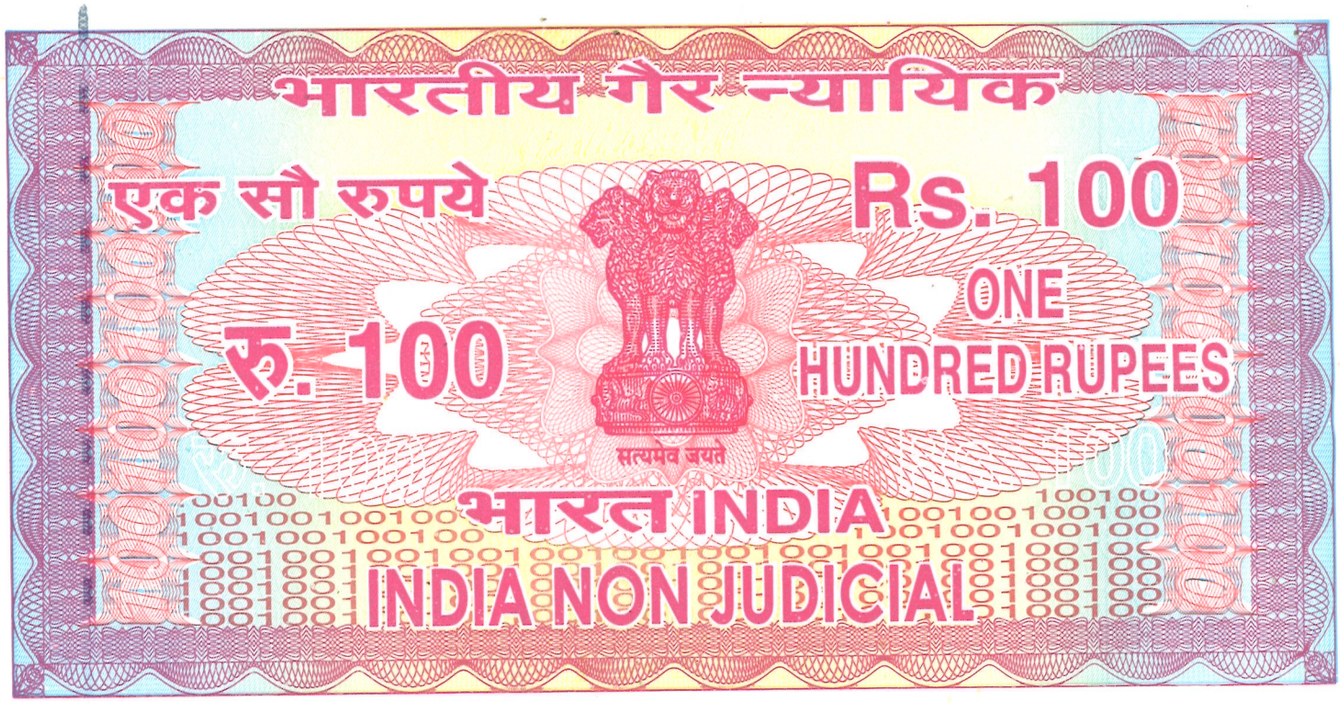


தமிழ்நாடு तमिलनाडु TAMILNADU

CY 870571

V. Deepa.

10 AUG 2023

CUMMINS INDIA LTD

PUNE- 411045

V. DEEPA
STAMP VENDOR
Lic No: 17071/B2/2014
No:34/A, Sivasankeran Street
Thiruvaliuvar Nagar, Panma
Chennai- 75. Cell: 98410 51628

RATE CONTRACT FOR E-CHECK OF CUMMINS MAKE 1400 HP DEMU ENGINE KTA 50L.
CONTRACT No MD/DMU/E-CHECK/RC/1400 HP/CIL/2023-25. Dt.15.12.2023.

ARTICLES OF AGREEMENT made this **15th day of December 2023** between the president of India acting through the Chief Design Engineer / Mechanical (CDE/Mech.) INTEGRAL COACH FACTORY hereinafter called the RAILWAY of the one part and Messrs. Cummins India Ltd., Pune, whose permanent postal address is Distribution Business of Cummins India Limited, Cummins India Office Campus, Tower A, 3rd Floor, Survey No. 21, BALEWADI, PUNE- 411 045, Maharashtra, INDIA, hereinafter called the "CONTRACTOR" of the another part.

WHEREAS the CONTRACTOR has agreed with the RAILWAY to enter into Rate Contract for E-Check of CIL make engine KTA 50L installed on 1400 HP DEMU, vide M/s. CIL letter no.CIL/DBU/RAIL/ICF/2023-018, Dtd. 09.12.2023 in reference to this office acceptance letter no. MD/DMU/E-CHECK/RC/1400HP/CIL/2023-25 (Tender no. 2023472610940), dtd. 08.12.2023, set-forth in the schedule hereto annexed upon the General Conditions of the Contract for works and Special Terms and conditions and the special specifications, if any in AND WHEREAS the performance of the said works in act in which public are interested.

NOW THIS INDENTURE WITNESSTH that in consideration of the payments to be made by the RAILWAY, CONTRACTOR will duly perform the said works in the said schedule set-forth and shall execute the same with great promptness, care and accuracy and will observe, fulfill and keep all the conditions therein mentioned (which shall be deemed and taken to be part of this contract as if the same had been fully set-forth herein) and the RAILWAY both hereby agree that the CONTRACTOR shall duly perform the said works in the manner aforesaid and observe and keep said terms and conditions, the RAILWAY will pay or cause to be paid to the CONTRACTOR for the said works on final completion thereof the amount due in respect thereof at the rates specified in the schedules here unto annexed.

मुख्य अभिकल्प इंजीनियर/यांत्रिक
Chief Design Engineer / Mechanical
सवारी डिब्बा कारखाना
Integral Coach Factory
चेन्नै / Chennai - 600 038.

CUMMINS (INDIA) LIMITED PUNE

It is hereby agreed and declared that all the provisions of said specifications, scope of works, conditions of the Rate Contract which have been carefully read and understood by the CONTRACTOR and the schedule of rates and the special terms and conditions contained in Annexure – **1 & 2** respectively and the general conditions of the contract amended from time to time, thereof shall be as binding upon the CONTRACTOR and upon the RAILWAYS administration whereas Annexure **1 to 15** shall be part of the contract and if the same had been repeated herein and shall be read as part of the presents.

In the event of any dispute between the two parties, the matters shall be referred to arbitration appointed by GM/ICF as per the provision of cl.64 of GCC amended from time to time and the Arbitration and Conciliation Act 1996 amendments made from time to time. The decision of the arbitrator/s shall be final and binding upon the parties to this agreement. The place of Arbitration shall be in Chennai only. The Courts in Chennai alone shall have exclusive Jurisdiction on all disputes/claims arising out of this agreement.

IN WITNESS thereof the parties have hereunto set their respective hands the day and year mentioned by them.

Signed for an on behalf of the
President of India by

Shri. LALIT KISHORE
CDE / Mech.
INTEGRAL COACH FACTORY

Signature of Chief Design Engineer / Mechanical

मुख्य अभिकल्प इंजीनियर/यांत्रिक
Chief Design Engineer / Mechanical
सवारी डिब्बा कारखाना
Integral Coach Factory
चेन्नै / Chennai - 600 038.

In the presence of Shri. Tirunaaga Senthil Kumar
(Name of Witness) Dy. CME/ Design-I

(Signature of Witness)

उप मुख्य यांत्रिक इंजीनियर अभिकल्प
Dy. Chief Mechanical Engineer / Design
सवारी डिब्बा कारखाना चेन्नै 600 038
Integral Coach Factory, Chennai - 600 038

and by Mr. G. Veerabadran,
Executive Manager Sales-Key Accounts
duly constituted attorney of and for on behalf of
M/s Cummins India Limited (DBU), Pune,

(Signature of the Contractor)

CUMMINS (INDIA) LIMITED PUNE

who has signed in the presents in the presence of
(Name of Witness)
Ms. Jennifer Michael
Key Accounts Manager - Railways
M/s Cummins India Limited (DBU), Chennai

(Signature of Witness)

मुख्य अभिकल्प इंजीनियर/यांत्रिक
Chief Design Engineer / Mechanical
सवारी डिब्बा कारखाना
Integral Coach Factory
चेन्नै / Chennai - 600 038.

CUMMINS (INDIA) LIMITED PUNE

1. GENERAL

Railway Board vide letter No. 98/M(L)/466/35 Dt. 29.9 / 3.10.2000 advised ICF to enter into rate contracts with OEM for E-Check of DEMU engines which are already in service. Accordingly ICF has entered into rate contract for E-Check of 1400 HP DEMU engine KTA 50L with CONTRACTOR. Since adequate facilities are not available at user Railway end, CIL will carry out E-Check at HHP Rebuild Centre at Phaltan, Service centre at Jaipur or service centre at Asansol.

E-check is to be performed for the engine after 54 months (as per RDSO guidelines). However, latest RDSO instructions/ Guidelines in this regard shall be followed. The following engine Parameters can be used as basic guidelines to determine whether the engine is required to undergo in frame overhaul / Major overhaul.

Excessive Oil consumption
Excessive drop of oil pressure
Excessive Blow by
Engine oil contamination
Unusual noise from engine
Excessive vibration/ smoke level
Any catastrophic failure

All major parts such as cylinder block, cylinder head, crankshaft, turbocharger, PT pump Rocker arm housing, Oil cooler housing, After cooler housing shall be kept in working condition and reusable condition. In case of any of major items found beyond economical repairs will be replaced with new parts and will be charged at extra cost.

For the satisfactory performance of the overhauled engine, it is necessary that the associated systems of the engine such as cooling, Hydraulic, Electronic governing and engine related electrical systems are examined corrected and up fitted. The work can be carried out by the concerned Railway POH workshop or if desired through local Cummins dealer on chargeable basis and the same is not included in the scope of contract.

The scope of E-Check is given in **Annexure-3**. During E-Check, if it is found that apart from compulsory replacement items, certain components/ sub-assemblies/ assemblies require repair attention or required to be replaced, the same may be attended / replaced treating them as condition based repair/ replacements, at an extra cost.

2. VALIDITY OF CONTRACT

This rate contract is valid for a period of Two years from the date of signing of the contract i.e., from **15.12.2023 to 14.12.2025**.

The rate contract can be extended for a maximum of one year after the expiry with further price escalation of 5% over the accepted rates of the rate contract.

CUMMINS (INDIA) LIMITED PUNE

मुख्य अभिकल्प इंजीनियर/यांत्रिक
Chief Design Engineer / Mechanical
सवारी डिब्बा कारखाना
Integral Coach Factory
चेन्नै / Chennai - 600 038.

3. VARIATION IN CONTRACT QUANTITIES:

This Rate Contract is concluded for a quantity of 173 Nos. of KTA 50 L Engines. The Railway wise distribution is hereunder:

Sl. No	Railways	No. of Engines(E-Checks)
		2023-2025
1	Southern Railway	06
2	South Western Railway	08
3	South Central Railway	12
4	South East Central Railway	05
5	Eastern Railway	07
6	East Central Railway	12
7	North Eastern Railway	01
8	Northeast Frontier Railway	18
9	Northern Railway	57
10	North Western Railway	23
11	Western Railway	20
12	Central Railway	04
	Total	**173**

Any variations in the above mentioned quantity has to be dealt with, as given below:

(i) The above mentioned quantities of the engines to be given for E-Check attention are only approximate and are only for the guidance for the contractor/Railways. As for as possible, they have been assessed correctly but are to vary during the execution of the work.

(ii) For increase up to 25 % of the quantities indicated in the schedule, the contractor shall be paid for such increase in the quantities as per the agreement rate. For this, no finance concurrence would be required.

(III) In case an increase in quantity beyond 25% of the agreement quantity is considered unavoidable, the same shall be got executed by floating a fresh tender. If floating a fresh tender for operating is considered not practicable, quantity will be operated in excess of 125% and above, of the agreement quantity subject to the following conditions:

a) Operation of quantity beyond 125% of the agreement quantity, needs the approval of an officer of the rank not less than S.A.Grade:

b) Quantity operated in excess of 125% but up to 140% of the agreement quantity, shall be paid at 98% of the rate awarded in that particular tender;

c) Quantity operated in excess of 140% but up to 150% of the agreement quantity shall be paid at 96% of the rate awarded in that particular tender;

d) Variation in quantity of individual items beyond 150% will be prohibited and would be permitted only in exceptional unavoidable circumstances with the concurrence of associate finance and shall be paid at 96% of the rate awarded in that particular tender.

However, Execution of quantities beyond 150 % of the overall agreement value should not be permitted and, if found necessary, should be only through fresh tenders or by negotiating with existing contractor, with prior personal concurrence of PFA and approval of General Manager.

CUMMINS (INDIA) LIMITED PUNE

मुख्य अभिकल्प इंजीनियर/यांत्रिक
Chief Design Engineer / Mechanical
सवारी डिब्बा कारखाना
Integral Coach Factory
चेन्नै / Chennai - 600 038.

4. SCOPE AND DETAILS OF CONTRACT

1. This rate contract is applicable for CIL engine model KTA 50L of 1400 HP DEMU.
2. Scope of E-Check **(Annexure- 3)** (i.e. E-Check activities to be carried out by M/s CIL.
3. Schedule of Rates **(Annexure-1)**
4. Special Terms and Conditions **(Annexure- 2)**
5. The contractor shall execute work orders as and when placed by user Railway, for any quantum of work against this rate contract. Payment will be made by user Railways.
6. E-Check will be completed within 40 days from the Date of issue of Technically and Commercially clear LOA/WO to commence the rebuild. Detailed breakup for the execution of E check timeline shall be as given below:

Sl. No	Description	Duration-A (No. of Days)	Duration-B (No. of Days)
1	Completion of Rebuilding the Engine Post Estimate Approval	26 Days	26 Days
2	Communication of Joint Testing Inspection Date to the User Railway	4 Days	4 Days
3	Testing Inspection & Test Certificate Preparation along with Joint Inspection Report from the Reporting Date of Railway Representatives at HHP RC (With Prior Intimation)	4 Days	4 Days
4	Document Preparation & Despatch	6 Days	16 Days *
Total No. of Days		**40 Days**	**50 Days**

* - Lead time for delivery of Rebuild engine shall be 50 days (Duration -B mentioned above) for NF, Eastern (Jamalpur) and Northern Railway (Budgam, J&K DEMU) and 40 days (Duration -A) for areas other than duration B. The lead time 40 /50 days as mentioned above is excluding the following activities.

1. Lead time for arrival of user Railway representative for inspection.
2. Lead time for generation and receipt of road permit from user Rlys. wherever applicable user Railways have to provide the Road permit for shipment.

7. Basic guidelines for performing E-Check, that includes Railways to arrange DEMU pre-shopping report **(Annexure-7)**
8. E-Check tools available under dealer's responsibility **(Annexure-8)**
9. Minimum facilities required to be provided by Railways to carry out E-Check in the DEMU car shed **(Annexure- 9)**
10. Format for DEMU Pre-shopping report **(Annexure-10)**
11. Format for Scheduled Work Plan for E-Check **(Annexure-11)**
12. Format for Engine Performance after E-Check **(Annexure -12)**
13. Format for E-Check report **(Annexure-13)**
14. Details of CIL Service Network for availing service support as shown in **Annexure-14**.
15. Format for Details of deductions after every E-Check by Railways **Annexure- 15.**

CUMMINS (INDIA) LIMITED PUNE

मुख्य अभिकल्प इंजीनियर/यांत्रिक
Chief Design Engineer / Mechanical
सवारी डिब्बा कारखाना
Integral Coach Factory
चेन्नै / Chennai - 600 038.

Annexure- 1

SCHEDULE OF RATES

1. Rates for Must change items as per **Annexure – 4**
2. Rates for Condition based replacement items as per **Annexure – 5**
3. Rates for Labour charges, Transportation charges and Engineer deputation charges as per **Annexure - 6.**
4. The Rates as entered in this agreement are special and thus would be solely applicable for E-Check of Engines under this Contract. Further, these Rates would not form a base / reference for any other Contracts / Purchases in Railways.

5. **TAXES AND DUTIES:**

   The rates referred in the Annexures 4, 5 and 6 are base prices without any taxes. GST shall be charged extra as per the applicable HSN code / SAC code and corresponding Tax Rate prevailing at the time of billing. GST for transaction within Maharashtra shall be charged as CGST/SGST and for outside Maharashtra shall be charged as IGST.

   Any changes to the tax structure by the Government of India / State Government would be made applicable during the tenure of the contract. Upon the effective date of implementation of any such taxes in the future and / or wherever applicable, Railways shall repay the same to the contractor if recovered from them.

   In case the User Railway has provisions for any tax benefits information regarding the same and concerned documentation shall be made available to Cummins prior to invoicing and shipment.

6. **STATUTORY VARIATIONS:** Statutory variation clause is applicable.

7. **CONTRACT PERIOD AND PRICE TERMS:**

   The above rates will be valid and binding on Railways as well as CIL, during the contract period i.e., from **15.12.2023 to 14.12.2025** subject to the following:

   a) The Rates are fixed as per the agreement as shown in **Annexure - 4, 5 & 6,** during the entire contract period i.e., from **15.12.2023 to 14.12.2025** for Must change items, condition based replacement items, Labour charges, Engineer deputation and conveyance charges.

   b) The rate contract can be extended for a maximum of one year after the expiry with a price escalation of 5% over the accepted rates of the rate contract. However, Labour charges, Engineer deputation and conveyance charges are fixed as shown in **Annexure - 6** during the extended contract period.

CUMMINS (INDIA) LIMITED PUNE

मुख्य अभिकल्प इंजीनियर/यांत्रिक
Chief Design Engineer / Mechanical
सवारी डिब्बा कारखाना
Integral Coach Factory
चेन्नै / Chennai - 600 038.

Annexure - 2

SPECIAL TERMS AND CONDITIONS

1. This Rate contract is for a period of Two years from the date of signing of the contract.

2. The CONTRACTOR shall execute work orders as and when placed for any quantum of work against the Rate Contract. Work orders will be placed by Zonal Railways.

3. The CONTRACTOR will carry out E-Check at their HHP rebuild centre at Phaltan, Service Centre at Jaipur or at service centre at Asansol. The CONTRACTOR or their dealer should ensure that all the work orders are completed promptly.

4. Any work order placed by Zonal Railways against Rate contract on the last day of validity of the contract shall be binding on the contractor. **However, in such cases, Railways shall request ICF, for the extension of the Rate Contract to facilitate processing of payments to the contractor.**

5. The following engine Parameters can be used as basic guidelines to determine whether the engine is required to undergo E-check/ in frame overhaul.
    - Excessive Oil consumption
    - Excessive drop of oil pressure
    - Excessive Blow by
    - Engine oil contamination
    - Unusual noise from engine
    - Excessive vibration/ smoke level
    - Any catastrophic failure.

6 The latest version of scope including any additions as discussed in various forums like DEMU coordination meeting, meeting with RDSO, user Railways etc. shall be included.

7 Freight: Prices offered are Ex-works Phaltan / Jaipur / Asansol (as the case may be). Inbound and Outbound freight would be borne by the User Railway. Freight may be arranged with necessary support from User Railway by the CONTRACTOR / their authorized dealer and charged in actual with the invoice value. Regarding service tax, contractor shall deal with respective user Railways.

8. In case any additional parts required other than the parts included in Annexure of Must and Conditional based replaceable parts, shall be charged additionally as per the then existing prices upon written Confirmation from the respective user Railways. However, if the said items are available in the DGS&D / GeM Rate contract (if comes in to force in future), the same rates shall be applicable.

9. "Notwithstanding anything contained in this contract /Tender" the aggregate liability of the CONTRACTOR towards any claim from the User Railway / third Party under performance of work order for E Check Services shall be limited to contract charges received by the CONTRACTOR for that specific work order.

10. **PART NUMBER SUPERCEDENCE/ OBSOLESENCE:**
The description and the part number offered in the scope in this offer may change/ may get obsolete during the course of the Contract execution which shall be communicated to ICF on a Quarterly basis. Such Changes, if any that shall be communicated only with ICF and the same shall be cascaded to the User Railways to get prepared for the changes in the execution of the Work Orders from User Railways.

मुख्य अभिकल्प इंजीनियर/यांत्रिक
Chief Design Engineer / Mechanical
सवारी डिब्बा कारखाना
Integral Coach Factory
चेन्नै / Chennai - 600 038.

CUMMINS (INDIA) LIMITED PUNE

11. **CURRENT FULFILLMENT RATE:**

(Projection Adherence): CIL will circulate the updated Population of Engines those are offered for E-Check as against the projected quantities of respective User Railways who all are the part of this Contract on a Monthly basis.

12. Railways shall submit a "Pre-shopping report" in the prescribed **Annexure-10**, the CONTRACTOR or their authorized dealer shall render necessary assistance to User Railway in this regard.

13. The "Pre-shopping report" will determine the condition of the engine for major overhauling requirement based on the recorded parameters. Scheduled work plan for additional work or, engine overhauling, as applicable will also be prepared. Both the parties will sign on the mutually agreed "Scheduled work Plan" and will strictly follow the same. This will eliminate the problem of job incompletion & delay. A sample format of "Scheduled work plan" is enclosed as **Annexure - 11**.

14. Both RAILWAYS and the CONTRACTOR or their authorized dealer should nominate a responsible person from their sides for the supervision and to monitor the progress of work as per "Scheduled work plan".

    A service report should be made and signed by both the nominated representatives on completion of the activities with reference to the "Scheduled work plan". In the event of incomplete works, reason should clearly be mentioned in the service report and the incomplete work should be rescheduled and completed within the stipulated period.

15. The CONTRACTOR or their authorized dealer should ensure the availability of technical manpower, tools including special tools & measuring instruments required. Railways to ensure facilities as given below, in the DMU car shed from where the engines are offered for E-check:

    - Air compressor (compressed dry air)
    - Overhead crane for removal/installation of roof mounted radiator (RMR)
    - Welding equipment, gas cylinder, electrodes etc.
    - Arrangement of load bank for load trial after the completion of 'E' check
    - Workshop equipment likes Vice, Hydraulic press, Drill machine etc.
    - Lighting of the engine room/coach throughout the working period without interruptions.
    - Secured area for keeping dealer's tools
    - Transporting of heavy parts/components inside the Car Shed
    - Draining & filling of diesel/ lubricating oil/ engine coolant/ hydraulic oil
    - Cleaning of panel filter, diesel tank and radiator
    - Arrangement of charged batteries.

CUMMINS (INDIA) LIMITED PUNE

मुख्य अभिकल्प इंजीनियर/यांत्रिक
Chief Design Engineer / Mechanical
सवारी डिब्बा कारखाना
Integral Coach Factory
चेन्नै / Chennai - 600 038

16. **POST PAYMENT AUDIT**

Railways reserve the right to carry out post payment audit and technical examination of the works and final bill including all supporting vouchers, abstract etc. and to make a claim on the contractor for the refund of any excess amount paid to them, if as a result of such examination any over payment made to them is discovered to have been made in respect of any work done or alleged to have done by him under the contract.

17. COMPLETION PERIOD

The E-Check of the engine should be completed within 40 days, for all Railways except for NF, Eastern (Jamalpur) and Northern Railway (Budgam, J&K DEMU), where the lead time for delivery of Rebuild engine shall be 50 days, from the date of technical and commercial approval of repairs at estimates subject to submission of E-Check schedule at least 90 days in advance. If the CONTRACTOR fails to supply the engine duly overhauled within the above period, payment shall be deducted @ Rs.25000/- per day from the bill subject to the ceiling of 10% of the invoice amount for that engine.

18. EARNEST MONEY DEPOSIT (EMD)

The CONTRACTOR has deposited a sum of Rs. 70,11,500/- (Rupees Seventy lakhs Eleven Thousand Five hundred only) e-pay order no."**CKW1521931"** dated 13.02.2023.The EMD will be returned to the CONTRACTOR after the agreement gets signed by both the parties, i.e. ICF and the CONTRACTOR

19. **SECURITY DEPOSIT AND PERFORMANCE GUARANTEE:**

The CONTRACTOR or their Authorized dealer shall pay the Security Deposit & performance bank Guarantee to the concerned User Railways as per the existing rules and regulations as follows:

(a) Security Deposit @ 5% of Supply order value shall be applicable. The same will be recovered from the bills submitted by the CONTRACTOR.

(b) Additionally Performance Guarantee @ 5% of the Supply order value to be provided.

(c) Both Security deposit and Performance Guarantee shall be released after satisfactory completion of work and warranty period is over.

20. **SAFE CUSTODY OF MATERIAL AT CONTRACTOR'S PREMISES.**

The contractor shall keep safe custody of the engines sent for repairs at his premises. For this purpose, contractor shall be required to furnish Bank Guarantee to the tune of 10% of the total contract value on placement of contract and prior to actual operation of the same. The same will be return back to the firm when the engine is returned to Railways after E-Check attention. This will be followed for every E-Check attention of the engine.

मुख्य अभिकल्प इंजीनियर/यांत्रिक
Chief Design Engineer / Mechanical
सवारी डिब्बा कारखाना
Integral Coach Factory
चेन्नै / Chennai - 600 038.

CUMMINS (INDIA) LIMITED PUNE

21. RETURN OF OLD PARTS.

Major parts like Liners, Pistons, Camshaft, Crankshaft, major parts etc. if replaced during overhauling of the engine, shall be returned to Railways duly segregated, cleaned and packed in suitable container along with the repaired engine. However, small items like "O' Rings, Gaskets, Bushings, Bearings, Hoses and any child parts used in reconditioned (Recon) components etc. shall not returned by CIL.

Returnable Parts from mandatory List	Returnable Parts from condition based List (If new is quoted in E-Check estimate)
• Main Bearing set • Connecting Rod Bearing set • Liners • Piston • Ring set • Cylinder Head Gasket • Push Rod- Valve • Push Rod - Injector • Damper • Oil Cooler	• Crankshaft • Camshaft • Cylinder Head • Turbocharger • Connecting Rod • After Cooler • injector

22. ARBITRATION

i. Settlement of disputes and differences arising out of contract shall be done as per clauses 63 and 64 of GCC 2019 as amended from time to time and Arbitration & Conciliation (Amendment) Act 2019.

ii. The place of arbitration shall be at Chennai only and the Courts in Chennai alone shall have the jurisdiction to try and adjudicate any disputes / claims arising out of this agreement.

23. SAFETY MEASURES:

The CONTRACTOR or their authorized dealer shall take all the precautionary measures not only to ensure protections of his own personnel moving around while working on the Railway premises, but also shall confirm to the rules and regulations of the Railways in this respect.

The work must be carried out most carefully without any infringement of the Indian Railway Act or the General / subsidiary rules enforced on the Railways in such a way they do not hinder Railway operations to any Railway equipments, structures or rolling stock except as agreed to by the Railways.

24. INDEMNITY BY CONTRACTOR:

The Contractor shall indemnify and save harmless the Railway from and against all actions, suit, proceedings, losses, costs, damages, charges, claims and demands of every nature and description brought or recovered against the Railways by reason of any act or omission of the Contractor, his agents or employees, in the execution of the works or in his guarding of the same. All sums payable by way of compensation under any of these conditions shall be considered as reasonable compensation to be applied to the actual loss or damage sustained, and whether or not any damage shall have been sustained.

मुख्य अभिकल्प इंजीनियर/यांत्रिक
Chief Design Engineer / Mechanical
सवारी डिब्बा कारखाना
Integral Coach Factory
चेन्नै / Chennai - 600 038.

CUMMINS (INDIA) LIMITED PUNE

25. **WARRANTY**

After E-check / overhauling the engine shall be warranted for 13 months from the date of delivery / 12 months from the date of commissioning or 4000 hours operation of engine whichever is earlier, against any defects in the components changed on compulsory replacement or condition basis, poor workmanship, defective design of components or malfunctioning of the engine. Warranty of the engine will be from the date of commissioning, provided the engine gets commissioned within 30 days of receipt.

26. FALL CLAUSE:

If cost of any item as per ICF Rate contract scope with M/s.CIL is found higher compared to cost of same item as per DGS&D / GeM Rate contract (if comes in to force in future) with M/s.CIL, during the currency of both Rate contracts, then Railway administration would pay lower rate only.

26. INSPECTION & TESTING OF ENGINE

The report with respect to E-Check / overhaul of each engine shall be submitted in the format at Annexure-12, enclosed. The CONTRACTOR shall conduct the load test after completion of all the activities mentioned in the scope of E-Check of the engine and prove the satisfactory performance of the engine and record the test parameters as per the Format at Annexure-12. The load test shall be completed within the stipulated period specified in clause No.17. However, User Railways may choose to waive off witnessing of final testing inspection to improve execution time of E-Check based on the firm's internal testing certificate and warranty documentation.

28. PAYMENT

a) Payment will be made by Zonal Railways.
b) 95% payment shall be made at the time of delivery of E-check/ overhauled engine against the Performa invoice duly supported by the internal test certificate to be given by the firm.
c) Balance 5% payment will be made after the receipt and commissioning of the engine at Railways. In case the engine is not commissioned within 90 days from date of receipt of engine after E- Check, User Railways can process for payment of balance 5%.
d) IT and surcharge on IT will be recovered as applicable. Necessary certificate for having deducted IT will be issued.
e) The Railways shall submit the details of deductions carried out at source from the bills receivable by the Contractor as per the format at Annexure-15 to Cummins.

29. PROVISIONS OF EMPLOYEES PROVIDENT FUND & MISCELLANEOUS PROVISIONS ACT 1952:

i. The contractor shall comply with the provisions of para.30 & 36-B of the Employees Provident Fund Scheme, 1952; Para 3 and 4 of Employees Pension scheme, 1995; and para. 7 & 8 of Employees Deposit Linked Insurance Scheme 1976; as modified from time to time through enactment of "Employees Provident Fund and Miscellaneous Provisions Act, 1952", wherever applicable and shall also indemnify the Railway from and against any claims under the aforesaid Act and the Rules.

मुख्य अभिकल्प इंजीनियर/यांत्रिक
Chief Design Engineer / Mechanical
सवारी डिब्बा कारखाना
Integral Coach Factory
चेन्नै / Chennai - 600 038.

CUMMINS (INDIA) LIMITED PUNE

ii. The contractor is required to comply with the provisions of EPF and M&P Act, 1952 and obtain code number from the concerned authorities whenever workmen employed by him are 20 or more. He shall also indemnify Railways from and against any claim, penalties, recoveries under the above Act & Rules. Contractors should get the code number under EPF so as to enable the Provident Fund Commissioners to extend the social security benefits to the workmen engaged by the Railway contractors.

30. SHRAMIK KALYAN:

Contractor is to abide by the provisions of Payment of Wages act & Minimum Wages act in terms of clause 54 and 55 of Indian Railways General Condition of Contract. In order to ensure the same, an application has been developed and hosted on website 'www.shramikkalyan.indianrailways.gov.in'. Contractor shall register his firm/company etc. and upload requisite details of labour and their payment in this portal. These details shall be available in public domain. The Registration/ updation of Portal shall be done as under:

a) Contractor shall apply for onetime registration of his company/firm etc. in the Shramikkalyan portal with requisite details subsequent to issue of Letter of Acceptance. Engineer shall approve the contractor's registration in the portal within 7 days of receipt of such request.

b) Contractor once approved by any Engineer, can create password with login ID (PAN No.) for subsequent use of portal for all LoAs issued in his favour.

c) The contractor once registered on the portal, shall provide details of his Letter of Acceptances (LoA) / Contract Agreements on shramikkalyan portal within 15 days of issue of any LoA for approval of concerned engineer. Engineer shall update (if required) and approve the details of LoA filled by contractor within 7 days of receipt of such request.

d) After approval of LoA by Engineer, contractor shall fill the salient details of contract labours engaged in the contract and ensure updating of each wage payment to them on shramikkalyan portal on monthly basis.

e) It shall be mandatory upon the contractor to ensure correct and prompt uploading of all salient details of engaged contractual labour & payments made thereof after each wage period.

While processing payment of any 'On Account bill' or 'Final bill' or release of 'Advances' or 'Performance Guarantee / Security deposit', contractor shall submit a certificate to the Engineer or Engineer's representatives that "I have uploaded the correct details of contract labours engaged in connection with this contract and payments made to them during the wage period in Railway's Shramikkalyan portal at 'www.shramikkalyan.indianrailways.gov.in' till ____Month, ____Year."

31. APPLICABLE CONDITIONS: General conditions of contract amended from time to time

******

CUMMINS (INDIA) LIMITED PUNE

मुख्य अभिकल्प इंजीनियर/यांत्रिक
Chief Design Engineer / Mechanical
सवारी डिब्बा कारखाना
Integral Coach Factory
चेन्नै / Chennai - 600 038.

Scope of E-Check

Unit assemblies or part thereof –
Clean the engine on receipt, dismantle & inspect the engine component as below:-

1. **Tappet Cover** - Check for crack & physical damage. Replace, if damaged. If found OK, clean the same & re-use. Replace breather.

2. **Rocker Housing Assembly** - Check for crack & physical damage. Replace, if damaged. If found OK, clean the same & re-use. Replace rocker lever, bushes, shaft, cap etc. as per requirement after inspection. Clean lube oil passages.

3. **Cylinder head** – Check for crack & physical damage. Replace, if damaged. If found OK, de-carbonize and de-scale the cylinder head. Replace all intake valves, exhaust valves, valve guides, valve seat inserts, valve collets, valve springs & retainers etc.

4. **Piston & Ring Sets** – Replace all pistons along with piston rings.

5. **Cylinder Liners** – Replace all cylinder liners.

6. **Connecting rods** – Inspect all connecting rods for bend, twist, burning marks etc. Replace if bend/twist is out of limit or if connecting rod is having burning marks/dents. If found OK, clean the same and re-use. Clean lube oil passages. Replace all bushes.

7. **Connecting rod bearings** – Replace all connecting rod bearings with suitable size bearings depending on crank pin size.

8. **Main bearings**- Replace all main rod bearings with suitable size bearings depending on crank main journal size.

9. **Cam shaft** – Inspect the cam shaft for bend, pitting marks and scratches. Replace, if bend is out of limit of pitting marks/heavy scratches are observed.
If found OK, clean the same & re-use. Polish the cam lobes.

10. **Cam follower** – Inspect cam follower assemblies. Check cam follower assembly.
If found OK, re-condition the cam follower assemblies by replacing all rollers, pins, socket & locks.

11. **Push rods** – Replace all push rods.

12. **Crank shaft** – Inspect the crank shaft for seizure, cracks, bend, hardness etc. Replace the crank shaft, if it is beyond salvageable condition due to seizure of bearing, hardness is low even after grinding, cracks, bend is beyond limit etc.
If found OK, clean the crank shaft & lube oil passage inside the crank shafts. Check main journal size and crank pin size. Grind it to next undersize depending on hardness and wearing on main journal and crank pin. Check & correct dynamic balancing.

13. **Vibration damper** – Replace vibration damper.

मुख्य अभिकल्प इंजीनियर/यांत्रिक
Chief Design Engineer / Mechanical
सवारी डिब्बा कारखाना
Integral Coach Factory
चेन्नै / Chennai - 600 038.

CUMMINS (INDIA) LIMITED PUNE

14. **Water pump** – Clean & de-scale the water pump housing. Check housing for damage. Replace, if required.
If found OK, re-condition water pump by replacing shaft, impeller, bearing, seal & seat assembly etc.
If the water pump is beyond economical repair, replace it.

15. **Accessory Drive** – Re-condition the accessory drive assembly by replacing bushing. Replace the shaft, if found damaged.

16. **Fuel pump** – Dismantle the fuel pump. Clean all the internal fuel passages.
Inspect all fuel pump components for wear/damage. Replace as per requirement. Replace all gaskets, bushes & O-rings.
Check gear pump for wearing/damage/seizure and delivery flow.
Replace, if excessive wearing/damage/seizure is observed or fuel delivery flow is low.
If found OK, re-use the gear pump after cleaning.
Calibrate the fuel pump as per code.

17. **Injectors** - Dismantle all the injectors. Clean the injectors. Inspect injector body for physical damage. Replace, if required. Check barrel and plunger assembly for wearing & clearance. Replace, if excessive clearance is observed. Also replace barrel plunger assembly, if excessive wear on plunger tip is observed. Since barrel & plunger are matched, they must be replaced together in pair.
Replace all injector cups.
Calibrate the injectors as per code.
If any injector is observed beyond economical repair, replace the same.

18. **Lube oil pump** – Clean the lube oil pump. Check housing for wearing/damage. Recondition lube oil pump by replacing gears & all gaskets.

19. **Turbo charger** - Dismantle the turbo charger. Check housings for excessive wear/damage or warpage. Replace, if required.
Recondition the turbo charger by replacing wheel & shaft assembly and using turbo repair kit. Replace turbo charger, if found beyond economical repair.

20. **Lube oil cooler** – Dismantle lube oil cooler assembly, Check cooler housing for damage. Replace lube oil cooler, if required.
If found OK, clean/de-scale the housing. Replace elements & gaskets.

21. **Air intake manifold** – Clean the manifold. Inspect the physical damage. Replace, if damaged. Replace after cooler element.

22. **Exhaust manifold** – De-carbonize the exhaust manifold. Replace, if excessive wearing/warping observed.

23. **Gear train** – Check all gears for wearing/damage. Replace, if found worn out excessively/damaged.

24. **Gear case cover & housing** – Clean gear case cover & housing. Replace, if found damaged.

CUMMINS (INDIA) LIMITED PUNE

मुख्य अभिकल्प इंजीनियर/यांत्रिक
Chief Design Engineer / Mechanical
सवारी डिब्बा कारखाना
Integral Coach Factory
चेन्नै / Chennai - 600 038.

25. **Gaskets, O-rings, rubber components & hose** – Replace all gaskets & O-rings, rubber components & hoses.

26. **Cylinder block** – Clean & check for physical damage. Replace, if found damaged beyond salvageable condition.
If cylinder block is OK, de-carbonize & de-scale it.
Clean all lube oil & coolant passage inside the block.
Replace all cam shaft bushes and all other hoses.

27. Check main bearing caps for distortions, Replace caps, if found beyond repairs. Carryout line boring.

28. Any other component/assemblies not mentioned above may also be required to be replaced on condition basis.

29. The details of parts required for the above mentioned schedule along with part No, price & quantity are as per Annexure-4 & 5.

Assemble the engine using re-conditioned sub-assemblies, new gasket & O-rings as per Cummins procedure.

Test the engine as per Cummins recommended test bed.
Paint the engine.
Pack in suitable transportable packing

CUMMINS (INDIA) LIMITED PUNE

मुख्य अभिकल्प इंजीनियर/यांत्रिक
Chief Design Engineer / Mechanical
सवारी डिब्बा कारखाना
Integral Coach Factory
चेन्नै / Chennai - 600 038.

RATES FOR MUST CHANGE ITEMS DURING E-CHECK OF KTA50L ENGINE

Sl No	Part No.	Description	Qty/ Engine	Unit Price without Tax (Rs)	Extended Amount without Tax (Rs)	HSN Code	GST Rate
1	RX3646323	RECONDITINED CYLINDER HEAD	16	41,541.20	6,64,659.20	84099990	28%
2	RX3076132	RECONDITINED INJECTOR STC	16	26,709.52	4,27,352.32	84099990	28%
3	RX3632225	RECONDITIONED ROD ENGINE CONNECTING	16	2,303.30	36,852.80	84099990	28%
4	RX4913065	RECONDITIONED FUEL PUMP	1	50,480.00	50,480.00	84133090	28%
5	RX3642502	RECONDITIONED CAMFOLLOWER K19	16	8,307.80	1,32,924.80	84099990	28%
6	RX3647030	RECONDITIONED WATER PUMP KV16	1	14,736.05	14,736.05	84133030	28%
7	RX3628640	RECONDITIONED WATER PUMP DRIVE KV	1	4,324.23	4,324.23	84133030	28%
8	RX3880160	RECONDITIONED ACC DRIVE KV-STD	1	5,274.45	5,274.45	84099990	28%
9	RX3634643	RECONDITIONED PUMP, LUBICATING OIL	1	10,390.99	10,390.99	84099990	28%
10	RX4955505	RECONDITIONED TURBOCHARGER	2	74,422.51	1,48,845.02	84148030	18%
11	3006089	LINER, CYLINDER	16	7,208.21	1,15,331.36	84099990	28%
12	3631246	KIT, PISTON ENGINE	16	37,822.36	6,05,157.76	84099990	28%
13	KIT3018211	SET MAIN BEARING (010)	1	73,566.92	73,566.92	84099990	28%
14	3047391	BEARING, CONNECTING ROD	32	1,414.75	45,272.00	84831010	28%
15	3804300	SET, LOWER ENGINE GASKET	1	81,672.54	81,672.54	40169390	18%
16	4352581	KIT, UPPER ENGINE GASKET	1	93,676.27	93,676.27	40169390	18%
17	3057139	ROD, PUSH	32	1,637.49	52,399.68	84099990	28%
18	3017961	ROD, PUSH	16	2,624.69	41,995.04	84099990	28%
19	3628650	DAMPER, VIBRATION	1	50,594.84	50,594.84	84099990	28%
20	3628649	DAMPER, VIBRATION	1	50,594.84	50,594.84	84099990	28%

मुख्य अभिकल्प इंजीनियर/यांत्रिक
Chief Design Engineer / Mechanical
सवारी डिब्बा कारखाना
Integral Coach Factory
चेन्नै / Chennai - 600 038.

CUMMINS (INDIA) LIMITED PUNE

21	206709	TUBE, WATER TRANSFER	14	1,854.24	25,959.36	73079990	18%
22	135675	THERMOSTAT	4	1,197.46	4,789.84	90321090	18%
23	3166554	ELEMENT, LUB OIL FILTER	4	430.38	1,721.52	84212300	18%
24	3176710	TUBE, FUEL SUPPLY	1	2,545.83	2,545.83	73079990	18%
25	3628931	TUBE, FUEL SUPPLY	1	2,670.70	2,670.70	73079990	18%
26	3033915	SEAL, O RING	16	562.09	8,993.44	40169330	18%
27	3026395	HOSE, PLAIN	4	79.86	319.44	40091100	18%
28	205230	BUSHING	34	496.18	16,870.12	84099990	28%
29	3630125	HOSE, PLAIN	2	4,539.89	9,079.78	40091100	18%
30	3632028	HOSE, FLEXIBLE	4	5,321.81	21,287.24	40091100	18%
31	3635074	CORE, COOLER	4	31,439.70	1,25,758.80	84099949	28%
32	3178549	TUBE, WATER TRANSFER	1	1,041.91	1,041.91	73079990	18%
33	3178545	TUBE, WATER TRANSFER	1	809.95	809.95	73079990	18%
34	3021436	BREATHER, CRANKCASE	1	1,186.77	1,186.77	84099990	28%
35	43828 C	CLAMP, HOSE	8	28.76	230.08	82057000	18%
36	3635033	HOSE, FLEXIBLE	2	2,344.61	4,689.22	40091100	18%
37	3634390	HOSE, FLEXIBLE	1	5,654.70	5,654.70	40091100	18%
38	3634396	HOSE, FLEXIBLE	1	1,328.31	1,328.31	40091100	18%
39	3067371	HOSE, PLAIN	2	6,753.94	13,507.88	40091100	18%
40	AK 6021 SS	HOSE, FLEXIBLE	1	1,011.34	1,011.34	40091100	18%
41	AK 6019 SS	HOSE, FLEXIBLE	1	1,064.95	1,064.95	40091100	18%
42	AK 6022 SS	HOSE, FLEXIBLE	1	1,091.19	1,091.19	40091100	18%
43	AK 6024 SS	HOSE, FLEXIBLE	1	867.14	867.14	40091100	18%
44	AK 6009 SS	HOSE, FLEXIBLE	1	735.69	735.69	40091100	18%

मुख्य अभिकल्प इंजीनियर/यांत्रिक
Chief Design Engineer / Mechanical
सवारी डिब्बा कारखाना
Integral Coach Factory
चेन्नै / Chennai - 600 038.

CUMMINS (INDIA) LIMITED PUNE

45	AK 4010 SS	HOSE, FLEXIBLE	1	476.94	476.94	40091100	18%
46	3175318	HOSE, FLEXIBLE	1	539.56	539.56	40091100	18%
47	3628889	HOSE, FLEXIBLE	4	3,275.65	13,102.60	40091100	18%
48	3630864	HOSE, FLEXIBLE	1	12,714.97	12,714.97	40091100	18%
49	3630865	HOSE, FLEXIBLE	1	19,618.61	19,618.61	40091100	18%
50	3630867	HOSE, FLEXIBLE	1	3,162.29	3,162.29	40091100	18%
51	3631295	HOSE, FLEXIBLE	1	59,130.12	59,130.12	40091100	18%
52	3634389	HOSE, FLEXIBLE	1	5,009.70	5,009.70	40091100	18%
53	3634395	HOSE, FLEXIBLE	1	2,008.28	2,008.28	40091100	18%
54	3635070	HOSE, PLAIN	10	1,624.79	16,247.90	40091100	18%
55	AK 4029 SL	HOSE, FLEXIBLE	1	999.31	999.31	40091100	18%
56	AK 4049 SL	HOSE, FLEXIBLE	1	1,244.93	1,244.93	40091100	18%
57	2870393	HOSE, FLEXIBLE	2	1,633.30	3,266.60	40091100	18%
58	AK 6012 SS	HOSE, FLEXIBLE	2	671.51	1,343.02	40091100	18%
59	3875875	ACTUATOR	1	1,83,258.26	1,83,258.26	84099990	28%
60	2879404	HARNESS, WIRING	1	10,343.54	10,343.54	85441930	18%
Total for Must change Items					**32,91,782.94**		

मुख्य अभिकल्प इंजीनियर/यांत्रिक
Chief Design Engineer / Mechanical
सवारी डिब्बा कारखाना
Integral Coach Factory
चेन्नै / Chennai - 600 038.

CUMMINS INDIA) LIMITED PUNE

Annexure – 5

RATES FOR CONDITION BASED REPLACEMENT ITEMS DURING E-CHECK OF KTA50L ENGINE

Sl No.	Part No.	Description	Qty/ Engine	Unit Price without Tax (Rs)	Extended Amount without Tax (Rs)	HSN Code	GST Rate
1	3646323	HEAD, CYLINDER	1	94,788.14	94,788.14	84099990	28%
2	4955505	TURBOCHARGER	2	2,26,465.00	4,52,930.00	84148030	18%
3	3648617	ASSY, CRANKSHAFT	1	23,39,594.52	23,39,594.52	84831091	28%
4	3632225	ROD, ENGINE CONNECTING	1	39,958.13	39,958.13	84099990	28%
5	4372339	PUMP, WATER	1	44,212.97	44,212.97	84133030	28%
6	3634648	PUMP, LUBRICATING OIL	1	48,831.37	48,831.37	84133020	28%
7	3628798	GEAR, CRANKSHAFT	1	11,663.09	11,663.09	84834000	18%
8	3175255	GEAR, CRANKSHAFT	1	16,606.35	16,606.35	84834000	18%
9	207251	GEAR, WATER PUMP	1	2,346.41	2,346.41	84834000	28%
10	4952020	GEAR, ACCESSORY DRIVE	1	3,504.30	3,504.30	84834000	18%
11	3628822	GEAR, IDLER	1	8,564.90	8,564.90	84834000	18%
12	3628823	GEAR, IDLER	1	4,100.94	4,100.94	84834000	18%
13	3004683	GEAR, IDLER	1	7,611.20	7,611.20	84834000	18%
14	3178450	SHAFT, IDLER	1	2,462.50	2,462.50	84831010	28%
15	3007971	BEARING, CAMSHAFT THRUST	2	3,553.22	7,106.44	84099990	28%
16	3018210	SET, MAIN BEARING STD.	1	61,159.33	61,159.33	84099990	28%
17	3018212	SET, MAIN BEARING 020	1	94,697.99	94,697.99	84099990	28%
18	3047390	BEARING, CONNECTING ROD	32	987.00	31,584.00	84831010	28%
19	3047392	BEARING, CONNECTING ROD	32	1,110.65	35,540.80	84831010	28%
20	3626715	CORE, AFTERCOOLER	4	1,56,882.87	6,27,531.48	84099990	28%
21	3066898	CAMSHAFT	1	1,77,904.60	1,77,904.60	84831099	28%
22	3066899	CAMSHAFT	1	1,77,904.60	1,77,904.60	84831099	28%
Total for Condition Based replacement Items					**42,90,604.06**		

मुख्य अभिकल्प इंजीनियर/यांत्रिक
Chief Design Engineer / Mechanical
सवारी डिब्बा कारखाना
Integral Coach Factory
चेन्नै / Chennai - 600 038.

CUMMINS (INDIA) LIMITED PUNE

Annexure – 6

RATES FOR LABOUR, TRANSPORTATION AND ENGINEER DEPUTATION CHARGES DURING E-CHECK OF KTA50L ENGINE

Sl. No.	Item	Price in Rs. (GST Extra)
(i)	Labour Charges	3,02,500.00
(ii)	Engineer Deputation Charges per day (beyond 5 days of free visit)	6050.00 / day
(iii)	Transportation Charges	Actuals

Note:

i. The contractor will give 5 days free visit by their field engineers during commissioning of overhauled engine. For any further increase beyond 5 days on Railways account they will be charging towards engineer deputation charges @ Rs.6050/- per day.

ii. For Labour Charges and Engineer Deputation Charges, GST shall be charged at 18% as per SAC Code 9987.

iii. The Transportation Charges include charges for transportation and transit insurance, GST would be charged at 28%.

Tender details:

Tender no. : 2023472610940
Tender opened on : 24.02.2023.
Negotiation dated : 21.08.2023.

The price details are as follows:
(Note: Basic price only, Taxes Extra)

SL. No.	Item	Cost Rs.
1	Must change parts - 60 items	32,91,782.94
2	Condition based change parts - 22 items	42,90,604.06
3	Labour charges	3,02,500.00
4	Engineer Deputation charges per day (beyond 5 days of free visit)	6,050.00
5.	Transport charges	Actuals
6.	Total cost per engine (Sl. Nos.1+2+3) (Engineer deputation charges & Transport charges are not included, it will be charged as actual)	78,84,887.00

मुख्य अभिकल्प इंजीनियर/यांत्रिक
Chief Design Engineer / Mechanical
सवारी डिब्बा कारखाना
Integral Coach Factory
चेन्नै / Chennai - 600 038.

CUMMINS (INDIA) LIMITED PUNE

Annexure - 7

Basic Guidelines for performing 'E' Check

- Railways to arrange the "DEMU Pre-Shopping Report" from User Railway. The CONTRACTOR/their Authorized dealer will render necessary assistance to User Railway in this regard.

- The "Pre-shopping report" will determine the condition of the engine for major overhauling requirement based on the recorded parameters. Scheduled work plan for additional work or, engine overhauling, as applicable will also be prepared. Both the parties will sign on the mutually agreed "Scheduled work Plan" and will strictly follow the same. This will eliminate the problem of job incompletion & delay.
- Both RAILWAYS and the CONTRACTOR or their authorized dealer should nominate a responsible person from their sides for the supervision and assessment on the progress of work. A service report should be made and signed by both the nominated representatives on completion of the activities. In the event of incomplete work, reason should clearly be mentioned in the service report and the incomplete work should be rescheduled.

- RAILWAYS & the CONTRACTOR's authorized dealer should ensure that manpower, materials, consumables, tools & equipment as per the scheduled activity requirement & responsibility are made available for avoiding the unnecessary / unaccountable delay.

- Railways to provide following man power-

    - Skilled Manpower – 2 persons
    - Unskilled Manpower – 5 persons

मुख्य अभिकल्प इंजीनियर/यांत्रिक
Chief Design Engineer / Mechanical
सवारी डिब्बा कारखाना
Integral Coach Factory
चेन्नै / Chennai - 600 038.

CUMMINS (INDIA) LIMITED PUNE

Tools under Dealer's Responsibility

- Standard Tool Box
- Tachometer
- Water manometer
- KTA – 3067 – Blow-bye Tool
- Hydraulic oil pressure gauge
- Valve & injector setting tool
- Engine work related torque wrenches
- ST tools, as applicable to engine related work as per the “Scheduled Work Plan”

CUMMINS (INDIA) LIMITED PUNE

मुख्य अभिकल्प इंजीनियर/यांत्रिक
Chief Design Engineer / Mechanical
सवारी डिब्बा कारखाना
Integral Coach Factory
चेन्नै / Chennai - 600 038.

Minimum facilities required to remove / fit back the engine which is to be provided by Railways in the DMU car shed:

- Air compressor (compressed dry air)
- Overhead crane for removal/installation of Engine, radiator etc.
- Welding equipment, gas cylinder, electrodes etc.
- Arrangement of load bank for load trial after the completion of 'E' check
- Workshop equipments like Vice, Hydraulic press, Drilling machine etc.
- Lighting of the engine room/coach throughout the working period without interruptions.
- Secured area for keeping dealers tools
- Transporting of heavy parts/components inside the Car Shed
- Draining & filling of diesel/ lubricating oil/ engine coolant/ hydraulic oil
- Cleaning of panel filter, diesel tank and radiator
- Arrangement of charged batteries.

मुख्य अभिकल्प इंजीनियर/यांत्रिक
Chief Design Engineer / Mechanical
सवारी डिब्बा कारखाना
Integral Coach Factory
चेन्नै / Chennai - 600 038.

CUMMINS (INDIA) LIMITED PUNE

Annexure -10

PRE-SHOPPING REPORT

DPC No._____ Power pack make_____ Km RUN_____

ESN_____ Date in Service_____ Engine Hrs. Run_____
(after commissioning/ before E-Check)

Parameter	Value/ Condition	Parameter	Value/ Condition
Min oil pressure at idle (at working temperature)		Engine Sound – any abnormalities	
Max. cooling water temperature encountered		Safety devices of cooling water and Lub oil- Functioning / bypassed/ defective	
Engine oil Consumption		Hydraulic pump & motors condition	
Smoke level/ Vibrations at full load		Lub oil consumption in 300 Hrs.	
Condition of lube oil sludge/ excessive carboning / diesel dilution		Last PT pump & injectors calibrated on	
Blow-bye value		Last B-Check carried-out on	
Governor & actuator working		Last C-Check carried-out on	
Turbo end play / side clearance		Crank end play	
Accessory drive end play		Lub oil brand & grade being used	
Contamination in the engine oil		Hydraulic oil brand & grade being used	
Leakage of water, oil, diesel or air observed			

Major repairs carried out:

Detail	Hrs. of operation	Date

Parts renewed or cannibalized from the DEMU:

मुख्य अभिकल्प इंजीनियर/यांत्रिक
Chief Design Engineer / Mechanical
सवारी डिब्बा कारखाना
Integral Coach Factory
चेन्नै / Chennai - 600 038.

CUMMINS (INDIA) LIMITED PUNE

RPM on notches:

Notch	1st	2nd	3rd	4th	5th	6th	7th	8th
RPM								
Water Temp.								
Oil Temp.								
Oil Pressure								
Voltage								
Current								
KW load								

Job required to be carried out

Additional information, if any

Note: Details of major repairs carried out or defects noticed during service may be attached with this report.

Signature: _____

Name: _____

Designation: _____ Date: _____

मुख्य अभिकल्प इंजीनियर/यांत्रिक
Chief Design Engineer / Mechanical
सवारी डिब्बा कारखाना
Integral Coach Factory
चेन्नै / Chennai - 600 038.

CUMMINS (INDIA) LIMITED PUNE

SCHEDULED WORK PLAN

DPC No._____ **Power pack make**_____ **Km RUN**_____

ESN_____ Date in Service _____Engine Hrs. Run_____
(after commissioning / before E-Check)

The form to have additional break-up of activities

Date of DEMU receipt				**Remarks**	
Activity	Proposed date of completion	Date of actual completion	Reason for delay	Responsibility	Revised date
Taking shell on pedestals					
Draining of lub oil, water from DEMU					
Removal of peripheral components					
Removal of engine					
Fitment of overhauled engine					
Fitment of peripheral components					
Other maintenance					
Lowering of shell on bogie					
Filling of water, lub, Diesel					
Cranking of engine					
Load Testing					
Handing over of performance test reports and load test results and warranty certificate					

Reason for any modification and responsibility must be given in schedule

Signature of
Authorised representative
of CIL Dealer

Signature of
Authorised representative
of Railways

मुख्य अभिकल्प इंजीनियर/यांत्रिक
Chief Design Engineer / Mechanical
सवारी डिब्बा कारखाना
Integral Coach Factory
चेन्नै / Chennai - 600 038.

CUMMINS (INDIA) LIMITED PUNE

FORMAT FOR ENGINE PERFORMANCE AFTER E-CHECK

Date of inspection	
Engine Hour Meter Reading	
Low idle RPM	
Oil Pressure at Low idle	
Water temperature at low idle	
Oil temperature at low idle	
High idle RPM	
Oil pressure at high idle	
Oil temperature at high idle	
Hydraulic oil temperature	
Blow-bye reading (of water)	
Crank end play	
Acc, drive end play	
Turbo play – LB	
Turbo play –RB	

Signature of
Authorized representative
of CIL Dealer

Signature of
Authorized representative
of Railways

मुख्य अभिकल्प इंजीनियर/यांत्रिक
Chief Design Engineer / Mechanical
सवारी डिब्बा कारखाना
Integral Coach Factory
चेन्नै / Chennai - 600 038.

CUMMINS (INDIA) LIMITED PUNE

E-Check Report

1. Engine Type :
2. Engine Serial Number :
3. Date of Commissioning :
4. Date of Despatch after E-Check :

Date: Signature of CIL representative

CUMMINS (INDIA) LIMITED PUNE

मुख्य अभिकल्प इंजीनियर/यांत्रिक
Chief Design Engineer / Mechanical
सवारी डिब्बा कारखाना
Integral Coach Factory
चेन्नै / Chennai - 600 038.

Pre E-Check Condition Report of Major Components

1. Schedule Particulars
2. Kms earned since DOC / Last E-Check
3. Engine Hours

A Deficiency Report

B Damage Report

Signature
Name
Representative of CIL

Signature
Name
Representative of Railways

Additional information, if any.

Signature _____
Name _____
Designation :

Date_____

मुख्य अभिकल्प इंजीनियर/यांत्रिक
Chief Design Engineer / Mechanical
सवारी डिब्बा कारखाना
Integral Coach Factory
चेन्नै / Chennai - 600 038.

CUMMINS (INDIA) LIMITED PUNE

Summary Report on Condition of Major Items

A. Must Change Items

Sl. No	Item	Part No.	Total Qty	Nos. rejected	Nos. Reusable	Ref. Page No.

B. Items Changed on condition basis

Sl. No	Item	Part No.	Total Qty	Nos. rejected	Nos. Reusable	Ref. Page No.

CUMMINS (INDIA) LIMITED PUNE

मुख्य अभिकल्प इंजीनियर/यांत्रिक
Chief Design Engineer / Mechanical
सवारी डिब्बा कारखाना
Integral Coach Factory
चेन्नै / Chennai - 600 038.

Load Test Report

1. DPC No.
2. Engine No.

मुख्य अभिकल्प इंजीनियर/यांत्रिक
Chief Design Engineer / Mechanical
सवारी डिब्बा कारखाना
Integral Coach Factory
चेन्नै / Chennai - 600 038.

CUMMINS (INDIA) LIMITED
PUNE

Detailed Report on Condition of Major Components

1.0 Crankshaft (Pt. No.)

1.1 Old Crankshaft

a) S. No.

b) Main journal sizes

New Location		Rejection Limits
Size	H*	
	V*	

c) Crank Pin sizes

New Location		Rejection Limits
Size	H*	
	V*	

1.2 New Crankshaft

d) S. No.

e) Main journal sizes

Location		
Size	H*	
	V*	

f) Crank Pin sizes

Location		
Size	H*	
	V*	

2.0 Crank Gear (Pt. No.)

2.1 Rejection Criteria

2.2 Old Crank Gear

a) S. No

b) Condition

c) Status

2.3 New Crank Gear

a) S. No

3.0 Camshaft Gear (Pt. No.)

3.1 Rejection Criteria

3.2 Old Cam Gear

a) S. No.

b) Condition

c) Status

3.3 New Cam Gear

a) S. No.

4.0 Cam Shafts (Pt. No.)

a) Rejection Criteria

b) Condition Report

Location			
S. No			
Condition			
S. No. of New camshafts used			

मुख्य अभिकल्प इंजीनियर/यांत्रिक
Chief Design Engineer / Mechanical
सवारी डिब्बा कारखाना
Integral Coach Factory
चेन्नै / Chennai - 600 038.

CUMMINS INDIA LIMITED PUNE

5.0 Connecting Rods (Pt. No.)

5.1 Rejection Criteria

5.2 Old Connecting Rods

Location			
S. No			
Sizes			
Status			

5.3 New Connecting Rods

Location			
S. No			
Sizes			

6.0 Piston (Pt. No.)

6.1 Rejection Criteria

6.2 Old Pistons

Location			
S. No			
Sizes			
Status			

6.3 New Pistons

Location			
S. No			
Sizes			

7 Piston Pins (Pt. No.)

7.1 Rejection Criteria

7.2 Old Piston pins

Location			
S. No			
Sizes			
Status			

7.3 New Piston pins

Location			
S. No			
Sizes			

CUMMINS (INDIA) LIMITED PUNE

मुख्य अभिकल्प इंजीनियर/यांत्रिक
Chief Design Engineer / Mechanical
सवारी डिब्बा कारखाना
Integral Coach Factory
चेन्नै / Chennai - 600 038.

8 **Cylinder Heads (Pt. No.)**

a) Rejection Criteria

b) Condition Report

Location			
Old Cylinder Head S. No			
Condition			
Status			
New Cylinder head S. No.			

8.1 **Valve (Pt. No.)**

a) Rejection Criteria

b) Condition Report

Location			
Old Valve S. No			
Sizes			
Status			
New Valve S.No.			

8.2 **Valve Guides (Pt. No.)**

a) Rejection Criteria

b) Condition Report

Location			
Sizes			
Status			
Size of New Valve Guide used.			

8.3 Valve Seat Insert (Pt. No.)

a) Rejection Criteria

b) Condition Report

Location			
Sizes			
Status			
Size of New Valve Seat Insert used.			

CUMMINS (INDIA) LIMITED PUNE

मुख्य अभिकल्प इंजीनियर/यांत्रिक
Chief Design Engineer / Mechanical
सवारी डिब्बा कारखाना
Integral Coach Factory
चेन्नै / Chennai - 600 038.

8.4 Valve Spring (Pt. No.)

a) Rejection Criteria
b) Condition Report

Location			
Sizes			
Status			
Size of New Valve Spring used			

8.5 Rocker Arm Assemblies (Pt. No.)

a) Rejection Criteria
b) Condition Report

Location			
Sizes			
Status			
Size of New RA Assy. used			

8.6 Push Rod (Pt. No.)

a) Rejection Criteria
b) Condition Report

Location			
Sizes			
Status			

9 **F I Pumps (Pt. No)**

a) Condition Report.
b) Test report of Overhauled FIP

10.0 Injectors (Pt. No.)

a) Condition and Test Report

Location			
S. No			
Test Report			

11.0 Vibration Damper (Pt. No.)

a) Rejection Criteria
b) Condition Report

CUMMINS (INDIA) LIMITED PUNE

मुख्य अभिकल्प इंजीनियर/यांत्रिक
Chief Design Engineer / Mechanical
सवारी डिब्बा कारखाना
Integral Coach Factory
चेन्नै / Chennai - 600 038.

12.0 Cylinder Liners (Pt. No.)

a) Rejection Criteria
b) Condition Report

Location			
S. No			
Condition			
Status			
S. No of New Liners			

13.0 Lube oil Pump (Pt. No.)

a) Rejection Criteria
b) Condition Report

14.0 Lube oil Cooler (Pt. No.)

a) Rejection Criteria
b) S. No of old Lube oil cooler
c) Condition Report
d) S. No of New Lube oil cooler

15.0 After Cooler (Pt. No.)

a) Rejection Criteria
b) S. No of old AC
c) Condition Report
d) S. No of New AC

16.0 Turbo Super Charger (Pt. No)

16.1 Left Side TSC

a) S. No
b) Condition report

Item	Pt. No	Rejection Criteria	Condition of Old Components	Remarks

16.2 Right Side TSC

a) S. No
b) Condition report

Item	Pt. No	Rejection Criteria	Condition of Old Components	Remarks

मुख्य अभिकल्प इंजीनियर/यांत्रिक
Chief Design Engineer / Mechanical
सवारी डिब्बा कारखाना
Integral Coach Factory
चेन्नै / Chennai - 600 038.

CUMMINS (INDIA) LIMITED PUNE

CIL service network :

User railway to connect Cummins respective territory authorized service dealer to avail the services after receipt of Rebuild (E-Check) engine to user railway.

मुख्य अभिकल्प इंजीनियर/यांत्रिक
Chief Design Engineer / Mechanical
सवारी डिब्बा कारखाना
Integral Coach Factory
चेन्नै / Chennai - 600 038.

CUMMINS (INDIA) LIMITED
PUNE

FORMAT FOR DETAILS OF DEDUCTIONS:

Railways shall submit the details of deductions carried out by Railways at source from the bills receivable by the Contractor.

ZONE	USER RAILWAYS NAME	Engine No.	Engine Model	Invoice No.	Invoice Amount	Amount Paid	Deduction Value	% of Invoice Amount	Reason for this Deduction
							Commissioning Balance		
							TDS		
							SD		
							WCT		
							LD		
							Any other		

मुख्य अभिकल्प इंजीनियर/यांत्रिक
Chief Design Engineer / Mechanical
सवारी डिब्बा कारखाना
Integral Coach Factory
चेन्नै / Chennai - 600 038.

CUMMINS (INDIA) LIMITED PUNE