

HC/RLC/D

27.9.94

The General Manager(Engg),  
Northern Railway,  
Baroda House,  
New Delhi-110001.

Sub: Speed certificate for operation of BG/DMU stock fitted with all coil ICF bogies upto a maximum speed of 80 kmph.

As per directive of Railway Board ICF has manufactured Diesel Multiple Unit BG with electric transmission. The unit consists of one power car one trailer and one driving trailer as per ICF drawing No. DMU/DPC-9-0-001, DMU/TC-9-0-001 and DMU/DTC-9-0-001 respectively. The coaches have been constructed within EDO 590 profile approved for standard BG coaching stock. The power car has been fitted with 20 t axle all coil bogie similar to ICF drawing No. EMU/M-0-0-002 used in existing EMU motor coaches and the trailer coach has been fitted with bogies as per ICF drg. No. T-0-0-601 used in main line non AC coaches and driving trailer coach has been fitted with 16 bogies similar to ICF Drg. No. WTAC3.0.0/301. The suspensions are suitable to cater for maximum passenger capacity of 158(crush load), 216(crush load) and 324(dense crush load) for power car, trailer and driving trailer respectively. The maximum axle load of motor, trailer and driving trailer coaches are 17.5t, 11.75t and 13.4t respectively. The coaches are provided with standard screw coupling and side buffers. The coaches are provided with foot steps for boarding by passengers and also vestibule arrangement to enable intercoach movement. The DMU is provided with twin pipe graduated release air brake system.

2. In order to assess the speed potential of this stock detailed oscillation trials have been conducted on Jalandhar - Pathankot section of Ferozpur division of Northern Railway up to a maximum speed of 105 Kmph and the results are contained in RDSO Report No. MT-17. Based on the results of these trials it is certified that the BG DMU stock fitted with ICF all coil bogies may be permitted to run upto a maximum speed of 80 Kmph on mainline routes of Northern Railway subject to the following conditions:

#### 2.1 Track

2.1.1 The track shall be to a minimum standard of 90 R rails on sleepers to M+4 density and depth of ballast cushion below sleepers of 200 mm which may consist of atleast 75 mm clean and the rest in caked up condition, on compacted and stable formation.

2.1.2 For track of lower standard than that mentioned above the Chief Engineer concerned shall decide the lower maximum permissible speed. In this connection Railway Board's letter No. 65/WDO/SR/26 dated. 19/20.10.1966 may be seen. When the Chief Engineer considers that the road bed is not compacted or there is improper drainage, he may suitably restrict the maximum permissible speed depending on the local conditions.

2.1.3 The maximum permissible speed on curves shall be decided on the basis of the existing provisions of the Indian Railways Way Manual 1986.

## 2.2 Bridges

2.2.1 Bridges shall be to MBG loading-1987. RBG or BGHL standard drawings.

2.2.2 For bridges of lower standard than that mentioned above, the Chief Engineer concerned shall be referred to.

2.2.3 The clearance with reference to Bridges refers to standard design of girders, slabs, pipe culverts etc. issued by RDSO but not to:

- i) non standard designs
- ii) piers, abutments and foundations
- iii) Bridges on curves etc.

which are to be examined under the direction of the Chief Engineer concerned and certified by him in terms of current IRS Bridges Rules, Steel Bridge Code, Bridge sub-structures and foundation code etc. read with upto date correction slips.

## 2.3 General

2.3.1 All the permanent and temporary speed restrictions in force and those imposed from time to time due to track, bridges, curves, signalling and interlocking etc. shall be observed.

2.3.2 The length of the power car and driving trailer over the body infringes with Clause 19(b) of Chapter-IV(A) of Schedule of Dimensions - 1973(Reprint). These infringements have been condoned by Railway Board vide their letter No. 94/CEPO/SR/13 dated 26.9.94. (encl)

SN-010

DA: Drg.No.DMU/DPC-9-0-001,  
DMU/TC-9-0-001 and  
DMU/DTC-9-0-001,

P. Bhattacharya  
( P. BHATTACHARYA )  
Director Standards (Motive Power)

Copy to:-

1. The General Manager(Mech/Optg), Northern Railway, Baroda House, New Delhi.

2. Secretary (Mech.) / Rly. Board . d/c P. Bhattacharya  
( P. BHATTACHARYA )  
Director Standards (Motive Power)

misc/bgdmu

let's to GM (Ess), (Mech) (OP) / Sec (Mech) / Rly

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