

ATTACHMENT A

Scope of Work



SCOPE OF WORK

1. GENERAL REQUIREMENTS

- A. The Contractor shall provide all labor, supervision, equipment, material, replacement parts, inspections, testing, documentation, and transportation necessary to perform overhaul, repair, and rehabilitation services for wheelset and traction motor assemblies in accordance with the scope of work specified herein.
- B. The Contractor shall possess and maintain a current M-1003 Quality Assurance Certification issued by the Association of American Railroads (AAR) and must adhere to all applicable requirements of the current editions of the following:
 - 1. 49 CFR 229, Railroad Locomotive Safety Standards
 - 2. 40 CFR 238, Passenger Equipment Safety Standards
- C. The Contractor's M-1003 Quality Assurance Certification issued by the AAR shall be available for VRE inspection during the term of the Contract.
- D. The Contractor shall notify VRE immediately of any change in the status of its M-1003 Quality Assurance Certification during the term of the Contract.

2. SPECIFIC REQUIREMENTS

- A. VRE will be responsible for the removal of the wheelsets and traction motor assemblies from its railcars and locomotives. Once removed, and upon VRE's request, the Contractor shall pick up wheelsets and traction motor assemblies from the following Maintenance and Storage Facilities (MSF):

1. Broad Run MSF 10637 Piper Lane Bristow, VA 20136	2. Crossroads MSF 9400 Crossroads Parkway Fredericksburg, VA 22408
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- B. The Contractor shall perform wheelset rehabilitation work on VRE's Gallery IV Railcars, manufactured by Nippon Sharyo, in accordance with **ATTACHMENT B – WHEELSET AND TRACTION MOTOR OVERHAUL, REPAIR AND REHABILITATION SPECIFICATION.**
- C. The Contractor shall perform passenger railcar wheelset rehabilitation work to include replacement, repair or overhaul of complete wheelsets. A complete wheelset consists of one (1) axle, two (2) wheels and two (2) journal bearings. The rehabilitated wheelsets shall be "rebuilt in kind" unless otherwise specified by VRE.



- D. Rehabilitated wheelsets, when installed on a passenger railcar, shall be suitable for operation at any speed up to ninety (90) miles per hour.
- E. The Contractor shall also perform traction motor rehabilitation work on VRE's MP36PH-3C locomotives, manufactured by MotivePower, Inc., in accordance with **ATTACHMENT B – WHEELSET AND TRACTION MOTOR OVERHAUL, REPAIR AND REHABILITATION SPECIFICATION**.
- F. The Contractor shall perform traction motor assembly rehabilitation work to include replacement, repair, or overhaul of a complete traction motor assembly. A complete traction motor assembly consists of one (1) D78B traction motor, locomotive wheelset consisting of one (1) axle, one (1) 60-tooth bull gear, two (2) 40-inch wheels, and two (2) 6-7/8" x 12" journal bearings. The traction motor assembly also includes traction motor support bearings, wicks, and a gear case. The rehabilitated traction motor assemblies shall be "rebuilt in kind" unless otherwise specified by VRE.
- G. Locomotive traction motor assemblies may require only rehabilitated wheelsets. The Contractor will receive a complete traction motor assembly and shall remove the wheelset to perform locomotive wheelset rehabilitation work to include replacement, repair, or overhaul of complete wheelsets. The rehabilitated wheelsets shall be "rebuilt in kind" unless otherwise specified by VRE.
- H. Traction motor assemblies and wheelsets returned to VRE by the Contractor must be interchangeable with the equivalent wheelsets in operation on VRE's passenger railcars and locomotives.
- I. The for all overhaul, repair and rehabilitation services, the Contractor shall submit to VRE a quote including line items, unit prices, the VRE Requisition Number, the VRE Contract Number, and total price. If the quote includes traction motor assemblies requiring any major repairs, including armature rewind, field coil replacement, and shaft replacement or replacements, VRE must approve the quote prior to the performance of work by the Contractor.

3. **SCHEDULE OF SERVICES AND SHIPMENT**

- A. The Contractor shall deliver all new, overhauled, or repaired equipment within eighty (80) business days of receipt from VRE.
- B. Any deviation or delay from the established schedule must be presented by the Contractor to VRE in writing for approval.
- C. Shipments shall be FOB destination, freight prepaid and allowed.



- D. Deliveries shall be made between the hours of 9:00 A.M. and 4:00 P.M. Eastern Time, Monday through Friday (excluding Federal Observed Holidays), to the location identified on the Requisition sent to the Contractor by VRE.
- E. With each shipment to VRE, the Contractor shall prepare its own packing list documenting the equipment by part number, serial number, and VRE Purchase Order Number.
- F. Any damage incurred in shipping the equipment to VRE is the sole responsibility of the Contractor.

4. **DELIVERABLES**

The Contractor shall provide the following submittals for each rehabilitated wheelset or traction motor assembly delivered by the Contractor.

- A. When applicable, a record of all heat numbers, which shall be included with the packing list and bill of lading for each wheelset.
- B. When applicable, certified copies of chemical and physical test results as specified by the latest version of the AAR Manual of Standards and Recommended Practices (MSRP) Section G for Grade “F” axles.
- C. When applicable, certification of the ladle analysis of the steel used and of the ultrasonic and magnetic particle testing conducted on each wheel.
- D. When applicable, certification that each wheel is dynamically balanced.
- E. When applicable, documentation that details the repairs, remanufacturing, testing and performance of each traction motor. The Contractor’s documentation shall include clearly defined minimum and maximum allowable tolerances and the actual recorded measurements.
- F. When applicable, data sheets, including serial numbers, measurements, and pressure diagrams of wheel and bearing mounting.
- G. Copies of inspection, overhaul, and test procedures for each apparatus serviced under this Contract.
- H. The equipment and component manufacturer’s warranty for one (1) year.

