

SYLLABUS FOR THE POST OF TOWER WAGON DRIVER

1. Principles of working of Diesel Engine and Transmission System, specifications, types/models of diesel engine and transmission system in the tower car.
2. **Diesel Engine:** Identification of the engine, external engine components, air induction system, lubricating oil system, cooling system, exhaust system, fuel system, electrical system and batteries.
3. **Maintenance of different models of diesel engine in the tower cars of 4-wheeler and 8-wheeler.**
 - (a) Daily maintenance.
 - (b) Weekly maintenance.
 - (c) A,B,C,D & E checks & trouble shooting.
4. Maintenance and trouble shooting of different transmission systems of 4-wheeler and 8-wheeler tower cars.
5. **Tower Car 4-wheeler & 8-wheeler.**

General description, Traction alternator, Traction Motor and Power rectifier of the ICF 8-wheeler tower car, Power pack arrangement, body construction, facilities in the body, facilities in the roof, specification and make of equipments like engine, engine transmission system, axle drive, cradle shaft, brakes, wheels, bogie brake arrangement and electrical system for 4-wheeler & 8-wheeler tower car.
6. **Operating instructions of 4-wheeler & 8-wheeler tower cars.**

(1) Preliminaries (2) On entry into driving cabin/car (3) Starting the diesel engine (4) Check on the brake system after starting the diesel engine (5) Important instructions (6) Starting the OHE car (7) Running (8) Braking and stopping the car (9) Stopping the diesel engine (10) Operation of parking brake (11) General hints on brakes (12) Protective devices and warnings (13) Operating of lights (14) Towing the OHE Car (15) Battery charging (16) Coupling and uncoupling of the OHE Car.
7. **Pneumatic system of 4-wheeler & 8-wheeler tower cars.**

Pneumatic circuit diagram, its working system and equipments of Jamalpur Make, Vendra Make, Phooltas Make, 8-Wheeler of ICF Make Tower Cars.


वरिष्ठ मंडल विद्युत इंजीनियर (क.दि.)
Sr. Divisional Electrical Engineer (TRD)
दक्षिण मध्य रेलवे, सिकन्दराबाद
S C. Railway Secunderabad

8. **Electrical, engine and transmission control system.**

Engine starting, control circuits and its working, engine/transmission safety control, forward/reverse control, battery charger, lighting of Jamalpur Make, Ventra Make, Phooltas Make, 8-Wheeler of ICF Make Tower Cars.

9. Maintenance of bogies, wheels, body, C&W check, wheel dia measurement, hot axle, brake rigging, parking brake, various safety measures of wheels & bogies etc.

10. **Schedule maintenance of 4-wheeler & 8-wheeler tower cars.**

Weekly, Monthly, Half Yearly and Yearly inspection of safety items, emergency spares, engine and radiator, transmission and gear box, wheel & axle, brake gear & under frame, lifting platform, pantograph, gauges, sensors & meters, lights & fans, battery, self starter & alternator, screw coupling, portable generator, lookout glass.

11. **Trouble shooting of 4-wheeler & 8-wheeler tower cars.**

Engine not starting, tripping of MCB, Tower Car not moving in both directions, Tower Car not moving in one direction, engine RPM not raising. Quick trouble shooting of the driver for ICF Tower Cars as per the Crompton Greeves Manual.

12. Special maintenance instructions, OEM manuals on tower cars.

13. Various types of lubricants used in the 4-wheeler & 8-wheeler tower cars Jamalpur Make, Ventra Make, Phooltas Make, 8-Wheeler of ICF Make Tower Cars, periodicity of replacement and topping up.

14. Running allowance, mileage, OTA, breach of rest, G&SR, various types of signals and their aspects, stop signal, distant signal etc., points and crossings, SWRs, accident manuals, PME, Refresher Courses, Road learning etc.,

15. Safety equipments & essential tools, registers, LOP, ACTM, essential OHE and T&P equipments and spares in the Tower Cars.

(K.THOURYA)
Sr.DEE(TRD)/SC

वरिष्ठ मंडल विद्युत इंजीनियर (फ.दि)
Sr Divisional Electrical Engineer (TRD)
दक्षिण मध्य रेलवे, शिकन्दागढ़
पिन कोड - 226001, 226002, 226003, 226004, 226005, 226006, 226007, 226008, 226009, 226010, 226011, 226012, 226013, 226014, 226015, 226016, 226017, 226018, 226019, 226020, 226021, 226022, 226023, 226024, 226025, 226026, 226027, 226028, 226029, 226030, 226031, 226032, 226033, 226034, 226035, 226036, 226037, 226038, 226039, 226040, 226041, 226042, 226043, 226044, 226045, 226046, 226047, 226048, 226049, 226050, 226051, 226052, 226053, 226054, 226055, 226056, 226057, 226058, 226059, 226060, 226061, 226062, 226063, 226064, 226065, 226066, 226067, 226068, 226069, 226070, 226071, 226072, 226073, 226074, 226075, 226076, 226077, 226078, 226079, 226080, 226081, 226082, 226083, 226084, 226085, 226086, 226087, 226088, 226089, 226090, 226091, 226092, 226093, 226094, 226095, 226096, 226097, 226098, 226099, 226100, 226101, 226102, 226103, 226104, 226105, 226106, 226107, 226108, 226109, 226110, 226111, 226112, 226113, 226114, 226115, 226116, 226117, 226118, 226119, 226120, 226121, 226122, 226123, 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