

TRIAL SCHEME FOR BIOLOGICAL/ VACUUM/ CHEMICAL TOILET

1 OBJECTIVE

To study

- i) Performance of the toilet
- ii) Effect on tank fixing arrangement
- iii) Condition of tank, pipeline and other structures
- iv) Any odour or foul smell, infestation of flies
- v) Corrosion effect on any structure

2 AUTHORITY FOR CONDUCTING TRIAL

RDSO letter No. MC/CB/LF dated

3 TRAIN ON WHICH TRIAL IS TO BE CONDUCTED

To be decided

4 MATERIAL ON TRIALS

...no. of toilets fitted on ... no. of coaches

5 NOMINATION OF OFFICER AND INSPECTOR

- (i) CME of Railway will nominate one officer of division to monitor the trial. In addition one inspector shall be exclusively nominated to monitor these trials, prepare the reports and maintain regular feedback and liaison with RDSO.
- (ii) Feedback should be given as per item No. 8.4.

6 BRIEF DESCRIPTION OF TRIAL

- (i) Before the commencement of trial one rake will be nominated for trial.
- (ii) The complete rake should comprise of conventional air brake coaches.
- (iv) Nominated rake shall be fitted with Biological/Vacuum/Chemical toilet.
- (v) The trial should be continuous for up to six month or 100000 KM. whichever is earlier. RDSO may at their option decide to extend the trial or draw interim conclusions.

(x) Performance of the Biological /Vacuum/Chemical Toilets are to be monitored as per Annexure – I & II.

7 INITIATION OF TRIAL

--- No. of Biological/Vacuum/Chemical toilets shall be fitted in – No. of coaches for initiation of the trial. At the commencement of the trial, following action shall be taken: -

- a) Coach No., type, Rly., P.R.O., date of fitment of Biological/Vacuum/Chemical Toilet shall be recorded in the test format as given in the Annexure -I
- b) In case a new coach is inducted in the trial rake during the trial period test format Annexure - I is to be filled separately with all the information.
- c) If the trial coach is marked sick for sick line repair, the coach is to be attached to the trial rake after repairs to coach.

8 MONITORING OF TRIAL

8.1 PRIMARY MAINTENANCE DEPOT

- (a) Trip Examination

All the coaches of trial rake fitted with Biological/Vacuum/Chemical Toilet shall be checked on every round trip in the primary maintenance depot and the results of the examination shall be recorded in the format at Annexure -I for the following:-

- i) Whether the tank, fixing arrangement are in good order or not.
- ii) Whether any leakage in the tank, pipelines & connections.
- iii) Whether foul smell or odour inside the lavatory.
- iv) Whether any cockroach or flies noticed inside the toilet.
- v) Whether tank clogged or not.

- (b) WEEKLY EXAMINATION:

- i) Whether the tank, fixing arrangement are in good order or not.
- ii) Whether any cracks in pipeline and tanks.

- iii) Whether tank is having any defect.
- iv) Whether any foul smell or any odour inside the lavatory.
- v) Whether tank is clogged
- vi) Any flies or insect noticed in the toilet.

(c) MONTHLY INSPECTION

- i) Each item of trip and weekly examination.
- ii) Annexure I & II is to be filled monthly jointly by RDSO, Railway and Firm's representative.

8.2 Secondary Maintenance Depot:

The feed back of the coaches fitted with Biological/ vacuum/chemical toilets should be sent as per Annexure-II.

8.3 CLOSURE OF TRIAL

- a) As and when it is decided to close the trial following data shall be recorded :
- i) Performance of the toilet
 - ii) Kilometers earned by each coach
 - iii) Any defects in the toilet system.

At the end of trials the rake , RDSO may also decide to continue the Biological/Vacuum/Chemical Toilet in service at the end of documented trial.

8.4 FEEDBACK

Feedback shall be sent to RDSO on Annexure - I & II.

Annexure -I

DETAILS TO BE FILLED BY PRIMARY MAINTENANCE DEPOT

Coach No. Type POH date Return date

Rake No. Train No. Date of commencement of trial

Type of Toilet: Date of Inspection:

S. No.	Item to be recorded	Toilet No. 1	Toilet No. 2	Toilet No. 3	Toilet No. 4	Remark
1.	Condition of the tank					
2.	Leakage from pipes/tank					
3.	Condition of fixing arrangement					
4.	Any corrosion					
5.	Cockroaches/flies in the toilet					
6.	Clogging/choking in the toilet due to non bio-degradable waste					
7.	COD/BOD/PH value of discharged water (for Biological/ Chemical Toilets)					
8.	Condition of the flushing system					
9.	Condition and functioning of control panel					
10.	Condition and functioning of quick coupling (for vacuum toilet)					

11.	Performance of evacuation pump (for Vacuum toilet)					
12.	Time taken to evacuate of one coach's retention tank.					
13.	Any odour noticed during removal of cartridge in chemical toilet					
14.	Condition of stainless steel membrane sieve in chemical toilet					
15.	Performance of the pump for recycling of water in chemical toilet					

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TO BE FILLED AT SECONDARY MAINTENANCE DEPOT

Train No.-----

Rake No.-----

Type of Toilet-----

Date of inspection-----

Sl. No	Coach No.	Type	Rly	OBSERVATIONS						REMARKS
				Any leakage	Any defect in tank	Any foul smell	Any clogging	Cockroaches/flies	Other reason	

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