Introduction of Air suspension System:
Air suspension system as secondary suspension in coaching stock is far superior to conventional secondary suspension & provides –
- Better riding comfort
- Improved reliability and reduced maintenance
- Capacity to sustain super dense crush load

Working principle:
In air suspension system, properties of air are used for cushioning effect. Enclosed pressurized air in a rubber bellow is called Air spring. These are height-controlled load leveling suspension devices for changing loads.

Main equipments of Air suspension system:
1. Air spring - 04 Nos /Coach
2. Levelling valve - 04 Nos /Coach
3. Duplex check valve - 02 Nos /Coach
4. 40 ltrs auxiliary reservoir - 04 Nos /Coach
5. Bogie suspension isolating cock - 02 Nos /Coach
6. Non return valve - 01 No /Coach
7. 150 ltrs MR reservoir - 01 No /Coach
8. Coach suspension isolating cock - 01 No /Coach

Inspection and Maintenance Schedule:
- For inspection and maintenance of air suspension system following checks should be done at maintenance depots:
  - Visually check the condition of air spring rubber bellows for any external damages, air leakage and infringement of any fittings.
- Drain the 150 litre air reservoir of air suspension system and check its safety straps for tightness. Check the air leakage from adjoining pipe line.

- Check the position of coach and bogie isolating cocks, these should be in open position and bracket for handle should be intact.

- Drain the 40 litre air reservoirs of air suspension system and check their safety straps for tightness. Check the air leakage from adjoining pipe line.

- Check the installation lever, tightening of installation lever nuts and protection screen nuts.
SCHEMATIC DIAGRAM OF AIR SUSPENSION EQUIPMENTS
Operating Instructions:

1. Train driver should maintain 7 Kg/cm² pressure from the compressor.
2. In case of heavy leakage of air from any bogie or coach, following action should be taken by driver and guard of the train.
   - Visually check the leaky / failed spring by the position of horizontal lever.
   - Visually check the leakage area of the air suspension and take action as follows:-
     - If leakage is between coach suspension isolating cock and bogie suspension isolating cock then close the coach suspension isolating cock.
     - If leakage is found between bogie suspension isolating cock and air spring then close the bogie suspension isolating cock.
     - After isolating the coach/ bogie air springs, limit the train speed to 60 kmph.