

MINISTRY OF INDIA SURFACE TRANSPORT

Tests - Diesel Engines- Buses

OBSERVATION REPORT OF TRIAL RUN OF MAGNETIZER FUEL SAVER-  
SUMMARY

Trial taken by: Ministry of Surface Transport, New Delhi

Date of Trial: 17<sup>th</sup> January 2001

Witnessed by: Shri P.R. Duma  
Chief Engineer, Mechanical, Most

Shri V.K. Sachdev  
Superintending Engineer, Mechanical, Most

Vehicle: Manti Gypsy bearing Registration No. DL-ICC8

Km running per liter:  
without Magnetizer 4916-4809=10.7K

Km running per liter:  
with Magnetizer 5046-4916=12.5K

Manti Bus average savings: **16.8% Km per litre**

Unit fitted: Magnetizer AFES/TS

Bus TS 566: Km per litre 3.77 to 4.271 or .501 or a savings  
**Yield of 13.3%**

Bus TS 598: **Original exhaust opacity 20.2 reduced to 16.6 or 17.  
17.82% reduction**

\* original on file

## MAGNETIZER DIESEL BUS TESTS – INDIA 2001

### HIGHER FUEL EFFICIENCY AND EMISSION CONTROL SUMMARY

MONOPOLE TECHNOLOGY-ENERGYSATION of fuel and oxygen by MONOPOLE MAGNETS was tried by running the buses for over 1000 KMS under the existing working conditions and with a **savings of 12 to 13%**. By doing adjustments such as rearing, cleaning the filter, oil checking and reducing the fuel pump output by 10%, higher efficiency can be achieved.

1. TRIAL II BUS TS.566 Annexure I  
Performance observed for 12630 Km. and fuel consumed is 2957 litres of diesel. Km./Litre improved from 3.77 to 4.271, **an increase of 0.501 Km./Litre – 13.3%**. Cost of fuel per Km. reduced from Rs. 4.244 to Rs. 3.746, a savings of Rs. 0.498/Km. Savings during the trial for 12630 Km, worked out as Rs. 6290 and the pay back period is only 72 days.
2. TRIAL III BUS TS. 566 REVERSE TRIAL – Annexure II.  
**Energysers removed** after Trial II and the performance observed. The average Km./Litre **reduced from 4.271 to 3.836**. (cleaner engine)
3. TRIAL IV BUS TS. 598. Details in Annexure III.  
Performance observed for 10080 KM. and the diesel consumed is 2189 litre. KMPL improved from 4.09 to 4.605 **an increase of 0.515 KM/Litre i.e. 12.6%**. Saving in fuel cost worked out as Rs. 0.438 per KM. pay back.
4. EMISSION. Annexure IV.  
Emission got tested only once. After Trial IV, emission before removing the **Energysers was 16.6%** and after removing the Magnetizer Unit and running about 1 KM. **emission was increased To 20.2% = 25% increase in emissions with the removal of the System.** (Engine is clean and it can increase during run.)

5. INFERENCE.

MONOPOLE TECHNOLOGY is effective for fuel saving and pollution control. (With other benefits.) It is simple, repeatable, techno commercial and environmental friendly.

**A 10% savings in fuel in TVM control depot means 1350 litres of diesel.**

6. PROPOSAL.

We shall be glad to assist for mass application and availing benefits. We request you call us on any matters of interest.

M.K.A. NAIR  
G.M. MKTG

\* Original on file

## Annexure I

TRIAL IBus TS 557 ENERGYSERS USED-HDFE-N 1 UNIT, MAE-B 1 UNITRUTE- TVM- TKDY. TVM-PLKD, TVM-EKLM

| DATE     | RUTE         | DIESEL  |       |        | KM  | REMARKS   |
|----------|--------------|---------|-------|--------|-----|---|
|          |              | Station | Time  | Litres |     |   |
| 04.05.00 | TVM-EKLM     | TVM     | 17.35 | 145    | 450 | Proper follow-up could not be done as the bus was operating in different rutes and fueling at different stations enroute. |
| 05.05.00 | EKLM-TVM     | EKLM    | 14.45 | 85     |     |   |
|          |              | TVM     | 21.45 | 65     |     |   |
| 06.05.00 | TVM-PLKD     | EKLM    | 02.00 | 117    | 750 | Energyzers removed on 16.05.00 for trial in another vehicle.  |
| 07.05.00 | TVM-TKDY     | TVM     | 04.00 | 60     | 510 |   |
|          |              | TVLA    | 19.00 | 40     |     |   |
| 08.05.00 | TVM-TKDY     | TVM     | 03.35 | 75     | 510 | This trial not taken into consideration for evaluating the efficiency.  |
|          |              | CHRY    | 19.00 | 80     |     |   |
|          | TVM-TKDY     | TVM     | 23.35 | 45     | 630 |   |
|          |              | TDPA    | 15.20 | 95     |     |   |
| 09.05.00 | TVM-EKLM     | TVM     | 23.00 | 50     | 450 |   |
| 10.05.00 | EKLM-TVM     | EKLM    | 04.35 | 44     |     |   |
| 11.05.0  | Not operated |         |       |        |     |   |
| 12.05.00 | TVM-TKDY     | TVM     | 04.00 | 80     | --- |   |

BOBY  
ASST.DEN.U. ALIAS  
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## ANNEXURE II

BUS NO.-TS 566 WITHOUT ENERGYSERSAME BUS AND SAME RUTE AS IN TRIAL II

| DATE     | DIESEL      | KM          | REMARKS  |
|----------|-------------|-------------|--|
| 21.07.00 | 125         | 280         | 1. AV.Km./Litre with Energyser = 4.271<br>2. Total KM run without Energyzers = 8320<br>3. Fuel (diesel) consumed = 2143 liters<br>4. AV.Km./Litre without Energyser = 3.836<br>5. <b>Increase in fuel consumption = 10.2%</b><br><b>(Note: Magnetizer Removed)</b> |
| 22.07.00 | 115         | 505         |  |
| 23.07.00 | 60          | 505         |  |
| 24.07.00 | 211         | 440         |  |
| 25.07.00 | --          | --          |  |
| 26.07.00 | 50          | 505         | Note: By removing the KMPL reduced to almost to the original level, but slightly more than 3.77 and it can be due to the clean cylinders, nozzles, etc.  |
| 27.07.00 | 115         | 505         |  |
| 28.07.00 | 110         | 505         |  |
| 29.07.00 | 190         | 505         |  |
| 30.07.00 | 160         | 505         |  |
| 31.07.00 | 155         | 505         |  |
| 01.08.00 | 125         | 505         |  |
| 02.08.00 | 115         | 505         |  |
| 03.08.00 | 70          | 505         |  |
| 04.08.00 | 140         | 440         |  |
| 05.08.00 | 108         | 440         |  |
| 06.08.00 | 94          | 510         |  |
| 07.08.00 | --          | ---         |  |
| 08.08.00 | --          | ---         |  |
| 09.08.00 | 75          | 430         |  |
| 10.08.00 | 115         | 505         |  |
|          | <u>2143</u> | <u>8220</u> |  |

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