

**RAIL COACH FACTORY, KAPURTHALA**

**MD22161**

**Date: 27.05.2026**

**Sub: CAMC for Automatic Fire/Smoke Detection system(FSDS) in Non-AC coaches . \***

With reference to the above subject, CAMC (Annexure-C rev.02) on the basis of RDSO guidelines has been prepared and being sent for further n/a.

  
Dy. CME/Design/Fur

Dy. CPLE- II

Dy.CMM/LHB

Copy for kind information:-  
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Annexure-C (Rev.02)

**TERMS & CONDITIONS AND SCOPE OF WORK OF CAMC**

**NAME OF WORK:** Comprehensive Annual Maintenance Contract for FDS (AUTOMATIC FIRE/SMOKE DETECTION SYSTEM) FOR NON AC COACHES retro-fitment in IR for a period of six years in warranty.

**1.SCOPE OF WORK:**

- i. For CAMC guidelines, ANNEXURE-E of RDSO letter no MC/ACF/Fire Detection/Non AC dated 23.12.2024 shall be followed.

During CAMC and preventive maintenance visits, following activities are to be attended and their satisfactory compliance is to be certified by Railways.

- a. Common maintenance schedule for Fire/smoke detection system.

S.no	Activities description	D2	D3	SS1	SS2	SS3
1.	Check air flow reading, it should be within the range i.e. $F_n \pm 20\%$ , where $F_n$ is the normal air flow value.	√	√	√	√	√
2.	If less than $F_n - 20\%$ , clean the filter and re-check	√	√	√	√	√
3.	If still less than $F_n - 20\%$ , flush the pipe line with vaccum cleaner and check. If problem still persists, seek further guidance from Supplier/OEM.	√	√	√	√	√
4	If more than $F_n + 20\%$ , check intactness of the pipe & capillary network and seek further guidance from Supplier/OEM.	√	√	√	√	√
5.	Check intactness of power supply input voltage from DC power supply to detector and output voltage from detector to other devices.	√	√	√	√	√
6.	Check back up battery voltage if back up battery voltage is less than 18 VDC seek further guidance from Supplier/OEM.	√	√	√	√	√

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7.	Conduct smoke test by simulating smoke generation from any source e.g. smoke generator at the farthest end from the system and verify detector performance as per maintenance manual. If any discrepancies observed, investigate with firm's consultation	√	√	√	√	√
8.	Clean the sampling points, sampling pipe and capillaries by vacuum cleaning	√	√	√	√	√
9.	Check/Replace any defective/malfunctioning parts and carry out smoke test	√	√	√	√	√
10.	Maintenance free 7AH 12 V Battery Unit 2nos. (per coach)	√	√	Must Replace	Must Replace	Must Replace
11.	Check Inline filter 1 no. (per coach)	√	√	√	Must Replace	Must Replace
12.	Complete testing of the system including replacement of must change items (free of cost by the firm if under warranty)	√	√	√	√	√

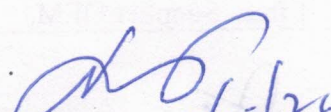
b. The time period of warranty shall be 6 years including the compulsory CAMC (Comprehensive Annual Maintenance Contract). Payment for CAMC service of each system shall be fixed percentage of per unit supply rate and shall be as per below tabulated rates. The payment may be done on quarterly basis.

S.No	Year of CAMC	Percentage of the per unit supply rate
1	1 <sup>st</sup> Year	5%
2	2 <sup>nd</sup> Year	6%
3	3 <sup>rd</sup> Year	7%
4	4 <sup>th</sup> Year	12% (including 5% for SS-2 maintenance cost)
5	5 <sup>th</sup> Year	8%
6	6 <sup>th</sup> Year	13% (including 5% for SS-2 maintenance cost)

  
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- i. The maintenance of equipment and all its accessories is the responsibility of Contractor.
- ii. For arbitration, clause 2900 of IRS conditions of the contract revised through Railway Board's letter No. 2018/TF/Civil/Arbitration Policy dt.12.12.2018 shall be applicable.
- iii. Only in case there is any physical damage or equipment is broken/missing the same will be replaced on chargeable basis. Else in all other cases the defective material/component will be part of CAMC and shall be repaired free of cost at the first availability of the train.

## **2) RESPONSE TIME FOR EMERGENCY/BREAKDOWN VISITS:**

In case a failure is reported by a consignee, qualified service engineers/Technician should visit their site within 48hrs. In case fault requires pit line attention, the maximum downtime of the FDS system shall be 72 hours after the Coach has been provided on the Pit Line for attending to the failure and intimation sent to the Contractor. In other cases, the maximum downtime of the FDS system shall be 48 hours after technician reporting at site. Failure to adhere to this will invite penalty as per Clause (6) below. Railway shall carry out joint inspection engineers/technician visit site on day qualified service.

Complaints shall be lodged by consignee by Written letter, Fax, E-mail, Phone, SMS or per bearer at address given by Contractor. The responsibility to keep the failure reporting address details current will rest with the contractor.

## **3) PLACE OF WORK:**

**Installation and Service Locations:** The contractor is liable for maintenance of FDS in IR coaches at workshop premises or coaching depots across the concerned Zonal Railways as assigned by user. This applies to rakes (specific train numbers) mentioned in clause (A) of RDSO letter No. MC/AC/Fire Detection/Non-AC dated **23.12.2024**.

## **4) INSPECTION:**

Nominated representative SSE-in-charge of the concerned depot will be the representative of Engineer in-charge for the subject work. The contractor is advised to contact the Engineer in-charge or his representative for inspection purpose.

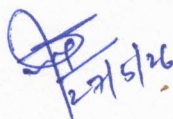
## **5) COMPLETION PERIOD:**

The warranty period for FDS system is 6 years. It includes the compulsory comprehensive Annual Maintenance Contract(CAMC) as per RDSO letter no MC/ACF/Fire Detection/Non-AC dated 26.05.2025. The CAMC will start from the 1<sup>st</sup> year of the supply as per clause 1(B) above.

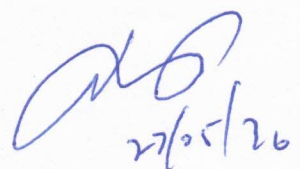
## **6) PENALTY CLAUSE:**

Penalty shall be levied on the contractor at the rate of 500/-coach per day for not adhering to response time stipulated in clause under para2.

  
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## 7) PAYMENT TERMS:

The contractor shall arrange to submit the bills after completion of work in triplicate to Depot officials who will verify and submit bill to the Office of Senior Divisional Mechanical Engineer, respective zonal Railway along with M Book certified by the CDO for payment.

Normally quarterly payment under CAMC will be made to the contractor within 30 days from the end of that quarter subject to submission of the following documents by the contractor to the paying authority assigned by the consignee.

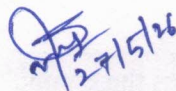
- a) Depot officials' certificate for work done under CAMC with down time and penalty calculation in the prescribed format as per Clause 6 for penalty calculation.
- b) A certificate by consignee that no spare part is due with the contractor and performance certificate from SSE that maintenance works are carried out as per the contract agreement with entire satisfaction of Railway.
- c) Bills submitted by the contractor and accepted by consignee.
- d) No extra charge for repair will be admissible.
- e) Only payment for Executed Coaches will be made duly certified by consignee.

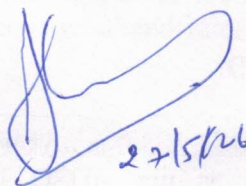
Railway administration will make arrangement for payment through NEFT mode only. Payment is not applicable for not attending the schedule visit on the part of the contractor.

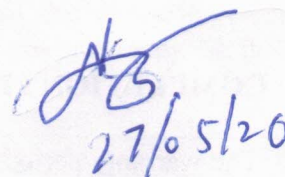
Income tax plus surcharge on income tax as applicable at the time of billing shall be deducted from the bills and other tax as applicable on total contract cost will also be deducted as per extant rules.

The associate Accounts officer shall be the bill paying authority. Rate is inclusive of GST. GST shall be paid as per prevailing rate and as per applicable guidelines of Railway.

  
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