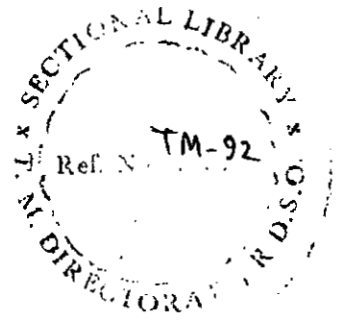


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GOVERNMENT OF INDIA
MINISTRY OF RAILWAYS

**CHECK LIST FOR INSPECTION
OF
DYNAMIC TRACK STABILIZER**

(DGS-62N)

REPORT NO. TM-92

OCTOBER 2005

RESEARCH DESIGNS & STANDARDS ORGANISATION
LUCKNOW-226011

97482

Name & designation of Inspecting Official :

Date of inspection :

Machine no. :

Base station :

ITEMS TO BE CHECKED

| S. No. | Item | Agent/Description | Prevailing conditions |
|--------|--|-------------------------------|--------------------------|
| 1. | Oil/Water Levels in Tank/Container: | | |
| i) | Hydraulic oil | HLP 68 or equivalent | Ok/Less |
| ii) | Radiator | Coolant | Ok/Less |
| iii) | ZF gear box | API CF4 15W40 or equivalent | Ok/Less |
| iv) | Diesel oil | HSD | Ok/Less |
| v) | Engine oil | API CF4 15W40 or equivalent | Ok/Less |
| vi) | Axle gear box | SAE-90 or equivalent | Ok/Less |
| vii) | Vibration gear box | Gear oil SAE-90 or equivalent | Ok/Less |
| viii) | Drive intermediate shaft | Gear oil SAE-90 or equivalent | Ok/Less |
| ix) | Distribution gear box | Gear oil SAE-90 or equivalent | Ok/Less |
| 2. | Engine: As per maintenance schedule | | |
| | Engine model & no. Engine Hours: | | |
| i) | Starting problem | | Yes/No |
| ii) | Condition of smoke | | White/Black /Normal/Grey |
| iii) | Max. Engine temperature during working | | °C |
| iv) | Leakage in head-gasket | | No/ Yes (Head no.) |
| v) | Electrolyte level in batteries | | Ok/Less |

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| S. No. | Item | Agent/Description | Prevailing conditions |
|--------|--|-------------------|--------------------------|
| vi) | Specific gravity of electrolyte | | Ok/Less |
| vii) | Belt condition | | Ok/ Damaged (Belt no.) |
| viii) | Belt tension | | Ok/To be tightened |
| ix) | Condition of engine hoses | | Ok/To be attended |
| x) | R.P.M. of the engine | | |
| xi) | Engine oil pressure Min. 1.5 Kg/sq. cm at idle Min. 2.5 Kg/sq. cm at rated speed | | Actual |
| xii) | Battery charging circuit | | Working/ Not working |
| xiii) | Last change of air cleaner filters done on | | Dated Engine hrs. |
| xiv) | Last change of engine oil done on | | Dated Engine hrs |
| xv) | Last change of engine oil filters done on | | Dated Engine hrs |
| xvi) | Last change of diesel filters done on | | Dated Engine hrs |
| xvii) | Last change/repair of | | |
| a) | Self starter done on | | Dated Engine hrs |
| b) | Alternator done on | | Dated Engine hrs |
| xviii) | Last change of batteries done on | | Dated Engine hrs |
| xix) | Condition of radiator | | Ok/ To be cleaned |
| xx) | Last change of ZF gear box oil & filter | | Dated Engine hrs |
| xxi) | Stabilising unit derailment protection switch | | Working / To be attended |
| xxii) | Last overhauling of the engine done on | | Dated Engine hrs |
| xxiii) | Last calibration of fuel injection pump done on | | Dated Engine hrs |
| xxiv) | Last calibration of fuel injectors done on | | Dated Engine hrs |
| xxv) | Last attention given by the Service Engineer to engine | | Dated Engine hrs |

| S. No. | Item | Agent/Description | Prevailing conditions |
|------------|--|---------------------------|-----------------------|
| xxvi) | Whether Working Gauges are functional | | |
| a) | R.P.M. | | Yes/No |
| b) | Oil pressure | | Yes/No |
| c) | Temperature | | Yes/No |
| d) | Battery charging | | Yes/No |
| xxvii) | Any abnormal sound from engine | | No/Yes (Location) |
| xxviii) | Functioning of engine safety circuit | | |
| a) | High temperature safety circuit | | Working / Not working |
| b) | Low lube oil pressure safety circuit | | Working / Not working |
| 3. | Lubrication as per maintenance schedule | | |
| 3.1 | Stabilizing Unit | | |
| i) | Stabilising unit roller | Grease RR-3 or Equivalent | Done/Not done |
| ii) | Stabilising unit roller clamp housing | Grease RR-3 or Equivalent | -do- |
| iii) | Stabilising unit guide column | Grease RR-3 or Equivalent | -do- |
| iv) | Clamp pivot pins | Grease RR-3 or Equivalent | -do- |
| v) | Link rod bearing | Grease RR-3 or Equivalent | -do- |
| vi) | Stabilising roller guide bush | Grease RR-3 or Equivalent | -do- |
| vii) | Stabilising roller pulley | Grease RR-3 or Equivalent | -do- |
| viii) | Rail setting device | Grease RR-3 or Equivalent | -do- |
| ix) | Rail holding device | Grease RR-3 or Equivalent | -do- |
| 3.2 | Cardon Shaft: | | |
| i) | Engine to ZF gearbox | Grease RR-3 or Equivalent | Done/Not done |
| ii) | ZF to Distributor gearbox | Grease RR-3 or Equivalent | -do- |
| iii) | Engine to Pump distributor gearbox | Grease RR-3 or Equivalent | -do- |
| iv) | Distributor gearbox to Rear axle | Grease RR-3 or Equivalent | -do- |
| v) | Distributor gearbox to Intermediate bearings | Grease RR-3 or Equivalent | -do- |

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| S. No. | Item | Agent/Description | Prevailing conditions |
|--------|--|---------------------------|-------------------------------|
| i) | Axle gearbox flange cover | Grease RR-3 or Equivalent | -do- |
| ii) | Working drive reduction gearbox to ZF gearbox | Grease RR-3 or Equivalent | -do- |
| | Miscellaneous: | | |
| i) | Torque arm pivot | Grease RR-3 or Equivalent | -do- |
| ii) | Brake linkage | Grease RR-3 or Equivalent | -do- |
| iii) | All the pivot joints of trolleys | Grease RR-3 or Equivalent | Done/Not done |
| | Hydraulic Hoses: | | |
| i) | Any rubbing of hydraulic hoses | | Yes/ No |
| ii) | Hoses required to be changed (no. & sizes) | | |
| iii) | Stock of hoses with the machine | | Adequate/Less |
| iv) | Stock of hose fittings | | Adequate/Less |
| | PCBs: | | |
| i) | Requirement of PCB, if any | | |
| ii) | Defective/ Released PCB available with machine | | |
| | General: | | |
| i) | Heavy leakage of hydraulic oil | | Yes/No (location) |
| ii) | All locking devices | | Working / Not working |
| iii) | Air oiler/drier | | Working / Not working |
| iv) | Water separator | | Working / Not working |
| v) | Electrical lights | | Working / Not working |
| vi) | Braking system | | Satisfactory / Unsatisfactory |
| vii) | Condition of brake shoes | | Ok/ To be replaced |

| S. No. | Item | Agent/Description | Prevailing conditions |
|-----------|--|-------------------|-----------------------|
| viii) | All log books filled properly | | Yes/No |
| ix) | Condition of machine working tools (spanner set etc.) | | |
| x) | Hydraulic oil temperature after working of machine for 2 hrs | °C | |
| xi) | Condition of oil coolers | | Ok/ To be cleaned |
| xii) | Track lifting roller height | | Ok/ To be adjusted |
| xiii) | Play in torque arm pivot | | Ok/ To be attended |
| 7. | Safety Items: | | |
| i) | Safety equipments as per Annexure-I | | Available/Deficient |
| ii) | Competency certificate of the Operator | | Current/Expired |
| iii) | Engaging/disengaging indicator of stabilizing unit | | Working / Not working |
| 8. | During Block Working: | | |
| i) | Location of the block | | |
| ii) | Pre & post stabilising operations being done | | Yes/No |
| iii) | Duration of block (hrs/minutes) | | |
| iv) | Output of work | | Km. |

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| S. No. | Item | Agent/Description | Prevailing conditions |
|--------|--|-------------------|-------------------------------------|
| 9. | Staff: | | |
| i) | Strength of staff | | Full/Deficient |
| ii) | Group performance | | Excellent / V. Good / Good /Average |
| iii) | Cost awareness | | Excellent / V. Good / Good /Average |
| iv) | Safety awareness | | Excellent / V. Good / Good /Average |
| v) | Staff due for medical | | |
| 10. | General condition of the machine | | Excellent / V. Good / Good /Average |
| 11. | Hydraulic pressure in bars | | Rated Actual |
| i) | Vibrating pressure | | 350 |
| ii) | Vertical pressure | | 40-100 |
| iii) | Gauge holding pressure | | 20-30 |
| iv) | Vibrating frequency for Concrete sleepers | | 30-33 Hz |
| 12 | Pending maintenance schedule and reasons | | |
| 13. | Availability of spares as per annexure-II | | Complete/Deficient |
| 14. | Any other remark by the Inspecting Officer | | |

Signature of Inspecting Officer

List Of Safety Equipments

| Sl. no. | Description | Quantity |
|---------|-------------------------|--------------|
| 1. | Detonators | One box |
| 2. | H.S. flag red | Two nos. |
| 3. | H.S. flag green | One no. |
| 4. | Hand Signal lamps | Two nos. |
| 5. | Chain & Pad lock | One set |
| 6. | Terfor (2 t capacity) | One no. |
| 7. | 25t jack with traverser | Two nos. |
| 8. | Wooden blocks off sizes | Four nos. |
| 9. | First aid box | One no. |
| 10. | Patromax | One no. |
| 11. | Crow bar | Two nos. |
| 12. | Field telephone | One no. |
| 13. | Skids | Four nos. |
| 14. | Working time table | One no. |
| 15. | G & SR book | One no. |
| 16. | Banner Flag | Two nos. |
| 17. | LV board / Tail lamp | One no. each |
| 18. | Warning hooters | One no. |

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Annexure-II

List of the Spare Parts to be kept on
Dynamic Track Stabilizer (DGS-62N)

| S.No. | Description of Part | Part No. | Quantity |
|-------|---|--------------------|-------------|
| 1. | A) V-Belt | B-95/97 | Three |
| | B) V- Belt | A-52 | One |
| | C) V- Belt | A-60 | One |
| 2. | HSD Oil Filter. | (2538234-3166555) | Two |
| 3. | Lube Oil Filter | (158139 - 3166554) | Two |
| 4. | Super bypass Filter for engine oil | 3873576 | One |
| 5. | Air Cleaner: | | |
| | a) Outer Element | 3237953k | Two |
| | b) Inner Element | 3226019k | Two |
| 6. | C.R. Element | 95079(32038066) | One |
| 7. | Engine Oil | API CF-4 15W40 | 100 lts. |
| 8. | Distilled water for battery | | Two bottles |
| 9. | HLP-68 or equivalent | | 210 lts. |
| 10. | Radiator Hose | | One set |
| 11. | Grease MP-2 or RR-3 | | 10 kgs. |
| 12. | Petroleum Jelly | | 250 gms |
| 13. | Emery paper fine | | Two |
| 14. | ZF filter | Hyd. 501-225-25-ES | One |
| 15. | Hyd. Suction filter | Hyd-501-460-150 | Two |
| 16. | Hyd. Return filter | Hyr501-330-10ES | One |
| 17. | Hyd. Suction filter | Hyd-501-160-P10ES | Two |
| 18. | Hyd. Filter Driving (Proportional Filter) | Hyd-501-32-10ES | Two |

| S.No. | Description of Part | Part No. | Quantity |
|-------|---------------------|-----------------------------|-----------------------|
| 19. | Hyd. Pipe | SAE 100 R2A : 04 | 5 M with end fittings |
| 20. | -do- | : 06 | -do- |
| 21. | -do- | : 08 | -do- |
| 22. | -do- | : 10 | -do- |
| 23. | -do- | : 16 | -do- |
| 24. | -do- | : 20 | -do- |
| 25. | Hyd. Pipe | SAE R5-24 | 5M with end fittings |
| 26. | Power supply PCB | EK812 SV00 | One |
| 27. | Cardon shaft | KGW:180:1250:11D:00 | One |
| 28. | Cardon shaft | LZ:400:LA50/587:30/FL:D:180 | One |
| 29. | Cardon shaft | KGV:150:0900:110:00 | One |
| 30. | Relay | ELT:7002:S4 | Two |
| 31. | Relay | ELT-663 | Two |
| 32. | Head light bulbs | | Four |
| 33. | Working light bulbs | | Six |
| 34. | Fuses (4 amp) | | Six |
| 35. | Self starter | | One |



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ACKNOWLEDGEMENT

Following officers and staff have made their valuable contribution in finalising the Checklist for inspection of Dynamic Track Stabilizer Machine (DGS-62N).

Railways:

1. S/Sri Dhananjay Shahi JE/TMC/NER
2. " Swatantra singh JE/TMC/NR

RDSO:

1. S/Sri A.K. Pandey DTM-V
2. " " Neerendra Prasad ARE/TM
3. " " M.N. Siddiqui SE/Engg./TM
4. " " A.N. Srivastava JRE/I
5. " " Prem Kumar JRE/I