

TENDER DOCUMENT- I



N. F. RAILWAY
NEW GUWAHATI DIESEL LOCO SHED
(MECHANICAL DEPARTMENT)

TENDER DOCUMENT

OF

E-TENDER NOTICE NO.: NGCD-AMC-AC-EL-03 -26-27

Name of the Service: AMC of Electric Loco Cab Air Conditioners mounted on Roof of all classes of three Phase Locomotives of Diesel Loco Shed, New Guwahati, N.F. Railway for a period of 1 Year.

Tender closing date and time: 07.07.2026 at 15:30 hours

System of Tendering: OPEN TENDER

System of Tendering: Open

Office of Sr.DME/ Diesel/ Mechanical
New Guwahati Diesel Loco Shed
Bamunimaidam
Guwahati – 781021

NORTHEAST FRONTIER RAILWAY

(Mechanical Department)

Important Notes for Intending Tenderer

Tender No: NGCD-AMC-AC-EL-03 -26-27with Closing Date 07.07.2026

NOTE

- 1) Tenders have been invited for and on behalf of the President of India for the work mentioned as per NIT.
- 2) The tender document is available after having deposited the requisite cost of the tender document as per NIT. It is understood that you are agreed to abide by the conditions those are laid down in the tender document when you submit the tender.
- 3) The tender document includes various chapters, drawings and annexure as enclosed, those are integral parts of the tender documents.
- 4) Tender documents are not transferable and cost of Tender document is not refundable.

GENERAL INSTRUCTIONS

- i) Tenderers intending to participate in the e-Tender must make payment of Cost of Tender Document through net-banking, Debit/Credit Card, Payment Gateway as per the provision available in IREPS works/service tender module. IREPS e-receipt for cost of Tender Document is to be uploaded.
- ii) Tenders other than in form of e-Tendering shall not be accepted against this tender. For this purpose, tenderers are required to register themselves with IREPS. Registration requires procurement of Class III Digital Signature Certificate and Digital Encryption Certificate.
- iii) Rates entered in to rate page shall only be considered. Rates offered in any other form / letter by the tenderer shall not be considered.
- iv) In case of any difficulty faced by the tenderer while submitting their bid in the IREPS website assistance from help desk available with the website may be sought.
- v) Railway Administration shall not be responsible for any delay/difficulties /inaccessibility of the down loading facility for any reason whatsoever.

TOP SHEET

1. Name of the Service	AMC of Electric Loco Cab Air Conditioners mounted on Roof of all classes of three Phase Locomotives of Diesel Loco Shed, New Guwahati, N.F. Railway for a period of 1 Year
2. Tender Notice No.	NGCD-AMC-AC-EL-03 -26-27 with Closing Date 07.07.2026
3. Tender Value	₹ 15,29,420.29 (Rupees Fifteen Lakhs Twenty Nine Thousand Four Hundred Twenty and Paise Twenty Nine only)
4. Period of Contract	01 Year.
5. Type Of Contract	SERVICE (Open Tender)
6. Bid security/EMD	₹30,600.00 (Rupees Thirty Thousand Six Hundred only)
7. Tender System	Open Tender
8. Type of tender	Single packet system
9. Date & Time of closing of the bid	07.07.2026 at 15:30 hours
10. Date and Time of Opening of bids	After closing Date & Time
11. Cost of Tender Form	Nil (as per Clause 3 of part I of GCC Services 2018)
12. Tender Submission mode	ONLINE
13. Mode of Tendering	E – tendering
14. Offer validity	60 days

N. F. RAILWAY
(Mechanical Department)

Notice for e-tendering Service contract vide Sr.DME/D/NGC Notice No. NGCD-AMC-AC-EL-03 -26-27
with Closing Date 07.07.2026

Open tender through e-tendering system is invited in single packet system for the work mentioned below:-

S N	Tender No.	Name of Service	Tender Value	Bid security	Cost of tender (Non – refundable)	Completion period	Date and time of	
							Closing of tender	Opening of tender
1	NGCD-AMC-AC-EL-03 -26-27 with Closing Date 07.07.2026	AMC of Electric Loco Cab Air Conditioners mounted on Roof of all classes of three Phase Locomotives of Diesel Loco Shed, New Guwahati, N.F. Railway for a period of 1 Year.	₹ 15,29,420.29	₹30,600.00	Nil	01 year	07.07.2026 at 15:30 hours	After closing of the tender.

Note: -

1. The complete information with the tender document of above e-tender will be available up to 15.00 hrs of 07.07.2026 in website <http://www.ireps.gov.in>. The tenderers require submitting their e – tender on this website only.
2. Tenderer other than in the form of e-tendering shall not be accepted against above e-tenders. For this purpose, contractors are required to get themselves registered with IREPS website along with class III digital signature certificates.
3. Rates entered into rate page and dully signed digitally shall only be considered. Rates in any other financial entity on any other form/letter if attached by tenderers shall not be considered.
4. Documents being attached should be signed digitally by the tenderer.
5. The tenderer/contractor is advised to make payments for the cost of tender document/EMD (as applicable) for this instant tender in the form of ONLINE payment modes only available on IREPS portal, i.e. net banking, debit card, credit card etc. Manual payments through Demand Draft, Bankers cheque, Deposit receipts, FDR etc. are not acceptable.
6. Tender will be opened at the specified time & date. In case the specified date is declared a holiday, the tender would be opened at the same time on the next working day.
7. In case of any difficulty help desk available on the website of IREPS may be approached.

PART-A

On behalf of the President of India, Sr.DME/ Diesel/ New Guwahati, Northeast Frontier Railway, Guwahati, (herein after referred to as “Railways”) invites on line tenders from established and reliable contractor(s)/ tenderer for “AMC of Electric Loco Cab Air Conditioners mounted on Roof of all classes of three Phase Locomotives of Diesel Loco Shed, New Guwahati, N.F. Railway for a period of 1 Year”.

The Standard General Conditions of Contract (GCC) for Service contract 2018 with all correction slips up to latest as amended from time to time will be applicable for this contract by DLS/NGC Department. All the Rules, Terms, Conditions, Eligibility Criteria of the Standard General Conditions of Contract (GCC) for Service contract 2018 and this Tender Document will Supersede IREPS Rules, Terms, Conditions, Eligibility Criteria etc. Tenderer participating in this tender will be considered well familiar with the clauses available in the GCC for Service Contract. In case any clarifications/query the tenderer may read the GCC 2018 for Service Contract. If any typing error found in Terms and Conditions of GCC in this Bid/Document the Original as mentioned in GCC for Service Contract will hold good.

1. If the tenderer(s) expire(s) after the submission of his / their tender or after the acceptance of his / their tender, the Railway shall deem such tender cancelled. If a partner of a firm expires after the submission of their tender or after the acceptance of their tender, the Railway shall deem such tender as cancelled, unless the firm retains its character.
2. Conditional tenders are liable to be rejected straight away. Railway reserves the right to reject such tenders summarily without assigning any reasons whatsoever.
3. A Bidder shall submit only one bid in the particular Bidding process. A Bidder who submits more than one bid will cause all of the proposals in which the Bidder has participated to be disqualified. No Bidder can be a sub-contractor while submitting a bid individually or as a partner in the same bidding process.
4. The bidder must not have suffered bankruptcy/insolvency during the last 5 years. The Bidder should submit an undertaking to this effect as part of the bid.
5. Joint Venture will not be permitted in this tender.
6. Rights of The Railway to Deal with Tender: The authority for the acceptance of the tender will rest with the Railway. It shall not be obligatory on the said authority to accept the lowest tender or any other tender and no tenderer(s) shall demand any explanation for the cause of rejection of his /their tender or the Railway to assign reasons for declining to consider or reject any particular tender or tenders.
7. If the tenderer(s) deliberately gives / give wrong information in his / their tender or creates / create circumstances for the acceptance of his / their tender, the Railway reserves the right to reject such tender at any stage.
8. Payment of Earnest Money Deposit (EMD) & Tender documents cost (TDC) in respect of e-tendering should be accepted through net banking or payment gateway only.
“However, for service contracts MSEs registered with District Industries Centres, Khadi and Village Industries commission, Khadi and Village Industries Board, Coir Board, National small Industries Corporation, Directorate of handicraft and Handloom, Any other body specified by MSME shall be supplied such tender documents free of cost on confirmation of their evidence to this effect exempted from payment of EMD.” (Authority Board’s L/No. 2016/CE- I/ CT/ 3/MSME dt Aug’2016).
9. Tenders containing erasures and / or alterations of tender documents are liable to be rejected. Any correction made by tender(s) in his/their entries must be attested by him / them.

10. **Tender Document Cost:** Not applicable.

11. Minimum Eligibility Criteria:-

11.1 **Financial Eligibility Criteria:** The bidder will be qualified only if they have minimum financial capabilities as below:-

- i) **T1- Annual turnover:** the bidder should have an aggregate financial turnover not less than 1.5 times the advertised bid value during the last three previous financial years and in the current financial year upto the date of opening of the tender. The audited balance sheet reflecting

financial turnover certified by chartered accountant with her stamp, signature and membership number shall be considered.

- ii) **T2-Liquidity:** The bidder should have access to or has available liquid assets, lines of credit and other financial means to meet cash flow that is valued at 5% of the estimated bid value net of applicant's commitment for other contracts. The audited balance sheet and/or banking reference certified by chartered accountant with her stamp, signature and membership number shall be submitted by the bidder along with bid.

Banking reference should contain in clear terms the amount that bank will be in a position to lend for this work to the applicant/Consortium. In case the Net Current Assets (as seen from the Balance Sheets) are negative, only the Banking references will be considered. Otherwise the aggregate of the Net Current Assets and submitted Banking references will be considered for working out the Liquidity.

The banking reference should be from a Scheduled Bank in India and it should not be more than 3 months old as on date of submission of bids.

Tenderer must submit relevant documents in support of having fulfilled above criteria. Offers not meeting the above eligibility criteria will be considered unsuitable. Railway reserves the right to accept/ reject any tender, without assigning any reason for the same.

Note: In case of audited Balance sheet is not available for financial year 2025-26, then a certificate from Chartered Accountant issued on the basis of any other Government approved document like GST Returns/VAT Statement (if applicable) will be considered. {Authority: Railway Board's letter no. 2016/EnHM/06/02, New Delhi, Dated 18.10.2018}.

11.2 Technical Eligibility Criteria:

- 11.2.1 **Work Experience:** The bidder should have satisfactorily completed, in the last three previous financial years and the current financial year upto the date of opening of the tender, one similar single service contract for a minimum of 35% of advertised value of the bid.

- 11.2.2 **Completed service contract:** includes on-going service contract subject to payment of bills amounting to at least 35% of the advertised value of the bid.

- 11.2.3 **Similar service contract means:** *Similar nature of the work vide PCEE office letter no. EL/W/29/Tender/Similar Works/299 dtd. 14/02/2011 is defined as the follows:*

"Supply, testing, commissioning of AC machines or AMC/CMC/Repair/Rehabilitation work of AC machines."

Work experience certificate from private individuals shall not be accepted. Certificate from public listed company/private company/Trusts having annual turnover of ₹ 500 crore and above subject to the same being issued from their Head office by a person of the company duly enclosing his authorization by the manairepsent for issuing such credentials.

Notes:

The bidder shall submit details of work executed by them in the prescribed format along with bid for the service contracts to be considered for qualification of work experience criteria clearly indicating the nature/scope of contract, actual completion cost and actual date of completion for such contract.

12. **The tenderers are required to submit proof as how they meet the minimum eligibility criteria as specified above in "clause 20" for the tendered work. In case they do not submit any proof for the same, the offer will be considered incomplete and will be summarily rejected.**

13. The following documents should also be submitted by the tenderer/s along with the tender in support of their credentials;

- List of Personnel, Organization available on hand and proposed to be engaged for the subject work.
- List of Plant and Machinery available on hand (own) and proposed to be inducted (own and hired to be given separately) for the subject work.

- c) List of Works completed in the last three financial years giving description of work, organization for whom executed, approximate value of contract at the time of award, date of award and date of scheduled completion of work. Date of actual start, actual completion and final value of contract should also be given.
 - d) List of works on hand indicating description of work, contract value, and approximate value of balance work yet to be done and date of award.
 - e) The tenderer must establish that he follows all Labour laws and makes payment to his staff in accordance with relevant Acts through documentary evidence like copy of latest returns filed for PF, ESI code No. etc.
14. The contractor shall have complete technical know-how of housekeeping services, its operating procedures and work methods to get the required job done with minimum possible resources. A proof to substantiate this shall be enclosed along with tender.
15. The contractor shall use all the resources such as cleaning machines, materials & manpower strictly as per specifications as laid down in tender document.
16. **Police Verification of Labour Employed by Contractor:** The Contractor is required to submit Police Verification certificates for all contractual staff that she/he will be hiring for delivery of services for Indian Railways. The format for the same is provided in the **Annexure VIII**.
17. Tenderers shall ensure that all the documents submitted by them are original or duly attested. The photocopies without attestation will not be accepted and will be ignored.
18. The contractor shall provide the evidence of the possession of all the machines/equipment as per this document before signing the agreement.
19. **Tenderers Credentials:** Documents testifying tenderers previous experience and financial status should be produced along with the tender or when desired by competent authority of the Railway.
20. The Tender can be bid only through e-tendering system by logging in to www.ireps.gov.in. The tender will be closed at 15:00 hours on the date as specified above.
21. Non-compliance with any of the conditions set forth therein above is liable to result in the tender can be rejected.
22. **Execution Of Contract Documents:** The successful Tenderer(s) shall be required to execute an agreement with the President of India acting through the Divisional Mechanical Engineer; New Guwahati Diesel Loco Shed, Bamunimaidam; Guwahati – 781021; N. F. Railway, for carrying out the work according to Standard General Conditions of Contract for Services-January, 2018, Special Conditions /Specifications annexed to the tender and Specification for work and materials of Railway as amended/corrected up to latest Correction Slips, mentioned in tender form (First Sheet).
23. **Partnership Deeds, Power Of Attorney Etc.:** The tenderer shall clearly specify whether the tender is submitted on his own or on behalf of a partnership concern. If the tender is submitted on behalf of a partnership concern, he should submit the certified copy of partnership deed along with the tender and authorization to sign the tender documents on behalf of partnership firm. If these documents are not enclosed along with tender documents, the tender will be treated as having been submitted by individual signing the tender documents. The Railway will not be bound by any power of attorney granted by the tenderer or by changes in the composition of the firm made subsequent to the execution of the contract. It may, however, recognize such power of attorney and changes after obtaining proper legal advice, the cost of which will be chargeable to the contractor.
24. The tenderer whether sole proprietor, a limited company or a partnership firm if they want to act

through agent or individual partner(s) should submit along with the tender or at a later stage, a power of attorney duly stamped and authenticated by a Notary Public or by Magistrate in favour of the specific person whether he/they be partner(s) of the firm or any other person specifically authorizing him/them to submit the tender, sign the agreement, receive money, witness measurements, sign measurement books, compromise, settle, relinquish any claim(s) preferred by the firm and sign "No Claim Certificate" and refer all or any disputes to arbitration.

25. Employment/Partnership Etc. of Retired Railway Employees:-

- a) Should a bidder be a retired Manager of the Gazetted rank or any other Gazetted officer working before her retirement, whether in the executive or administrative capacity or whether holding a pensionable post or not, in any department of any of the railways owned and administered by the President of India for the time being, or should a bidder being a partnership firm have as one of its partners a retired Manager or retired Gazetted Officer as aforesaid, or should a bidder being an incorporated company have any such retired Manager or retired officer as one of its Directors or should a bidder have in her employment any retired Manager or retired Gazetted Officer as aforesaid, the full information as to the date of retirement of such Manager or Gazetted Officer from the said service and in case where such Manager or Officer had not retired from Government service at least 2 years prior to the date of submission of the tender as to whether permission for taking such contract, or if the contractor be a partnership firm or an incorporated company, to become a partner or Director as the case may be, or to take the employment under the contractor, has been obtained by the bidder or the Manager or Officer, as the case may be from the President of India or any officer, duly authorized by her in this behalf, shall be clearly stated in writing at the time of submitting the bid. Bids without the information above referred to or a statement to the effect that no such retired Manager or retired Gazetted Officer is so associated with the bidder, as the case may be, shall be rejected.
- b) Should a bidder or contractor being an individual on the list of approved Contractors, have a relative(s) or in the case of partnership firm or company of contractors one or more of her shareholder(s) or a relative(s) of the shareholder(s) employed in gazetted capacity in the any department of the N. F. Railway, the authority inviting tenders shall be informed of the fact at the time of submission of tender, failing which the tender may be disqualified/rejected or if such fact subsequently comes to light, the contract may be rescinded in accordance with provision in Clause 7.4 of Standard General Conditions of Contract for Services.

26. Tender not accompanied by the required earnest money in the requisite form as mentioned in the tender document shall be summarily rejected.

27. The cost of tender document is non-refundable. (as per applicability)

28. Conditional tenders can be rejected as per sole discretion of railway administration. Railway reserves the right to cancel the tender without assigning any reason whatsoever.

29. Offers with validity of offer less than what is prescribed in the tender documents will be rejected summarily.

30. If the date of opening happens to be a BANDH or Holiday or Natural calamities, the tender will be opened at the same time on the following working day.

31. The railway reserves the right to cancel the tender without assigning any reason.

32. Any other information required by the tenderer can be obtained from the office of Sr. DME/ Diesel/ Mechanical, New Guwahati Diesel Loco Shed, Bamunimaidam; Guwahati – 781021; N.F.

Railway, during the working hours.

33. The tenderer must obtain for himself on his own responsibility and his own expense all the information like area to be cleaned, availability of cleaning machines asked in this tender, infrastructure available at the DLS NGC etc. which may be necessary for the purpose of filling a tender and acquaint himself with all local conditions, means of access to the nature of work and all matters pertaining thereto before quoting rate in financial bid.

34. Disqualification of Bidders:

1. Employment/ Partnership etc. of Retired Railway Employees:

- (a) Should a Bidder be a retired Manager of the Gazetted rank or any other Gazetted Officer working before her retirement, whether in the executive or administrative capacity or whether holding a pensionable post or not, in any department of any of the railways owned and administered by the President of India for the time being, or
- (b) Should a Bidder being partnership firm have as one of its partners a retired Manager or retired Gazetted Officer as aforesaid, or
- (c) Should a Bidder being an incorporated company have any such retired Manager or retired officer as one of its Directors or
- (d) Should a Bidder have in her employment any retired Manager or retired Gazetted Officer as aforesaid, then the full information as to the date of retirement of such Manager or Gazetted Officer from the said service and in case where such Manager or Officer had not retired from Government service at least one year prior to the date of submission of the Bid as to whether permission for taking such contract, or if the contractor be a partnership firm or an incorporated company, to become a partner or Director as the case may be, or to take the employment under the contractor, has been obtained by the Bidder or the Manager or Officer, as the case may be from the President of India or any officer, duly authorized by her in this behalf, shall be clearly stated in writing at the time of submitting the Bid (as per Annexure IV).

Bids without the information above referred to or a statement to the effect that no such retired Manager or retired Gazetted Officer is so associated with the Bidder. as the case may be, shall be rejected.

35. Should a Bidder or contractor being an individual on the list of approved Contractors, have a relative(s) or in the case of partnership firm or company of contractors one or more of her shareholder(s) or a relative(s) of the shareholder(s) employed in gazette capacity in any department of Indian Railway, the authority inviting bids shall be informed of the fact at the time of submission of Bid, failing which the bid may be disqualified/ rejected or if such fact subsequently comes to light, the contract may be rescinded in accordance with the provision in Clause 7.4 of the General Conditions of Contract.
36. If the bidder or any of its constituents has been levied with a penalty for violation of labour laws for three times in the last two years (from the date of opening of tender) by the appropriate enforcing agency like the Labour Commissioner etc.
37. The contractor shall be disqualified from participating in the bidding for services in a Railway division.
- 37.1 If any previous contract of the bidder or any of its constituents had been terminated under clause 7.4 in that Railway division, within the previous 2 years from date of submission of bids.
- 37.2 In that Railway division, the bidder or any of its constituents has been imposed a penalty equivalent to the maximum penalty that can be imposed under a previous contract, such a figure being specified, within the previous 2 years from date of submission of bids. (Period of 2 years shall be reckoned from the date on which the total accrued amount of penalties has reached the maximum penalty that can be imposed under the contract, as specified by the Competent Authority).

The declaration to this effect shall be furnished by the contractor as a part of his bid document. A format in this regard has been attached as Annexure IV. In case this declaration is found to be

false, process for 'banning of business' against the bidder/contractor shall be initiated as per extent rules.

Bids without the above information (Annexure IV) shall be rejected. This shall be mandatory for all the bidders.

38. Earnest money:

Tender received without the prescribed amount of Earnest Money Deposit (EMD) is liable to be summarily rejected. EMD required to be submitted by bidders on ireps portal as per ireps GTC.

MSEs registered with District Industries Centres, Khadi and Village Industries Commission, Khadi and Village Industries Board, Coir Board, National Small Industries Corporation, Directorate of Handicraft and Handloom, any other body specified by Ministry of MSME or Startups as recognized by Department of Industrial policy & Promotion shall be exempted from payment of minimum EMD detailed in the bid.

The bidder seeking EMD exemption, must submit the valid supporting document for the relevant category with bid. MSE registered agencies for the item tendered will be exempted from payment of Earnest Money (EMD).

39. COMPLIANCE

- i. The offer should be fully in accordance with the drawing and specification. Details of variation from the drawing and specification, if any, should be clearly indicated and in such event a certificate from the user must be furnished to the effect that the product offered performs the requisite functions satisfactorily. The name of such user should also be indicated.
- ii. The bidder should indicate clause by clause that either his offer complies in every respect with the requirements of each clause and sub clause or precisely how they differ from the requirements of the tender (bid).
- iii. Should the bidder wish to depart from the provision of the specification and drawings on account of manufacturing practices or any reason he should clearly draw attention in his offer to the proposed point of deviation and submit complete information with justifications, drawings and specifications to explain the related merits of his proposal vis-a-vis the stipulations laid down in tender (bid) documents for appreciation and understanding of Railways. In the absence of any such deviation it will be deemed that the bidder is fully satisfied and the intents of specifications and drawings and shall comply with statutory provisions laid in the tender (bid) documents. The statement of deviations, if any, should be given in the shape of Performa
- iv. In their offer, the bidder shall clearly indicate all deviations from the specifications or conditions stipulated in the entire booklet. In the absence of any such indication the offer shall be taken as confirming to the provisions stipulated in these specifications/drawings and booklet

40. ALL OTHER TERMS AND CONDITIONS, ANNEXURES TO BE FOLLOWED AS PER GCC SERVICE 2018 WITH LATEST CORRECTION SLIPS (UPLOADED HERewith THE TENDER DOCUMENT) AND DOCUMENTS TO BE SUBMITTED ACCORDINGLY. IF DOCUMENTS SUBMITTED BY THE BIDDERS ARE NOT FOUND IN COMPLIANCE WITH GCC SERVICES 2018 AND TENDER DOCUMENT THEN THE BIDDERS SHALL NOT BE CONSIDERED FOR FURTHER EVALUATION.

PART-B

SCOPE OF WORK

1.0 INTRODUCTION:

- 1.1 The tender shall be governed by General conditions of contract for Services-2018 or latest (with correction slips).
- 1.2 If there are varying or conflicting provisions in the documents forming part of the contract, Sr.DME/DLS/NGC shall be deciding authority with regard to the intentions of the provisions and decision shall be final and binding on the contractor.

2.0 Name of Service: AMC of Electric Loco Cab Air Conditioners mounted on Roof of all classes of three Phase Locomotives of Diesel Loco Shed, New Guwahati, N.F. Railway for a period of 1 Year.

3.0 Scope of Work:

The Scope of work for the service 'AMC of Electric Loco Cab Air Conditioners mounted on Roof of all classes of three Phase Locomotives of Diesel Loco Shed, New Guwahati, N.F. Railway for a period of 1 Year' is as under:

- 1.This contract covers the preventive maintenance for Roof mounted Air conditioning system in the cabs of all classes of Electric Locomotives. This contract shall be annual maintenance contract and covers all preventive maintenance of Air conditioning system during TI, IA, IB, IC, TOH & IOH schedule of Electric Locomotives as per RDSO SMI-293 (Annexure-B2) to ensure trouble free service of the same during service in loco.
- 2.This also includes servicing and replacement of essential components and replacement of optional items as per the need in the Air conditioners of loco during TI, IA, IB, IC, TOH & IOH schedule of Electric Locomotives.
3. In addition to preventive maintenance, all breakdown maintenance calls as and when reported shall be attended by the contractor which is in addition to the normal visits.
- 4.Replacement of essential spares (other than Annexure-B1) & hardware items as per the preventive maintenance schedule given in RDSO SMI-293.
- 5.Gas charging to be carried out as & when required and on replacement of any part of the system.
- 6.Establishing the need for replacement of items given in Annexure-B1 on condition basis after joint inspection at DLS/NGC and their representative as per the need.
- 7.The contractor shall also undertake the responsibility of keeping the essential & standby spares at DLS/NGC. If any of the components indicated in the list given by Annexure-B1 are to be replaced, the same should be fitted by the contractor on the Air conditioners while carrying out the scheduled maintenance activities or on requirement.
- 8.Railways shall provide 1 (one) day time at the time of each TI, IA,IB & IC schedule of loco & 03 days for TOH & IOH schedule loco to carry out the preventive Maintenance Schedule activities as detailed above.
9. The components/ spares to be used for replacement should be of OEM standard or should be procured from the sources given in RDSO specification No. RDSO/2007/ EL/ SPEC/ 0055 (Rev1).
- 10.Railway will provide a list of Electric Locomotives in which Air conditioners are required to be maintained during the AMC period. In case these locos are transferred to other shed and new loco included in holding of the shed during the AMC period then coming locos may be included for AMC of balance period and payment for the same will be made in proportion to the service provided by the contractor for that locos .If under AMC loco transferred to other shed then it will be removed from AMC contract after release HQ/NFR letter date.
- 11.Contractors shall prepare inspection report as per the format provided by the concern section for every TI, IA, IB, IC, TOH and IOH inspection.

LIST OF OPTIONAL ITEMS TO BE REPLACED ON CONDITION BASIS DURING AMC PERIOD

SN.	ITEM Description	Qty.	Unit
1	COMPRESSOR	4	Nos.
2	THREE PHASE CONDENSER MOTOR	4	Nos.
3	THREE PHASE BLOWER MOTOR	4	Nos.
4	BLOWER EVAPORATOR	4	Nos.
5	FAN BLADE CONDENSER	4	Nos.
6	COOLING COIL	4	Nos.
7	CONDENSER COIL	4	Nos.
8	FILTER DRIER	10	Nos.
9	HIGHPRESSURECUT- OUT	10	Nos.
10	LOW PRESSURE CUT- OUT	10	Nos.
11	HIGH PRESSURE SWITCH	10	Nos.
12	HEATER	10	Nos.
13	OVER HEAT PROTECTOR	10	Nos.
14	CONTACTOR FOR BLOWER MOTOR	10	Nos.
15	CONTACTOR FOR COMPRESSOR/CONDENSOR MOTOR	10	Nos.
16	CONTACTOR FOR HEATER	10	Nos.
17	AUXILIARY CONTACTOR SIDE MTD	10	Nos.
18	AUXILIARY CONTACTOR TOP MTD.	10	Nos.
19	MCB, 16A,TP for main MCB	10	Nos.
20	WIRED REMOTE CONTROLLER	10	Nos.
21	TIME DELAY RELAY	10	Nos.
22	ELECTRONICS THERMOSTAT DISPLAY (RDSO/ PE/SPEC/ AC/0020 Alt-latest)	10	Nos.
23	EXPENSION VALUE (EMERSON/DANFOSS/ ENDFOSS)	4	Nos.
24	ROTARY SWITCH KAYCEE	10	Nos.
25	RETURN AIR FILTER	10	Nos.
26	PLATE MOUNTED SOCKET	6	Nos.
27	PLATE MOUNTED PLUG	6	Nos.
28	CABLE MOUNTED SOCKET	6	Nos.
29	CABLE MOUNTED PLUG	6	Nos.
30	CONTROL LEAD LOCO	10	Nos.
31	BEARING (6202 C3) OF BLOWER MOTOR	14	Nos.
32	BEARING (6202 C3) OF CONDENSER MOTOR	4	Nos.
33	CONTROL TRANSFORMER 5V/110V,200VA	8	Nos.
34	MPCB FOR CONDENSOR MOTOR(0.6-1.6A)	10	Nos.
35	CHANGE OVER MCB 4P,40A	10	Nos.
36	MPCB FOR COMPRESSOR (4.0-6.3A)	10	Nos.
37	MCB, 6A, DP FOR CONTROL CIRCUIT	10	Nos.

4.0 GENERAL CONDITIONS: -

- i. The work shall be done in accordance with Tech. Specification. The contractor is advised to go through the Tech. Specification before offering their quotations. **THESE TECHNICAL SPECIFICATIONS ARE DETAILED TO MEET THE DESIRED QUALITY OF WORK. HOWEVER, IN CASE OF ANY AMBIGUITY / TYPOGRAPHICAL MISTAKE, NECESSARY CLARIFICATION MAY BE COLLECTED FROM SR.DME/DSL/NGC OFFICE BEFORE TENDER OPENING TILL COMPLETION OF WORK. THE DECISION OF SR.DME/DSL/NGC IS BINDING AND FINAL IN NATURE.**
- ii. Defective parts shall only be replaced with OEM's spares or equivalent as mentioned in Scope of Work.
- iii. In case of any dispute, regarding work the decision of the Sr. Divisional Mech. Engineer/DSL/ New Guwahati, NFR will be final and binding to the contractor.
- iv. If any damage is caused as a result of execution of work, it shall be responsibility of the contractor to repairs and make good the loss properly at his own cost to the satisfaction of the Railway administration/ representatives.
- v. No part of the work can be got executed by the other agency except by the staff of contractor.
- vi. Any defects /discrepancy within the specified scope of work pointed out to the contractor during joint inspection shall be rectified by the contractor at his own cost.
- vii. The tenderer shall responsible for obtaining the approval of local authority (if required).
- viii. Inspection of material in case of replacement shall be done by the authorized representative of SR.DME/DSL/NGC.
- ix. A joint survey before handing over the System to the Contractor will be done between Contractor and Railway/Old Contractor. A Certificate of handing/taking over of system in working condition will be given by Railway to successful bidder duly supported by Joint Inspection Report. Similarly after completion of contract, a joint survey will be done between Contractor and Railway. Contractor should be responsible for handing over of system in working condition.
- x. All the safety precautions for men and material working within Railway premises should be taken by the contractor. The contractor shall be responsible in all respect, if any of their workmen meets with an accident due to non-observation of the safety precautions. Tenderer shall indemnify Railway against any or all claims which may arise because of any reason under any circumstances / incident / accident.
- xi. The work shall be planned by the contractor in consultation with consignees of work to avoid any interruption to normal power supply and passenger facility.
- xii. The Railway shall not be responsible for any loss or damage to contractor material / equipment, tools and plants etc. from any cause what so ever.
- xiii. The works shall be carried out to the full satisfaction of authorized representative SR.DME/DSL/NGC.
- xiv. To and fro transportation, loading and unloading of T&Ps and material from the firm's works place to Railway site shall be arranged by the contractor.
- xv. The rates quoted by the tenderer and accepted by the Railway administration shall hold good till completion of the work and no additional individual claims will be admissible on account of the fluctuation in market rates, increase in taxes / levies / toll taxes etc.
- xvi. Railway reserves the right to reject all or any tender without assigning any reason thereof or relax or change any of the conditions / specifications stipulated in the tender.
- xvii. The contractor shall intimate inspection program of the work in advance. The equipments / instruments required for checking at site or in office place shall be arranged by the contractor.
- xviii. Water and Necessary Electricity & Electrical connection shall be provided at Diesel Loco Shed, New Guwahati on free of cost. **All the other items like welding sets, welding consumables, etc. as required during execution of work shall be arranged by contractor.**

5.0 PAYMENT:

- i. Bills correct in all respect and accompanied with relevant documents shall be submitted to the office of Sr. Divisional Mechanical Engineer, Diesel Loco Shed, New Guwahati, Bamunimaidam, Guwahati (Assam) - 781021 in Triplicate.
- ii. Payment of Contractor's Bill will be made by railway on quarterly basis of actual no. of locos in which CAMC/preventive maintenance is carried out by contractor, within the reasonable period of time after submission of bill correct in all respect & supported by necessary documents and signed on measurement book.
- iii. All the payment will be released through Sr. Divisional Finance Manager, Guwahati, N.F. Railway within a reasonable period from the date of receipt bills accompanied by necessary documents.
- iv. The contractor should submit bills for the subject work duly certified by the concerned authorized

Engineer-in-charge as per extant rule.

- v. National Electronic fund transfer systems (NEFT) for making payments to contractors has become mandatory and hence please submit the bank account details in the format mentioned. The attested copy of the NEFT format details by the concerned Bank Manager should be enclosed with the bill. In case of non-payment through ECS/EFT or where ECS/EFT facility is not available, payment will be released through cheque.
- vi. Taxes, Duties, LD, Cess and Penalties etc. as applicable shall be deducted from the Contractor's bill and payment of bill will be made by "Sr. Divisional Finance Manager, Guwahati, N.F. Railway".
- vii. Railway will reimburse the Service tax / GST as applicable as per extant guidelines / rules to Contractor on production of necessary documentary proof of payment of service tax / GST to Government during passing of the bill.
- viii. Railway will reimburse the GST as applicable as per extant guidelines / rules to Contractor during passing of the bill.

6.0 CONDITIONS FOR ISSUE OF IDENTITY CARDS BY CONTRACTORS:

- a) The contractor is bound to issue Identity card to each and every person employed by him and deployed for execution of the contract work as given below, at his own cost. Failure on the part of the contractor to issue identity cards to their employees will be treated as breach of contract conditions and therefore will be dealt as per GCC.
- b) It is mandatory on the part of every employee, deployed by the contractors to keep in his possession, the identity card, issued by the contractor throughout the execution of the work. Failure to possess such identity will be treated as unauthorized persons in the Railway premises. Such persons shall be liable for prosecution as per law.
- c) It is mandatory for the contractors to submit the list of employees issued with the identity cards and deployed for execution of the particular contract, to the Railway's Engineer at site before commencement of the work and also for any subsequent changes made during the execution of work.
- d) No claims whatsoever arising out of implementation of special conditions pertaining to issue of Identity cards shall be admissible.
- e) As soon as the contract work is over or a contract worker leaves the contractor, the contractor must cancel the identity card.
- f) The contractor after award of the contract will employ supervisor who will look after this work along with identity cards and telephone no. The contractor shall be responsible for the general conduct and discipline of his labours / staff deputed for this work. However, Railway reserves the right to take action against any lab staff due to any misconduct during the period of contract.

7.0 Contractor shall submit the Police Verification Certificate of the labour deployed by him for this contract. Concerned SSE shall signed the I-card ensuring the police verification certificate of labour deployed by the contractor.

8.0 PENALTY:

8.1 The penalties as below will be imposed for non execution of schedule maintenance activities. Incomplete/partial schedule maintenance activity will also be considered as "No Schedule Activity".

Schedule Type	Penalty Amount in Rs.
IT schedule	Rs.1,000/-
IA, IB & IC schedule	Rs.2,000/-
TOH Schedule	Rs.5,000/-
IOH Schedule	Rs.8,000/-

8.2 The defective Cab AC is to be attended on arrival of loco at DLS/NGC for schedule and unschedule maintenance / inspections. Failure in attending the defective Cab AC will result in penalty of Rs.2000/- per cab AC per incidence.

8.3 If loco is turned out from shed with Cab AC in defective condition, payment will not be made (Prorate basis) for the time period for which loco is on line with defective Cab AC's assuming that it is not in AMC.

9.0 ALLOCATION: 050-512-32

10.0 INSPECTION:

- i. Joint inspection by railways and the authorized representative of the contractor during maintenance of Air conditioner is to be carried out for ascertaining the need for replacement of optional items which needs to be changed on condition basis. This will be form the basis for payment of optional items. The maintenance activities executed in TI, IA, IB, IC, TOH & IOH schedule of Loco including fitment of essential / standby spares on Electric Loco cab Air conditioners will be jointly inspected by Railways and the authorized representative of the contractor for ensuring trouble free performance of the Air conditioners and a joint inspection certificate will be issued before leaving the Loco from shed. It should be ensured that roof mounted Air conditioning system in the cabs of Electric locomotives is working as per the requirement of RDSO specification no. RDSO/2007/EL/SPEC/0055 (Rev-1) issued in November - 2007 (revised on 07/10/2014) after every scheduled maintenance.
- ii. **All the material to be supplied by the contractor for replacement shall be delivered to SSE/D/G/NGC at sub-store through proper delivery challan. The material will be inspected by the authorized representative of Sr.DME/DSL/NGC and will be issued to the contractor as and when required.**
- iii. After every scheduled / breakdown maintenance / repair, all the repaired components as well as CAB ACs shall be finally inspected by the authorized representative of Sr.DME/DSL/NGC. The final inspection certificate should contain details of materials actually replaced and / or repaired by contractor during the maintenance or repair work

11.0 WARRANTY:

The schedule maintenance activities carried out on the Air conditioning system of Electric Loco will be guaranteed till the next maintenance schedule for trouble free performance of the Air conditioners and also against the manufacturing defects of the standby spares replaced for a period of one year from the date of replacement and fitment on the Air conditioning system of Electric Loco. Consumables & essential items will be replaced as & when required throughout the contract period including gas charging on free of cost as these items are covered in the rate of AMC. In case of defective workmanship and inferior quality of the standby spares used, the contractor has to replace the defective standby spare (s) free of cost and similar guarantee of one year will be applicable to the replaced essential/ standby spare from the date of such replacement and fitment on the Air conditioners.

- 12.0 RELEASED MATERIAL:** Released material will be the property of Railway. All Released material shall be handed over to SSE/D/G/NGC and the same will be sent to Section In-charge of Concern Section with proper accountal by the contractor before preparation of bill. Tenderer shall take into consideration this aspect while quoting the rates.

- 13.0 OPTIONAL SPARES TO BE REPLACED DURING AMC:** All must change and optional items to be used during AMC shall be procured from CLW approved sources of Cab AC. If approved Cab AC sources have used material/items of other brand, contractor can use items of those brands directly. In case of difficulties in getting material from CLW approved sources of Cab AC, material of other makes can only be used having the same specification prior approval of Sr.DME/DSL/NGC. However, contractor has to give reasonable justification and all such items shall also be warranted for 01 (One) year from the date of provision. **The contractor shall also submit documentary proof of procurement of materials from the approved vendor/source, along with the relevant purchase invoices, challans and other supporting documents, for verification.**

- 14.0 HANDING/TAKING OVER OF EQUIPMENT/WORK:** The contractor shall bind to execute the work under the contract and complete in all respects to the satisfaction of Engineer. The Engineer-in-charge shall determine the date and time on which the work is considered to have been completed in support of which his certificate shall be regarded as sufficient evidence. For all purpose contractors shall be bound to observe any such determination by the Engineer.

- 15.0 WORKING TIME:** The contractor will carry out the work normally 8 to 20hrs daily in DLS/NGC. The contractor shall not carry out any work after 20.00 hrs without the permission of the officer in charges of the shed. Prior permission of Officer In-charge/SSE/D/G/NGC of the shed is required for working in Holidays/Sundays. In normal working days, he shall take permission of the concerned section in-charge of the work.

- 16.0 LIASONING OF THE WORK:** The contractor shall depute his representative before start of the work to chalk out system/procedure with the railway representative for better coordination to execute the works contract.

- 17.0 COMPLETION PERIOD OF SERVICE:** The service shall be completed in all respects within **one year** from the date of issue of Letter of Acceptance (LOA) or the start of the AMC service.

18.0 SAFETY MEASURES:

- 18.1** The contractor shall take all precautionary measures not only to ensure protection of his own personnel moving around or working on the Railway premises; but also conform to the rules and regulations of the Railways in this respect. Information about OHE, safe distance, movement of locos in yards, movement of material by crane are to be advised to the employees of contractor provided under this contract with precautions to be taken and their acknowledgement should be obtained by the contractor.
- 18.2** The contractor shall warn all his workmen to be careful while crossing the tracks against the movement of trains. The Railway accepts no claims in regard to any loss due to the accident on the track by the passage of trains. The Contractor shall also ensure that his workmen will observe strictly the Railway Safety Rules while he is on duty.
- 18.3** The Contractor shall warn strictly all his workmen not to climb to the roof of loco on any situation / condition without the knowledge of Sr. Section Engineer, Diesel Loco Shed, New Guwahati.
- 18.4** In case of accidents resulting in injury to the Contractor's workmen, the contractor shall be liable for all compensation, insurance etc., for his workmen as per the various statutes and the Railway will have **no bindings for such compensation**. If the accident causes an injury or a loss to the lives of the Railway employee / staff, the Railway administration shall have the right to claim any compensation on the contractor.
- 18.5** The work must be carried out very carefully & adopt safe method of handling Railway materials without any infringement of the Indian Railways Act for the general and subsidiary rules in force on the Railways in such a way that they do not hinder Railway operation or not affect the proper functioning or cause damage to any Railway equipment, structure or rolling stock except as agreed by the Railways.
- 18.6** The Contractor solely responsible for any loss or damages & Railway will not be responsible for any loss during the accident by mis-handling of Railway Materials and shall bear the cost of all damages in case of accidents / unusual occurrences causing damages to Railway property.
- 18.7** First aid facilities: The Contractor shall provide and maintain a first aid box so as to be readily accessible during all working hours. First — aid box equipped with the prescribed contents at every place where contract labour by him.

19.0 PLACE OF WORK: Work will be executed in the premises of Diesel Loco Shed, New Guwahati. For this purpose, the contractor will arrange to bring all the required materials, tools & jigs, etc. from contractor's work place to New Guwahati at their own cost. Transportation charges for the contractor's personnel and freight charges for the aforesaid materials will be borne by the contractor.

20.0 WORK/SITE IN-CHARGE (CONSIGNEE): The Consignee/representative for the above work will be as authorized by Sr. DME/DSL/NGC.

21.0 PACKING, TRANSPORT & OTHER CHARGES: All the transport required for execution of work for "**AMC of Electric Loco Cab Air Conditioners mounted on Roof of Locomotives**" and for rectification of the defects noticed during warranty period will be arranged by the contractor at their own cost. For carrying out the work/rectifications at railway's site, the contractor will have to make his own arrangements for labours & tools etc. Necessary Electricity & Electrical connection shall be provided at Diesel Loco Shed, New Guwahati on free of cost.

22.0 INSURANCE CHARGES: The quoted rate should be inclusive of insurance charges and will be borne by Firm for safe transportation of Rly material. No reimbursement shall be made for insurance charges by Railway.

23.0 ACCEPTED RATES:

- 23.1** The rates accepted for the schedules should be inclusive of all taxes, duties, levies and GST.
- 23.2** The rates quoted by the Contractor and accepted by the Railways shall hold good till the completion of the work and no additional individual claim will be admissible on account of fluctuation in market rates or any account whatsoever.

24.0 DEDUCTION OF INCOME TAXES AT SOURCE: The Railway shall deduct applicable Taxes at source at the time of arranging payments to the contractor as per proceeding rates and laws.

25.0 SAFE CUSTODY (INDEMNITY) BY CONTRACTORS:

- 25.1** If required, the indemnity bond shall be executed on a non-judicial stamp paper of requisite value,

certified by the Collector of Stamp Revenue to the effect that stamp of adequate value have been purchased, and shall be signed by the person(s) authorized by 'Power of Attorney'.

- 25.2** The Railway's materials handed over to the contractor will be at contractor's works until they are returned to railway, duly carrying out repairs. It is a practice that whenever any machinery/material belonging to railways are handed over to any outside agency for any work, the estimated cost of machine/material is either deposited in cash with the railways in the form of FDR in favour of " Sr. Divisional Finance Manager, Guwahati, N.F. Railway" or any Indemnity Bond on the railway's prescribed form by contractor for an equivalent amount in favour of Senior Divisional Mechanical Engineer, Diesel Loco Shed, New Guwahati, N.F. Railway is to be submitted to railways duly indemnifying safe custody of the machine/material at a contractor's works. The firm has to indemnify for an amount equivalent to the value of 02 Nos. Loco CAB-AC units that may be retained by the firm for Repair purpose at a time. The Contractor's Indemnity Bond/FDR for indemnifying railway material shall be released on receipt of entire contracted quantity for repaired equipments by railways.

SPECIAL MAINTENANCE INSTRUCTION No. RDSO/2016/EL/SMI/0293 Rev. '1' Dated: 25.02.2025 OR Latest

- 1.0 Title:** Maintenance instructions for roof mounted air conditioning system for cabs of Electric Locomotives and EMU/Vande Bharat.
- 2.0 Object:** Roof mounted cab AC units are being provided on the electric locomotives and in EMU/Vande Bharat trains. Based on the field experience, it has been observed that there is a need to revise the Special maintenance instruction keeping in view of reliability, performance, maintenance of the Roof Mounted AC Package Unit. The SMI has been revised to follow guidelines/instructions for maintenance of cab ACs.
- 2.1** Trip Inspection (IT) Schedule to be carried out only during loco unscheduled visit to Diesel Loco Shed New Guwahati.
- 2.2** Schedule activities to be done only for those locomotives which schedule is being carried out at DLS/NGC.
- 3.0 Maintenance activities during minor schedules: -**

SN	Activities	IT	IA	IB	IC
3.1	General				
3.1.1	Check the loco logbook and attend the defects recorded	√	√	√	√
3.1.2	Run the AC unit in (Off, Auto, Manual cooling) all modes. Attend to any abnormalities observed.	√	√	√	√
3.1.3	Clean dust from control panel by compressed air or vacuum cleaner and tighten the cable terminals.		√	√	√
3.1.4	Remove return air filters by opening the grill. Clean these filters with water/vacuum cleaner or compressed air.		√	√	√
3.1.5	Check for damaged/jointed cable.		√	√	√
3.1.6	Ensure top cover of AC unit proper locking and gasket. Replace gasket if damaged.		√	√	√
3.1.7	Run the AC unit for half an hour and record the current drawn by various equipment's with the help of clamp tester. Equipment Nominal Current AC unit in cooling mode 4.5 - 6.0 Amp. AC unit in heating mode 2.0 - 3.0 Amp. Compressor Motor 2.0 - 4.0 Amp. Condenser Motor 0.6 - 0.8 Amp. Blower Motor 0.4 - 0.6 Amp.		√	√	√
3.1.8	Switch 'ON' the AC unit (Blower motor ON, Condenser motor ON, Compressor ON) and rotary switch set the manual cooling mode then check the time delay relay for its operation. Compressor must start within 180±15 Sec.		√	√	√
3.1.9	Run the AC unit in auto mode and check the cut-in and cut-out of thermostat. If thermostat is not working properly check the following: • Clean the cooling sensor probe and heater sensor probe. • Ensure Thermostat connector is properly tightened.		√	√	√
3.1.10	Ensure that there is no leakage of condensate water from trough to driver cab. Rectify any leakage.		√	√	√
3.1.11	Clean and inspect the condenser coil.			√	
3.1.12	Clean and inspect the evaporator coil.			√	
3.1.13	Clean and inspect the drainage holes.			√	
3.2	Control Panel				
3.2.1	Check intactness of control panel connectors.		√	√	√

3.2.2	Check working of rotary switch by rotating forward and backward. Replace, if found loose, damaged and jammed.		✓	✓	✓
3.2.3	Check the working of all LED's indications for proper function: i) Rotate the rotary switch in manual cooling mode position and check the status of LED (Main -ON, BLR-ON, COMP-ON, COOL-ON). ii) Rotate the rotary switch in Auto mode position and check the status of LED (Main- ON, BLR-ON, COMP-ON, COOL-ON in summer) and (Main - ON, BLR-ON, HTR-ON in winter). In case LEDs do not light up, check 110 V AC control supply. Rectify any abnormalities.		✓	✓	✓
3.2.4	Check and clean step-down transformer (Control Transformer) 415V/220 V and its connections.		✓	✓	✓
3.3	Condenser Motor and Blower Motor				
3.3.1	Clean the body of condenser motor and blower motor by compressed air.		✓	✓	✓
3.3.2	Check condenser motor visually for crack on blade or body.		✓	✓	✓
3.3.3	Check and ensure mounting fasteners are properly tightened.		✓	✓	✓
3.3.4	Check connection at terminal boxes of motor for proper tightens & cables are terminated with lugs.		✓	✓	✓
3.3.5	Check insulation resistance of motors by 500 V DC megger from the control panel. Attend the motors if insulation resistance is less than 2 MΩ.		✓	✓	✓
3.3.6	Check motors for any abnormal sound while running.		✓	✓	✓
3.4	Compressor				
3.4.1	Check and ensure mounting fasteners are properly tightened.		✓	✓	✓
3.4.2	Check electrical terminal box is properly tightened and cables are terminated with lugs.		✓	✓	✓
3.4.3	In case of abnormal sound: • Check the sequence of electric connection. • Ensure that the winding resistances of compressor motor between R, Y & B phases are balanced $\pm 3\%$.		✓	✓	✓
3.5	Heater				
3.5.1	Ensure proper mounting of heater without touching side bodies.		✓	✓	✓
3.5.2	Ensure proper clamping of electric wires to heater.		✓	✓	✓
3.5.3	Remove dust accumulation on heating element gently by soft brush/dry air.		✓	✓	✓
3.5.4	Clean thermostat temperature probe (OHP). Replace if cracked or broken.		✓	✓	✓
3.5.5	Check heater at the beginning of winter season by checking current drawn at control panel by clamp tester. (Nominal 2.0 - 3.0 Amp.)		✓	✓	✓
3.6	Trough				
3.6.1	Make sure condensate/rain water drains properly. This can be checked by opening the evaporator top and condenser top of the system by pouring water into the trough and clean the trough pipe by adequate size of round brush. It should be assured that there is no blockage in drain pipes.		✓	✓	✓
3.6.2	Ensure that there is no leakage of water to cab.		✓	✓	✓
3.7	OHP (Over heat protection), HP (High pressure), LP Low pressure)				
3.7.1	Check the mounting fasteners are properly tighten.		✓	✓	✓
3.7.2	Ensure that control wires to HP/LP/OHP cut-out are properly clamped.		✓	✓	✓
3.8	Time Delay Relay (TOR)				

3.8.1	Clean the complete assembly by compressed dry air jet.		√	√	√
3.8.2	Check the condition of the TOR for physical damage.		√	√	√
3.8.3	Tighten terminal & mounting screws.		√	√	√
3.8.4	Replace damage thimbles/lugs.		√	√	√
3.9	MCBs (Miniature circuit breaker) & MPCB (Motor protection circuit breaker)				
3.9.1	Clean the MCSs and MPCB with dry compressed air.		√	√	√
3.9.2	Check the condition of MCBs and MPCB for physical damage.		√	√	√
3.9.3	Ensure that end locks are provided.		√	√	√
3.9.4	Tighten electric cable connections and DIN rail screws.		√	√	√
3.10	Contactors				
3.10.1	Clean the contactors with dry compressed air.		√	√	√
3.10.2	Check continuity between the incoming and outgoing terminals.		√	√	√
3.10.3	Ensure tightness of connection.		√	√	√
3.11	Connector				
3.11.1	Open the connectors and check for flash marks/damage to pins.		√	√	√
3.11.2	Ensure that they are tightened properly.		√	√	√
3.11.3	Remove moisture by blowing air through hot air gun.		√	√	√

4.0 Maintenance activities during major schedules: -

SN	Activities	TOH	IOH	POH
4.1	All items of IC schedule	√	√	√
4.2	General			
4.2.1	Replace the return air filters by opening the grill.	Replace		
4.2.2	Ensure proper locking of top cover of AC unit and provision of Replace gasket.	Replace		
4.2.3	Replace gasket provided at bottom of Cab AC Unit.	Replace		
4.4	Condenser motor and Blower motor			
4.4.1	Run motor on no load for 15 minutes and check the following: <ul style="list-style-type: none"> Bearing noise- Normal noise. Bearing temperature rise above ambient should not more than 10 degree C. SPM (Shock pulse meter) reading – 20 dB max. (Green zone) 	√	√	√
	<ul style="list-style-type: none"> Replace bearing if defective. Check the setting of MPCB for current rating, if the rating is below the blower and condenser motor maximum current rating then increase it up to the maximum value. 			
4.4.2	Overhauling of blower and condenser fan motor: <ul style="list-style-type: none"> Measure insulation Resistance (IR) between motor terminals and frame before and after overhauling. The value should not be less than 100MΩ when the measured with 1000 V DC megger. Check terminal block and connecting lead for any physical damage or any flash mark. Perform HV (Di-electric) test on stator by applying 1.5 kV AC apply for one minute. The leakage current which should not exceed 1.0 mA. SCT (Surge comparison test) of stator at 1 kV. Measure starting current of motors on no load. It should not exceed 14A. No load current of motors should not exceed 1.4A. 	√	√	√

	<ul style="list-style-type: none"> Measure winding resistance of motors between UV, VW and WU phases. Ensure that they are balanced $\pm 10\%$. Spray water over running motor by jet having 10 mm dia from all side. After spray check IR value. It should not be less than 100 MΩ. 			
4.5	Refrigerant pipe line /Thermostatic expansion valve			
4.5.1	Check visually for proper clamping/support and use tube type clamping on the copper line.	✓	✓	✓
4.5.2	Ensure that thermostatic expansion valve of distributors to evaporator coil does not have any sharp bend or kinks.	✓	✓	✓
4.5.3	Ensure the proper clamping of the sensor bulb of the thermostatic valve on the suction pipe at 3 o'clock position.	✓	✓	✓
4.6	Evaporator/Condenser Fins			
4.6.1	Check that the mounting fasteners are properly tightened.	✓	✓	✓
4.6.2	Ensure that there is no damage to fins.	✓	✓	✓
4.6.3	Proper combing should be done on evaporator and condenser fins.	✓	✓	✓
4.6.4	Clean the evaporator and condenser fins with pressurized water and blow dry with moisture free air at 10-15 psi.	✓	✓	✓
4.7	OHP (Over heat protection), HP (High pressure), LP (Low pressure) Cut-outs:			
4.7.1	Disconnect blower motor through MPCB to cause compressor tripping on low pressure (LP) 30 \pm 5 psi. Disconnect condenser fan motor through MPCB to cause compressor tripping in (HP) 450 \pm 15 psi.	✓	✓	✓
4.7.2	Check the tripping of heater through OHP by switching off the blower. The probe of digital thermometer should be placed near the OHP sensor and the heater should trip at 65°C.	✓	✓	✓
4.8	Time Delay Relay (TOR)			
4.8.1	Check the time setting on test bench. (180 \pm 15 sec.)	✓	✓	✓

5.0 Trouble Shooting:

SN	Fault/Indication	Examine / Trouble shoot
5.1	HP Trip- Glows when the pressure of compressor is high (Max. air 450 \pm 15 psi).	<ul style="list-style-type: none"> Ensure 3-phase supply. Check that all MCBs are ON. Ensure availability of 110V supply. Check and ensure that condenser inlet and outlet air opening are not obstructed or blocked. Check Condenser Motor Operation (Working) Check air flow of condenser fan. It should be in upward direction. Check the condenser fan blade defective/broken. Check the dust on surface of condenser coil

5.2	LP Trip- Glows when the pressure of Low (Min. 30±5 psi).	<ul style="list-style-type: none"> • Check all MCBs and ensure 3-phase supply. • Check availability of 110V supply. • Check and ensure that return & supply air compressor is opening are not obstructed or blocked. • Air flow of blower fan motor should be in downward direction. • Feel the cooling coil by hand when compressor is running. • Check the suction pressure by pressure gauge and ensure it is between 60 to 70 psi when compressor is running. • Working of Condenser Motor
5.3	Compressor trip-Glows when compressor trips.	<ul style="list-style-type: none"> • Check all MCBs and ensure 3-phase supply. • Check that supply and return air filter are clean. • Check the current of compressor. (2.0-4.0 Amp.)
5.4	OHP trip- Glow when there is excess of heat through heater. (65±5°C)	<ul style="list-style-type: none"> • Check all MCBs and ensure 3-phase supply. • Check and tighten all power lead connections at terminals. • Air flow of blower fan motor should be in Clockwise direction. • Check the setting of OHP.
5.5	Less Cooling	<ul style="list-style-type: none"> • Check that return air filter is not blocked • Check that the current of compressor is not less than 2.0 Amp. • If the suction pressure is less than 80 psi, when compressor is OFF and steady state is achieved, check leakage from joint of compressor, HP/LP cut-outs and filter drier with soap solution or HLD if available. Attend any leakage and recharge with refrigerant as indicated in the number plate.
5.6	Over current	<ul style="list-style-type: none"> • Check that supply and return air filter are clean. • Check that the suction pressure is between 60 and 65 psi.

6.0 Application to Class of Locomotives: All Electric locomotives and EMU/Vande Bharat trains fitted with cab AC units.

7.0 Agency of Implementation: All Electric Loco sheds. POH workshops

PART-C

SCHEDULE OF ITEMS, QUANTITIES AND RATES

Name of Service: AMC of Electric Loco Cab Air Conditioners mounted on Roof of all classes of three Phase Locomotives of Diesel Loco Shed, New Guwahati, N.F. Railway for a period of 1 Year

Sl. No.	Description of Service	Qty	Unit	Rate (in ₹) incl. of GST	Amount (in ₹) incl. of GST
Schedule-1: AMC of Electric Loco Cab Air Conditioners mounted on Roof of all classes of three Phase Locomotives of Diesel Loco Shed, New Guwahati, N.F. Railway for a period of 1 Year. (NB: 1 Unit = 1 Loco Month)					
a.	AMC of Electric Loco Cab Air Conditioners mounted on Roof of all classes of three Phase Locomotives of Diesel Loco Shed, New Guwahati, N.F. Railway for a period of 1 Year. (NB: 1 Unit = 1 Loco Month)	137	1 Loco Month	₹ 3,841.35	₹ 5,26,264.95
Schedule-2: Cost of optional items as indicated in Annexure-C1 (Additional spares may need to be replaced on condition basis during AMC period)					
a.	Cost of optional items as indicated in Annexure-C1 (Additional spares may need to be replaced on condition basis during AMC period)	1	Lumpsum	₹ 10,03,155.34	₹ 10,03,155.34
TOTAL AMOUNT (Incl. GST)					₹ 15,29,420.29
Rupees Fifteen Lakhs Twenty Nine Thousand Four Hundred Twenty and Paise Twenty Nine Only					

ANNEXURE – C1					
LIST OF OPTIONAL ITEMS TO BE REPLACED ON CONDITION BASIS DURING AMC PERIOD					
SN.	ITEM Description	Qty.	Unit	Unit Rate (₹)	Total Amount (₹)
1	COMPRESSOR	4	Nos.	39230.37	156921.48
2	THREE PHASE CONDENSER MOTOR	4	Nos.	13360.6	53442.40
3	THREE PHASE BLOWER MOTOR	4	Nos.	12459.92	49839.68
4	BLOWER EVAPORATOR	4	Nos.	2161.56	8646.24
5	FAN BLADE CONDENSER	4	Nos.	1804.8	7219.20
6	COOLING COIL	4	Nos.	4988.98	19955.92
7	CONDENSER COIL	4	Nos.	18036.22	72144.88
8	FILTER DRIER	10	Nos.	947.19	9471.90
9	HIGHPRESSURECUT- OUT	10	Nos.	1743.12	17431.20
10	LOW PRESSURE CUT- OUT	10	Nos.	1743.12	17431.20
11	HIGH PRESSURE SWITCH	10	Nos.	1688.47	16884.70
12	HEATER	10	Nos.	1425.51	14255.10
13	OVER HEAT PROTECTOR	10	Nos.	535.26	5352.60
14	CONTACTOR FOR BLOWER MOTOR	10	Nos.	1605.11	16051.10
15	CONTACTOR FOR COMPRESSOR/CONDENSOR MOTOR	10	Nos.	1396.89	13968.90
16	CONTACTOR FOR HEATER	10	Nos.	1396.55	13965.50
17	AUXILIARY CONTACTOR SIDE MTD	10	Nos.	424.25	4242.50
18	AUXILIARY CONTACTOR TOP MTD.	10	Nos.	387	3870.00
19	MCB, 16A,TP for main MCB	10	Nos.	2043.56	20435.60
20	WIRED REMOTE CONTROLLER	10	Nos.	3239.79	32397.90
21	TIME DELAY RELAY	10	Nos.	1660.72	16607.20
22	ELECTRONICS THERMOSTAT DISPLAY (RDSO/ PE/SPEC/ AC/0020 Alt-latest)	10	Nos.	9836.24	98362.40
23	EXPENSION VALUE (EMERSON/DANFOSS/ ENDFOSS)	4	Nos.	7080	28320.00
24	ROTORY SWITCH KAYCEE	10	Nos.	556.12	5561.20
25	RETURN AIR FILTER	10	Nos.	1088.53	10885.30
26	PLATE MOUNTED SOCKET	6	Nos.	783.25	4699.50
27	PLATE MOUNTED PLUG	6	Nos.	783.25	4699.50
28	CABLE MOUNTED SOCKET	6	Nos.	966.28	5797.68
29	CABLE MOUNTED PLUG	6	Nos.	966.28	5797.68
30	CONTROL LEAD LOCO	10	Nos.	3445.47	34454.70
31	BEARING (6202 C3) OF BLOWER MOTOR	14	Nos.	143.76	2012.64
32	BEARING (6202 C3) OF CONDENSER MOTOR	4	Nos.	143.76	575.04
33	CONTROL TRANSFORMER 5V/110V,200VA	8	Nos.	7332.47	58659.76
34	MPCB FOR CONDENSOR MOTOR(0.6-1.6A)	10	Nos.	6372	63720.00
35	CHANGE OVER MCB 4P,40A	10	Nos.	6466.40	64664.00
36	MPCB FOR COMPRESSOR (4.0-6.3A)	10	Nos.	6667	66670.00
37	MCB, 6A, DP FOR CONTROL CIRCUIT	10	Nos.	2832	28320.00
Total Amount in Rs. (including GST) =					₹ 10,53,734.60
Total Amount in Rs. (including GST) @ 4.80% below as per LOA =					₹ 10,03,155.34

PART-D

(Annexures)

Advance Correction Slip No:2 of GCC for Services,2018

A. Clause 2.6.2.1.3 of GCC for services, 2018 shall be modified to read as under-

The bidders shall be required to submit an undertaking certifying the truthfulness of all the documents submitted / uploaded along with the tender This shall be mandatory for all the bidders. In case of failure of the bidder to submit the undertaking, their offer shall be summarily rejected.

B. There was no format corresponding to para 2.6.2.1.3 of GCC for services. Therefore, a new Annexure of GCC for services, 2018 shall be introduced as under.

Undertaking for Truthfulness/ Correctness of the DOCUMENTS submitted/uploaded by the tenderer along with the tender.

I..... (Name and designation) ** appointed as the attorney/authorised signatory of the tenderer (including its constituents),

M/s. (hereinafter called the tenderer) for the purpose of the tender documents for the work of as per the Tender No. of (Railway), do hereby solemnly affirm and state on the behalf of the tenderer including its constituents as under:

1. I/We the tenderer(s), am/are signing this document after carefully reading the contents.
2. I/We the tenderer(s) also accept all the conditions of the tender and have signed all the pages in confirmation thereof.
3. I/We hereby declare that I/we have downloaded the tender documents from Indian Railway website www.ireps.gov.in. I/we have verified the content of the document from the website and there is no addition, no deletion or no alteration to the content of the tender document. In case of any discrepancy noticed at any stage, i.e. evaluation of tenders, execution of work or final payment of the contract, the master copy available with the Railway Administration shall be final and binding upon me/us.
4. I/We declare and certify that I/we have not made any misleading or false representation in the forms, statements and attachments in proof of the qualification requirements.
5. **I/We also understand that my/our offer will be evaluated based on the documents / credentials submitted along with the offer and same shall be binding upon me/us.**
6. **I/We declare that the information and documents submitted along with the tender by me/us are correct and I/we are fully responsible for the correctness of the information and documents, submitted by us.**
7. I/We undersigned that if the certificates regarding eligibility criteria submitted by us are found to be forged/false or incorrect at any time during process for evaluation of tenders, it shall lead to forfeiture of the tender EMD besides banning of business for Five years. Further, I/we (insert name of the tenderer)** and all my/our constituents understand that my/our offer shall be summarily rejected.

8. I/We also understand that if the certificates submitted by us found to be false/forged or incorrect at any time after the award of the contract, it will lead to termination of the contract, along with forfeiture of EMD/SD and Performance Guarantee besides any other action provided in the contract including banning of business for five years on entire IR.

**SEAL AND SIGNATURE OF
THE TENDERER**

Place:

Dated:

Acceptance/deviation Schedule
(Tenderer may add more sheets if space is not adequate)

Clause #	Accepted (Yes / No)	If No list Deviation (s)
General Conditions		
Special Conditions		

**Seal and Signature of
The Tenderer**

Experience of the Contractor

SN	Name of Govt. Deptt/ Client with address	Description of Work	CA No. and Date	Total Final Value of work	Date of Award of Contract	Stipulated Completion Time	Date of actual completion	Remarks

**Seal and Signature of
The Tenderer**

Form of Declaration

Tender No:

To,

The President of India,

Acting through General Manager, Western Railway.

1. I/We, the undersigned hereby solemnly declare and certify that I/We do not have any of our relative(s) or in the case of partnership firm or company of contractors one or more of her shareholder(s) or a relative of the shareholder(s) employed in gazette capacity in any department of Indian Railway except the names mentioned herein under:

1.

2.

3.

AND SO ON

2. I/we, the under signed declare and certify that no such retired manager or retired gazetted officer as mentioned in clause no: 2.5.1.1 (a), (b),(c),(d) of GCC for services is associated with us.

Signature of Bidder/s Date

ANNEXURE – V

DETAILS OF EXISTING COMMITMENT

SN	Name of Service/Work	Contract No. and Date	Place of Work	Value in Lakh of Rs.	Anticipated Date of Completion

**Seal and Signature of
The Tenderer**

ANNEXURE – VI

DETAILS OF ORGANISATIONAL SET UP

ORGANISATION OF THE COMPANY

DESCRIPTION	CATEGORY	NO. OF PERSONS	NAME	QUALIFICATIONS
On Permanent Rolls				
Temporary				
Likely to be made available on works				

**Seal and Signature of
The Tenderer**

ANNEXURE – VII

ASSET PLANT AND EQUIPMENT STATEMENT

SN	DESCRIPTION	NO. AVAILABLE READILY ON HAND	NO. TO BE ARRANGED LATER

**Seal and Signature of
The Tenderer**

POLICE VERIFICATION

Photo of Applicant
signed by
Contractor

S no.	Particulars	
1	Full name with address	
2	Parent's name	
3	Nationality	
4	Present address in full with police station and district	
5	Period of residence	
6	Home/Permanent address in full with police station and district	

Declaration (by applicant):

I certify that the following information is correct and complete to the best of my knowledge and belief.

POLICE CERTIFICATION:

The details as stated above are correct and the above person does not have any criminal or any case registered, pending in any court of law.

Signature of Applicant:

Date:

Place:

Counter signature of Authorized Signatory with stamp

EFT MANDATE FORM

From:

Dated:

To,
DFM/Guwahati,
N. F. Railway.

Sub: Willingness to receive payment through RBI's EFT system.

We refer to the Electronic Fund Transfer (EFT) system being set up by Northeast Frontier Railway, Guwahati for remittance of our payments using RBI's EFT scheme and confirm that we are agreeable to our payments being made through the above scheme to our under noted Account

Name of Organization & Address :

MICR Code of Bank :

Bank Name :

Branch Name :

PAN No :

Bank Address :

Branch/Tele/Fax No :

Bank Account No :

Type of Account :

VENDOR Code (Issued by Railway) :

IFSC NO :

A Xerox copy of the Cheque left is attached herewith for necessary action at your end.

Encl: As above

Signature & Stamp

Confirmed by bank.

-----END OF TENDER DOCUMENT-----