

TRUCK, TRACTOR, HEAVY, MC4 – INTERNATIONAL SF2670 W/INTEGRAL SLEEPER

SERVICING INSTRUCTION

This instruction is authorised for use by command of the Chief of Army. It provides direction, mandatory controls and procedures for the operation, maintenance and support of equipment. Personnel are to carry out any action required by this instruction in accordance with EMEI General A 001.

INTRODUCTION

1. This EMEI lists the requirements for each level of servicing for the Truck, Tractor, Heavy, MC4 – International SF2670 W/Integral Sleeper. Table 1 details driver tasks and Table 2 details the tasks to be performed by an authorised tradesperson. Tradesperson tasks are to be carried out by a Vehicle Mechanic ECN 229 or the civilian equivalent.
2. Equipment placed into extended storage is to be inspected and serviced annually in accordance with EMEI Vehicle A 139-1 and EMEI Vehicle A 203-3.

Associated Publications

3. For maintenance and repair procedures, refer to the following EMEI:
 - a. [Electrical T 009-1](#) Refrigeration and Air Conditioning Equipment General – Storage of Refrigeration and Air Conditioning Equipment, All Types;
 - b. [EMEI Vehicle A 029](#) Vehicles – General – Servicing of B Vehicles, Trailers, Stationary Equipment, Auxiliary and Small Engines;
 - c. [EMEI Vehicle A 139-1](#) B Vehicles and Trailers – General – Preparation Of Vehicles for Periods of Non-Use (One to Twelve Months);
 - d. [EMEI Vehicle A 203-3](#) Preservation – Preservation of Vehicles and MUA;
 - e. [EMEI Vehicle A 591-1](#) Miscellaneous – Inspection and Cleaning of Dry Type Air Cleaners;
 - f. EMEI Vehicle G 88 decade Truck, Tractor, Heavy, Mc4, International Sf2670 W/Integral Sleeper;
 - g. EMEI Workshop E series – Occupational Health and Safety Instructions;
 - h. [Technical Regulation of Army Materiel Manual](#) (TRAMM);
 - i. [Defence Safety Manual](#) (SAFETYMAN);
 - j. [Material Safety Data Sheet](#) (MSDS); and
 - k. [Repair Parts Scale](#) (RPS) 02197.

Safety Precautions

WARNING

Do not work on a raised vehicle without the use of an axle stand beneath the raised axle. Place the axle stand as close to the raised wheel as possible. This procedure is required for all repairs and maintenance activities involving positioning of body parts in potential crush zones of a vehicle. Failure to comply may result in serious injury or death.

All industrial safety, work practices and equipment operating and maintenance instructions pertaining to this EMEI are to be adhered to.

The handling, use and storage of chemical substances are to be in accordance with the SAFETYMAN, relevant MSDS and EMEI Workshop E series.

Servicing and Maintenance

4. Servicing is to be based on distance travelled after the warranty period is completed, with all vehicles being serviced and technically inspected at least once every 12 months in accordance with the TRAMM.
5. Unit commanders may reduce the periods between services or add servicing tasks to meet operational or exercise requirements. A scheduled service may be anticipated or delayed within a limit of plus or minus 10% of the interval between services to meet operational needs or permit workload planning. However, no vehicle is to exceed a scheduled service by more than 1000 km.
6. Alternate major services are to be clearly identified in the record of servicing section of the GM 120.
7. The servicing points for the vehicle are shown in Figure 1.

NOTE

Equipment that exceeds the 10 percent maximum limit are to be classified **Do Not Use - XX** until the required service has been carried out.

Vehicle and Driveline Lubrication

8. Only EP lithium complex greases are to be used where Shell Retinax LX2 is specified.

Adjustments

9. During servicing there is a requirement to carry out adjustments and re-tension driveline and suspension component bolts. The servicing requirements for these components are detailed in Table 1.

NOTE

Bolts and nuts assembled with Loctite products which require re-tensioning or adjusting during servicing are to have Loctite reapplied.

Documentation

10. All servicing carried is to be documented in the record of servicing section of the GM 120 at the completion of the service.

Servicing Sequence

11. The following servicing sequence is to be applied to the Truck, Tractor, Heavy, MC4 – International SF2670 W/Integral Sleeper:
 - a. **Initial Service.** This service is to be performed 750 km or one month from introduction into service or in accordance with the warranty agreement.
 - b. **Minor Service.** This service is to be performed 20 000 km or 12 months from the Initial Service.
 - c. **Major Service.** This service is to be performed 20 000 km or 12 months from the last Minor Service.
 - d. **Minor Service.** This service is to be performed 20 000 km or 12 months from the last Major Service.
 - e. **Alternate Major Service.** This service is to be performed 20 000 km or 12 months after the second Minor Service has been carried out.
12. The servicing sequence commences again after the Alternate Major Service, with a Minor Service being carried out after a further 20 000 km or 12 months.

Table 1 Servicing Requirements – Driver Tasks (Under Tradesperson Supervision)

Serial	Item or Assembly	Minor 12 Months or 20 000 km	Major 24 Months or 40 000 km	Alt Major 48 Months or 80 000 km	Capacity (Litres)	Lubricant	No. of Points
1	Engine oil	D	D	D	41	SAE 15W/40	1
2	Engine oil filter	R	R	R			1
3	Fuel filter	D	R	R			1
4	Coolant		D (every 24 months only)	D (every 24 months only)	46	Tec PGXL	1
5	Coolant conditioner cartridge (Note 1)	R	R	R			1
6	Radiator shroud and fins	I	I	I			1
7	Cooling system hose connections	Y	Y	Y			
8	Power steering fluid	T	D	D	5	SAE 15W/40 (class CC/CD)	1
9	Power steering filter		R	R			1
10	Drive belts	I/Y	I/Y	I/Y			
11	Fan clutch air filter	R	R	R			1
12	Air cleaner (Note 2)	I	I	R			1
13	Engine breather	C	C	C			1
14	Exhaust system leaks/damage/security	I	I	I			
15	Tyre pressures and wear	I	I	I			11
16	Front axle hubs (Note 3)	T	D	D	0.375	OEP 600	2
17	Intermediate differential and axle hubs (Note 3)	T	D	D	16	OEP 600	2
18	Rear differential and axle hubs (Note 3)	T	D	D	13	OEP 600	2
19	Transmission	T	D	D	14.2	SAE Grade 40	1
20	Transmission filter regulator	C	C	C			1
21	Hydraulic oil	T	T	D (every 48 months only)	227	Hydraulic Fluid ISO Grade 68	1
22	Hydraulic system filter		R	R			1
23	Front spring shackles	L	L	L		Shell Retinax	2
24	Propshafts and universal joints	L	L	L		Shell Retinax	7
25	Pintle hook	L	L	L		Shell Retinax	1
26	Fifth wheel	L	L	L		Shell Retinax	1
27	Steering box input shaft bearing housing (Note 4)	L	L	L		Shell Retinax	1
28	Steering drag links	L	L	L		Shell Retinax	4
29	Steering column shaft	L	L	L		Shell Retinax	3
30	Front hub king pins	L	L	L		Shell Retinax	4

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Table1 Servicing Requirements – Driver Tasks (Under Tradesperson Supervision) (Continued)

Serial	Item or Assembly	Minor 12 Months or 20 000 km	Major 24 Months or 40 000 km	Alt Major 48 Months or 80 000 km	Capacity (Litres)	Lubricant	No. of Points
30	Front hub king pins	L	L	L		Shell Retinax	4
31	Tie rod ends	L	L	L		Shell Retinax	2
32	Clutch cross shaft	L	L	L		Shell Retinax	1
33	Clutch pedal linkages	L	L	L		Shell Retinax	1
34	Brake camshafts and slack adjusters	L	L	L		Shell Retinax	6
35	Brake system air reservoirs	D	D	D			
36	Windscreen wipers, washers and wiper blades	I	I	I			
37	Battery security / electrolyte level / cleanliness / terminal tightness	I/C/T	I/C/T	I/C/T			2
38	Spare wheel carrier operation	I	I	I			1
39	Mirrors / door windows / windscreen	I	I	I			
40	Hinges / catches / latches	L	L	L			
41	Check brake, fuel and hydraulic hoses for chafing	I	I	I			
42	Check for oil, fuel, and coolant leaks	I	I	I			
43	Check all lights and gauges	I	I	I			
44	Clean all breathers	C	C	C			
45	Check security of nuts, bolts and screws	Y	Y	Y			

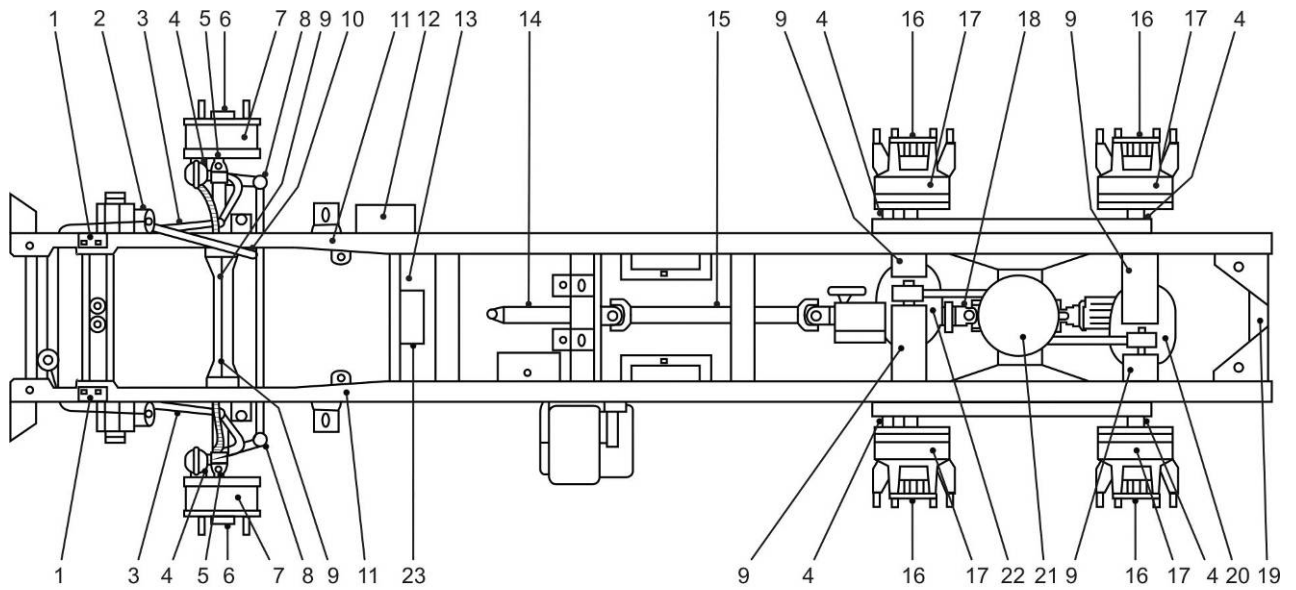
Legend:

A – Adjust, C – Clean, I – Inspect, L – Lubricate, T – Top up, D – Drain and Refill, O – Overhaul, R – Replace, Y – Tighten

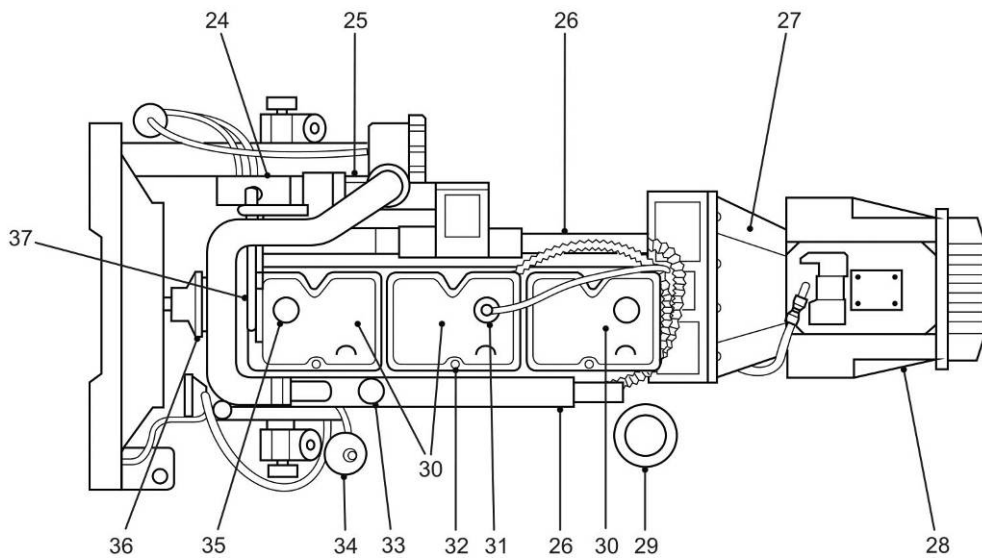
Notes:

1. TEC PGXL coolant condition is to be tested in accordance with EMEI Vehicle G 883.
2. Check the air restriction indicator and replace the air cleaner element if the indicator is red, or at each alternate major service, whichever occurs first. Do not attempt to clean the element by tapping on a hard surface or blowing out with compressed air. Elements may be cleaned by washing in accordance with EMEI Vehicle A 591-1.
3. Item to be inspected by a tradesperson prior to refilling. Differential magnetic drain plugs are to be cleaned.
4. Do not over grease – use low pressure grease gun.

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| 1. Spring shackles (fixed) | 9. Front and Rear U-bolts | 17. Rear brake linings |
| 2. Master steering box | 10. Steering column | 18. Rear prop shaft |
| 3. drag link | 11. Spring shackles (pivoting) | 19. Pintle hook |
| 4. Camshafts/slack adjusters | 12. Hydraulic reservoir | 20. Rear differential |
| 5. King pins | 13. Hydraulic filter | 21. Fifth wheel |
| 6. Front hubs and bearings | 14. Transmission prop shaft | 22. Intermediate differential |
| 7. Front brake linings | 15. Intermediate prop shaft | 23. Batteries |
| 8. Tie rods | 16. Rear wheel bearings | |



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|------------------------|-------------------------|------------------------|
| 24. Coolant and filter | 29. Air cleaner | 34. Power steering |
| 25. Oil filter | 30. Valve clearances | 35. Engine |
| 26. Rear engine mounts | 31. Engine breather | 36. Drive belts |
| 27. Clutch cross shaft | 32. Cylinder head bolts | 37. Front engine mount |
| 28. Transmission | 33. Fuel filter | |

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Figure 1 Servicing Points for Truck, Tractor, Heavy, International SF2670

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Table 2 Servicing Requirements – Tradesperson Tasks

Serial	Item or Assembly	Minor 12 Months or 20 000 km	Major 24 Months or 40 000 km	Alt Major 48 Months or 80 000 km	Capacity (Litres)	Lubricant	No. of Points
1	Test cooling system (Note 1)	I	I	D	46	Tec PGXL	1
2	Radiator mounting bolts	Y	Y	Y			
3	Vibration damper leaks/damage	I	I	I			
4	Engine mountings	I	I	I			
5	Cylinder head bolts			Y			
6	Valves and injectors			A			
7	Alternator mounting bolts	Y	Y	Y			
8	Crankcase breather	C	C	C			
9	Transmission oil pump pick-up strainer		I/C	I/C			
10	Fuel system flush			I/C			
11	Front shock absorber leaks/damage/security	I	I	I			
12	Check/adjust clutch and clutchbrake (Note 2)	I/A	I/A	I/A			1
13	C-Brake	I/A	I/A	I/A			
14	Steering box adjustment		I/A	I/A			
15	Tyre pressures and wear	I	I	I			11
16	Front wheel and bogie alignment		I	I			
17	Brake linings and drums (Note 3)	I	I	I			6
18	Brake slack adjusters	A	A	A			6
19	Front, intermediate and rear wheel bearings (Note 4) (Note 5)	I	I	I			
20	Front and rear springs	I	I	I			
21	Front and rear spring U-Bolts (Note 6)		Y	Y			
22	Transmission centre shaft bearing wear	I	I	I			
23	Propshaft universal joints and coupling bolts	Y	Y	Y			
24	Hydraulic PTO operation	I	I	I			
25	NATO plug	I	I	I			
26	Check air system build-up time (Note 7)	I	I	I			
27	STC operation test and equipment		I	I			
28	Fifth wheel mounting bolt tension	Y	Y	Y			12
29	Fifth wheel operation	I	I	I			
30	Receiver dryer (Note 8)	R	R	R			1
31	Air conditioner suction and discharge pressure		T	T			
32	Air conditioner oil level		T	T		OM-70	

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Table 2 Servicing Requirements – Tradesperson Tasks (Continued)

Serial	Item or Assembly	Minor 12 Months or 20 000 km	Major 24 Months or 40 000 km	Alt Major 48 Months or 80 000 km	Capacity (Litres)	Lubricant	No. of Points
33	Evacuate air conditioner system (Note 9)		R	R			
34	Air conditioner security	Y	Y	Y			
35	Compressor mounting and clutch bolts	Y	Y	Y			
36	Condenser core	C	C	C			
37	Refrigerant hoses	I	I	I			
38	Drain tubes for kinks/restriction	I	I	I			
39	Test air conditioner operation (Note 10)	I	I	I			
40	Tachograph calibration (Note 11)						

Legend:

A – Adjust, C – Clean, I – Inspect, L – Lubricate, T – Top up, D – Drain and Refill, O – Overhaul, R – Replace, Y – Tighten

Notes:

1. TEC PGXL coolant condition is to be tested in accordance with EMEI Vehicle G 883.
2. Clutch adjusting ring to be rotated three times in each direction at every major service to prevent seizure.
3. Brake linings to be inspected by removing backing plates.
4. Front hub inspection procedure:
 - a. remove hub caps and inspect oil;
 - b. re-adjust wheel bearings; and
 - c. refit hub cap and refill hub bearing cavity in accordance with EMEI Vehicle G 883.
5. Rear wheel bearing inspection procedure:
 - a. jack wheels clear of ground and support on safety stands;
 - b. remove axle shafts and inspect oil;
 - c. re-adjust wheel bearings in accordance with EMEI Vehicle G 883;
 - d. refit axle shafts and lower vehicle to the ground;
 - e. jack up axle assembly alternately from each end and keep tilted for one minute to allow hub cavities to fill with oil; and
 - f. top up the differential oil level after both hub cavities on each axle have been filled.
6. The front and rear U-bolts are to be re-torqued with the vehicle in a laden condition on the initial service and at each major service in accordance with EMEI Vehicle G 884 – Suspension – Group 13.
7. Air compressor charge time (air system empty to fully charged) maximum four minutes at 1250 rpm.
8. The receiver dryer is to be replaced every 12 months or whenever the system is opened.
9. The air conditioning refrigerant must be recovered and not vented to the atmosphere and the task carried out in accordance with EMEI Electrical T 009-1.
10. Test in accordance with Air Conditioning System Test Procedure (Para 13 to 19).
11. Tachograph calibration is to be done by trade repair.

Air Conditioning System Test Procedure

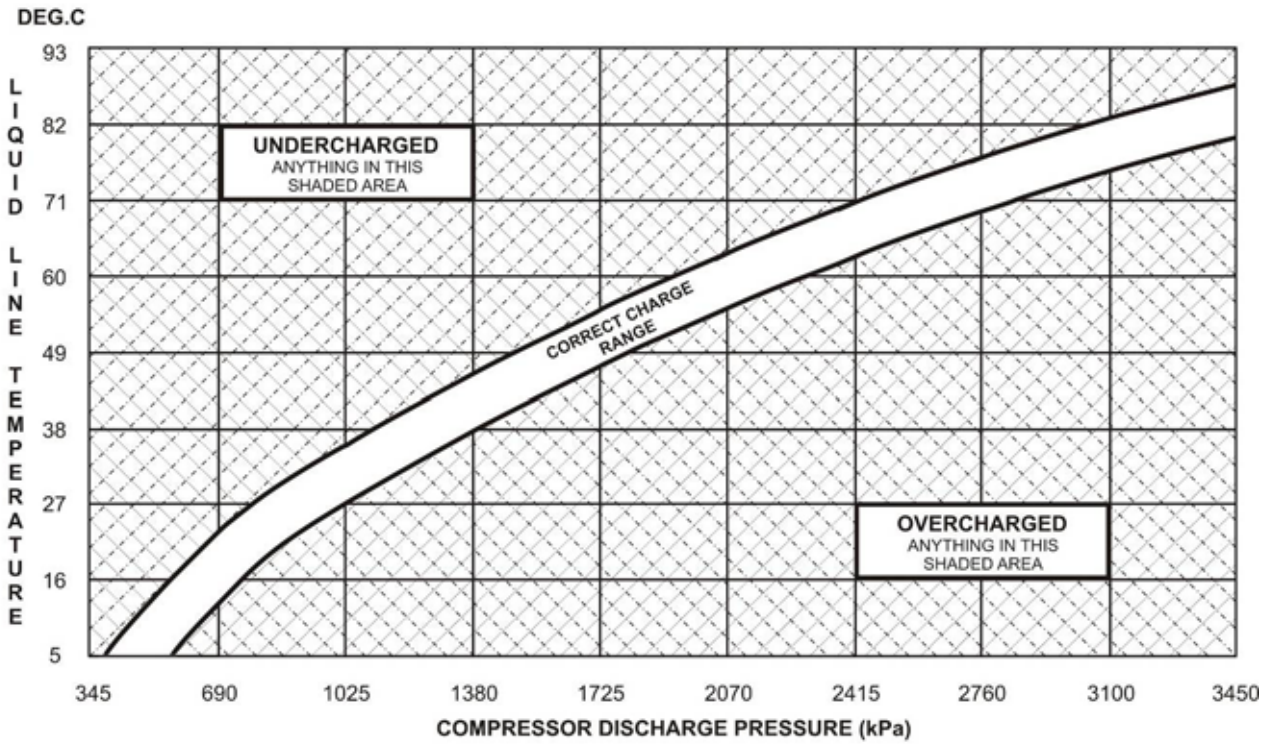


Ensure the engine fan is operating whenever the air conditioner compressor is operating.

13. Check the condenser cleanliness and compressor drive belt tension.
14. Check the evaporator drains are clear.
15. Push the INTAKE RAMAIR and VENT knobs on the heater and air-conditioning control panel fully in, then set the heater lever to the OFF position and the air-conditioning lever fully to the left-hand side (COLD).
16. Set the vent lever to the face/feet position (fully left) and turn the fan onto its highest speed setting.
17. Check the air being discharged through the left-hand side cabin vent using a suitable thermometer. The outlet temperature should be between 6°C and 10°C.

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- 18. Conduct a thorough leak test using a UV leak detector light source.
- 19. Check the gas charge using the **Correct Charge Range** chart (Figure 2).



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Figure 2 Correct Charge Range

END

Distribution List: **VEH G 71.0 – Code 2** (Maint Level)
(Sponsor: LV SPO, Mdm/Hvy B Vehicles)
(Authority: TRAMM)

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