# SCOPE OF WORK FOR ENGINES AND TRANSMISSION CITY OF OCALA/SUNTRAN

## **INTRODUCTION**

The City of Ocala/SunTran is seeking competitive bids for the supply of new or reconditioned Cummins L9 CM2350 engines and Allison B400 transmissions. Bidders may submit proposals for the full scope of work or specific components, including:

- Complete engine and related components, including installation.
- Engine only (Crate engine).
- Complete transmission and related components, including installation.
- Transmission only (Crate transmission).

The City of Ocala/SunTran anticipates purchasing up to ten (10) engines and ten (10) transmissions over a three-year period. Pricing and work distribution will be evaluated collectively or in parts, based on the best interests of the City.

## **SCOPE OF WORK**

## **ENGINE AND TRANSMISSION UNITS**

Engines and transmissions in current inventory:

Unit Number	Engine Serial Number	Transmission Serial Number
18	74149149	6511468472
34	60353676*	6511567749
35	74351334	6511567735**
40	74641619	6511711207
41	74636173	6511713337
42	74636208	6511697562
43	74636184	6511715904
44	74636197	6511713352
45	74632509	6511715878
46	74629071	6511715890

<sup>\*</sup>Replaced July 2023

City of Ocala/SunTran expects to rehabilitate all engines and transmissions as part of this Scope of Work, however, exceptions may be made. The engines and transmissions shall have the same ratings as supplied from the OEM during the original manufacture of the vehicle. The engines and transmissions shall be replaced with a new or reconditioned replacements being of the latest model year and comparable to the

<sup>\*\*</sup>Replaced March 2025

original. For this purpose, an engine shall include block, heads, intake and exhaust manifolds, sump pan, turbo, engine mounted sensors, and electronic systems; transmission shall include torque converter, external cooler, cooler hoses, accumulator and accumulator hoses.

#### **ENGINE REPLACEMENT WITH INSTALLATION**

Replacement engines and transmissions shall include a base manufacturer's warranty. Engine and transmission, as described in the preceding paragraph shall be covered by said warranty. Contractor shall provide a third-party bond or surety for any portion of the specified warranty not directly covered by the OEM.

All related isolators, mounts, mounting hardware, and interface parts between the engine and transmission (including, but not limited to items such as flex plates, hydro-damper, rubber elements and the like) shall be replaced. Additionally, the air intake housing and piping shall be cleaned, inspected, and replaced if required. All filter elements and clamps shall be replaced with new.

A new ECM shall be installed and programmed. Passwords will be provided by City of Ocala/SunTran's Project Manager. The Contractor shall confirm all settable parameters with City of Ocala/SunTran's Project Manager prior to the delivery of the first completed unit. All like series engines shall be programmed identically. The Contractor shall also inspect and replace as needed engine wiring harness and supports with new components. All wiring connectors shall be watertight and treated with a dielectric grease to prevent the ingress of contaminants and contact corrosion.

# **COOLING SYSTEM**

Buses are equipped with Engineered Machine Products (EMP) Corporation, Mini Hybrid Thermal Systems. The Contractor shall renew the cooling system to like new condition, including but not limited to the following work:

- All electric fans shall be inspected and replaced if failed using new OEM materials.
- Surge tank pressure relief valve and sight glass shall be repaired or replaced as needed.
- Surge tanks shall be pressure tested. Defective tanks shall be repaired or replaced.
- Inlet and outlet hoses and constant torque clamps shall be replaced.
- The cooling system shall be refilled with a Zerox/Fleetguard OAT Million Mile Coolant or approved equal as approved by the engine manufacturer.
- All coolant hoses shall be replaced with OEM silicone hoses and clamps.

- All coolant lines shall be routed and bracketed in the original OEM configuration.
- All belts, belt transitioners, and idlers shall be replaced.
- The rear engine belt guards (if so installed) shall be inspected, repaired, and replaced, if necessary.
- The radiator replaced with a new radiator system.
- All other piping associated with the cooling and charge air system shall be cleaned, inspected, repaired, or replaced, if necessary.
- All rubber and silicone hoses shall be replaced in kind.
- All Charge Air Cooling (CAC) and intercooler piping and housing must be thoroughly inspected.
- All resilient mounts and isolators shall be replaced with new. All bolts, washers, locknuts, etc., removed during the repair process shall be replaced with new hardware of the same grade.

If any of these components are found to be defective, damaged, or failing during inspection, they must be replaced with new parts.

Work shall be performed to the best industry standards and shall be resistant to the intrusion of dirt and water characteristic of City of Ocala/SunTran's operating and maintenance environment.

Use of materials and components, other than OEM manufactured components shall be approved by the Project Manager in advance of installation. Unapproved component substitutions shall be at the Contractor's own risk.

Should the installed components be different than the originally installed components, the Contractor shall provide two (2) sets of paper and one (1) set of editable electronic operations and maintenance manuals and illustrated parts manuals. Electronic manuals shall be compatible and editable with existing City of Ocala/SunTran software (e.g., Microsoft Office). Delivery of the manuals shall accompany the bus when returned to City of Ocala/SunTran.

Any parts removed, as part of the cooling system upgrade, from City of Ocala/SunTran equipment not reinstalled or having a core value relative to the work, shall be catalogued on a per bus basis and returned to City of Ocala/SunTran. The cost of the freight shall be the responsibility of the Contractor.

#### **HEATING AND AIR CONDITIONING**

City of Ocala/SunTran will document the operation of the climate control system on each unit prior to Contractor pick up. Contractor shall be responsible for returning the HVAC system in the same operating condition as received. The air conditioning drive belt shall be replaced.

## **AIR COMPRESSOR AND GOVERNOR**

The air compressor and governor shall be replaced with new units that meet the same specifications as the existing compressor and governor.

## **ALTERNATOR**

The alternator shall be replaced with new ducted air-cooled alternator having the capacity of 120% of full vehicle operating load or approved equal. The alternator selection is subject to review and approval by City of Ocala/SunTran's Project Manager. The Contractor shall replace the alternator drive belt and the voltage regulator.

Ducting for the air-cooled alternator shall be routed to preclude the influx of hot air and water into the duct system via the air intake or convection heating of the ductwork by other components.

# **STARTING SYSTEM**

The Contractor shall replace the starting motor with a new starter. The starter power line from the starter to the engine compartment bulkhead shall be replaced. If necessary, the junction block at the bulkhead shall be replaced.

# **FUEL SYSTEM**

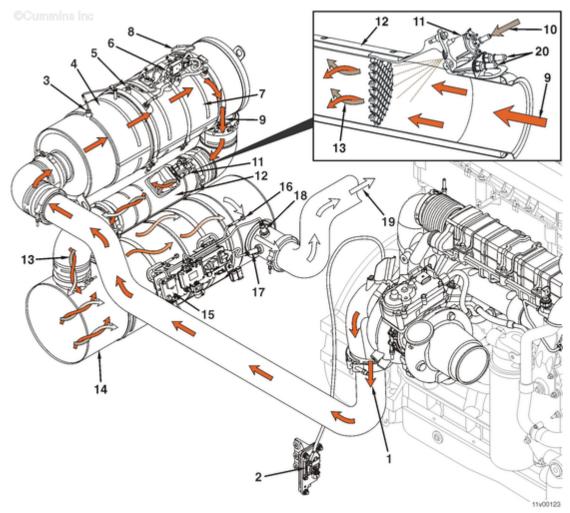
The Contractor shall replace the fuel filters and all the fuel lines within the engine compartment.

# **EXHAUST AND EMISSION SYSTEM**

Emission system shall meet the Environmental Protection Agency (EPA) requirements in force at the time original EPA standard for engine model year. The exhaust system components shall be replaced to OEM specified functionality with genuine Cummins OEM parts or approved equal. The Contractor shall replace all flex pipes/sections/clamps

and damaged exhaust mounting brackets. Additionally, all rubber isolation of the exhaust system shall be replaced, and new fasteners shall be used. A comprehensive renewal of the emissions control system shall be performed, including but not limited to, the following:

- Diesel Particulate filter (DPF) shall be replaced with new.
- Pressure sensing tubing shall be replaced with new. All pressure switches and NOx sensors shall be replaced with new. Switches or sensors shall be replaced with new.
- Selective Catalyst Reduction (SCR) unit and all temperature sensors shall be replaced with new.
- All hardened or crystalized DEF accumulations shall be removed from the decomposition reactor and SCR (DEF) dosing nozzle will be replaced with new.
- All other components associated with the emission control systems shall be new condition as identified:



- 1. Exhaust from turbocharger
- 2. Aftertreatment intake NOx sensor
- 3. Aftertreatment diesel oxidation catalyst (DOC) intake temperature sensor
- 4. Aftertreatment DOC
- 5. Aftertreatment diesel particulate filter (DPF) intake temperature sensor
- 6. Aftertreatment DPF combination pressure sensor
- 7. Aftertreatment DPF
- 8. Aftertreatment DPF outlet temperature sensor
- 9. Exhaust gas flow from the DPF
- 10. Diesel exhaust fluid (DEF) supply to aftertreatment DEF dosing valve
- 11. Aftertreatment DEF dosing valve
- 12. Decomposition reactor
- 13. Exhaust and DEF mixture
- 14. Aftertreatment selective catalytic reduction (SCR) catalyst
- 15. Aftertreatment SCR intake temperature sensor
- 16. Aftertreatment SCR outlet temperature sensor
- 17. Aftertreatment SCR outlet NOx sensor
- 18. Particulate matter sensor
- 19. Exhaust flow exiting aftertreatment system
- 20. Aftertreatment DEF dosing valve coolant fittings.

#### **HYDRAULIC SYSTEM**

The Contractor shall replace reservoir filter elements, reservoir gaskets, and power steering lines in the engine compartment. The power steering fluid line filter shall be cleaned, and if necessary, replaced. The power steering reservoir shall also be cleaned, inspected, and repaired or replaced. The reservoir sight glass shall be cleaned and replaced, as necessary. The sight glass seal shall be replaced. The power steering fluid shall be replaced with fluid matching the original OEM specifications.

## **WIRING**

As needed all engine and transmission wiring harnesses shall be replaced with new harnesses. Harness connectors shall be treated with a dielectric grease to prevent the ingress of contaminants and contact corrosion. The wiring harness(es) between the shift selector and the TCU shall also be replaced with a new OEM harness(es). All wiring, regardless of whether it was repaired, replaced, or unsecured during the repower process, shall be routed and bracketed in the original OEM configuration. Secondary wiring insulation shall be installed in areas subject to chafing. All bolted terminations shall be properly assembled to OEM configuration and properly torqued using a calibrated torque wrench. Torque seal compound shall be applied between the binding posts and nuts of all torqued joints. Wiring, from the alternator to the terminals strip, terminals, and binding posts shall be properly sized to meet the increased current associated with the electric fan modification.

# **ENGINE ONLY (CRATE ENGINE)**

For this purpose, a crate engine shall include block, heads, intake and exhaust manifolds, sump pan, turbo, engine mounted sensors, and electronic systems.

A new ECM shall be provided and programmed. Passwords will be provided by City of Ocala/SunTran's Project Manager. The Contractor shall confirm all settable parameters with City of Ocala/SunTran's Project Manager prior to the delivery of the first completed unit. All like series engines shall be programmed identically.

# **TRANSMISSION WITH INSTALLATION**

Transmission must be an OEM certified Allision B400 transmission or approved equal, the unit may be factory new or OEM remanufactured. The replacement transmission shall have the same ratings as supplied from the OEM during the original manufacture of the vehicle and be compatible with existing TCM.

#### Installation Requirements:

- Install the replacement transmission using OEM torque specs and alignment procedures.
- Replace transmission cooler and/or flush cooler lines.
- Replace or reinstall transmission mounts.
- Install new input/output speed sensors.
- Reconnect transmission harness and verify pin integrity.
- Fill with OEM-approved synthetic transmission fluid.

## **Programming & Testing:**

- Update or flash Transmission Control Module (TCM) with current calibration.
- Perform shift selector calibration.
- Check for fault codes and perform relearn/adaptation procedures.
- Test drive under load and check:
  - Shift quality
  - Fluid levels and temps
  - Leaks, noises, and driveline alignment

Drive shaft and differential shall be thoroughly inspected, fitted with new universal joints, and balanced prior to reassembly and installation. Differential shall be inspected for damages seals and leaks, seals and bearings replaced as needed.

# TRANSMISSION ONLY (CRATE TRANSMISSION)

Transmission must be an OEM certified Allision B400 transmission or approved equal, the unit may be factory new or OEM remanufactured. The replacement transmission shall have the same ratings as supplied from the OEM during the original manufacture of the vehicle and be compatible with existing TCM.

# Components Included:

- Complete B400 transmission assembly
- Torque converter (new or OEM reman)

- Internal wiring harness
- Pressure and temperature sensors
- Input/output speed sensors
- Transmission control valve body (installed)
- Bellhousing and torque converter housing (vehicle-specific fitment)
- OEM-quality gaskets and seals installed
- Mounting brackets Installation guide and documentation
- Serial number tag and calibration information

# **TRANSPORTATION**

The cost for transporting and insuring City of Ocala/SunTran equipment to and from the Contractor's facility shall be the responsibility of the Contractor.

Packaged and catalogued parts may be transported to City of Ocala/SunTran in repowered vehicles if no damage to the vehicle is incurred.

Crate engines or transmissions can be shipped or arrangements made for pick-up at vendor facility.

# SHOP/TECHNICIAN REQUIREMENTS

All vendors submitting bids must operate a commercial repair facility capable of performing comprehensive heavy-duty vehicle services. The facility must meet the following minimum criteria:

- Be a licensed and insured heavy-duty repair shop.
- Be in compliance with all applicable federal, state, and local regulations.
- Maintain a physical location with appropriate heavy equipment (lifts, cranes, hoists, diagnostic tools).
- Have a minimum of 5 years experience servicing Class 7 and 8 vehicles, including powertrain replacement and diagnostics.
- Certified by OEMs for engine and transmission service and installation.
- Access to heavy-duty vehicle lift or crane with sufficient capacity for engine and/or transmission removal and installation.

Technicians assigned to the project must meet the following minimum qualifications:

#### **ASE Certification:**

- At least one ASE-certified technician in Medium/Heavy Truck Series (T-Series) must be on staff, with valid credentials in:
  - ∘ T2 Diesel Engines
  - o T6 Electrical/Electronic Systems
  - T8 Preventive Maintenance Inspection

#### **EPA** Certification:

• If any HVAC components will be accessed or disconnected, the technician must hold a valid EPA Section 609 Certification for refrigerant handling.

## Experience:

- Each technician must have a minimum of 3 years of direct experience in heavy-duty diesel engine diagnostics, removal, and replacement.
- Documented experience working on engines from major OEMs such as Cummins, Caterpillar, Detroit Diesel, or equivalent.

# **PROJECT MANAGEMENT**

A City of Ocala/SunTran Project Manager shall be assigned to this Project and represent a single point of contact for the Contractor. City of Ocala/SunTran's Project Manager may delegate responsibility to other personnel or City of Ocala/SunTran representative(s), but all correspondence shall be sent or copied to the Project Manager.

# • Communication Protocol

The Contractor shall immediately inform City of Ocala/SunTran, as needed, to apprise the staff of potential production delays and when specification compliance or other issues arise that requires City of /SunTran's intervention.

The Contractor shall identify staff, preferably one (1) contact person, to communicate directly with City of Ocala/SunTran's Project Manager to clarify and help resolve issues. Photographs and videos shall be taken by the Contractor and forwarded to City of Ocala/SunTran's Project Manager as needed.

Whether a part or component requires repair or replacement, it shall be up to the Contractor to make that determination. City of Ocala/SunTran will endeavor to respond with a decision within one (1) working day to approve or disagree with the Contractor's determination, assuming all information needed to decide, such as OEM specifications, drawings, photographs, etc., are provided to City of Ocala/SunTran in a timely manner.

If City of Ocala/SunTran concurs, action as determined by the Contractor is approved. If City of Ocala/SunTran disagrees with the Contractor's determination, both sides shall work to resolve their differences. In cases where City of Ocala/SunTran and the Contractor cannot agree on a mutually acceptable course of action, City of Ocala/SunTran shall determine and direct a final course of action.

#### Files and Records

The Contractor shall maintain all records, files, correspondence, memorandum, and documentation related to the bus repower project, including individual bus files. These files shall include, at a minimum: Contractor's final inspection sheets; list of items replaced, repaired, or remanufactured; test result certificates, inspection records and a signed authorization to ship.

Discrepancies noted by the Contractor or City of Ocala/SunTran during the bus repower process, if any, shall be included in these files by the inspection personnel on a record that accompanies the vehicle, major component, subassembly, or assembly from the start of the repower process through final inspection. The Contractor shall retain copies of all files and send them to City of Ocala/SunTran at the completion of each bus repower.

# • Weekly Status Reports

The Contractor shall submit a written weekly progress status report to City of Ocala/SunTran via email by every Monday morning until all buses have been released. The weekly status report shall include at a minimum, but not be limited to, the following items:

- o Buses in process of repower.
- o Summary status of each bus being repowered.
- List of Open Issues that exist for each or all buses, defined as defects, quality issues or specification non-conformance items unacceptable in current form.

- List of Closed Issues, defined as previously Open Issues that were resolved, including a description of how the issues were resolved.
- List of buses accepted and released for delivery to City of Ocala/SunTran, including those with conditions or acceptable exceptions.
- O A narrative summary of other project activities. This should include, but is not limited to, technical and programmatic accomplishments, plant shutdowns for holidays and other reasons, identification of general problem area(s) and deficiencies identified during the week affecting all buses, and the Contractor's solutions, performance forecast, recommendations, and other salient information that would provide City of Ocala/SunTran the necessary information with which to assess the project's progress.

## Testing

The Contractor shall conduct fully documented tests on each vehicle during and following the repower to determine its acceptance to overall quality and specification compliance. These acceptance tests shall include pre-delivery inspections and testing. The testing shall include at a minimum:

- Shift points documentation.
- HVAC Compressor testing.
- O Hybrid fan function test.
- Emission system component tests, including before and after air flow and component weight.
- o Road tested for a minimum of thirty (30) miles over a variety of surfaces, under various conditions, and with sustained speeds of sixty-five (65) mph, to simulate City of Ocala/SunTran service operations.
- O The road tests required for acceptance of the repowered buses will require a Department of Transportation (DOT) pre-trip inspection. To the greatest extent possible, City of Ocala/SunTran will provide buses in fully operational condition. However, there may be bus repower candidates that have component failures that render them non-operational. As such, any defect impeding CDL DOT pre-trip requirements shall be considered an inadvertent omission to the Contract.
- o Buses shall not be accepted until the results of all the above tests are thoroughly

documented and meet the minimum OEM performance requirements and are satisfactory to City of Ocala/SunTran. The documents shall be in a clear format and shall be easy to draw appropriate conclusions. No buses shall be shipped until this information has been submitted to City of Ocala/SunTran. These tests shall be conducted in addition to, or in conjunction with, the inspection stop points noted in the previous section.

- Additional tests may be conducted at the discretion of the Contractor's management to ensure that the completed vehicles have attained the desired quality and have met requirements of the Contractor's and City of Ocala/SunTran's technical specifications. This additional testing shall be recorded on the appropriate pre-approved test forms, and, at City of Ocala/SunTran's discretion, may be done under the observation of City of Ocala/SunTran personnel or designee.
- O The results of the pre-delivered tests, and any other tests, shall be filed with the work and material records for each vehicle. Authorization forms for the release of each vehicle for delivery shall be provided by the Contractor. An executed copy of the authorization shall accompany the delivery of each vehicle along with other files. The above inspection is in addition to any and all tests and inspections required by City of /SunTran.
- O The Contractor shall also conduct tests to verify compliance with all applicable current Federal, State, and Local requirements. The Contractor shall certify in writing that each vehicle conforms to all applicable requirements. A statement to that effect shall be filed with the applicable work and material records for each vehicle. No bus will be accepted without these signed certifications.

# • Final Acceptance by City of Ocala/SunTran:

After the Contractor has performed all testing and inspections, City of Ocala/SunTran shall conduct a final inspection when the bus is presented by the Contractor. Discrepancies noted during the bus repower process shall be resolved by the Contractor and approved by City of Ocala/SunTran.

When all noted defects, specification deviations, and other issues have been reported by the Contractor as having been corrected, City of Ocala/SunTran will review and approve all these items before accepting the bus and releasing it for transport to City of Ocala/SunTran.

In cases where the Contractor refuses to take actions to correct discrepancies or deficiencies or take necessary steps to bring conditions or articles in conformity with the requirements of the Contract specifications, City of Ocala/SunTran will collaborate with the Contractor to settle the dispute(s). If discrepancies cannot be corrected to City of Ocala/SunTran satisfaction or City of Ocala/SunTran does not authorize conditional release, the vehicle shall not be accepted under full payment.

For those defects that will cause lengthy delays, or are the type best corrected by the Contractor at or near City of Ocala/SunTran's facilities, City of Ocala/SunTran shall decide as to how they should be handled and whether to authorize releasing the bus with conditions. City of Ocala/SunTran, or its designee, will inform the Contractor when each bus is authorized for release with conditions. If buses are accepted with certain conditions, the Contractor shall note this on the appropriate file and note the conditional release on the next weekly report.

# • Final Acceptance at City of Ocala/SunTran:

The final acceptance inspection conducted at City of Ocala/SunTran will be performed by City of Ocala/SunTran's Project Manager or designee. Acceptance constitutes the beginning of the warranty period and the completion for each bus repower. The final inspection and defect reports shall be provided to City of Ocala/SunTran in advance of the shipment of the completed bus. All items defined in these reports are to be corrected on all units prior to shipment of any remaining buses being repowered.

# • Warranty Requirements:

The Contractor shall assume all warranty responsibility for workmanship, parts, and equipment involved in the repower process whether performed by the Contractor or purchased from an outside source. Under no conditions shall the Contractor delegate warranty responsibility to suppliers and/or other outside sources, except for engine and transmission warranties which may be administered directly by the OEM. Warranty work performed under bond conditions shall remain the responsibility of the Contractor.

City of Ocala/SunTran will consider dealing directly with engine and transmission suppliers or their authorized representatives only if they are geographically located in the North Central Florida region.

Warranties in this document are in addition to any statutory remedies available to City of Ocala/SunTran or warranties imposed on the Contractor. Consistent with this

requirement, the Contractor warrants and guarantees to City of Ocala/SunTran each complete repowered bus, and specific subsystems and components as follows:

## Warranty Period

All Work performed by the Contractor or under the Contractor's control on repowered buses shall be warranted and guaranteed to be free from defects and related defects as outlined under WARRANTY beginning on the date the bus is accepted by City of Ocala/SunTran.

O During this warranty period, the repowered bus shall maintain the functional integrity of the Work performed. In cases where the Contractor determines that a part or component identified in this specification as requiring repair or replacement on an "as needed" basis does not require repair or replacement, that part or component shall still be covered by the warranty. The warranty is based on regular operation of the repowered bus under the operating conditions prevailing in City of Ocala/SunTran's locale.

#### Subsystems and Components

If longer warranties are offered as standard for subsystems and components, these warranties shall be passed on to City of Ocala/SunTran. The Contractor shall provide full warranty information including the contact, expiration date, and other pertinent information, and arrange transfer of warranty administration to City of Ocala/SunTran or its agent.

# o Warranty Continuation and Extension

During the warranty period, if any component, unit, or subsystem is repaired, rebuilt, or replaced, the component, unit, or subsystem shall retain the unexpired warranty period of the original component, unit, or subsystem.

If, during the warranty period, repairs, rebuilding, or replacement of a component, unit, or subsystem are not completed due to lack of material or inability to provide the proper repair for thirty (30) or more calendar days, the applicable warranty period shall be extended by the number of days equal to the delay period.

# Voiding of Warranty

The warranty shall not apply to any part or component of the bus that has been subject to misuse, negligence, accident, or that has been repaired or altered in any way as to adversely affect its performance or reliability, except insofar as such repairs were in accordance with the original OEM maintenance manuals

or supplement manuals that the Contractor supplies and the workmanship was in accordance with recognized standards of the industry.

#### • <u>Detection of Defects</u>

If City of Ocala/SunTran or its agent detects a defect within the warranty period, it will promptly notify the Contractor's representative, as follows:

Discuss the warranty event in a manner to supply enough detail to complete the warranty claim including cause, troubleshooting method, and correction. City of Ocala/SunTran or its agent will provide the Contractor with the following information:

- o Last five digits of the VIN number;
- o Engine Serial Number;
- Repower acceptance date;
- Current mileage;
- o Parts numbers for the required components, if known;
- The nature of the problem;
- o Symptoms exhibited that led to the diagnosis of the problem;
- o Cause of the problem; and Action that will be taken to correct the problem.

Within two (2) working days after receipt of notification, the Contractor's representative shall either agree or disagree that the defect is covered by warranty. The Contractor's representative may inspect the subsystem or component at City of Ocala/SunTran or nearby repair facility if that is where the vehicle is located. Regardless of whether the Contractor's representative agrees the defect is covered by warranty, City of Ocala/SunTran and the Contractor's representative shall agree within five (5) working days after notification on the most appropriate course for the repairs and the exact scope of the repairs to be performed. City of Ocala/SunTran reserves the right to commence repairs as soon as necessary, following agreement as to course and scope, regardless of whether warranty coverage has been confirmed. If no agreement is obtained within the five (5) working day period, City of Ocala/SunTran reserves the right to commence the repairs as it best sees fit.

## • Scope of Warranty Repairs

When warranty repairs are required, City of Ocala/SunTran and the Contractor's representative shall agree within five (5) working days after notification on the most appropriate course for the repairs and the exact scope of the repairs to be performed under the warranty.

## • Warranty Repairs by Contractor

If City of Ocala/SunTran requires the Contractor to perform warranty-covered repairs, the Contractor must begin work necessary to effect repairs, within five (5) working days after receiving notification of a defect from City of Ocala/SunTran. City of Ocala/SunTran will make the repowered bus available to enable the Contractor to complete repairs.

The Contractor shall provide, at its own expense, all spare parts, tools, and space required to complete repairs. Repairs must be diligently pursued in a timely manner by the Contractor.

# • Payments

Payment will be on approved invoice submittals in accordance with the Price Schedule.

City of Ocala/SunTran will be the sole judge of the quality, completeness, and acceptance of the Contractor's work for payment.

# THIRD PARTY REQUIREMENTS

The Respondent understands, as part of Federal Transit Administration (FTA) funding, geographical preference was not used for this procurement, additionally the Respondent must complete a System for Awards Management (SAM) registration for doing business with the U.S. Government with submittal.

The website can be accessed at: www.sam.gov/SAM/pages/public/index.jsf.

The Awarded Vendor shall comply with all Federal Transit Administration Third Party Contract Clauses (Attachment A). All documents shall be signed and included with bid submittal.

# **SPECIFICATIONS**

Minimum specifications:

- New or reconditioned replacement engine "Buy America" medium-duty engines are to be OEM Cummins engines or approved equal.
- Cummins CM2350 Medium Duty Transit Application with 280hp or approved equivalent.
- Transmission Allison B400 or approved equal new or reconditioned meeting Buy America Standards.
- 30.4 CFM Air Compressor
- Equivalent 24 Volt SKF H.C. Dual Turbo-2000 Air Dryer
- 900 Peak Torque @ 1300 RPM.
- High Pressure Common Rail Fuel System.
- Shallow Rear Sump Aluminum Oil Pan.
- Engine groups should be bid as detailed within their CPL detail at 24 volt controls.
- Turbo exhaust shall be Mid Mount Rear Out.

# **ENGINE CORE CREDIT**

The engine core will only be returned after the new or reconditioned replacement engine is installed, reprogrammed, and determined to be functional by the City of Ocala/SunTran Employees.

Once returned, the contractor will provide a written receipt for the engine core to the City of Ocala/SunTran.

The Contractor shall reimburse the core credit to the City of Ocala/SunTran within 45 days of receiving the core from the City of Ocala/SunTran.

#### TRANSMISSION CORE CREDIT

The transmission core will only be returned after the new or reconditioned replacement transmission is installed and determined to be functional by the City of Ocala/SunTran Employees.

Once returned, the contractor will provide a written receipt for the transmission core to the City of Ocala/SunTran.

The Contractor shall reimburse the core credit to the City of Ocala/SunTran within 45 days of receiving the core from the City of Ocala/SunTran.

## **DELIVERY AND ACCEPTANCE**

The engine core will only be returned after the new engine or reconditioned replacement engine is installed and reprogrammed. Once returned, the contractor will provide a written receipt for the engine core to the City of Ocala/SunTran.

The transmission core will only be returned after the new engine or reconditioned replacement engine is installed and reprogrammed. Once returned, the contractor will provide a written receipt for the engine core to the City of Ocala/SunTran.

The Contractor shall reimburse the core credit to the City of Ocala/SunTran within 45 days of receiving the core from the City of Ocala/SunTran.

# ELECTRONIC CONTROL MODULE (ECM) REPROGRAMMING

The City of Ocala/SunTran Project Manager will notify the vendor to reprogram each engine once installation is complete.

- Programming of the engine ECMs will be conducted by authorized / certified technicians only.
- ECM reprogram must be completed by the vendor submitting the bid.

#### **WARRANTY**

Price of unit shall include standard warranty. The City of Ocala/SunTran is requesting pricing of extended warranty for evaluation purposes only and does not guarantee extended warranty will be part of award.

Service warranty work is to be conducted by authorized / certified technicians only.

- Engine Standard warranty should be 2 years, unlimited miles with parts and labor.
- Engine Extended warranty should be 5 years / 300,000 miles with parts and labor.
- Transmission Standard warranty should be 2 years / unlimited miles with parts and labor.
- Transmission Extended warranty should be 4 years / unlimited miles with parts and labor.

## **PRICING SHEET**

Instructions: Engines are to be new or reconditioned replacement engines "Buy America" Compliant, Medium Duty OEM Cummins engines only.

Extended Warranty shall be 5 years / 300,000 miles with 100% parts and labor. Award will be based on lowest total cost for all engines.

Transmission: All quantities must be completed. Failure to complete all items (with the exception of the extended 5 year warranty column) may deem proposal non-responsive.

Line Item	Engine Specifications	Quantity	Unit of Measure	Unit Cost	Total	Core Credit Amount	Extended Warranty Cost
1	Engine only: Cummins L9 CM2350 Medium Duty Transit Application with 280hp or approved equal. New or reconditioned replacement engine.	Each	Each				

Line Item	Engine Specifications	Quantity	Unit of Measure	Unit Cost	Total	Core Credit Amount	Extended Warranty Cost
	Engine and related components: Cummins L9 CM2350 Medium Duty Transit Application with 280hp or approved equal. New or reconditioned replacement.	Each	Each				
3	Transmission only: Allison B400 or approved equal.	Each	Each				
4	Transmission and related components: Allison B400 or approved equal.	Each	Each				
TOTAL							