

**INVITATION TO BID  
TRUCKEE MEADOWS WATER AUTHORITY  
NRS 332 IN EXCESS OF \$50,000.00**

**BOOM TRUCK REPLACEMENT**

**TMWA BID NO. 2017-002**

**TMWA CAPITAL PROJECT NO.: 1-1690**

**RANGE FOR ENGINEER'S ESTIMATE: \$275,000.00 – 315,000.00**

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**PROJECT SCOPE:** Truckee Meadows Water Authority (TMWA) is accepting sealed bids for the purchase of a Boom Truck Replacement (Boom Truck). The bidder shall provide a Boom Truck installed and complete per the specifications, which are based on an International cab and chassis with crane and all accessories installed as provided in the specifications. TMWA will consider other models as long as they can be compared as equal to or better. Delivery of the Boom Truck must be on or before April 4, 2017, or as otherwise agreed upon. Delivery of the Boom Truck shall be to TMWA's Corporate Yard located at 1355 Capital Avenue, Reno, Nevada 89502.

**MANDATORY PRE-BID CONFERENCE:      None Required for this Project.**

**BID DOCUMENTS:** All bid documents may be downloaded from TMWA's website at [http://tmwa.com/about\\_us/doingbusinesswithtmwa](http://tmwa.com/about_us/doingbusinesswithtmwa)

**BID SUBMITTAL:** Sealed bids must be submitted to TMWA by mail to P.O. Box 30013, Reno, Nevada 89520-3013 or in person to 1355 Capital Boulevard, Reno, NV 89502, and must be **RECEIVED BY TMWA NOT LATER THAN 10:00 A.M. on October 25, 2016**. Bids received after the date and time set for receipt will be **REJECTED**.

**BID OPENING:** **October 25, 2016, at 10:05 a.m.**, at the TMWA Conference Room, 1355 Capital Blvd., Reno, NV 89502. TMWA reserves the right to reject any or all bids, including without limitation the right to reject any or all nonconforming, non-responsive, unbalanced, or conditional bids, and to reject the bid of any bidder if TMWA believes that it would not be in the best interest of TMWA to make an award to that bidder. TMWA also reserves the right to waive informalities. Bids will be evaluated as prescribed in Nevada Revised Statute 332.

**AWARD DATE :** On or Before November 7, 2016.

**DELIVERY DATE:** One Hundred Fifty (150) calendar days following Notice to Proceed.

**SHIPPING AND DELIVERY:** Total bid price shall include shipping and delivery to the TMWA corporate yard located at 1355 Capital Boulevard, Reno, Nevada.

**PLANS AND SPECIFICATIONS:** Specifications included in bid package.

Bidders are to complete all Bid Submittal Forms, contained on pages 2-9 in the Bid Proposal Form Section of the Bid Documents. The complete Contract Documents must be submitted to comprise a responsive and responsible bid. **A bid bond will not be required for this project.** Addenda, if any, shall be posted on the TMWA web-site at [http://www.tmwa.com/about\\_us/doingbusinesswithtmwa/](http://www.tmwa.com/about_us/doingbusinesswithtmwa/) It is each bidder's sole responsibility to ensure that they have received all addenda prior to submission of their bid.

**QUESTIONS:** Questions may be submitted in writing to the Contract Administrator up to three (3) business days before Bid Opening.

Maria I. Dufur, Contract Administrator  
Truckee Meadows Water Authority  
1355 Capital Boulevard  
Reno, NV 89502  
(775) 834-8056  
Fax (775) 834-8153: e-mail: [mdufur@tmwa.com](mailto:mdufur@tmwa.com)

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# INSTRUCTIONS TO BIDDERS

## I. BIDDING PROCEDURES

### A. Pre-bid Conference – **Not Required for this Project**

### B. Designated Contacts

The designated contact for questions pertaining to the Contract Documents, Specifications and/or Drawings is the designated Contract Administrator. All questions should be submitted in writing, and will receive a written response from the Contract Administrator.

Maria I. Dufur  
Truckee Meadows Water Authority  
P.O. Box 30013  
Reno, NV 89502  
775-834-8056  
FAX No. 775-834-8153  
E-mail: mdufur@tmwa.com

### C. Interpretations and Addenda

Bidders shall take no advantage of any apparent error or omission in the Bidding Documents. In the event a Bidder discovers such an error or omission, it shall immediately notify the Contract Administrator in writing. Truckee Meadows Water Authority will then make such corrections and interpretations as may be deemed necessary for fulfilling the intent of the Bidding Documents. Any Addendum or written clarification supplementing the Plans, Specifications, and Contract Documents issued prior to the time set for the submittal of Bid Proposal shall be made part of the Contract.

If it becomes necessary to issue a written addendum, a copy will be provided on Truckee Meadows Water Authority Web Site for free download at [http://tmwa.com/about\\_us/doingbusinesswithtmwa](http://tmwa.com/about_us/doingbusinesswithtmwa). Truckee Meadows Water Authority is not bound by any oral representations, clarifications, or changes made by employees, or representatives, unless such clarification or change is provided to all Bidders in written form. No significant Addendum shall be issued by Truckee Meadows Water Authority less than one (1) working day prior to the advertised date and time for Bid submittal unless the bid date is extended.

Prior to submission of the Bid, each Bidder shall ascertain that it has received all Addenda issued. The Bidder shall acknowledge receipt of all Addenda by completing the acknowledgment space provided on the Bid Schedule.

### D. Bid Preparation and Submission

1. Bid proposals are to be submitted on the Bid Schedule provided and must be manually signed by pen by an officer or authorized agent (with attached power of attorney) of the Bidder. All figures must be written in ink or typewritten. Figures written in pencil or erasures are not acceptable. Any interlineation or alteration must be initialed in ink by a person authorized to bind the Bidder to a Contract. If the person making said interlineation or alteration is not the same person who signs the Bid Proposal, such person must write his/her signature and print his/her name and title on each page of the Bid Proposal where initials appear. Written delegation of signature authority to an agent acting on behalf of the Bidder must accompany the sealed Bid and cannot contain any language which states the Bidder retains final approval of acceptance of any of the terms conditions, specifications and/or finalized Contract.
2. Each Bid shall be submitted in a sealed envelope and the envelope must be prominently marked on the lower left corner as follows:

**TMWA BID NO.:** 2017-002  
**OPENING:** October 25, 2016  
**COMPANY NAME:**

Truckee Meadows Water Authority will not consider a Bid that fails to comply with the above stated requirements. Truckee Meadows Water Authority will not be responsible for the premature opening of a Bid not properly addressed or identified. All Bids must be received prior to the time and date specified in the Invitation to Bid at the following address:

**Truckee Meadows Water Authority  
P.O. Box 30013, Reno, NV 89520-3013  
or  
1355 Capital Boulevard, Reno, NV 89502**

3. If forwarded by mail, the sealed envelope containing the Bid must be enclosed in another envelope addressed as specified. Mailed Bids must be received by Truckee Meadows Water Authority prior to the closing time for receipt of Bids to receive consideration. Email or Facsimile Bids will not be accepted or considered.

**E. Documents Necessary For Submittal**

The Bid Bond and Bid Schedule Form comprise the Bid Proposal and all shall be included in the sealed envelope. Truckee Meadows Water Authority will not consider a Bid received if there is an omission of or failure to complete any portion of the required documents prior to the time of Bid Opening. Do not submit the entire bid book. A separate (loose) Bid bond and Bid Schedule Form are provided in the bid document for bid submission.

**F. Bid Security – Not Required for this Project.**

1. Each Bidder's Proposal must be accompanied by a Cashier's check, Certified Check, or Bid Bond acceptable to Truckee Meadows Water Authority in an amount equal to at least five percent (5%) of the Bidder's "Base Bid" Proposal. Bid Security shall be payable without condition to Truckee Meadows Water Authority as a guarantee that the Bidder, if awarded the Contract, will promptly execute the Contract in accordance with the Bid Proposal and in the manner and form required by the Contract Documents, and will furnish the required Performance and Payment bonds. Should the Bidder refuse to enter into such Contract or fail to furnish such bonds, the amount of the Bid security may be forfeited to Truckee Meadows Water Authority as liquidated damages, not as penalty. All checks must indicate the Payee as "Truckee Meadows Water Authority" and reflect the Bid number. Failure to enclose Bid security with the sealed Bid will cause the Bid to be rejected and not considered.
2. Surety companies issuing bid bonds must be licensed to issue surety by the State of Nevada Insurance Division. Bonds issued by an individual surety are not acceptable to Truckee Meadows Water Authority.
3. Truckee Meadows Water Authority will have the right to hold the Bid security of Bidders to whom an award is being considered until either (a) the Contract has been executed and bonds have been furnished, or (b) the specified time has elapsed so that Bids may be withdrawn, or (c) all Bids have been rejected.

**G. Quantities**

The quantities given in the Contract Documents or indicated by the unit Bid items are approximate quantities and are intended to illustrate Scope of Work. **The term Contractor shall also refer to Supplier for the purposes of this bid.** Contractor shall be responsible for verifying the exact quantities involved each month through the measurement and payment provisions of the Contract Documents.

**H. Compensation**

The Total Bid Price shall cover all Work required by the Contract Documents and necessary or reasonably inferable to achieve completion of the Work. All costs in connection with the proper and successful completion of the Work, including furnishing all materials, equipment, supplies, and appurtenances; providing all construction equipment, tools and temporary utilities; and performing all necessary labor and supervision to fully complete the Work, shall be included in the unit and lump sum prices Bid. All Work not specifically identified as a pay item in the Bid Schedule shall be considered a non-compensatory obligation of the Contractor and all costs in connection therewith shall be deemed included in the prices otherwise Bid.

**I. Schedule of Values**

The purpose of the Schedule of Values shall serve Truckee Meadows Water Authority in two (2) distinct areas:

1. PRIOR TO AWARD OF BIDS - Truckee Meadows Water Authority may request a Schedule of Values for any or all item(s) included in the Bid schedule for the purpose of determining an unbalanced Bid. The analysis shall be conducted by Truckee Meadows Water Authority. All prospective Bidders may be required to prepare a Schedule of Values, and it shall be the Bidder's responsibility to verify the quantities as shown on the Drawings before preparing his Bid. The schedule as shown in the Bid Schedule does not constitute a complete outline of the Work to be performed by the Contractor in accordance with the Contract Drawings and Specifications. This list is intended to include all major items, and the Bid computed there from will be the maximum compensation for all work and materials furnished by the Contractor in order to comply with the Contract Drawings and Specifications, whether or not indicated in the approximate quantities or pertaining to the items of Work listed therein
2. AFTER AWARD OF BID - Truckee Meadows Water Authority will request a Schedule of Values for any or all item(s) included in the Bid schedule for the purpose of making partial payments to the Contractor.

Under no circumstances may any Bid item reflected as LUMP SUM or otherwise be increased or decreased as a result of the Lump Sum Bid breakdown analysis.

**J. Validity of Bid**

Truckee Meadows Water Authority reserves the right to withhold award of this Contract for a period of thirty (30) days from the date of the Bid opening. The Bidder acknowledges in submitting his/her Bid that all prices listed in the Bid Proposal are valid for a period of not less than thirty (30) days from the date of the Bid Opening.

**K. Bidders Representation**

Each Bidder by submitting its Bid represents and warrants that:

1. The Bidder, by submission of his Bid, confirms it has familiarized itself with the Invitation to Bid, Plans, Specifications, and Contract Documents and has found them fit and sufficient for the purpose of preparing his Bid. Bidder agrees to all the terms and conditions of the Contract and further agrees that no claim will be made against Truckee Meadows Water Authority, the Project Representative, or the Design Consultant for any damage that he or his subcontractors may have suffered due to the inadequacy of his Bid on account of any alleged errors, omissions, or other deficiencies in the Notice To Contractors, Plans, Specifications, or Contract Documents supplied to him by Truckee Meadows Water Authority.
2. The submission of a Bid shall constitute an acknowledgment upon which Truckee Meadows Water Authority may rely that the Bidder has thoroughly examined and is familiar with the Contract Documents. The Bidder shall in no way be relieved from any obligation with respect to its proposal or to the Contract. ***No claim for additional compensation will be allowed which is based upon a lack of knowledge of the Contract Documents.***
3. The Bidder has inspected the site(s) of the Work and is fully satisfied, by personal examination or by other means, of the locations of the proposed Work, of the actual conditions, including subsurface conditions, of and at the site(s) of the Work. If, during the course of its examinations, a Bidder finds facts or conditions which appear to be in conflict with the letter or spirit of the Bidding documents before submitting his/her bid, the Bidder shall request Truckee Meadows Water Authority, in writing, to provide additional information and explanation.
4. Submission of a Bid by a Bidder shall constitute conclusive evidence that the Bidder has relied solely and exclusively on its own examination of (1) the site of the Work, (2) access to the site, (3) all other data and matters requisite to the fulfillment of the Work and on its own knowledge of existing facilities on and in the vicinity of the site of the Work to be constructed under the Contract, (4) the conditions to be encountered, (5) the character, quality and scope of the proposed Work, (6) the quality and quantity of the materials to be furnished, and (7) the requirements of the Bid, the Drawings and Specifications. The Bidder is aware that soil classifications do not represent any particular stability or drainability characteristics, and are aware that water table levels can vary. ***No claim for additional compensation will be allowed which arises because of Bidder's failure to examine or become fully aware of the items in this paragraph.***
5. The information provided by Truckee Meadows Water Authority is provided for informational purposes only, without representation or warranty of any kind with respect to its accuracy or completeness, and is not intended to and shall not be relied upon as a substitute for, or a supplement to, the independent investigation by the Bidder of site conditions.
6. The Bidder, by signing the Bid Schedule, agrees that all material and workmanship on this Project shall meet or exceed OSHA standards and NOSHA standards.

7. The Bidder is qualified and possesses, at the time of the Bid submittal, a valid contractor's license for this particular Work (both as to type and available dollar limit) issued by the Nevada State Contractor's Board. Nevada Contractor's License type, number, expiration date and dollar limit must be indicated on the Bid Schedule. The Bidder and their subcontractors shall comply with all provisions of NRS Chapter 624 and Nevada Administrative Code, Chapter 624, to the extent applicable. Truckee Meadows Water Authority will not consider any Bid that fails to comply with these requirements.

8. The Bidder has a valid Business License and shall submit a copy with the bonds and Contract after award of contract.

9. The Bidder has appropriate work experience to be qualified to construct the Work. Bidder has successfully constructed at least three similar projects of equal or greater size, scope, type, cost, and complexity within the previous seven years. A similar project is one of the same category as this Project, defined for purposes of this paragraph as a boom truck replacement. Bidders must have such prior work experience in order to be deemed responsive or responsible for purposes of bid evaluations. TMWA considers it critical to public health and safety and in the best interests of TMWA that this work only be performed by contractors holding such prior experience.

a. Evidence of the Contractor's required project experience shall be provided in the reference section of the Proposal Summary section (additional sheets may be attached as necessary).

b. The requirements for submittal of required project experience also apply to proposed Subcontractors performing specialty work, including piping, control valve, electrical, power, telemetry, and equipment control work. Subcontractor experience shall be provided with submission of the final subcontractor list.

TMWA will determine in its sole and absolute discretion whether a Contractor is responsible, properly licensed, and has the requisite work experience required above to be eligible to perform this Project. Bids by Contractors that lack the proper license or requisite work experience set forth above will be rejected as non-responsible, non-responsive, and/or not in the best interests of TMWA

## **II. OPENING OF BIDS**

### **A. Opening of Bids.**

All Bids received on time and that comply with these requirements will be opened and publicly read aloud at the time and place set forth in the Invitation to Bid. Bidders, their representatives, and all other interested persons may be present at the opening and reading of Bids. Any Bids received after the time for receiving and opening Bids, as set forth in the Notice To Bidders and any Addendum, will not be considered. Any such Bids will be returned unopened to the Bidder.

### **B. Mistake In Bid**

A request for withdrawal of a Bid due to a purported error shall not be considered unless it is given in writing to the Contract Administrator by the Bidder within forty-eight (48) hours after opening of the bid. Any such request shall contain a full explanation of any purported error and shall be supported by the original calculations on which the Bid was computed, together with a certification and notarization thereon that such calculation is the original as prepared by the Bidder or his agent.

In the case of a difference between written words and figures, the amount stated in written words shall govern for a Lump Sum Bid.

In the case of a difference between Unit Price and the extended price, the Unit Price shall govern.

### **C. Withdrawal of Bid**

Before Bid Opening - A Bidder may request withdrawal of his/her posted, sealed Bid prior to the scheduled Bid opening time provided the request is submitted to the Contract Administrator's Office in writing or an authorized representative must present himself with proper identification to the



Contract Administrator's office and verbally request that the Bid be withdrawn.

After Bid Opening - No Bids may be withdrawn for a period of thirty (30) calendar days after the date of Bid opening, except as set forth in A above. All responsive and responsible Bids received are considered firm offers for the time period specified above and may be considered for award. The Bidder's offer will expire at the time specified above or upon acceptance by Truckee Meadows Water Authority, which occurs when the successful Bidder provides the bonds, insurance, and submits the signed Contract to Truckee Meadows Water Authority for execution and Truckee Meadows Water Authority executes the Contract.

### **III. AWARD OF CONTRACT/REJECTION OF BIDS/DISQUALIFICATION OF BIDDERS**

#### **A. Award of Contract**

Truckee Meadows Water Authority will award the Contract pursuant to the provisions of State law including but not limited to:

- (a) Chapter 332 (Purchasing: Local Governments)
- (b) Chapter 339 (Contractor's Bonds)
- (c) Chapter 624 (Contractors).

#### **B. Rejection of Bids**

Truckee Meadows Water Authority reserves the right to waive any informality or irregularity in any Bid received, and to reject any or all Bids. In the case of rejection of all Bids, Truckee Meadows Water Authority reserves the right to advertise for new Bids or to proceed to do the Work otherwise if it is in the best interest of Truckee Meadows Water Authority.

#### **C. Irregular Bid**

A Bid shall be considered irregular for the following reasons, any one or more of which may be cause for rejection:

1. If the Bid Schedule furnished by Truckee Meadows Water Authority is not used or is altered.
2. If there are unauthorized additions, conditional or alternate Bids, or omissions or irregularities of any kind which may tend to make the Bid incomplete, indefinite or ambiguous as to its meaning, or give the Bidder submitting the same an unfair competitive advantage over other Bidders.
3. If the Bid submitted contains any erasure, interlineations, or other corrections unless each such correction is prepared and authenticated in acceptance with the provisions of Paragraph IB.1.E (1).

#### **D. Unbalanced Bid**

If the Unit Bid Item prices and/or schedule of values of a prospective Bidder's Bid are obviously unbalanced, either in excess or below the reasonable cost analysis values, the Bid may be rejected. All Bids with separately priced line items shall be analyzed to determine if the prices are unbalanced. A bid may be rejected if Truckee Meadows Water Authority determines that the lack of balance poses an unacceptable risk to Truckee Meadows Water Authority.

A Bid with unbalanced pricing may increase performance risk and could result in payment of unreasonably high prices. Unbalanced pricing exists when, despite an acceptable total evaluated price, the price of one or more bid items is significantly over or understated as indicated by the application of cost or price analysis techniques. The greatest risks associated with unbalanced pricing occur when:

1. Over pricing of startup work, mobilization, or early items of work (front end

- loading) would cause a bidder to receive substantial up-front payment;
2. Base quantities and option quantities are separate line items;
  3. The quantities as bid are incorrect and the contract cost will be increased when quantities are corrected; or
  4. On items where the quantities may vary, if the anticipated variation in quantity would result in the lower Bidder not remaining as the low Bidder.

**E. Disqualification of Bidders**

Any one or more of the following may be considered as sufficient for the disqualification of a prospective Bidder and the rejection of the Bid:

1. The Bidder is not responsive or responsible;
2. The quality of the services, materials, equipment or labor offered does not conform to the approved Contract plans and specifications;
3. Evidence of collusion among prospective Bidders; (Participants in such collusion will receive no recognition as Bidders)
4. Lack of contractor's license classification required by Truckee Meadows Water Authority for this Work;
5. More than one Bid for the same work from an individual, firm, or corporation under the same or different name;
6. Lack of competency, understanding of the scope of the Work, adequate machinery, plant and/or equipment as revealed by the requested experience or subcontractor information;
7. Unsatisfactory performance record as shown by past work for Truckee Meadows Water Authority, judged from the standpoint of workmanship, progress, and quality of services/goods provided;
8. Uncompleted work which, in the judgment of Truckee Meadows Water Authority, might hinder or prevent the prompt completion of additional work, if awarded;
9. Failure to pay or satisfactorily settle all bills due for labor and material on any contract(s);
10. Failure to comply with any requirements of Truckee Meadows Water Authority;
11. Failure to list, as required, all subcontractors who will be employed by the Bidder;
12. Negative actions against the Contractor's license by the Nevada State Contractor's Board; or
13. Any other reason determined, in good faith, to be in the best interest of Truckee Meadows Water Authority.

**IV. BID PROTESTS**

The Truckee Meadows Water Authority Contracts Division will post the recommendation for award of this Contract on the website: [http://www.tmh2o.com/about\\_us/doingbusinesswithtmwa/](http://www.tmh2o.com/about_us/doingbusinesswithtmwa/) . Any Bidder which submitted a bid to TMWA may protest the recommendation for award in accordance with the procedures set forth in NRS 338.142 as if such procedures applied to a contract awarded under NRS 332. The protest must be submitted in writing to TMWA's Purchasing and Contracts

Administrator. In addition to any other information required by law, the protest shall include the following information:

1. The alleged violations(s) of: (a) Contract Documents referencing page number, item, and paragraph; (b) Nevada Revised Statutes referencing the specific chapter, section, and subsection; or (c) Local codes or ordinances referencing section number; and
2. Supporting documentation such as Nevada State Contractors Board licensing information or other detailed proof to substantiate the protest.

The Bidder filing the protest shall, at the time the protest is filed, post a bond with a good and solvent surety authorized to do business in the state of Nevada, or submit a cashier's check, money order, or certified check, to TMWA who will hold the bond or other security until a determination is made on the protest. The bond or other security submitted with the protest shall be in an amount equal to the lesser of 25 percent of the total Base Bid submitted by the Bidder filing the protest, or \$250,000.00.

If the protest is upheld, the bond or other security will be returned to the Bidder who submitted the protest. If the protest is rejected, a claim may be made by TMWA against the bond or other security in an amount equal to the expenses incurred by TMWA because of the unsuccessful protest. Any money remaining after the claim has been satisfied will be returned to the Bidder who posted the bond or submitted the security.

The protest filed in accordance with these provisions operates as a stay of action in relation to award of the Contract until a determination is made by TMWA on the protest.

An unsuccessful Bidder may not seek any type of judicial intervention until TMWA has made a determination on the protest and awarded the Contract.

TMWA will not be liable for any costs, expenses, attorney's fees, loss of income, or other damages sustained by a Bidder, whether or not the Bidder files the protest.

TMWA's Administrator of Purchasing and Contracts will promptly issue a decision in writing to the protester and any other party intervening. If the protester or any other intervening party wishes to appeal the decision rendered by TMWA's Administrator of Purchasing and Contracts to the TMWA Board, such appeal shall be made within 48 hours from receipt of the decision by submitting a notice of appeal in writing to TMWA's Administrator of Purchasing and Contracts.

An award recommendation will be made and presented to the Truckee Meadows Water Authority for a final decision. TMWA will not consider protests unless the procedures specified in this Section are followed.

**V. BID PREPARATION EXPENSES**

By accepting the Bid Proposal of the Bidder, Truckee Meadows Water Authority assumes no obligation to reimburse the Bidder for Bid preparation expenses. No Bidder shall have any right or claim against Truckee Meadows Water Authority for reimbursement of Bid preparation expenses.

**VI. COLLUSION, DISCRIMINATION, AND/OR PRICE FIXING**

The Bidder certifies that any and all prices which he may charge under the terms of the Contract do not, and will not, violate any existing federal, state or municipal laws or regulations concerning discrimination and/or price fixing. The Bidder agrees to indemnify, exonerate and hold Truckee Meadows Water Authority harmless from liability for any such violation now and throughout the term of the Contract.

**VII. CONTRACT AWARD**

**A. Method of Award.** The Bid, if awarded, will be awarded to the lowest responsive and

responsible Bidder. Bidder must bid all items to be responsive and considered for award.

**B. Time of Award.** The award, if made, will be within thirty (30) calendar days after the opening of Bids. Truckee Meadows Water Authority reserves the right to accept or reject any or all Bids received.

**C. Bonds.** The successful contractor will be required to provide the Bonds as indicated in Article 5 of the General Conditions.

**D. Insurance.** Insurance as described in the General Conditions shall be required of the Contractor not later than ten (10) calendar days after receipt of the Notice of Award. The Contractor shall procure and maintain, at its own expense, all the insurance required as stated herein, and shall submit coverage verification (certificates) for review and approval by Truckee Meadows Water Authority. A Notice to Proceed may be issued prior to receipt of the required insurance, bonds, and signed contracts starting the time for contract performance on the project, however, the Contractor will not be permitted to work prior to Truckee Meadows Water Authority's receipt and approval of the insurance, bonds and signed contract. Said certificates shall be specific to the project and all notices regarding insurances shall be delivered to:

Truckee Meadows Water Authority  
Attn: Maria Dufur, New Business Project Coordinator  
P. O. Box 30013  
Reno, NV 89520

The Notice to Proceed shall not be issued and Contractor shall not commence work, until such insurance has been approved by Truckee Meadows Water Authority. The Contractor shall not allow any subcontractors to commence work on its subcontract until all similar insurance required of the subcontractor has been obtained and verified by Contractor. Such insurance shall remain in full force and effect at all times during the execution of the Work and until the final completion and acceptance thereof and at all times thereafter as dictated in this Contract and the General Conditions.

If the Contractor fails to maintain any of the insurance coverage required herein, Truckee Meadows Water Authority will have the option to declare the Contractor in breach, or may purchase replacement insurance or pay the premiums that are due on existing policies in order that the required coverage may be maintained. The Contractor is responsible for any expenses paid by Truckee Meadows Water Authority to maintain such insurance and Truckee Meadows Water Authority may collect the same from the Contractor or deduct the amount paid from any sums due the Contractor under the Contract.

The insurance requirements specified herein do not relieve the Contractor of responsibility or limit the amount of liability to Truckee Meadows Water Authority or other persons, and the Contractor is encouraged to purchase such additional insurance as he deems necessary.

**E. Penalty for Collusion.** If, at any time, it is found that the Contractor has, in presenting any bid or bids, colluded with any other party or parties, then the Contract shall be null and void, and the Contractor and its sureties shall be liable for loss or damage which Truckee Meadows Water Authority may suffer thereby, and Truckee Meadows Water Authority may advertise for new bids for said Work. The Contractor further certifies that any and all prices which he may charge under the terms of the Contract do not, and will not, violate any existing Federal, State or Municipal laws or regulations concerning discrimination and/or price fixing.

**F. Copeland Anti-Kickback Law.** The Contractor shall comply with the Copeland Anti-Kickback Act (19 U.S.C. 874) as supplemented in the Department of Labor Regulations (29 CFR Part 3). This act provides that each Contractor or subcontractor shall be prohibited from inducing by any means, any person employed in the construction, completion or repair of public

facilities, to give up any part of the compensation to which he is otherwise entitled.

**G. Media Contact.** The Contractor shall immediately contact the TMWA Project Manager assigned to them, if they are approached by the media while working on any TNWA project.

## **END OF INSTRUCTIONS TO BIDDERS**

## BID PROPOSAL FORMS

**BID BOND**  
**NOT REQUIRED FOR THIS PROJECT**

KNOW ALL MEN BY THESE PRESENTS, that I/We \_\_\_\_\_

as Principal, hereinafter called Contractor, and

a corporation duly organized or authorized to do business under the laws of the State of Nevada, as Surety, hereinafter called the Surety, are held and firmly bound unto Truckee Meadows Water Authority, a joint powers authority created pursuant to NRS Chapter 277, for the sum of \$ \_\_\_\_\_ Dollars

(state sum in words)

for the payment whereof Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents. This bond shall be governed by the laws of the State of Nevada.

**WHEREAS**, the Principal has submitted a bid, identified as **TMWA Project #2015-012** and titled **"Boom Truck Replacement."**

**NOW, THEREFORE** if Truckee Meadows Water Authority shall accept the bid of the Principal and the Principal shall enter into a contract with Truckee Meadows Water Authority in Accordance with the terms of such bid, and give such bond or bonds as may be specified in the bidding or Contract Documents with good and sufficient surety for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof, or in the event of the failure of the Principal to enter such Contract and give such bond or bonds, if the Principal shall pay to Truckee Meadows Water Authority the difference not to exceed the penalty hereof between the amount specified in said bid and such larger amount for which Truckee Meadows Water Authority may in good faith contract with another party to perform work covered by said bid or an appropriate liquidated amount as specified in the Invitation for Bids then this obligation shall be null and void, otherwise to remain in full force and effect.

Executed on this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_

(Signature of Principal)

**Name:** \_\_\_\_\_

**Title:** \_\_\_\_\_

(Seal)

**Firm:** \_\_\_\_\_

**Address:** \_\_\_\_\_

**City/ State / Zip Code:** \_\_\_\_\_

**Written Name of Principal:** \_\_\_\_\_

(Signature of Notary)

**ATTEST NAME:** \_\_\_\_\_

Subscribed and sworn before me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_

(printed name of notary)

Notary Public for the State of \_\_\_\_\_

|  |  |
|--|--|
| <b>Claims Under This Bond May Be Addressed To:</b> |  |
| Name of Surety                                     |  |
| Address  |  |
| City   |  |
| State/Zip Code                                     |  |
| Name   |  |
| Title  |  |
| Phone  |  |
| Surety's Acknowledgment                            |  |

**NOTICE:** No substitution or revision to this bond form will be accepted. Sureties must be authorized to do business in and have an agent for service of process in the State of Nevada. Certified copy of Power of Attorney must be attached.

BID SCHEDULES  
(Cont)

**BID SCHEDULES**

**BID TITLE: Boom Truck Replacement**

**NOTICE:** No substitution or revision to this Bid Schedule form will be accepted. Truckee Meadows Water Authority will reject any Bid that is received that has changes or alterations to this document.

**PRICES** must be valid for 30 calendar days after the bid opening.

**COMPLETION** of this project is expected **PURSUANT TO CONTRACT DOCUMENTS**.

**BIDDER** acknowledges receipt of \_\_\_\_\_ Addendums.

Item pricing on this schedule is for use in preparing the schedule of values that will be used as a basis for partial payment during construction and for internal TMWA use. Item descriptions are not intended to be all inclusive. Bidders shall include costs for work not specifically mentioned in the most appropriate item.

TMWA reserves the right to perform extra work using time and expense or negotiated lump sum procedures.

The Contract Sum will be adjusted (increased or decreased) for actual quantities per unit price items. Lump sum items will not be adjusted.

Compliance with all permit and environmental requirements is incidental to the Work. No separate bid item, or additional payment provisions, shall be made for operational constraints or conditions placed on the Work by permitting agency requirements.

\_\_\_\_\_  
(signature)

**SUMMARY**

| Description   | Scheduled Value | Unit | Unit Price | Total Price |
|---|-----------------|------|------------|-------------|
| <b>No. 1</b> Boom Truck Cab and Chassis per Specifications included as Attachment "A" pages 1-9 at the end of the Bid Schedule  | LS              | 1    |            |             |
| <b>No. 2</b> Boom Truck Crane and Accessories and Installation of all components per specifications attached as Attachment "A" pages 10-13 at the end of the Bid ( <i>Operation and In-Service Training approximately 4 hours to be conducted on-site at TMWA's general office building, 1355 Capital Boulevard, Reno, NV</i> ) | LS              | 1    |            |             |
| Sales Tax Omitted from bid (Tax Exempt #RCE-006-161 – Federal Tax ID#88-0488450)  | N/A             | N/A  | N/A        | N/A         |
| <b>DELIVERY DATE</b> (Filled in by Bidder)  |                 |      |            |             |
| <b>TOTAL BID PRICE</b>  |                 |      |            |             |

Total Bid Price Written in Words: \_\_\_\_\_

**Notes:** None



**BID SCHEDULES**  
(Cont)

**BIDDER INFORMATION:**

|                                       |
|---------------------------------------|
| Company Name:                         |
| Address:                              |
| City:                                 |
| State / Zip Code:                     |
| Telephone Number including area code: |
| Fax Number including area code:       |
| E-mail:                               |

**LICENSING INFORMATION: (Not Required for This Project):**

|   |
|---|
| Nevada State Contractor's License Number: N/A |
| License Classification(s):                    |
| Limitation(s) of License:                     |
| Date Issued:                                  |
| Date of Expiration:                           |
| Name of Licensee:                             |
| City, State, Zip Code of Licensee:            |
| Telephone Number of Licensee:                 |

**BUSINESS LICENSE INFORMATION: (Required for This Project)**

|                                    |
|------------------------------------|
| Business License Number:           |
| Date Issued:                       |
| Date of Expiration:                |
| Name of Licensee:                  |
| City, State, Zip Code of Licensee: |
| Telephone Number of Licensee:      |

|                                 |
|---------------------------------|
| Taxpayer Identification Number: |
|---------------------------------|

BID SCHEDULES

(Cont)

**DISCLOSURE OF PRINCIPALS:**

**1. Individual and/or Partnership:**

|                        |
|------------------------|
| Owner 1) Name:         |
| Address:               |
| City, State, Zip Code: |
| Telephone Number:      |
|                        |
| Owner 2) Name:         |
| Address:               |
| City, State, Zip Code: |
| Telephone Number:      |
|                        |
| Other 1) Title:        |
| Name                   |
|                        |
| Other 2) Title:        |
| Name:                  |

**2. Corporation:**

|   |
|---|
| State in which Company is Incorporated: |
| Date Incorporated:                      |
| Name of Corporation:                    |
| Address                                 |
| City, State, Zip Code:                  |
| Telephone Number:                       |
| President's Name:                       |
| Vice-President's Name:                  |
| Other 1) Name:                          |
| Title:                                  |
| Other 2) Name:                          |
| Title                                   |

**BID SCHEDULES**

(Cont)

**MANAGEMENT AND SUPERVISORY PERSONNEL:**

| Persons and Positions | Years With Firm |
|-----------------------|-----------------|
| Name                  |                 |
| Title                 |                 |
| Name                  |                 |
| Title                 |                 |
| Name                  |                 |
| Title                 |                 |

(If additional space is needed, attach a separate page)

**REFERENCES: (Not Required for This Project)**

1. **Instructions:**

List at least three (3) contracts of a similar nature performed by your firm in the last three (3) years. If **NONE**, use your Company's letterhead (and submit with your bid proposal) a list what your qualifications are for this contract. Truckee Meadows Water Authority reserves the right to contact and verify, with any and all references listed, the quality of and the degree of satisfaction for such performance. See the Supplemental Conditions for the TMWA Project Category required for this project.

2. **Clients:** (if additional space is needed attach a separate page)

|                                   |                 |
|-----------------------------------|-----------------|
| Owner's Representative :          | Telephone #     |
| Address (inc. City, State & Zip): |                 |
| Owner's Representative's E-mail:  |                 |
| Superintendent:                   |                 |
| Amount of Contract:               | Date Completed: |
| Project Title:                    |                 |
| TMWA Project Category:            |                 |
|                                   |                 |
| Owner's Representative :          | Telephone #     |
| Address (inc. City, State & Zip): |                 |
| Owner's Representative's E-mail:  |                 |
| Superintendent:                   |                 |
| Amount of Contract:               | Date Completed: |
| Project Title:                    |                 |
| TMWA Project Category:            |                 |

BID SCHEDULES  
(Cont)

|                                   |                 |
|-----------------------------------|-----------------|
| Owner's Representative :          | Telephone #     |
| Address (inc. City, State & Zip): |                 |
| Owner's Representative's E-mail:  |                 |
| Superintendent:                   |                 |
| Amount of Contract:               | Date Completed: |
| Project Title:                    |                 |
| TMWA Project Category:            |                 |
| Project Name:                     |                 |
| Owner's Representative :          | Telephone #     |
| Address (inc. City, State & Zip): |                 |
| Owner's Representative's E-mail:  |                 |
| Superintendent:                   |                 |
| Amount of Contract:               | Date Completed: |
| Project Title:                    |                 |
| TMWA Project Category:            |                 |
| Project Name:                     |                 |
| Owner's Representative :          | Telephone #     |
| Address (inc. City, State & Zip): |                 |
| Owner's Representative's E-mail:  |                 |
| Superintendent:                   |                 |
| Amount of Contract:               | Date Completed: |
| Project Title:                    |                 |
| TMWA Project Category:            |                 |

**BID SCHEDULES**

(Cont)

**CERTIFICATION REGARDING DEBARMENT, SUSPENSION, AND OTHER RESPONSIBILITY MATTERS PRIMARY COVERED TRANSACTIONS**

1. The prospective primary participant certifies to the best of its knowledge and belief, that it and its principals:
  - a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded by any Federal, State or Local department or agency.
  - b) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or Local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property.
  - c) Are not presently indicted for or otherwise criminally or civilly charged by a government entity (Federal, State or Local) with commission of any of the offenses enumerated in paragraph (1)(b) of this certification; and
  - d) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or Local) terminated for cause or default.
2. Where the prospective primary participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

\_\_\_\_\_  
Signature of Authorized Certifying Official

\_\_\_\_\_  
Title

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Date

I am unable to certify to the above statement. My explanation is attached.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

**BIDDER'S SAFETY INFORMATION (Not Required for This Project)**

**Bidder's Safety Factors:**

| Year | "E-Mod" Factor <sup>1</sup> | OSHA Incident Rate <sup>2</sup> |
|------|-----------------------------|---------------------------------|
| 2014 |                             |                                 |
| 2015 |                             |                                 |

<sup>1</sup> E-Mod (Experience Modification) Factors are issued by the National Council on Compensation Insurance (NCCI).  
<sup>2</sup> OSHA Incident Rate is the number of OSHA Recordable Accidents multiplied by 200,000 and then dividing that result by the total number of annual man-hours. Please refer to the U.S. Department of Labor Occupational Safety and Health Administration's website for calculating worksheets and current requirements.



**ATTACHMENT "A"**  
**Part A – Cab and Chassis**  
**Part B – Crane and Accessories**  
**Part C – Supporting Documents**

## 18 ton Boom Truck

The specification provided is based on an International cab and chassis, the Truckee Meadows Water Authority will consider other models as long as they can be compared as equal to or better.

### Cab and Chassis Specification

Base Chassis, Model 7600 SBA 6X4 2010 with 230.00 Wheelbase, 162.90 CA, and 100.00 Axle to Frame.

FRAME RAILS Heat Treated Alloy Steel (120,000 PSI Yield); 10.866" x 3.622" x 0.433" (276.0mm x 92.0mm x 11.1mm); 456.0" (11582mm)

Maximum OAL

BUMPER, FRONT Steel, Swept Back

Includes

: BUMPER, FRONT Powder Coated Gray (Argent) Color

WHEELBASE RANGE 183" (465cm) Through and Including 248" (630cm)

AXLE, FRONT NON-DRIVING {Meritor MFS-18-133A} Wide Track, I-Beam Type, 18,000-lb Capacity

Notes

: The following features should be considered when calculating Front GAWR: Front Axles; Front

Suspension; Brake System; Brakes, Front

Air Cam; Wheels; Tires.

SUSPENSION, FRONT, SPRING Multileaf, Shackle Type; 18,000-lb Capacity; Less Shock Absorbers

Includes

: SPRING PINS Rubber Bushings, Maintenance-Free

Notes

: The following features should be considered when calculating Front GAWR: Front Axles; Front

Suspension; Brake System; Brakes, Front

Air Cam; Wheels; Tires.

BRAKE SYSTEM, AIR Dual System for Straight Truck Applications

Includes



: BRAKE LINES Color and Size Coded Nylon

: DRAIN VALVE Twist-Type

: GAUGE, AIR PRESSURE (2) Air 1 and Air 2 Gauges; Located in Instrument Cluster

: PARKING BRAKE CONTROL Yellow Knob, Located on Instrument Panel

: PARKING BRAKE VALVE For Truck

: QUICK RELEASE VALVE On Rear Axle for Spring Brake Release: 1 for 4x2, 2 for 6x4

: SLACK ADJUSTERS, FRONT Automatic

: SLACK ADJUSTERS, REAR Automatic

: SPRING BRAKE MODULATOR VALVE R-7 for 4x2, SR-7 with relay valve for 6x4

#### Notes

: Rear Axle is Limited to 46,000-lb GAWR with Code 04091 BRAKE SYSTEM, AIR and Standard Rear Air Cam Brakes Regardless of

Axle /Suspension Ordered.

BRAKES, FRONT, AIR CAM 16.5" x 6", Includes 24 SqIn Long Stroke Brake Chambers

#### Notes

: The following features should be considered when calculating Front GAWR: Front Axles; Front Suspension; Brake System; Brakes, Front Air Cam; Wheels; Tires.

TRAILER CONNECTIONS Four-Wheel, With Hand Control Valve and Tractor Protection Valve, for Straight Truck

TRAILER HOSES Glad Hands for Four-Wheel Connections, Temporarily Mounted with Bulkhead Connectors on End of Frame, Includes

Additional Hosing and Dummy Glad Hands

DRAIN VALVE {Berg} Manual; With Pull Chain, for Air Tank

AIR BRAKE ABS {Bendix AntiLock Brake System} Full Vehicle Wheel Control System (4-Channel)

AIR DRYER {Meritor Wabco System Saver 1200} with Heater

Includes

: AIR DRYER LOCATION Inside Left Rail, Back of Cab

BRAKE CHAMBERS, REAR AXLE {Bendix EverSure} 30/30 Spring Brake

BRAKE CHAMBERS, FRONT AXLE {Bendix} 24 SqIn

BRAKES, REAR, AIR CAM S-Cam; 16.5" x 7.0"; Includes 30/30 Sq.In. Long Stroke Brake Chamber and Spring Actuated Parking Brake

Notes

: The following features should be considered when calculating Rear GAWR: Rear Axles; Rear

Suspension; Brake System; Brakes, Rear

Air Cam; Brake Shoes, Rear; Special Rating, GAWR; Wheels; Tires.

AIR COMPRESSOR {Bendix BA-921 Head Unload} 15.9 CFM Capacity, Single Cylinder

AIR TANK LOCATION (2) : One Mounted Under Each Frame Rail, Front of Rear Suspension, Parallel to Rail

STEERING COLUMN Stationary

STEERING WHEEL 2-Spoke, 18" Dia., Black

STEERING GEAR (2) {Sheppard M100/M80} Dual Power

EXHAUST SYSTEM Switchback Horizontal Aftertreatment Device, Frame Mounted Right Side Under Cab; Includes Single Short

Horizontal Tail Pipe, Frame Mounted Right Side Back of Cab

ELECTRICAL SYSTEM 12-Volt, Standard Equipment

Includes

: DATA LINK CONNECTOR For Vehicle Programming and Diagnostics In Cab

: FUSES, ELECTRICAL SAE Blade-Type

: HAZARD SWITCH Push On/Push Off, Located on Top of Steering Column Cover

: HEADLIGHT DIMMER SWITCH Integral with Turn Signal Lever

: HEADLIGHTS (2) Sealed Beam, Round, with Chrome Plated Bezels

: JUMP START STUD Located on Positive Terminal of Outermost Battery

: PARKING LIGHT Integral with Front Turn Signal and Rear Tail Light

: STARTER SWITCH Electric, Key Operated

: STOP, TURN, TAIL & B/U LIGHTS Dual, Rear, Combination with Reflector

: TURN SIGNAL SWITCH Self-Cancelling for Trucks, Manual Cancelling for Tractors, with Lane Change Feature

: WINDSHIELD WIPER SWITCH 2-Speed with Wash and Intermittent Feature (5 Pre-Set Delays), Integral with Turn Signal Lever

: WINDSHIELD WIPERS Single Motor, Electric, Cowl Mounted

: WIRING, CHASSIS Color Coded and Continuously Numbered

JUMP START STUD (2) Remote Mounted

ALTERNATOR {Leece-Neville AVI160P2013} Brush Type; 12 Volt 160 Amp. Capacity, Pad Mount

BODY BUILDER WIRING To Rear of Frame, With Stop, Tail, Turn, and Marker Lights Circuits, Ignition Controlled Auxiliary Feed and

Ground, Less Trailer Socket

BATTERY SYSTEM {Deka/EAST PENN 9A31} Maintenance-Free (3) AGM 12-Volt 2775CCA Total

RADIO AM/FM/WB/Clock/Bluetooth/USB Input/3MM Auxiliary Input, MP3, Apple Device Play & Control, Bluetooth for Phone & Music, with

Multiple Speakers

HORN, ELECTRIC Disc Style

CLEARANCE/MARKER LIGHTS (5) {Truck Lite} Amber LED Lights, Flush Mounted on Cab or Sunshade

STARTING MOTOR {Mitsubishi Electric Automotive America 105P} 12-Volt, with Soft-Start

BATTERY BOX Steel, Mounted Inside the Cab, Under Passenger Seat, 3 Battery Capacity

TURN SIGNALS, FRONT Includes LED Side Turn Lights Mounted on Fender

FENDER EXTENSIONS Omit

INSULATION, UNDER HOOD for Sound Abatement

GRILLE Stationary, Chrome

INSULATION, SPLASH PANELS for Sound Abatement

FRONT END Tilting, Fiberglass, With Three Piece Construction Includes Long Hood

PAINT SCHEMATIC, PT-1 Single Color, Design 100

Includes

: PAINT SCHEMATIC ID LETTERS "GS"

PAINT TYPE Base Coat/Clear Coat, 1-2 Tone

VEHICLE REGISTRATION IDENTITY ID for the State of California

CLUTCH Omit Item (Clutch & Control)

ANTI-FREEZE Red, Extended Life Coolant; To -40 Degrees F/ -40 Degrees C, Freeze Protection, for N13

Engines

ENGINE, DIESEL {Navistar N13} EPA 2010, SCR, 430 HP @ 1700 RPM, 1550 lb-ft Torque @ 1000

RPM, 2100 RPM Governed Speed,

430 Peak HP (Max)

FAN DRIVE {Horton Drivemaster} Direct Drive Type, Two Speed With Residual Torque Device for

Disengaged Fan Speed

Includes

: FAN Nylon

FEDERAL EMISSIONS {Navistar N13} EPA, OBD and GHG Certified for Calendar Year 2016

AIR CLEANER Single Element

Includes

: AIR CLEANER with Vacuator

: GAUGE, AIR CLEANER RESTRICTION Air Cleaner Mounted

ENGINE CONTROL, REMOTE MOUNTED for PTO with N13 Engines

COLD STARTING EQUIPMENT Automatic; With Engine ECM Control

EMISSION COMPLIANCE Low NOx Idle Engine, Complies with California Clean Air Regulations;

Includes "Certified Clean Idle" Decal on

Hood

RADIATOR Aluminum; Welded, Front to Back CrossFlow System, 1593 SqIn, 1012 SqIn CAC, 1543 SqIn

3 Core LTR

TRANSMISSION, AUTOMATIC {Allison 4000\_RDS\_P} 5th Generation Controls; Close Ratio, 5-Speed,

With Overdrive; On/Off Hwy;

Includes Oil Level Sensor, With PTO Provision, Less Retarder

OIL COOLER, AUTO TRANSMISSION {Modine} Water to Oil Type

TRANSMISSION SHIFT CONTROL {Allison} Push-Button Type; for Allison 3000 & 4000 Series

Transmission

SHIFT CONTROL PARAMETERS {Allison} 3 Speed S1 Secondary Shift Schedule for 5 or 6 Speed

Allison Gen4/Gen 5 3000 & 4000

Series Transmissions

TRANSMISSION OIL Synthetic; 63 thru 76 Pints

ALLISON SPARE INPUT/OUTPUT for Rugged Duty Series (RDS); General Purpose Trucks,

Construction

TRANSMISSION TCM LOCATION Located Inside Cab

PTO LOCATION Left Side of Transmission

AXLE, REAR, TANDEM {Meritor MT-40-14X-4DFR} Single Reduction, 0.433"(11mm) Wall Housing

Thickness, 40,000-lb Capacity, R

Wheel Ends . Gear Ratio: 3.70

Includes

: POWER DIVIDER LOCK Electric over Air Operated, Cab Control with Indicator Light

: REAR AXLE DRAIN PLUG (2) Magnetic, For Tandem Rear Axle

Notes

: The following features should be considered when calculating Rear GAWR: Rear Axles; Rear

Suspension; Brake System; Brakes, Rear

Air Cam; Brake Shoes, Rear; Special Rating, GAWR; Wheels; Tires.

SUSPENSION, REAR, AIR, TANDEM {Hendrickson HAS-402-55} 55" Axle Spacing; 40,000-lb Capacity,

9.5" Ride Height, With Shock

Absorbers Mounted Inboard

Includes

: CROSSMEMBER, SUSPENSION 3-Piece

Notes

: The following features should be considered when calculating Rear GAWR: Rear Axles; Rear

Suspension; Brake System; Brakes, Rear

Air Cam; Brake Shoes, Rear; Special Rating, GAWR; Wheels; Tires.

: When Specifying Axle Ratio, Check Performance Guidelines and TCAPE for Startability and Performance

DEF TANK 9.5 U.S. Gal. 36.0L Capacity, Frame Mounted Outside Left Rail, Under Cab

FUEL/WATER SEPARATOR {Racor} Fuel Pre-Filter and Filter Base, Includes Water-In-Fuel Sensor

LOCATION FUEL/WATER SEPARATOR or Fuel Filter, Mounted Inside Left Rail, Back of Cab

FUEL TANK Top Draw; D-Style, Non-Polished Aluminum, 16" Tank Depth, 50 U.S. Gal., 189 L Capacity, with Quick Connect Outlet,

Mounted Left Side, Under Cab

FUEL COOLER Less Thermostat; Mounted in Front of Cooling Module

CAB Conventional

Includes

: ARM REST (2) Molded Plastic; One Each Door

: COAT HOOK, CAB Located on Rear Wall, Centered Above Rear Window

: CUP HOLDERS Two Cup Holders, Located in Lower Center of Instrument Panel

: DOME LIGHT, CAB Rectangular, Door Activated and Push On-Off at Light Lens, Timed Theater

Dimming, Integral to Console, Center

Mounted

: GLASS, ALL WINDOWS Tinted

: GRAB HANDLE, CAB INTERIOR (1) "A" Pillar Mounted, Passenger Side

: GRAB HANDLE, CAB INTERIOR (2) Front of "B" Pillar Mounted, One Each Side

: INTERIOR SHEET METAL Upper Door (Above Window Ledge) Painted Exterior Color

: STEP (4) Two Steps Per Door

GAUGE CLUSTER English With English Electronic Speedometer

Includes

: GAUGE CLUSTER (6) Engine Oil Pressure (Electronic), Water Temperature (Electronic), Fuel

(Electronic), Tachometer (Electronic),

Voltmeter, Washer Fluid Level

: ODOMETER DISPLAY, Miles, Trip Miles, Engine Hours, Trip Hours, Fault Code Readout

: WARNING SYSTEM Low Fuel, Low Oil Pressure, High Engine Coolant Temp, and Low Battery Voltage  
(Visual and Audible)

IP CLUSTER DISPLAY On Board Diagnostics Display of Fault Codes in Gauge Cluster

GAUGE, DEF FLUID LEVEL

SEAT, DRIVER {National 2000} Air Suspension, High Back With Integral Headrest, Vinyl, Isolator, 1

Chamber Lumbar, With 2 Position

Front Cushion Adjust, -3 to +14 Degree Angle Back Adjust

Includes

: SEAT BELT 3-Point, Lap and Shoulder Belt Type

MIRRORS (2) {Lang Mekra} Styled; Rectangular, Power Both Sides Flat Glass Only, Thermostatically  
Controlled Heated Heads, Clearance

Lights LED, Black Heads, Brackets and Arms, Breakaway Type, 7.09" x 15.75" & Integral Convex Both  
Sides, 102" Inside Spacing

SEAT, PASSENGER {Seats, Inc.} Non Suspension, High Back, Fixed Back, Integral Headrest, Vinyl, for  
use with Batteries in Cab

AIR CONDITIONER {Blend-Air} With Integral Heater & Defroster

Includes

: HEATER HOSES Premium

: HOSE CLAMPS, HEATER HOSE Mubea Constant Tension Clamps

: REFRIGERANT Hydrofluorocarbon HFC-134A

INSTRUMENT PANEL Center Section, Flat Panel

WINDOW, POWER (2) and Power Door Locks, Left and Right Doors, Includes Express Down Feature

HVAC FRESH AIR FILTER

STORAGE POCKET, DOOR Molded Plastic, Full Width; Mounted on Passenger Door

CAB INTERIOR TRIM Deluxe

Includes

: "A" PILLAR COVER Molded Plastic

: CAB INTERIOR TRIM PANELS Cloth Covered Molded Plastic, Full Height; All Exposed Interior Sheet Metal is Covered Except for the

Following: with a Two-Man Passenger Seat or with a Full Bench Seat the Back Panel is Completely Void of Covering

: CAB, INTERIOR TRIM, CLOSEOUT Lower Dash Closeout Panel; Molded Plastic; Under Instrument Panel Driver Side

: CONSOLE, OVERHEAD Molded Plastic; With Dual Storage Pockets with Retainer Nets and CB Radio Pocket

: DOOR TRIM PANELS Molded Plastic; Driver and Passenger Doors

: FLOOR COVERING Rubber, Black

: HEADLINER Soft Padded Cloth

: INSTRUMENT PANEL TRIM Molded Plastic with Black Center Section

: STORAGE POCKET, DOOR (1) Molded Plastic, Full-Length; Driver Door

: SUN VISOR (2) Padded Vinyl with Driver Side Toll Ticket Strap, Integral to Console

CAB REAR SUSPENSION Air Bag Type

WHEELS, FRONT {Maxion 90541} DISC; 22.5x8.25 Rims, Painted Steel, 2-Hand Hole, 10-Stud, 285.75mm BC, Hub-Piloted, Flanged

Nut, with Steel Hubs

WHEELS, REAR {Maxion 10038} DUAL DISC; 22.5x7.50 Rims, Painted Steel, 5-Hand Hole, 10-Stud, 285.75mm BC, Hub-Piloted, Flanged

Nut, with Steel Hubs

PAINT IDENTITY, FRONT WHEELS Disc Front Wheels; With Vendor Applied White Powder Coat Paint

PAINT IDENTITY, REAR WHEELS Disc Rear Wheels; With Vendor Applied White Powder Coat Paint

(8) TIRE, REAR 11R22.5 Load Range G HSR2 (CONTINENTAL), 498 rev/mile, 75 MPH, All-Position

(2) TIRE, FRONT 12R22.5 Load Range H HSR2 (CONTINENTAL), 483 rev/mile, 75 MPH, All-Position

**Services Section:**

WARRANTY Standard for Paystar 5000, and Workstar 7500/7600, Effective with Vehicles Built January 2, 2015 or Later, CTS-2003Z



## **Crane and Accessories**

This specification below is based on the Elliott 1870CP and may be substituted with an equal or better unit, but must incorporate all options as listed below. If an equal or better unit is proposed, TMWA will review the proposal and reserves the right to determine at its discretion if the proposed substitution is equal or better.

All items below are to be installed to the manufactures specifications and must meet all DOT requirements including DOT certification.

All manufactures warranties to be assigned to TMWA such as the Life Time Structural Warranty for outrigger/stabilizers including any crane manufacturer and or accessory warranties.

A one year full parts and labor warranty is required for all parts and equipment not specifically covered by manufactures warranties and it will be the responsibility of the bidder to provide any warranty work for the first year. If the bidder is outside of the local area (30 mile radius from our facility) they will be required to make arrangements for warranty work to be performed locally or be responsible for transportation and return of the vehicle to/from their facility .

### **1870CP BASIC UNIT**

1 "Rear mount sub-frame for an 18' bed. A 27' retracted to 70' extended 3-section proportional boom. Sheave head shall be equipped with three sheaves. Winch features a burst of speed 12,800 lb. bare drum pull with 275' of 9'16" diameter 6x37 EIPS wire rope w/ 9,600 lb. single line pull. Internal boom hard-wire anti-two-block and Load Moment Indicator (LMI) hydraulic overload protection system. 360 degree continuous rotation. Hydraulic system includes 3-section gear pump (counterclockwise rotation), 70 gallon oil reservoir with sight and temperature gauge, 10 micron return line filter, and single gate valve on suction line. Single operator platform and seat mounted on roadside of turret with engine start/stop switch, system pressure gauge, cup holder, 12V power outlet, lifting capacity chart, range diagram chart, boom angle indicator, crane control levers, signal horn, variable speed foot throttle, and LMI display. Two sets of "Out-and-Down" over frame outriggers located at front and rear, each set having a 17'6" center to center extended span and equipped with removable ball socket aluminum pads. Independent outrigger controls with manual control valves located at rear of unit with bubble levels. Horizontal boom rest at front of flatbed with bulkhead. Downhaul weight with hook. Maximum tip height of 80' and maximum lifting capacity of 18 US tons at 5' radius. Includes mounting to truck chassis, electronic throttle interface, hydraulic fluid, rear bumper, mud flaps, backup alarm, safety triangle kit, tested and ready to operate. 360 degree stability. Unit certified to ANSI B30.5 for Mobile Cranes.

**BED**

1. 18' Wood Deck Bed With LED Lights (1,600 lbs.)
2. Tie-Down Rails on Both Sides of Bed

**JIB**

1. 23' Non-Extendable 1-Piece Jib (Side Stows on Boom)(550 lbs.)

**OUTRIGGER/STABILIZER**

1. Automatic Safety Rotation Lockout to Prevent Boom from Rotating to Side Where Outriggers Are Not Fully Extended Horizontally

**LIFTING OPTION**

1. 275' of 9/16" Diameter Spin Resistant Wire Rope, In Lieu of Standard Wire Rope
2. 15-Ton Single Sheave Hook Block for 2/3 Parts of Line. (240 lbs.)

**Man Basket**

1. 2 Person Gravity-Leveled Rotating Steel Basket (40" x 60")(600 lbs.)  
Basket Test Weight Kit (750 lbs. for 600 lb. capacity)

**REMOTE CONTROL**

1. 4-Function Radio Remote Controls

**PTO**

1. Hot Shift PTO for Automatic Transmission
2. Clockwise Rotation Pump (Required for Automatic Transmission)

**TOOL BOX**

1. 2 each 24" x 20" x 18" Steel Underbody Mounted
2. 2 each 36" x 20" x 18" Steel Underbody Mounted

## **ADDITIONAL REQUIRED OPTIONS**

1. Additional Control Valve for Second Hydraulic Option
2. 36" High Bulkhead at Front of Bed (150 lbs.)
3. 36" High Stake Racks on all three sides
4. Fold Down Bed Access Ladder With Grab Handles
5. Vertical Holder on Bed for 2/3 Part Line Hook Block
6. Van Air 125CFM, w/100PSI Underdeck Air Compressor hydraulically driven, and weight of 453lbs installed.
7. Coxreel model TSH-N-3100 or equal  
Hose reel must be equipped 100 feet of 3/8" ID air hose rated @ 500psi max  
A 500 psi rated ball valve located between compressor and hose reel plumbed to give operators ground access.  
Hose Reel to be mounted curb side rear behind outriggers pulling toward curb.
8. ICC Bumper w/Pintle Hitch Premier 580, D Rings mounted each side of Pintle, and 7 pin trailer plug. Pintle hitch to be 24" to center from ground. Glad Hands at the rear.
9. 97DBA Back Up Alarm
10. TV550 Pro Vision Back Up Camera /w 7" Monitor
11. 2 each LED Flood Light 7" Grote part #81704 mounted on each side of boom rest 12" above the cab roof.
12. 2 each Grote Short Bracket part # 00872
13. Grote Amber Beacon part# 78783 mounted S.S. front of bulkhead 6" above cab roof.
14. 4 each ECCO Strobes part # 9014A two to be mounted on each corner of the front bumper and two to be mounted each corner rear of the flat bed.
15. Additional Set of Operation, Maintenance, and Parts Manuals
16. Operation In-Service Training approximately 4 hours, training to be conducted at the TMWA general office building 1355 Capital Blvd Reno NV 89520

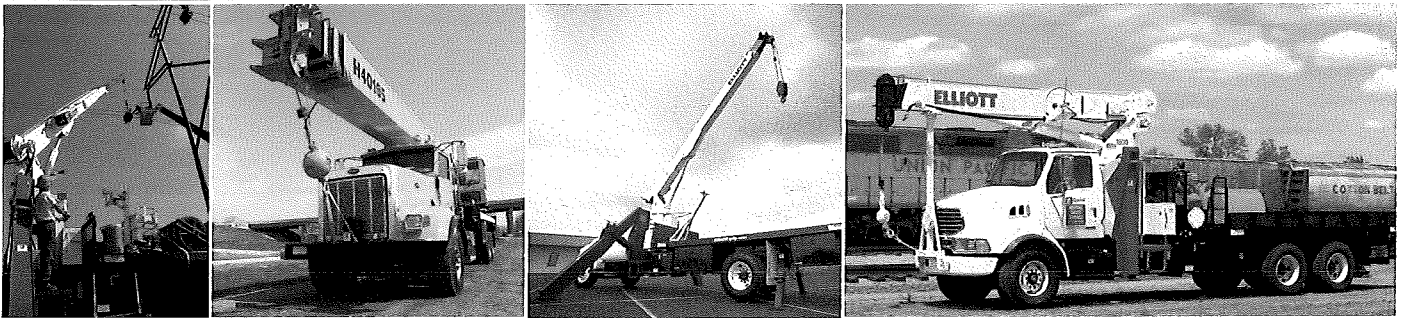
**PAINT**

Paint Crane Frame, Turret, Boom, Operator's Platform, and Control Console White. Subbase, Bed, and Reservoir to be Black. Outriggers, Boom Rest, and Bulkhead to be Red.

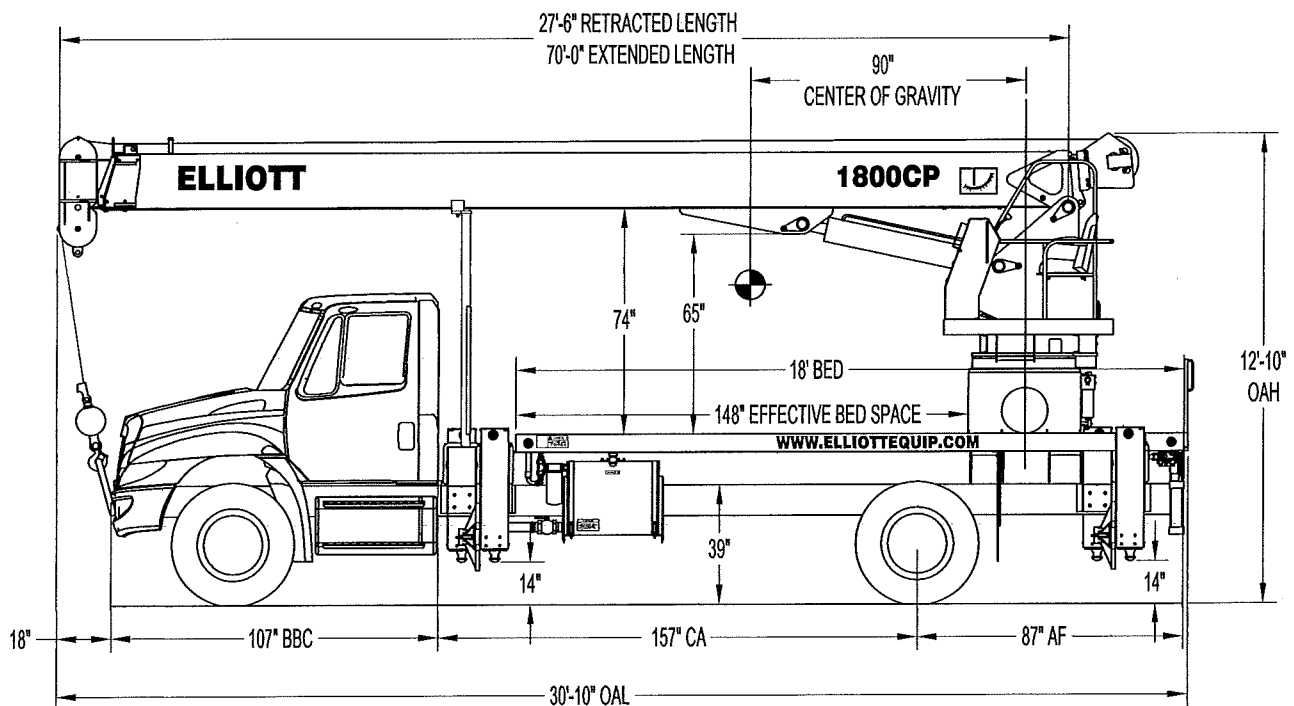
All painted steel must be zinc primered prior to painting.

# BoomTruck™ 1870CP

## TECHNICAL SPECIFICATIONS



1870CP SIDE VIEW DIAGRAM



- |                          |                         |                          |                      |
|--------------------------|-------------------------|--------------------------|----------------------|
| • Maximum Vertical Reach | 120'/36,6 m             | • Powered Boom Sections  | 3                    |
| • Working Area           | 360 Degrees             | • Overall Height         | 12'10"/3,9 m         |
| • Lifting Capacity       | 36,000 lbs/16 329 kg    | • Operator Controls      | Rotating Single Seat |
| • Boom Length            | 70'/21,3 m              | • Outrigger Type Front   | Out-Down             |
| • Crane Weight (Dry)     | 16,235 lbs/7364 kg      | • Outrigger Spread Front | 17'6"/5,3 m          |
| • Jib Lengths            | 23', 23-40'/7 m, 7-12 m | • Outrigger Type Rear    | Out-Down             |
| • Winch Bare Drum Pull   | 12,800 lbs/5806 kg      | • Outrigger Spread Rear  | 17'6"/5,3 m          |



Elliott Equipment Company  
4427 South 76th Circle  
Omaha, NE 68127

Phone: 402-592-4500  
Fax: 402-592-4553  
Email: sales@elliottequip.com

**Built for You.**  
www.elliottequip.com

## TECHNICAL SPECIFICATIONS

**Crane Capacity:** 36,000 lbs at five feet load radius.

**Maximum Tip Height:** 80' height (120' with optional 40' jib)

**Control Console:** Rotating single seat control station on street side of crane equipped with four single axis control levers for the main crane controls and two grip strut steps for access. Operator station includes adjustable operator seat, LMI display, bubble level gauge, engine start/stop switch, signal horn button, variable speed foot throttle, lifting capacity chart, range diagram chart, boom angle indicator, system pressure gauge, 12V DC power source, and cup holder. Outrigger controls mounted at rear under each corner of bed.

**Boom:** Three-section fully proportional, high strength steel plated rectangular tube sections. A maximum boom tip height of 80' mounted on a truck. The boom nose contains one floating upper sheave and two lower sheaves. Assembly includes heavy-duty cylinder fittings, pivot pins, and replaceable wear pads.

**Winch:** Mounted at the base of the boom for a long fleet angle and flat level spooling of cable. Winch is driven by a planetary reducer and powered by a hydraulic motor. Burst-of-speed winch provides increased line speed. The winch brake is spring applied, pressure release design. Supplied with 275' of 9/16" wire rope with a single line pull of 9,600 pounds, and a downhaul ball with swivel hook for single part line.

**Load Moment Indicator System:** System senses hoist cylinder pressures, boom length and boom angle with hydraulic function lockout. The display console is equipped with a bar graph showing crane utilization, boom angle or boom length, a mode select controls for main boom and jib operation, and an anti-two block with an audio/visual warning and shut-off functions to limit hook-boom point contact.

**Outriggers:** Two sets of out and down main outriggers with a 17'6" span, ball-socket removable aluminum outrigger pads and independent outrigger controls.

**Frame:** Full length, all welded rigid 4-plate design sub-frame. Sub-frame allows for bolt-on addition of 18' bed.

**Turret:** Reverse offset turret is one-piece weldment. Turret rotates on large diameter ball bearing.

**Rotation:** Hydraulic motor drives turret through double reduction planetary swing drive for continuous rotation. The swing drive system has a spring applied, pressure release brake.

**Lift:** One double-acting long stroke cylinder provides smooth and stable boom elevation. Holding valve prevents boom from falling in event of hose failure.

**Boom Extension:** Incorporates a single double-acting hydraulic extension cylinder, attached to the largest boom section, with a proportional cable extension system driving the outermost section.

**Hoses:** All high pressure hoses are wire braid reinforced with a minimum safety factor of 4 to 1.

**Cylinders:** All cylinders use microhoned cylinder tubing, chrome shafts, top grade packing and protective rod wipers. Cylinder-mounted holding valves provided on all load-holding cylinders.

**Hydraulic System:** Equipped with cable-shift PTO, three-section gear pump, SAE O-ring face seals on pressure lines, and a 10-micron return line filter. The control valve distributes all flow to hoist system, swing circuit, and other crane functions. System is open center type.

**Oil Tank Capacity:** 70 gallon mounted to truck frame on roadside.

**Cab Equipment:** PTO cable or switch with indicator lights installed in truck cab. U/L approved 5:BC dry chemical

fire extinguisher installed in truck cab.

**Operators Manual & Video:** Two CD copies and one hard copy of operation, maintenance, safety and parts manual provided with each unit. Operational and safety video provided at delivery.

**Installation:** Unit installed on chassis, painted, system and tank filled with oil, tested, inspected, and ready to operate.

**Standard Paint:** Paint turret and boom white, outriggers red, and bed and boxes black.

**Bumper:** Bureau of Motor Carrier Safety rear bumper.

**Weight:** Approximately 16,235 lbs. with 18' steel-floor bed less truck.

**Truck Chassis Required:** Approx. 156" C.A. RBM 1,463,000 in-lb. per rail, 13,000 lb. front axle and 33,000 lb. GVWR required. Trucks must have 12V electrical system with high capacity alternator, cab clearance stop/tail/backup lights, and I.D. lamps. Recommended GVWR is minimum for BoomTruck with flatbed only. Contact factory when additional equipment is to be added.

**Options:**

23' Fixed or 40' Telescopic Jib.

Radio Remote Controls.

1 or 2 Person Gravity Leveled Steel Basket.

Rotation Resistant Wire Rope.

Hydraulic Tool Circuits on Bed.

Much More...

Elliott Equipment Company reserves the right to change the specification of any unit at any time without prior notice. This brochure is only a statement of general specifications on the date of this publication. For more detailed info on specific Elliott trucks go to [www.elliotequip.com](http://www.elliotequip.com)



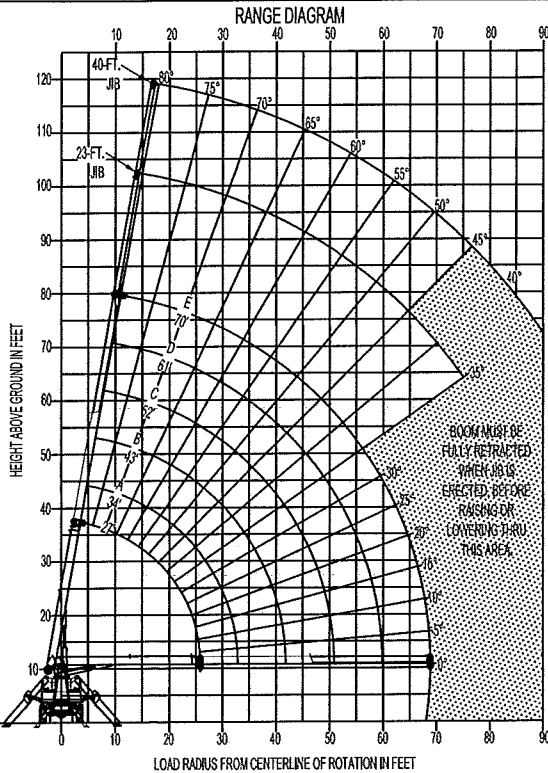
Elliott Equipment Company  
4427 South 76th Circle  
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Email: [sales@elliotequip.com](mailto:sales@elliotequip.com)

**Built for You.**  
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**MAXIMUM LIFTING AND RANGE CAPABILITIES**

**ELLIOTT MODEL 1800 70-FT. BOOM**  
EQUIPMENT COMPANY



| MAIN BOOM LOAD RATINGS |                   |   |       |       |       |       |       |       |       |       |      |      |
|------------------------|-------------------|---|-------|-------|-------|-------|-------|-------|-------|-------|------|------|
| LOAD RADIUS IN FEET    | LOADED BOOM ANGLE | LOAD RATINGS IN LBS. WITH OUTRIGGERS AND STABILIZERS EXTENDED |       |       |       |       |       |       |       |       |      |      |
|                        |                   | 27-FT   | 34-FT | 43-FT | 52-FT | 61-FT | 70-FT | 70-FT | 70-FT |       |      |      |
| 5                      | 79                | 36000   |       |       |       |       |       |       |       |       |      |      |
| 10                     | 68                | 21300   | 73    | 19500 | 77    | 16500 | 80    | 15000 |       |       |      |      |
| 15                     | 56                | 15200   | 64    | 14500 | 70    | 13500 | 75    | 12000 | 78    | 10500 | 60   | 9600 |
| 20                     | 41                | 11500   | 54    | 11100 | 63    | 10000 | 69    | 9000  | 73    | 8000  | 76   | 7300 |
| 25                     | 19                | 8600  | 43    | 8500  | 55    | 8000  | 62    | 7200  | 68    | 6500  | 71   | 5800 |
| 30                     |                   |   | 27    | 6750  | 47    | 6400  | 56    | 5900  | 63    | 5400  | 67   | 4900 |
| 35                     |                   |   |       | 38    | 5000  | 49    | 4700  | 58    | 4400  | 62    | 4200 |      |
| 40                     |                   |   |       | 20    | 4200  | 41    | 4100  | 50    | 3900  | 56    | 3700 |      |
| 45                     |                   |   |       |       |       | 30    | 3500  | 43    | 3400  | 51    | 3200 |      |
| 50                     |                   |   |       |       |       | 14    | 2800  | 36    | 2600  | 45    | 2700 |      |
| 55                     |                   |   |       |       |       |       |       | 26    | 2400  | 39    | 2300 |      |
| 60                     |                   |   |       |       |       |       |       |       |       | 32    | 1900 |      |
| 65                     |                   |   |       |       |       |       |       |       |       | 22    | 1550 |      |
| 0                      | 0                 | 6000  | 0     | 4200  | 0     | 3000  | 0     | 1900  | 0     | 1300  | 0    | 1000 |
| 340                    |                   |   | 270   |       | 210   |       | 170   |       | 150   |       | 130  |      |
| 530                    |                   |   | 420   |       | 330   |       | 270   |       | 230   |       | 200  |      |

| JIB LOAD RATINGS  |                        |                   |                         |                    |      |
|---|------------------------|-------------------|-------------------------|--------------------|------|
| LOAD RATINGS IN LBS. WITH OUTRIGGERS AND STABILIZERS EXTENDED |                        |                   |                         |                    |      |
| LOADED BOOM ANGLE   | 23-FT FIXED LENGTH JIB |                   | 23-41 FT EXTENDABLE JIB |                    |      |
|   | 23-FT JIB              | LOADED BOOM ANGLE | 23-FT JIB RETRACTED     | 48-FT JIB EXTENDED |      |
| 80  | 4600                   | 80                | 4500                    | 80                 | 2600 |
| 75  | 3700                   | 75                | 3600                    | 75                 | 2000 |
| 70  | 3000                   | 70                | 2900                    | 70                 | 1900 |
| 65  | 2400                   | 65                | 2300                    | 65                 | 1800 |
| 60  | 2000                   | 60                | 1900                    | 60                 | 1300 |
| 55  | 1600                   | 55                | 1500                    | 55                 | 900  |
| 50  | 1400                   | 50                | 1300                    | 50                 | 800  |
| 45  | 1100                   | 45                | 1000                    | 45                 | 600  |
| 40  | 900                    | 40                | 800                     |                    |      |
| 35  | 700                    | 35                | 600                     |                    |      |

**WARNING**

1. THE OPERATOR MUST READ AND UNDERSTAND ALL DECALS IN ADDITION TO THE OPERATION AND SAFETY MANUAL BEFORE OPERATING THIS CRANE.
2. POSITIONING OR OPERATION OF CRANE BEYOND AREAS SHOWN ON THIS CHART IS NOT INTENDED OR APPROVED EXCEPT WHERE SPECIFIED IN THE OPERATION AND SAFETY MANUAL.
3. LOADED BOOM ANGLES AT SPECIFIED BOOM LENGTHS GIVE ONLY AN APPROXIMATION OF THE OPERATING RADIUS. THE BOOM ANGLE BEFORE APPLYING A LOAD SHOULD BE GREATER TO ACCOUNT FOR DEFLECTION. DO NOT EXCEED THE OPERATING RADIUS FOR A BOOM LENGTH AND LOAD RATING.
4. THE JIB LOAD RATING CHART IS BASED ON THE LOADED BOOM ANGLES OF THE MAIN BOOM AND NOT THE LOAD RADIUS. DO NOT EXCEED JIB LOAD RATINGS AT REDUCED BOOM LENGTHS.
5. FOR BOOM ANGLES NOT SHOWN ON JIB LOAD RATING CHART, USE RATING OF NEXT LOWER BOOM ANGLE.
6. FOR BOOM LENGTHS NOT SHOWN, USE THE RATING OF NEXT LONGER BOOM LENGTH. FOR RADI NOT SHOWN, USE RATING OF NEXT LONGER RADIUS.
7. CRANE LOAD RATINGS ON OUTRIGGERS AND STABILIZERS ARE BASED ON FREELY SUSPENDED LOADS WITH THE MACHINE LEVELED AND STANDING ON A FIRM UNIFORM SUPPORTING SURFACE. NO ATTEMPT SHALL BE MADE TO MOVE A LOAD HORIZONTALLY ON THE GROUND IN ANY DIRECTION.
8. PRACTICAL WORKING LOADS DEPEND ON THE SUPPORTING SURFACE, WIND, AND OTHER FACTORS AFFECTING STABILITY SUCH AS HAZARDOUS SURROUNDINGS, EXPERIENCE OF PERSONNEL, AND PROPER HANDLING, ALL OF WHICH MUST BE TAKEN INTO ACCOUNT BY THE OPERATOR.
9. THE MAXIMUM LOAD WHICH MAY BE TELESCOPED IS LIMITED BY HYDRAULIC PRESSURE, BOOM ANGLE, AND BOOM LUBRICATION. IT IS SAFE TO ATTEMPT TO TELESCOPE ANY LOAD WITHIN THE LIMITS OF THE LOAD RATING CHART. BOOM MUST BE FULLY RETRACTED AGAINST THE BOOM STOPS AT ALL TIMES WHEN LIFTING MINIMUM BOOM LENGTH CAPACITY LOADS.
10. IF ANY OPERATIONAL AID SUCH AS ANTI-2-BLOCK, OVERLOAD SYSTEM OR LEVELING INDICATOR IS MALFUNCTIONING OR INOPERATIVE, DISCONTINUE USE IMMEDIATELY AND CONTACT A QUALIFIED REPAIR FACILITY.
11. CAPACITY INDICATING LIMITING DEVICES SHOULD NOT BE RELIED UPON TO REPLACE THE USE OF CAPACITY CHARTS AND PROPER OPERATING PROCEDURES.

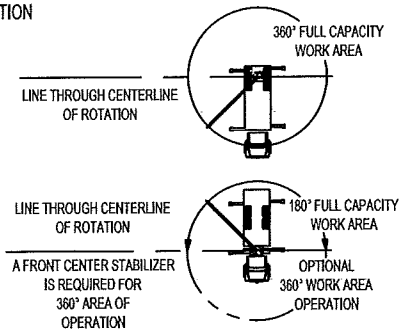
**INFORMATION**

1. DEDUCTIONS MUST BE MADE FROM RATED CAPACITIES FOR STOWED JIB, OPTIONAL ATTACHMENTS, HOOKS, LOAD BLOCKS (SEE DEDUCTION CHART), WEIGHTS OF SLINGS AND ALL OTHER LOAD HANDLING DEVICES SHALL BE CONSIDERED A PART OF THE LOAD.
2. CRANE LOAD RATINGS WITH OUTRIGGERS ARE BASED ON OUTRIGGERS AND STABILIZERS EXTENDED AND SET WITH ALL LOAD REMOVED FROM CARRIER WHEELS.
3. LOAD RATINGS ABOVE THE BOLD LINE ARE STRUCTURALLY LIMITED AND DO NOT EXCEED 85% OF TIPPING.

**DEFINITIONS**

1. OPERATING RADIUS IS THE HORIZONTAL DISTANCE FROM THE CENTER OF ROTATION TO THE CENTER OF THE VERTICAL HOIST LINE OR TACKLE WITH A LOAD APPLIED.
2. LOADED BOOM ANGLES, SHOWN ABOVE, ARE THE INCLUDED ANGLE BETWEEN THE HORIZONTAL AND LONGITUDINAL AXIS OF THE BOOM BASE AFTER LIFTING RATED LOAD AT THE RATED RADIUS.

**AREA OF OPERATION**



CRANE MEETS ASME B30.5 REQUIREMENTS AT TIME OF MANUFACTURE

DO NOT PAINT OVER ANY LABELS 1080270 07/1907

**ALLOWABLE LINE PULL**

| 1-PART LINE | 2-PART LINE | 3-PART LINE | 4-PART LINE |
|-------------|-------------|-------------|-------------|
|             |             |             |             |
| 9600-LBS.   | 19200-LBS.  | 28800-LBS.  | 36000-LBS.  |
| 9060-LBS.   | 18120-LBS.  | 27180-LBS.  | 36000-LBS.  |
| 7680-LBS.   | 15360-LBS.  | 23040-LBS.  | 30720-LBS.  |

**NOTICE**

- DO NOT DEADHEAD LINE BLOCK AGAINST BOOM TIP WHEN EXTENDING BOOM
- KEEP AT LEAST 5 WRAPS OF LOADLINE ON THE WINCH DRUM AT ALL TIMES
- USE ONLY 9/16" DIAMETER WIRE ROPE AS SPECIFIED BELOW, WITH THE PROPER BREAKING STRENGTHS LISTED
- ANTI-TWO-BLOCK SYSTEM MUST BE IN GOOD OPERATING CONDITION BEFORE OPERATING CRANE. SEE OPERATION & SAFETY MANUAL
- MAXIMUM CAPACITY WITH "BURST OF SPEED" IS 600 LBS.

|                                  |                               |
|----------------------------------|-------------------------------|
| 9/16" - 6 x 37 HRHC (3.51 S.F.)  | 33,600-LBS. BREAKING STRENGTH |
| 9/16" - SPN RESISTANT (5.1 S.F.) | 45,300-LBS. BREAKING STRENGTH |
| 9/16" - SPN RESISTANT (6.1 S.F.) | 38,400-LBS. BREAKING STRENGTH |

DEDUCTIONS FROM RATED LOADS FOR HANDLING DEVICES SUPPLIED BY ELLIOTT EQUIPMENT CO.  
 OVERHAUL BALL ----- SEE OVERHAUL BALL MFG. NAMEPLATE  
 LOAD BLOCK ----- SEE BLOCK MFG. NAMEPLATE  
 SWING AROUND JIB ----- SEE LOAD RATING CHART

**WARNING:**

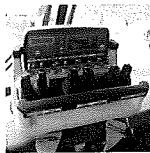
LIFTING OFF THE MAIN BOOM WHILE JIB IS ERECTED IS NOT INTENDED OR APPROVED

**CHASSIS SPECIFICATIONS**

|                                | 1870CP BoomTruck     |
|--------------------------------|----------------------|
| Wheelbase (WB)                 | 224" / 569 cm        |
| Cab to Axle (CA)               | 156" / 396 cm        |
| Cab to End of Frame (EOF)      | 247" / 627 cm        |
| Frame Section Modulus          | 13.3 in3-110,000 psi |
| Front Axle Gross Weight Rating | 13,000 lb / 5896 kg  |
| Rear Axle Gross Weight Rating  | 20,000 lb / 9072 kg  |
| Integral Front Frame Rails     | Not Applicable       |

Chassis data is minimum general requirements-not for engineering.  
 Actual dimensions and truck data will depend on truck selection and axle configuration.  
 \*Minimum chassis weight is required to meet 85% stability requirements.

**OPTIONS**



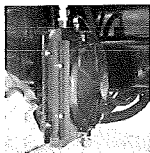
**Radio Remote Control**

Interference protected radio remotes let you get closer to your work and have full control over your machine.



**Pin-On Jib Attachments**

One piece & two piece telescoping or fixed jibs that stow on the side of the boom for easy placement while on the worksite.



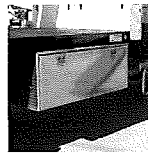
**Hydraulic Oil Cooler**

Add a bed-mounted hydraulic oil cooler and fan to assist with high duty cycle job applications. A "must" for hot weather environments



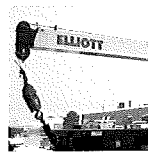
**Custom Paint**

Choose from a wide list of high quality paint applications including Elliott's standard white or red paint, metallic paints, or multiple colors.



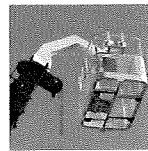
**Tool Boxes**

Optional tool boxes and bed storage can accommodate any storage need for tools, work materials and more.



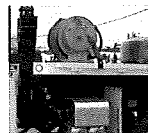
**Hook Block for Multi-Part Line**

Elliott can install a 2-3 part hook block or a 4 part-hook block to improve lifting capabilities. The block can be stored at the rear of the bed.



**Gravity Leveled Basket**

Elliott's pin-on work platform pins onto the boom for easy installation and removal. Gravity leveling and mechanical rotation makes it a great accessory for any worksite.



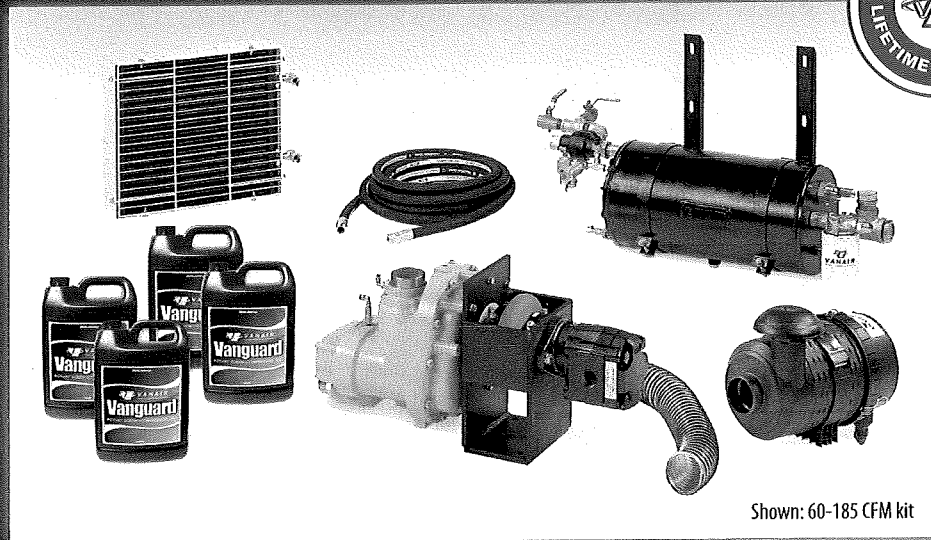
**Body Mounted Hose Reels and Circuits**

Let us work with you to customize your tool compatability by adding hose reels or hydraulic circuits to the crane bed.



: : underdeck 60 - 185 CFM hydraulic driven air compressor

# HYDRAULIC DRIVEN 60 - 185 CFM UNDERDECK AIR COMPRESSOR



Shown: 60-185 CFM kit

## All the Advantages of an Underdeck System

Lightweight, space saving and cost effective, Vanair's hydraulically-driven underdeck air compressor systems are ideal for vehicles that already have a built-in hydraulic system.

### SPECIFICATIONS

| Capacity (CFM) | Air (psi) | gpm         | Hydraulic Pressure | Compressor Input | Compressor Oil Capacity | Mounted Weight (dry) |
|----------------|-----------|-------------|--------------------|------------------|-------------------------|----------------------|
| 60             | 100 - 150 | 17.0        | 2300 - 2800        | 1030 rpm         | 2.5 gal.                | 428 lbs.             |
| 85             | 100 - 150 | 23.5        | 2300 - 2700        | 1460 rpm         | 2.5 gal.                | 428 lbs.             |
| 125            | 100 - 150 | 27.6 - 29.2 | 2100 - 2620        | 1330 rpm         | 3.5 gal.                | 453 lbs.             |
| 160            | 100 - 150 | 36.8 - 38.3 | 2200 - 2700        | 1675 rpm         | 3.5 gal.                | 453 lbs.             |
| 185*           | 100 - 150 | 42.2 - 44.2 | 2400 - 2830        | 1920 rpm         | 3.5 gal.                | 453-491 lbs.         |

*Ratings above are approximate and are based on 120° F hydraulic fluid temperature. Add 400 psi minimum to hydraulic requirements for hydraulic system continuous pressure ratings. Machine hydraulic relief valve is set at 3200 psi. Consult Vanair for specific details.*

\*150 psi kit includes additional cooler. Consult factory for over 185 CFM.



**VANAIR**  
MOBILE POWER SOLUTIONS™

800.526.8817 | vanair.com

## SPECIAL FEATURES

### Air Compressor

- Lifetime warranty on air end
- 100,000 hours design life
- 100% Duty cycle
- Greater efficiency for lower engine RPM's
- Integrated inlet valve and rear discharge provides higher ground clearance
- Made in USA

### Discharge System

- Intank coalescer system provides greater surface area for increased oil separation
- Coalescer is protected from the elements, eliminating the possibility of rust or damage from external source
- Exclusive anti-static coalescing element for greater safety
- Uses only 3.0 gallons of oil vs. 5.5 gallons compared to competitor's tanks
- Less prescribed maintenance and waste oil recovery costs
- Less than 2 ppm oil carryover
- Pressure rated to 250 psig
- 5 year warranty or 3000 hours for replacement on coalescer element only
- Smaller tank design makes installation easier
- Streamlined fittings on the end of tank
- ASME and CRN certified

### Instrumentation

- Hour meter
- Pressure gauge
- Temperature gauge

### Cooler(s)

- Capable of cooling up to 185 CFM at 100 psi
- Air to oil heat exchanger driven by 12V fan

### Air Filter

- ABS plastic housing
- Dual stage

### Hydraulic Motor

- Geared

### Vanguard Rotary Screw Compressor Oil

- Full synthetic oil exclusively created for rotary screw compressors
- Flash point: 257° C/495° F
- Pour Point: -45° C / -50° F
- Outstanding thermal and oxidative stability
- Reduced oil disposal due to extended drain intervals

### Safety Equipment

- High-temperature shutdown
- High-pressure shutdown
- Air pressure-relief safety valve
- Minimum pressure valve
- Automatic blowdown on shutdown
- Oil fill plug safety relief

### OPTIONS/ACCESSORIES

- External, spin-on air-oil separating element
- Dual pressure
- Service/control line moisture separators
- Filter/lubricator/regulator (FLR)
- Air hoses, hose reels, and fittings
- OSHA safety valve (velocity fuse)
- Sullair® air tools
- Tool oiler/lubricator
- Post drivers
- Biodegradable Vanguard Green synthetic oil

### DIMENSIONS – (without fittings)

#### 60, 85, 125, 160 and 185 CFM Model

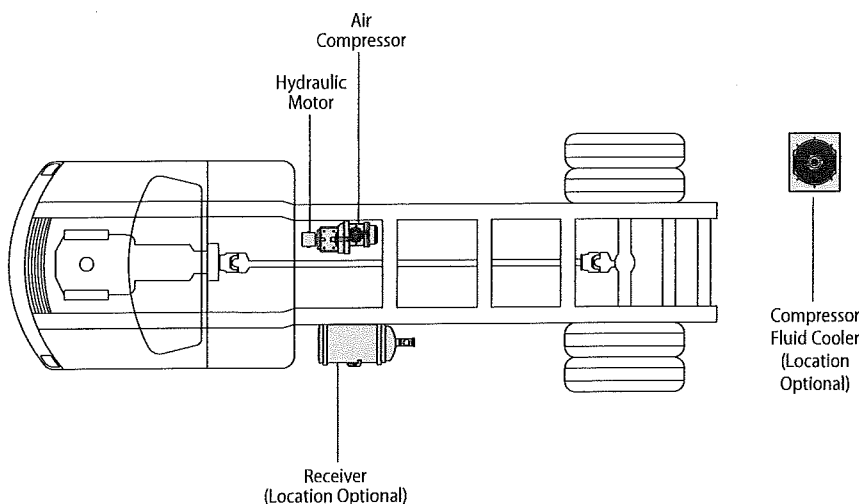
Compressor (in.) – 11.9 W x 18 L x 13 H

Air/fluid receiver (in.) – 10.25 D x 21.5 L

Remote air to oil cooler (in.) – 26.5 W x 19.25 H x 9.25 D

Hydraulic coupling including

motor (in.) – 12.25 W x 30.25 L x 15.5 H



### HYDRAULIC SYSTEM REQUIREMENTS

Vanair highly recommends consulting a hydraulic supply expert for specifying the correct hydraulic pump size and type, oil reservoir size, hydraulic cooler, hydraulic pressure relief, and other hydraulic supply components for your application. Please take into consideration the following:

- The hydraulic flow and pressure requirements of the air compressor
- Keep in mind that when the compressor is running there is a continuous hydraulic load
- The duty cycle and ambient operating temperatures
- Other hydraulic equipment which may share the same hydraulic supply system (Vanair recommends a dedicated pump and hydraulic circuit)



**VANAIR®**  
MOBILE POWER SOLUTIONS™

Specifications subject to change without notice.  
HYDRAULICCOMPONENT-072215

*Product improvement is a continuing goal. Design and specifications are subject to change without notice or obligations.*

("SAMPLE")  
**PURCHASE AGREEMENT**  
**(NRS 332)**

**BOOM TRUCK REPLACEMENT**  
**TMWA Bid No.: 2017-002**

THIS EQUIPMENT/PRODUCT PURCHASE AGREEMENT (also herein referred to as "Contract"), made and entered into this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, by and between the Truckee Meadows Water Authority hereinafter called "TMWA" and \_\_\_\_\_, hereinafter called the "Supplier".

WITNESSETH, that TMWA and the Supplier, for the consideration hereinafter named, agree as follows:

**Article 1      Scope of Work**

The Supplier shall provide equipment/product for the Boom Truck Replacement ("Boom Truck") including Truck Cab and Chassis with crane and all accessories Installed and Complete as provided in the specifications ("Boom Truck") and provide all of the equipment and services described in the specification prepared by TMWA (Exhibit "A" attached hereto) and as amended by specific addenda, and shall do everything required by this Agreement in furnishing the Boom Truck.

Delivery of the Boom Truck shall be to TMWA's Corporate Boulevard Yard located at 1355 Capital Boulevard, Reno, Nevada.

**Article 2      Contract Time, Guaranteed Delivery Date, and Liquidated Damages**

Supplier agrees to deliver the Boom Truck, in a good and satisfactory condition, pursuant to the Specification to the TMWA Corporate Boulevard Yard site located at 1355 Capital Avenue, Reno, Nevada no later than **One Hundred Fifty (150) calendar days** following the issuance of the Notice to Proceed, unless otherwise agreed to between the parties, which is the Guaranteed Delivery Time as defined in the Bid Package.

TMWA and Supplier recognize that time is of the essence of this Agreement.

**Article 3      The Contract Sum**

TMWA shall pay Supplier, as full compensation for furnishing the Boom Truck, services, and other specified items in accordance with the Contract Documents and to the satisfaction of TMWA, the lump sum amount of: \_\_\_\_\_  
(\$\_\_\_\_\_) **Dollars.**

#### **Article 4 Payment**

Payment for the Boom Truck item described on the Bid Schedule will be made within 30 days of the later of: i) inspection by TMWA and acceptance of delivery of such Boom Truck; or ii) receipt of an invoice for the Boom Truck item.

#### **Article 5 Acceptance and Final Payment**

Testing and acceptance of the Boom Truck shall be as specified in the Specifications, Bid and Contract Documents. Acceptance of final payment by the Supplier shall constitute a full waiver and release by the Supplier of all claims against TMWA arising out of or relating to this Agreement.

#### **Article 6 The Contract Documents**

The following is an enumeration of the Contract Documents that are fully a part of the Contract as if herein repeated:

1. Bid Documents and Bid Form
2. Agreement
3. Specifications
4. Addenda

#### **Article 7 Warranty**

Supplier warrants that the Boom Truck furnished under the Contract will be of good quality and new and that the Boom Truck will be free from defects and will conform with the requirements of the Specifications, Bid and Contract Documents.

#### **Article 8 Indemnification/Hold Harmless**

Notwithstanding any provision to the contrary in the Contract Documents, TMWA waives any requirement that the Supplier on this bid provide insurance (other than property insurance insuring risk of loss until delivery and acceptance by TMWA) in connection with the delivery of the Boom Truck.

#### **Article 9 Performance Bond (*Not Required*)**

#### **Article 10 Termination**

In addition to other provisions of this Agreement, TMWA may terminate the Agreement in accordance with the procedures specified in the Bid Documents, Bid Form, Specifications and Contract upon giving Supplier seven day notice in writing.

**Article 11 Governing Law**

This Agreement shall be governed by, interpreted under and construed and enforced in accordance with the laws of the State of Nevada, with venue in the County of Washoe. Each of the parties hereto acknowledge and agree that the laws of the State of Nevada and the selection of venue in the County of Washoe were freely chosen by the parties hereto.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement the day and year first above written.

TRUCKEE MEADOWS WATER AUTHORITY

Dated: \_\_\_\_\_, 20\_\_ By: \_\_\_\_\_  
General Manager

ATTEST: \_\_\_\_\_  
TMWA Clerk

Dated: \_\_\_\_\_, 20\_\_ Supplier: \_\_\_\_\_

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

STATE OF NEVADA        )  
                                  ) ss:  
COUNTY OF WASHOE    )

On this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_, personally appeared before me, a Notary Public, \_\_\_\_\_, who acknowledged to me that he/she executed the foregoing Agreement for Equipment/Product as the authorized representative of the Supplier.

\_\_\_\_\_  
Notary Public

ATTACHMENT "A"  
Part A – Cab and Chassis  
Part B – Crane and Accessories  
Part C – Supporting Documents

## 18 ton Boom Truck

The specification provided is based on an International cab and chassis, the Truckee Meadows Water Authority will consider other models as long as they can be compared as equal to or better.

### Cab and Chassis Specification

Base Chassis, Model 7600 SBA 6X4 2010 with 230.00 Wheelbase, 162.90 CA, and 100.00 Axle to Frame.

FRAME RAILS Heat Treated Alloy Steel (120,000 PSI Yield); 10.866" x 3.622" x 0.433" (276.0mm x 92.0mm x 11.1mm); 456.0" (11582mm)

Maximum OAL

BUMPER, FRONT Steel, Swept Back

Includes

: BUMPER, FRONT Powder Coated Gray (Argent) Color

WHEELBASE RANGE 183" (465cm) Through and Including 248" (630cm)

AXLE, FRONT NON-DRIVING {Meritor MFS-18-133A} Wide Track, I-Beam Type, 18,000-lb Capacity

Notes

: The following features should be considered when calculating Front GAWR: Front Axles; Front

Suspension; Brake System; Brakes, Front

Air Cam; Wheels; Tires.

SUSPENSION, FRONT, SPRING Multileaf, Shackle Type; 18,000-lb Capacity; Less Shock Absorbers

Includes

: SPRING PINS Rubber Bushings, Maintenance-Free

Notes

: The following features should be considered when calculating Front GAWR: Front Axles; Front

Suspension; Brake System; Brakes, Front

Air Cam; Wheels; Tires.

BRAKE SYSTEM, AIR Dual System for Straight Truck Applications

Includes

: BRAKE LINES Color and Size Coded Nylon

: DRAIN VALVE Twist-Type

: GAUGE, AIR PRESSURE (2) Air 1 and Air 2 Gauges; Located in Instrument Cluster

: PARKING BRAKE CONTROL Yellow Knob, Located on Instrument Panel

: PARKING BRAKE VALVE For Truck

: QUICK RELEASE VALVE On Rear Axle for Spring Brake Release: 1 for 4x2, 2 for 6x4

: SLACK ADJUSTERS, FRONT Automatic

: SLACK ADJUSTERS, REAR Automatic

: SPRING BRAKE MODULATOR VALVE R-7 for 4x2, SR-7 with relay valve for 6x4

#### Notes

: Rear Axle is Limited to 46,000-lb GAWR with Code 04091 BRAKE SYSTEM, AIR and Standard Rear Air Cam Brakes Regardless of

Axle /Suspension Ordered.

BRAKES, FRONT, AIR CAM 16.5" x 6", Includes 24 SqIn Long Stroke Brake Chambers

#### Notes

: The following features should be considered when calculating Front GAWR: Front Axles; Front Suspension; Brake System; Brakes, Front

Air Cam; Wheels; Tires.

TRAILER CONNECTIONS Four-Wheel, With Hand Control Valve and Tractor Protection Valve, for Straight Truck

TRAILER HOSES Glad Hands for Four-Wheel Connections, Temporarily Mounted with Bulkhead Connectors on End of Frame, Includes

Additional Hosing and Dummy Glad Hands

DRAIN VALVE {Berg} Manual; With Pull Chain, for Air Tank

AIR BRAKE ABS {Bendix AntiLock Brake System} Full Vehicle Wheel Control System (4-Channel)

AIR DRYER {Meritor Wabco System Saver 1200} with Heater

#### Includes

: AIR DRYER LOCATION Inside Left Rail, Back of Cab



BRAKE CHAMBERS, REAR AXLE {Bendix EverSure} 30/30 Spring Brake

BRAKE CHAMBERS, FRONT AXLE {Bendix} 24 SqIn

BRAKES, REAR, AIR CAM S-Cam; 16.5" x 7.0"; Includes 30/30 Sq.In. Long Stroke Brake Chamber and Spring Actuated Parking Brake

Notes

: The following features should be considered when calculating Rear GAWR: Rear Axles; Rear

Suspension; Brake System; Brakes, Rear

Air Cam; Brake Shoes, Rear; Special Rating, GAWR; Wheels; Tires.

AIR COMPRESSOR {Bendix BA-921 Head Unload} 15.9 CFM Capacity, Single Cylinder

AIR TANK LOCATION (2) : One Mounted Under Each Frame Rail, Front of Rear Suspension, Parallel to Rail

STEERING COLUMN Stationary

STEERING WHEEL 2-Spoke, 18" Dia., Black

STEERING GEAR (2) {Sheppard M100/M80} Dual Power

EXHAUST SYSTEM Switchback Horizontal Aftertreatment Device, Frame Mounted Right Side Under Cab; Includes Single Short

Horizontal Tail Pipe, Frame Mounted Right Side Back of Cab

ELECTRICAL SYSTEM 12-Volt, Standard Equipment

Includes

: DATA LINK CONNECTOR For Vehicle Programming and Diagnostics In Cab

: FUSES, ELECTRICAL SAE Blade-Type

: HAZARD SWITCH Push On/Push Off, Located on Top of Steering Column Cover

: HEADLIGHT DIMMER SWITCH Integral with Turn Signal Lever

: HEADLIGHTS (2) Sealed Beam, Round, with Chrome Plated Bezels

: JUMP START STUD Located on Positive Terminal of Outermost Battery

: PARKING LIGHT Integral with Front Turn Signal and Rear Tail Light

: STARTER SWITCH Electric, Key Operated

: STOP, TURN, TAIL & B/U LIGHTS Dual, Rear, Combination with Reflector

: TURN SIGNAL SWITCH Self-Cancelling for Trucks, Manual Cancelling for Tractors, with Lane Change Feature

: WINDSHIELD WIPER SWITCH 2-Speed with Wash and Intermittent Feature (5 Pre-Set Delays), Integral with Turn Signal Lever

: WINDSHIELD WIPERS Single Motor, Electric, Cowl Mounted

: WIRING, CHASSIS Color Coded and Continuously Numbered

JUMP START STUD (2) Remote Mounted

ALTERNATOR {Leece-Neville AVI160P2013} Brush Type; 12 Volt 160 Amp. Capacity, Pad Mount

BODY BUILDER WIRING To Rear of Frame, With Stop, Tail, Turn, and Marker Lights Circuits, Ignition Controlled Auxiliary Feed and

Ground, Less Trailer Socket

BATTERY SYSTEM {Deka/EAST PENN 9A31} Maintenance-Free (3) AGM 12-Volt 2775CCA Total

RADIO AM/FM/WB/Clock/Bluetooth/USB Input/3MM Auxiliary Input, MP3, Apple Device Play & Control, Bluetooth for Phone & Music, with

Multiple Speakers

HORN, ELECTRIC Disc Style

CLEARANCE/MARKER LIGHTS (5) {Truck Lite} Amber LED Lights, Flush Mounted on Cab or Sunshade

STARTING MOTOR {Mitsubishi Electric Automotive America 105P} 12-Volt, with Soft-Start

BATTERY BOX Steel, Mounted Inside the Cab, Under Passenger Seat, 3 Battery Capacity

TURN SIGNALS, FRONT Includes LED Side Turn Lights Mounted on Fender

FENDER EXTENSIONS Omit

INSULATION, UNDER HOOD for Sound Abatement

GRILLE Stationary, Chrome

INSULATION, SPLASH PANELS for Sound Abatement

FRONT END Tilting, Fiberglass, With Three Piece Construction Includes Long Hood

PAINT SCHEMATIC, PT-1 Single Color, Design 100

Includes

: PAINT SCHEMATIC ID LETTERS "GS"

PAINT TYPE Base Coat/Clear Coat, 1-2 Tone

VEHICLE REGISTRATION IDENTITY ID for the State of California

CLUTCH Omit Item (Clutch & Control)

ANTI-FREEZE Red, Extended Life Coolant; To -40 Degrees F/ -40 Degrees C, Freeze Protection, for N13

Engines

ENGINE, DIESEL {Navistar N13} EPA 2010, SCR, 430 HP @ 1700 RPM, 1550 lb-ft Torque @ 1000

RPM, 2100 RPM Governed Speed,

430 Peak HP (Max)

FAN DRIVE {Horton Drivemaster} Direct Drive Type, Two Speed With Residual Torque Device for

Disengaged Fan Speed

Includes

: FAN Nylon

FEDERAL EMISSIONS {Navistar N13} EPA, OBD and GHG Certified for Calendar Year 2016

AIR CLEANER Single Element

Includes

: AIR CLEANER with Vacuator

: GAUGE, AIR CLEANER RESTRICTION Air Cleaner Mounted

ENGINE CONTROL, REMOTE MOUNTED for PTO with N13 Engines

COLD STARTING EQUIPMENT Automatic; With Engine ECM Control

EMISSION COMPLIANCE Low NOx Idle Engine, Complies with California Clean Air Regulations;

Includes "Certified Clean Idle" Decal on

Hood

RADIATOR Aluminum; Welded, Front to Back CrossFlow System, 1593 SqIn, 1012 SqIn CAC, 1543 SqIn

3 Core LTR

TRANSMISSION, AUTOMATIC {Allison 4000\_RDS\_P} 5th Generation Controls; Close Ratio, 5-Speed,

With Overdrive; On/Off Hwy;

Includes Oil Level Sensor, With PTO Provision, Less Retarder

OIL COOLER, AUTO TRANSMISSION {Modine} Water to Oil Type

TRANSMISSION SHIFT CONTROL {Allison} Push-Button Type; for Allison 3000 & 4000 Series

Transmission

SHIFT CONTROL PARAMETERS {Allison} 3 Speed S1 Secondary Shift Schedule for 5 or 6 Speed

Allison Gen4/Gen 5 3000 & 4000

Series Transmissions

TRANSMISSION OIL Synthetic; 63 thru 76 Pints

ALLISON SPARE INPUT/OUTPUT for Rugged Duty Series (RDS); General Purpose Trucks,

Construction

TRANSMISSION TCM LOCATION Located Inside Cab

PTO LOCATION Left Side of Transmission

AXLE, REAR, TANDEM {Meritor MT-40-14X-4DFR} Single Reduction, 0.433"(11mm) Wall Housing

Thickness, 40,000-lb Capacity, R

Wheel Ends . Gear Ratio: 3.70

Includes

: POWER DIVIDER LOCK Electric over Air Operated, Cab Control with Indicator Light

: REAR AXLE DRAIN PLUG (2) Magnetic, For Tandem Rear Axle

Notes

: The following features should be considered when calculating Rear GAWR: Rear Axles; Rear

Suspension; Brake System; Brakes, Rear

Air Cam; Brake Shoes, Rear; Special Rating, GAWR; Wheels; Tires.

SUSPENSION, REAR, AIR, TANDEM {Hendrickson HAS-402-55} 55" Axle Spacing; 40,000-lb Capacity,

9.5" Ride Height, With Shock

Absorbers Mounted Inboard

Includes

: CROSSMEMBER, SUSPENSION 3-Piece

Notes

: The following features should be considered when calculating Rear GAWR: Rear Axles; Rear

Suspension; Brake System; Brakes, Rear

Air Cam; Brake Shoes, Rear; Special Rating, GAWR; Wheels; Tires.

: When Specifying Axle Ratio, Check Performance Guidelines and TCAPE for Startability and Performance

DEF TANK 9.5 U.S. Gal. 36.0L Capacity, Frame Mounted Outside Left Rail, Under Cab

FUEL/WATER SEPARATOR {Racor} Fuel Pre-Filter and Filter Base, Includes Water-In-Fuel Sensor

LOCATION FUEL/WATER SEPARATOR or Fuel Filter, Mounted Inside Left Rail, Back of Cab

FUEL TANK Top Draw; D-Style, Non-Polished Aluminum, 16" Tank Depth, 50 U.S. Gal., 189 L Capacity, with Quick Connect Outlet,

Mounted Left Side, Under Cab

FUEL COOLER Less Thermostat; Mounted in Front of Cooling Module

CAB Conventional

Includes

: ARM REST (2) Molded Plastic; One Each Door

: COAT HOOK, CAB Located on Rear Wall, Centered Above Rear Window

: CUP HOLDERS Two Cup Holders, Located in Lower Center of Instrument Panel

: DOME LIGHT, CAB Rectangular, Door Activated and Push On-Off at Light Lens, Timed Theater

Dimming, Integral to Console, Center

Mounted

: GLASS, ALL WINDOWS Tinted

: GRAB HANDLE, CAB INTERIOR (1) "A" Pillar Mounted, Passenger Side

: GRAB HANDLE, CAB INTERIOR (2) Front of "B" Pillar Mounted, One Each Side

: INTERIOR SHEET METAL Upper Door (Above Window Ledge) Painted Exterior Color

: STEP (4) Two Steps Per Door

GAUGE CLUSTER English With English Electronic Speedometer

Includes

: GAUGE CLUSTER (6) Engine Oil Pressure (Electronic), Water Temperature (Electronic), Fuel

(Electronic), Tachometer (Electronic),

Voltmeter, Washer Fluid Level

: ODOMETER DISPLAY, Miles, Trip Miles, Engine Hours, Trip Hours, Fault Code Readout

: WARNING SYSTEM Low Fuel, Low Oil Pressure, High Engine Coolant Temp, and Low Battery Voltage  
(Visual and Audible)

IP CLUSTER DISPLAY On Board Diagnostics Display of Fault Codes in Gauge Cluster

GAUGE, DEF FLUID LEVEL

SEAT, DRIVER {National 2000} Air Suspension, High Back With Integral Headrest, Vinyl, Isolator, 1

Chamber Lumbar, With 2 Position

Front Cushion Adjust, -3 to +14 Degree Angle Back Adjust

Includes

: SEAT BELT 3-Point, Lap and Shoulder Belt Type

MIRRORS (2) {Lang Mekra} Styled; Rectangular, Power Both Sides Flat Glass Only, Thermostatically  
Controlled Heated Heads, Clearance

Lights LED, Black Heads, Brackets and Arms, Breakaway Type, 7.09" x 15.75" & Integral Convex Both  
Sides, 102" Inside Spacing

SEAT, PASSENGER {Seats, Inc.} Non Suspension, High Back, Fixed Back, Integral Headrest, Vinyl, for  
use with Batteries in Cab

AIR CONDITIONER {Blend-Air} With Integral Heater & Defroster

Includes

: HEATER HOSES Premium

: HOSE CLAMPS, HEATER HOSE Mubea Constant Tension Clamps

: REFRIGERANT Hydrofluorocarbon HFC-134A

INSTRUMENT PANEL Center Section, Flat Panel

WINDOW, POWER (2) and Power Door Locks, Left and Right Doors, Includes Express Down Feature

HVAC FRESH AIR FILTER

STORAGE POCKET, DOOR Molded Plastic, Full Width; Mounted on Passenger Door

CAB INTERIOR TRIM Deluxe

Includes

: "A" PILLAR COVER Molded Plastic

: CAB INTERIOR TRIM PANELS Cloth Covered Molded Plastic, Full Height; All Exposed Interior Sheet Metal is Covered Except for the

Following: with a Two-Man Passenger Seat or with a Full Bench Seat the Back Panel is Completely Void of Covering

: CAB, INTERIOR TRIM, CLOSEOUT Lower Dash Closeout Panel; Molded Plastic; Under Instrument Panel Driver Side

: CONSOLE, OVERHEAD Molded Plastic; With Dual Storage Pockets with Retainer Nets and CB Radio Pocket

: DOOR TRIM PANELS Molded Plastic; Driver and Passenger Doors

: FLOOR COVERING Rubber, Black

: HEADLINER Soft Padded Cloth

: INSTRUMENT PANEL TRIM Molded Plastic with Black Center Section

: STORAGE POCKET, DOOR (1) Molded Plastic, Full-Length; Driver Door

: SUN VISOR (2) Padded Vinyl with Driver Side Toll Ticket Strap, Integral to Console

CAB REAR SUSPENSION Air Bag Type

WHEELS, FRONT {Maxion 90541} DISC; 22.5x8.25 Rims, Painted Steel, 2-Hand Hole, 10-Stud,

285.75mm BC, Hub-Piloted, Flanged

Nut, with Steel Hubs

WHEELS, REAR {Maxion 10038} DUAL DISC; 22.5x7.50 Rims, Painted Steel, 5-Hand Hole, 10-Stud,

285.75mm BC, Hub-Piloted, Flanged

Nut, with Steel Hubs

PAINT IDENTITY, FRONT WHEELS Disc Front Wheels; With Vendor Applied White Powder Coat Paint

PAINT IDENTITY, REAR WHEELS Disc Rear Wheels; With Vendor Applied White Powder Coat Paint

(8) TIRE, REAR 11R22.5 Load Range G HSR2 (CONTINENTAL), 498 rev/mile, 75 MPH, All-Position

(2) TIRE, FRONT 12R22.5 Load Range H HSR2 (CONTINENTAL), 483 rev/mile, 75 MPH, All-Position

### **Services Section:**

WARRANTY Standard for Paystar 5000, and Workstar 7500/7600, Effective with Vehicles Built January 2, 2015 or Later, CTS-2003Z

## **Crane and Accessories**

This specification below is based on the Elliott 1870CP and may be substituted with an equal or better unit, but must incorporate all options as listed below. If an equal or better unit is proposed, TMWA will review the proposal and reserves the right to determine at its discretion if the proposed substitution is equal or better.

All items below are to be installed to the manufactures specifications and must meet all DOT requirements including DOT certification.

All manufactures warranties to be assigned to TMWA such as the Life Time Structural Warranty for outrigger/stabilizers including any crane manufacturer and or accessory warranties.

A one year full parts and labor warranty is required for all parts and equipment not specifically covered by manufactures warranties and it will be the responsibility of the bidder to provide any warranty work for the first year. If the bidder is outside of the local area (30 mile radius from our facility) they will be required to make arrangements for warranty work to be performed locally or be responsible for transportation and return of the vehicle to/from their facility .

### **1870CP BASIC UNIT**

1 "Rear mount sub-frame for an 18' bed. A 27' retracted to 70' extended 3-section proportional boom. Sheave head shall be equipped with three sheaves. Winch features a burst of speed 12,800 lb. bare drum pull with 275' of 9'16" diameter 6x37 EIPS wire rope w/ 9,600 lb. single line pull. Internal boom hard-wire anti-two-block and Load Moment Indicator (LMI) hydraulic overload protection system. 360 degree continuous rotation. Hydraulic system includes 3-section gear pump (counterclockwise rotation), 70 gallon oil reservoir with sight and temperature gauge, 10 micron return line filter, and single gate valve on suction line. Single operator platform and seat mounted on roadside of turret with engine start/stop switch, system pressure gauge, cup holder, 12V power outlet, lifting capacity chart, range diagram chart, boom angle indicator, crane control levers, signal horn, variable speed foot throttle, and LMI display. Two sets of "Out-and-Down" over frame outriggers located at front and rear, each set having a 17'6" center to center extended span and equipped with removable ball socket aluminum pads. Independent outrigger controls with manual control valves located at rear of unit with bubble levels. Horizontal boom rest at front of flatbed with bulkhead. Downhaul weight with hook. Maximum tip height of 80' and maximum lifting capacity of 18 US tons at 5' radius. Includes mounting to truck chassis, electronic throttle interface, hydraulic fluid, rear bumper, mud flaps, backup alarm, safety triangle kit, tested and ready to operate. 360 degree stability. Unit certified to ANSI B30.5 for Mobile Cranes.



**BED**

1. 18' Wood Deck Bed With LED Lights (1,600 lbs.)
2. Tie-Down Rails on Both Sides of Bed

**JIB**

1. 23' Non-Extendable 1-Piece Jib (Side Stows on Boom)(550 lbs.)

**OUTRIGGER/STABILIZER**

1. Automatic Safety Rotation Lockout to Prevent Boom from Rotating to Side Where Outriggers Are Not Fully Extended Horizontally

**LIFTING OPTION**

1. 275' of 9/16" Diameter Spin Resistant Wire Rope, In Lieu of Standard Wire Rope
2. 15-Ton Single Sheave Hook Block for 2/3 Parts of Line. (240 lbs.)

**Man Basket**

1. 2 Person Gravity-Leveled Rotating Steel Basket (40" x 60")(600 lbs.)  
Basket Test Weight Kit (750 lbs. for 600 lb. capacity)

**REMOTE CONTROL**

1. 4-Function Radio Remote Controls

**PTO**

1. Hot Shift PTO for Automatic Transmission
2. Clockwise Rotation Pump (Required for Automatic Transmission)

**TOOL BOX**

1. 2 each 24" x 20" x 18" Steel Underbody Mounted
2. 2 each 36" x 20" x 18" Steel Underbody Mounted

## **ADDITIONAL REQUIRED OPTIONS**

1. Additional Control Valve for Second Hydraulic Option
2. 36" High Bulkhead at Front of Bed (150 lbs.)
3. 36" High Stake Racks on all three sides
4. Fold Down Bed Access Ladder With Grab Handles
5. Vertical Holder on Bed for 2/3 Part Line Hook Block
6. Van Air 125CFM, w/100PSI Underdeck Air Compressor hydraulically driven, and weight of 453lbs installed.
7. Coxreel model TSH-N-3100 or equal  
Hose reel must be equipped 100 feet of 3/8" ID air hose rated @ 500psi max  
A 500 psi rated ball valve located between compressor and hose reel plumbed to give operators ground access.  
Hose Reel to be mounted curb side rear behind outriggers pulling toward curb.
8. ICC Bumper w/Pintle Hitch Premier 580, D Rings mounted each side of Pintle, and 7 pin trailer plug. Pintle hitch to be 24" to center from ground. Glad Hands at the rear.
9. 97DBA Back Up Alarm
10. TV550 Pro Vision Back Up Camera /w 7" Monitor
11. 2 each LED Flood Light 7" Grote part #81704 mounted on each side of boom rest 12" above the cab roof.
12. 2 each Grote Short Bracket part # 00872
13. Grote Amber Beacon part# 78783 mounted S.S. front of bulkhead 6" above cab roof.
14. 4 each ECCO Strobes part # 9014A two to be mounted on each corner of the front bumper and two to be mounted each corner rear of the flat bed.
15. Additional Set of Operation, Maintenance, and Parts Manuals
16. Operation In-Service Training approximately 4 hours, training to be conducted at the TMWA general office building 1355 Capital Blvd Reno NV 89520

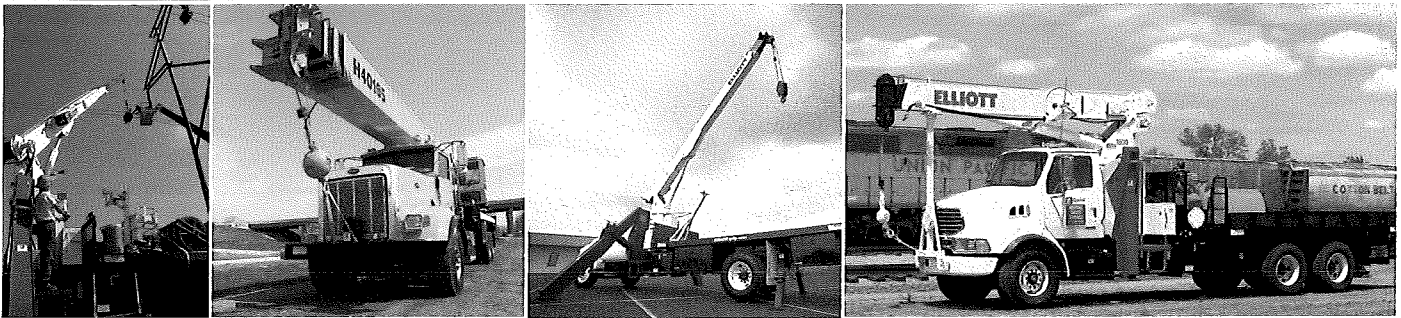
**PAINT**

Paint Crane Frame, Turret, Boom, Operator's Platform, and Control Console White. Subbase, Bed, and Reservoir to be Black. Outriggers, Boom Rest, and Bulkhead to be Red.

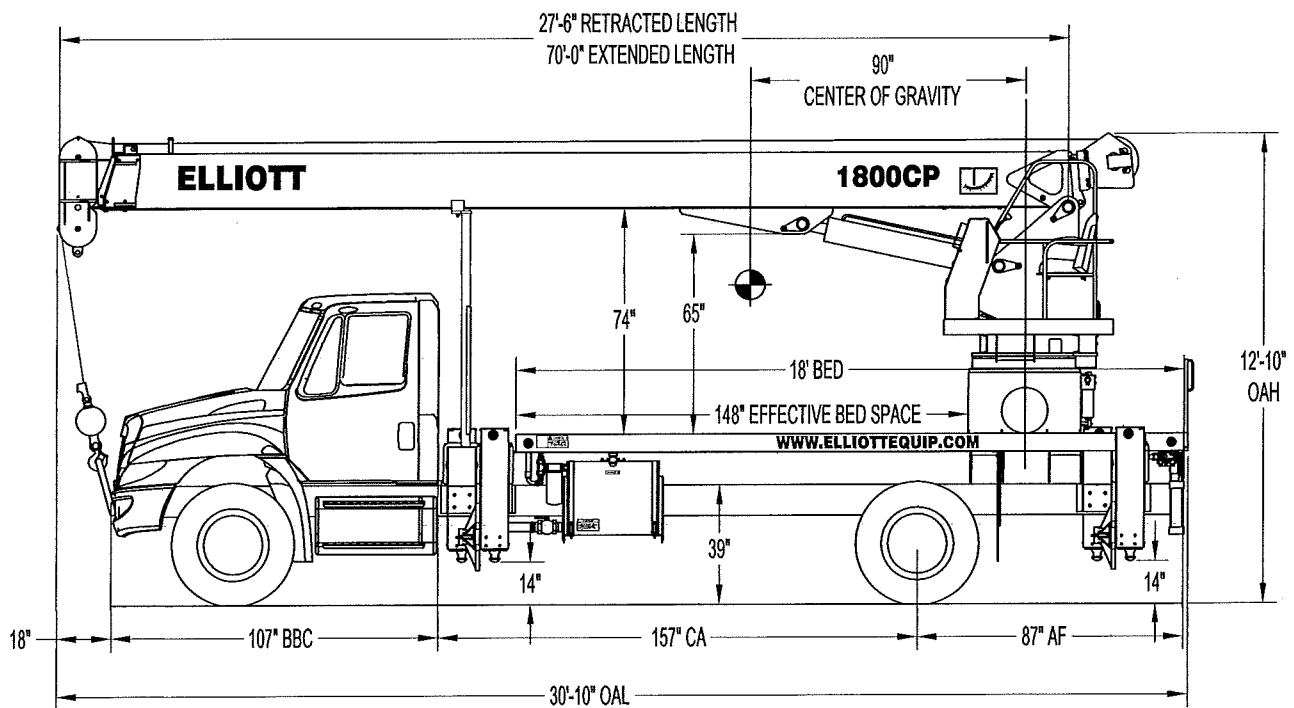
All painted steel must be zinc primered prior to painting.

# BoomTruck™ 1870CP

## TECHNICAL SPECIFICATIONS



1870CP SIDE VIEW DIAGRAM



- |                          |                         |                          |                      |
|--------------------------|-------------------------|--------------------------|----------------------|
| • Maximum Vertical Reach | 120'/36,6 m             | • Powered Boom Sections  | 3                    |
| • Working Area           | 360 Degrees             | • Overall Height         | 12'10"/3,9 m         |
| • Lifting Capacity       | 36,000 lbs/16 329 kg    | • Operator Controls      | Rotating Single Seat |
| • Boom Length            | 70'/21,3 m              | • Outrigger Type Front   | Out-Down             |
| • Crane Weight (Dry)     | 16,235 lbs/7364 kg      | • Outrigger Spread Front | 17'6"/5,3 m          |
| • Jib Lengths            | 23', 23-40'/7 m, 7-12 m | • Outrigger Type Rear    | Out-Down             |
| • Winch Bare Drum Pull   | 12,800 lbs/5806 kg      | • Outrigger Spread Rear  | 17'6"/5,3 m          |



Elliott Equipment Company  
4427 South 76th Circle  
Omaha, NE 68127

Phone: 402-592-4500  
Fax: 402-592-4553  
Email: sales@elliottequip.com

**Built for You.**  
www.elliottequip.com

## TECHNICAL SPECIFICATIONS

**Crane Capacity:** 36,000 lbs at five feet load radius.

**Maximum Tip Height:** 80' height (120' with optional 40' jib)

**Control Console:** Rotating single seat control station on street side of crane equipped with four single axis control levers for the main crane controls and two grip strut steps for access. Operator station includes adjustable operator seat, LMI display, bubble level gauge, engine start/stop switch, signal horn button, variable speed foot throttle, lifting capacity chart, range diagram chart, boom angle indicator, system pressure gauge, 12V DC power source, and cup holder. Outrigger controls mounted at rear under each corner of bed.

**Boom:** Three-section fully proportional, high strength steel plated rectangular tube sections. A maximum boom tip height of 80' mounted on a truck. The boom nose contains one floating upper sheave and two lower sheaves. Assembly includes heavy-duty cylinder fittings, pivot pins, and replaceable wear pads.

**Winch:** Mounted at the base of the boom for a long fleet angle and flat level spooling of cable. Winch is driven by a planetary reducer and powered by a hydraulic motor. Burst-of-speed winch provides increased line speed. The winch brake is spring applied, pressure release design. Supplied with 275' of 9/16" wire rope with a single line pull of 9,600 pounds, and a downhaul ball with swivel hook for single part line.

**Load Moment Indicator System:** System senses hoist cylinder pressures, boom length and boom angle with hydraulic function lockout. The display console is equipped with a bar graph showing crane utilization, boom angle or boom length, a mode select controls for main boom and jib operation, and an anti-two block with an audio/visual warning and shut-off functions to limit hook-boom point contact.

**Outriggers:** Two sets of out and down main outriggers with a 17'6" span, ball-socket removable aluminum outrigger pads and independent outrigger controls.

**Frame:** Full length, all welded rigid 4-plate design sub-frame. Sub-frame allows for bolt-on addition of 18' bed.

**Turret:** Reverse offset turret is one-piece weldment. Turret rotates on large diameter ball bearing.

**Rotation:** Hydraulic motor drives turret through double reduction planetary swing drive for continuous rotation. The swing drive system has a spring applied, pressure release brake.

**Lift:** One double-acting long stroke cylinder provides smooth and stable boom elevation. Holding valve prevents boom from falling in event of hose failure.

**Boom Extension:** Incorporates a single double-acting hydraulic extension cylinder, attached to the largest boom section, with a proportional cable extension system driving the outermost section.

**Hoses:** All high pressure hoses are wire braid reinforced with a minimum safety factor of 4 to 1.

**Cylinders:** All cylinders use microhoned cylinder tubing, chrome shafts, top grade packing and protective rod wipers. Cylinder-mounted holding valves provided on all load-holding cylinders.

**Hydraulic System:** Equipped with cable-shift PTO, three-section gear pump, SAE O-ring face seals on pressure lines, and a 10-micron return line filter. The control valve distributes all flow to hoist system, swing circuit, and other crane functions. System is open center type.

**Oil Tank Capacity:** 70 gallon mounted to truck frame on roadside.

**Cab Equipment:** PTO cable or switch with indicator lights installed in truck cab. U/L approved 5:BC dry chemical

fire extinguisher installed in truck cab.

**Operators Manual & Video:** Two CD copies and one hard copy of operation, maintenance, safety and parts manual provided with each unit. Operational and safety video provided at delivery.

**Installation:** Unit installed on chassis, painted, system and tank filled with oil, tested, inspected, and ready to operate.

**Standard Paint:** Paint turret and boom white, outriggers red, and bed and boxes black.

**Bumper:** Bureau of Motor Carrier Safety rear bumper.

**Weight:** Approximately 16,235 lbs. with 18' steel-floor bed less truck.

**Truck Chassis Required:** Approx. 156" C.A. RBM 1,463,000 in-lb. per rail, 13,000 lb. front axle and 33,000 lb. GVWR required. Trucks must have 12V electrical system with high capacity alternator, cab clearance stop/tail/backup lights, and I.D. lamps. Recommended GVWR is minimum for BoomTruck with flatbed only. Contact factory when additional equipment is to be added.

**Options:**

23' Fixed or 40' Telescopic Jib.

Radio Remote Controls.

1 or 2 Person Gravity Leveled Steel Basket.

Rotation Resistant Wire Rope.

Hydraulic Tool Circuits on Bed.

Much More...

Elliott Equipment Company reserves the right to change the specification of any unit at any time without prior notice. This brochure is only a statement of general specifications on the date of this publication. For more detailed info on specific Elliott trucks go to [www.elliotequip.com](http://www.elliotequip.com)



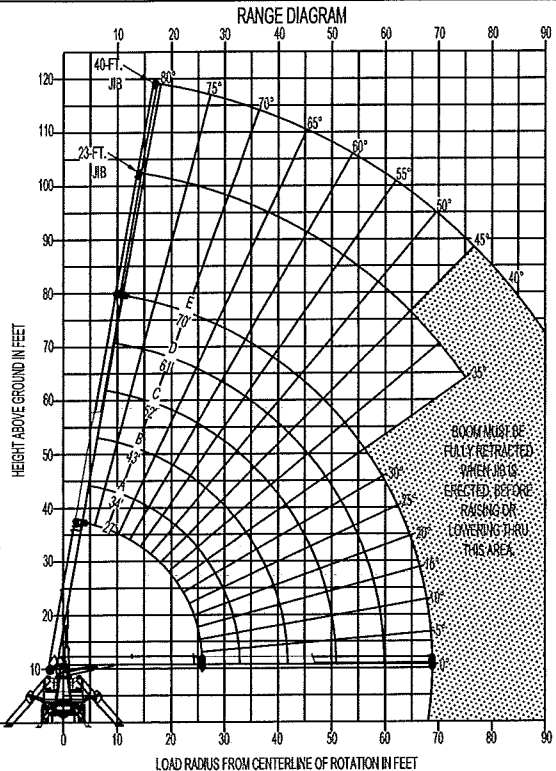
Elliott Equipment Company  
4427 South 76th Circle  
Omaha, NE 68127

Phone: 402-592-4500  
Fax: 402-592-4553  
Email: [sales@elliotequip.com](mailto:sales@elliotequip.com)

**Built for You.**  
[www.elliotequip.com](http://www.elliotequip.com)

**MAXIMUM LIFTING AND RANGE CAPABILITIES**

**ELLIOTT MODEL 1800 70-FT. BOOM**  
EQUIPMENT COMPANY



| MAIN BOOM LOAD RATINGS |                   |   |       |       |       |       |       |                        |                         |       | JIB LOAD RATINGS  |      |    |      |    |      |    |      |  |  |
|------------------------|-------------------|---|-------|-------|-------|-------|-------|------------------------|-------------------------|-------|---|------|----|------|----|------|----|------|--|--|
| LOAD RADIUS IN FEET    | LOADED BOOM ANGLE | LOAD RATINGS IN LBS. WITH OUTRIGGERS AND STABILIZERS EXTENDED |       |       |       |       |       |                        |                         |       | LOAD RATINGS IN LBS. WITH OUTRIGGERS AND STABILIZERS EXTENDED |      |    |      |    |      |    |      |  |  |
|                        |                   | 27-FT   | 34-FT | 43-FT | 52-FT | 61-FT | 70-FT | 23-FT FIXED LENGTH JIB | 23-41 FT EXTENDABLE JIB |       | 48-FT JIB EXTENDED  |      |    |      |    |      |    |      |  |  |
| 5                      | 79                | 36000   |       |       |       |       |       |                        |                         |       |   |      |    |      |    |      |    |      |  |  |
| 10                     | 68                | 21300   | 73    | 19500 | 77    | 16500 | 80    | 15000                  |                         |       |   |      |    |      |    |      |    |      |  |  |
| 15                     | 56                | 15200   | 64    | 14500 | 70    | 13500 | 75    | 12000                  | 78                      | 10500 | 60  | 9600 |    |      |    |      |    |      |  |  |
| 20                     | 41                | 11500   | 54    | 11100 | 63    | 10000 | 69    | 9000                   | 73                      | 8000  | 76  | 7300 | 70 | 3000 | 70 | 2900 | 70 | 1900 |  |  |
| 25                     | 19                | 8600  | 43    | 8500  | 55    | 8000  | 62    | 7200                   | 68                      | 6500  | 71  | 5800 | 65 | 2400 | 65 | 2300 | 65 | 1800 |  |  |
| 30                     |                   |   | 27    | 6750  | 47    | 6400  | 56    | 5900                   | 63                      | 5400  | 67  | 4900 | 60 | 2000 | 60 | 1900 | 60 | 1300 |  |  |
| 35                     |                   |   |       |       | 38    | 5000  | 49    | 4700                   | 56                      | 4400  | 62  | 4200 | 55 | 1600 | 55 | 1500 | 55 | 900  |  |  |
| 40                     |                   |   |       |       | 20    | 4200  | 41    | 4100                   | 50                      | 3900  | 56  | 3700 | 50 | 1400 | 50 | 1300 | 50 | 800  |  |  |
| 45                     |                   |   |       |       |       |       | 30    | 3500                   | 43                      | 3400  | 51  | 3200 | 45 | 1100 | 45 | 1000 | 45 | 600  |  |  |
| 50                     |                   |   |       |       |       |       | 14    | 2800                   | 36                      | 2600  | 45  | 2700 | 40 | 900  | 40 | 800  |    |      |  |  |
| 55                     |                   |   |       |       |       |       |       |                        | 26                      | 2400  | 39  | 2300 | 35 | 700  | 35 | 600  |    |      |  |  |
| 60                     |                   |   |       |       |       |       |       |                        |                         |       | 32  | 1900 |    |      |    |      |    |      |  |  |
| 65                     |                   |   |       |       |       |       |       |                        |                         |       | 22  | 1550 |    |      |    |      |    |      |  |  |
|                        | 0                 | 6000  | 0     | 4200  | 0     | 3000  | 0     | 1900                   | 0                       | 1300  | 0   | 1000 |    |      |    |      |    |      |  |  |
|                        | 340               |   | 270   |       | 210   |       | 170   |                        | 150                     |       | 130   |      |    |      |    |      |    |      |  |  |
|                        | 530               |   | 420   |       | 330   |       | 270   |                        | 230                     |       | 200   |      |    |      |    |      |    |      |  |  |

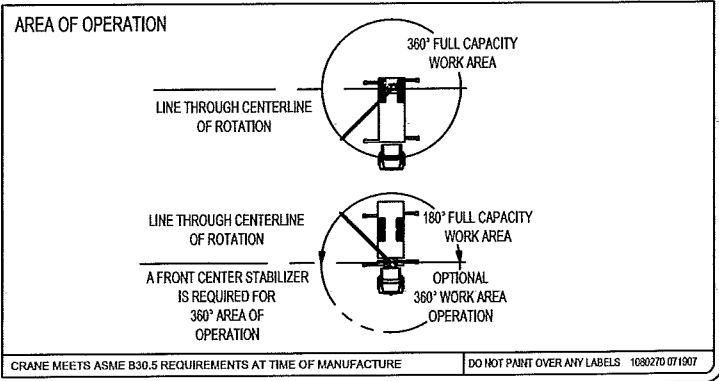
- WARNING**
- THE OPERATOR MUST READ AND UNDERSTAND ALL DECALS IN ADDITION TO THE OPERATION AND SAFETY MANUAL BEFORE OPERATING THIS CRANE.
  - POSITIONING OR OPERATION OF CRANE BEYOND AREAS SHOWN ON THIS CHART IS NOT INTENDED OR APPROVED EXCEPT WHERE SPECIFIED IN THE OPERATION AND SAFETY MANUAL.
  - LOADED BOOM ANGLES AT SPECIFIED BOOM LENGTHS GIVE ONLY AN APPROXIMATION OF THE OPERATING RADIUS. THE BOOM ANGLE BEFORE APPLYING A LOAD SHOULD BE GREATER TO ACCOUNT FOR DEFLECTION. DO NOT EXCEED THE OPERATING RADIUS FOR A BOOM LENGTH AND LOAD RATING.
  - THE JIB LOAD RATING CHART IS BASED ON THE LOADED BOOM ANGLES OF THE MAIN BOOM AND NOT THE LOAD RADIUS. DO NOT EXCEED JIB LOAD RATINGS AT REDUCED BOOM LENGTHS.
  - FOR BOOM ANGLES NOT SHOWN ON JIB LOAD RATING CHART, USE RATING OF NEXT LOWER BOOM ANGLE.
  - FOR BOOM LENGTHS NOT SHOWN, USE THE RATING OF NEXT LONGER BOOM LENGTH. FOR RADI NOT SHOWN, USE RATING OF NEXT LONGER RADIUS.
  - CRANE LOAD RATINGS ON OUTRIGGERS AND STABILIZERS ARE BASED ON FREELY SUSPENDED LOADS WITH THE MACHINE LEVELED AND STANDING ON A FIRM UNIFORM SUPPORTING SURFACE. NO ATTEMPT SHALL BE MADE TO MOVE A LOAD HORIZONTALLY ON THE GROUND IN ANY DIRECTION.
  - PRACTICAL WORKING LOADS DEPEND ON THE SUPPORTING SURFACE, WIND, AND OTHER FACTORS AFFECTING STABILITY SUCH AS HAZARDOUS SURROUNDINGS, EXPERIENCE OF PERSONNEL, AND PROPER HANDLING, ALL OF WHICH MUST BE TAKEN INTO ACCOUNT BY THE OPERATOR.
  - THE MAXIMUM LOAD WHICH MAY BE TELESCOPED IS LIMITED BY HYDRAULIC PRESSURE, BOOM ANGLE, AND BOOM LUBRICATION. IT IS SAFE TO ATTEMPT TO TELESCOPE ANY LOAD WITHIN THE LIMITS OF THE LOAD RATING CHART. BOOM MUST BE FULLY RETRACTED AGAINST THE BOOM STOPS AT ALL TIMES WHEN LIFTING MINIMUM BOOM LENGTH CAPACITY LOADS.
  - IF ANY OPERATIONAL AID SUCH AS ANTI-2-BLOCK, OVERLOAD SYSTEM OR LEVELING INDICATOR IS MALFUNCTIONING OR INOPERATIVE, DISCONTINUE USE IMMEDIATELY AND CONTACT A QUALIFIED REPAIR FACILITY.
  - CAPACITY INDICATING LIMITING DEVICES SHOULD NOT BE RELIED UPON TO REPLACE THE USE OF CAPACITY CHARTS AND PROPER OPERATING PROCEDURES.

- INFORMATION**
- DEDUCTIONS MUST BE MADE FROM RATED CAPACITIES FOR STOWED JIB, OPTIONAL ATTACHMENTS, HOOKS, LOAD BLOCKS (SEE DEDUCTION CHART), WEIGHTS OF SLINGS AND ALL OTHER LOAD HANDLING DEVICES SHALL BE CONSIDERED A PART OF THE LOAD.
  - CRANE LOAD RATINGS WITH OUTRIGGERS ARE BASED ON OUTRIGGERS AND STABILIZERS EXTENDED AND SET WITH ALL LOAD REMOVED FROM CARRIER WHEELS.
  - LOAD RATINGS ABOVE THE BOLD LINE ARE STRUCTURALLY LIMITED AND DO NOT EXCEED 85% OF TIPPING.
- DEFINITIONS**
- OPERATING RADIUS IS THE HORIZONTAL DISTANCE FROM THE CENTER OF ROTATION TO THE CENTER OF THE VERTICAL HOIST LINE OR TACKLE WITH A LOAD APPLIED.
  - LOADED BOOM ANGLES, SHOWN ABOVE, ARE THE INCLUDED ANGLE BETWEEN THE HORIZONTAL AND LONGITUDINAL AXIS OF THE BOOM BASE AFTER LIFTING RATED LOAD AT THE RATED RADIUS.

| ALLOWABLE LINE PULL |             |             |             | NOTICE   |
|---------------------|-------------|-------------|-------------|--|
| 1-PART LINE         | 2-PART LINE | 3-PART LINE | 4-PART LINE |  |
|                     |             |             |             | - DO NOT DEADHEAD LINE BLOCK AGAINST BOOM TIP WHEN EXTENDING BOOM<br>- KEEP AT LEAST 5 WRAPS OF LOADLINE ON THE WINCH DRUM AT ALL TIMES<br>- USE ONLY 9/16" DIAMETER WIRE ROPE, AS SPECIFIED BELOW, WITH THE PROPER BREAKING STRENGTHS LISTED<br>- ANTI-TWO-BLOCK SYSTEM MUST BE IN GOOD OPERATING CONDITION BEFORE OPERATING CRANE. SEE OPERATION & SAFETY MANUAL<br>- MAXIMUM CAPACITY WITH "BURST OF SPEED" IS 600 LBS. |
| 9600-LBS.           | 19200-LBS.  | 28800-LBS.  | 36000-LBS.  |  |
| 9060-LBS.           | 18120-LBS.  | 27180-LBS.  | 36000-LBS.  | 9/16" - 6 x 37 FIRC (3.1 S.F.)<br>33,600-LBS. BREAKING STRENGTH  |
| 7680-LBS.           | 15360-LBS.  | 23040-LBS.  | 30720-LBS.  | 9/16" - SPIN RESISTANT (5.1 S.F.)<br>45,300-LBS. BREAKING STRENGTH   |
|                     |             |             |             | 9/16" - SPIN RESISTANT (6.1 S.F.)<br>38,400-LBS. BREAKING STRENGTH   |

DEDUCTIONS FROM RATED LOADS FOR HANDLING DEVICES SUPPLIED BY ELLIOTT EQUIPMENT CO.  
 OVERHAUL BALL ----- SEE OVERHAUL BALL MFG. NAMEPLATE  
 LOAD BLOCK ----- SEE BLOCK MFG. NAMEPLATE  
 SWING AROUND JIB ----- SEE LOAD RATING CHART

**WARNING:**  
 LIFTING OFF THE MAIN BOOM WHILE JIB IS ERRECTED IS NOT INTENDED OR APPROVED

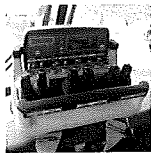


**CHASSIS SPECIFICATIONS**

|                                | 1870CP BoomTruck     |
|--------------------------------|----------------------|
| Wheelbase (WB)                 | 224" / 569 cm        |
| Cab to Axle (CA)               | 156" / 396 cm        |
| Cab to End of Frame (EOF)      | 247" / 627 cm        |
| Frame Section Modulus          | 13.3 in3-110,000 psi |
| Front Axle Gross Weight Rating | 13,000 lb / 5896 kg  |
| Rear Axle Gross Weight Rating  | 20,000 lb / 9072 kg  |
| Integral Front Frame Rails     | Not Applicable       |

Chassis data is minimum general requirements-not for engineering.  
 Actual dimensions and truck data will depend on truck selection and axle configuration.  
 \*Minimum chassis weight is required to meet 85% stability requirements.

**OPTIONS**



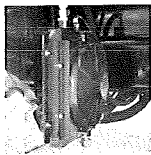
**Radio Remote Control**

Interference protected radio remotes let you get closer to your work and have full control over your machine.



**Pin-On Jib Attachments**

One piece & two piece telescoping or fixed jibs that stow on the side of the boom for easy placement while on the worksite.



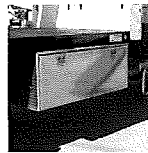
**Hydraulic Oil Cooler**

Add a bed-mounted hydraulic oil cooler and fan to assist with high duty cycle job applications. A "must" for hot weather environments



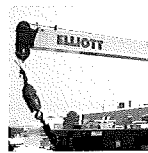
**Custom Paint**

Choose from a wide list of high quality paint applications including Elliott's standard white or red paint, metallic paints, or multiple colors.



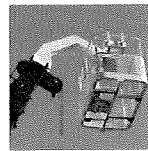
**Tool Boxes**

Optional tool boxes and bed storage can accommodate any storage need for tools, work materials and more.



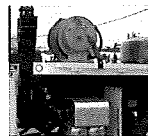
**Hook Block for Multi-Part Line**

Elliott can install a 2-3 part hook block or a 4 part-hook block to improve lifting capabilities. The block can be stored at the rear of the bed.



**Gravity Leveled Basket**

Elliott's pin-on work platform pins onto the boom for easy installation and removal. Gravity leveling and mechanical rotation makes it a great accessory for any worksite.

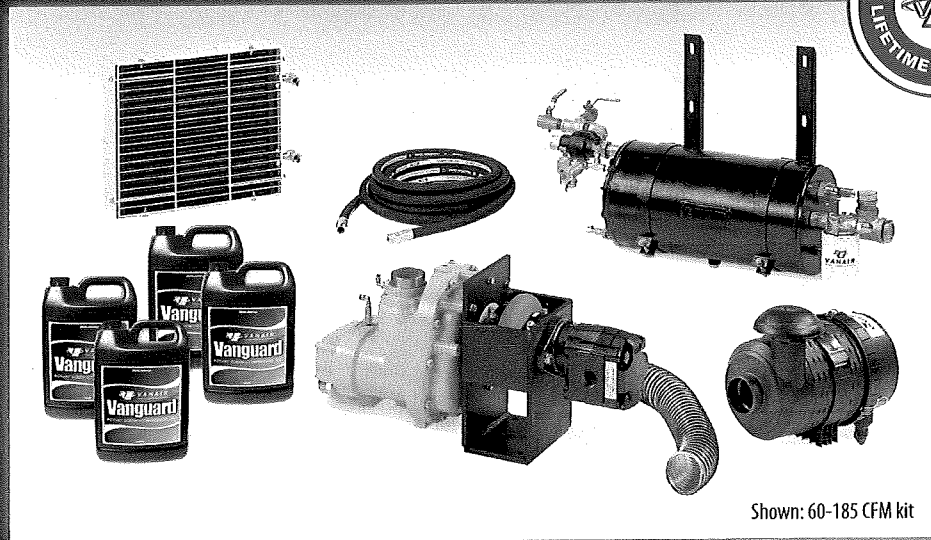


**Body Mounted Hose Reels and Circuits**

Let us work with you to customize your tool compatability by adding hose reels or hydraulic circuits to the crane bed.

: : underdeck 60 - 185 CFM hydraulic driven air compressor

# HYDRAULIC DRIVEN 60 - 185 CFM UNDERDECK AIR COMPRESSOR



Shown: 60-185 CFM kit

## All the Advantages of an Underdeck System

Lightweight, space saving and cost effective, Vanair's hydraulically-driven underdeck air compressor systems are ideal for vehicles that already have a built-in hydraulic system.

### SPECIFICATIONS

| Capacity (CFM) | Air (psi) | gpm         | Hydraulic Pressure | Compressor Input | Compressor Oil Capacity | Mounted Weight (dry) |
|----------------|-----------|-------------|--------------------|------------------|-------------------------|----------------------|
| 60             | 100 - 150 | 17.0        | 2300 - 2800        | 1030 rpm         | 2.5 gal.                | 428 lbs.             |
| 85             | 100 - 150 | 23.5        | 2300 - 2700        | 1460 rpm         | 2.5 gal.                | 428 lbs.             |
| 125            | 100 - 150 | 27.6 - 29.2 | 2100 - 2620        | 1330 rpm         | 3.5 gal.                | 453 lbs.             |
| 160            | 100 - 150 | 36.8 - 38.3 | 2200 - 2700        | 1675 rpm         | 3.5 gal.                | 453 lbs.             |
| 185*           | 100 - 150 | 42.2 - 44.2 | 2400 - 2830        | 1920 rpm         | 3.5 gal.                | 453-491 lbs.         |

*Ratings above are approximate and are based on 120° F hydraulic fluid temperature. Add 400 psi minimum to hydraulic requirements for hydraulic system continuous pressure ratings. Machine hydraulic relief valve is set at 3200 psi. Consult Vanair for specific details.*

\*150 psi kit includes additional cooler. Consult factory for over 185 CFM.



**VANAIR**  
MOBILE POWER SOLUTIONS™

800.526.8817 | vanair.com



## SPECIAL FEATURES

### Air Compressor

- Lifetime warranty on air end
- 100,000 hours design life
- 100% Duty cycle
- Greater efficiency for lower engine RPM's
- Integrated inlet valve and rear discharge provides higher ground clearance
- Made in USA

### Discharge System

- Intank coalescer system provides greater surface area for increased oil separation
- Coalescer is protected from the elements, eliminating the possibility of rust or damage from external source
- Exclusive anti-static coalescing element for greater safety
- Uses only 3.0 gallons of oil vs. 5.5 gallons compared to competitor's tanks
- Less prescribed maintenance and waste oil recovery costs
- Less than 2 ppm oil carryover
- Pressure rated to 250 psig
- 5 year warranty or 3000 hours for replacement on coalescer element only
- Smaller tank design makes installation easier
- Streamlined fittings on the end of tank
- ASME and CRN certified

### Instrumentation

- Hour meter
- Pressure gauge
- Temperature gauge

### Cooler(s)

- Capable of cooling up to 185 CFM at 100 psi
- Air to oil heat exchanger driven by 12V fan

### Air Filter

- ABS plastic housing
- Dual stage

### Hydraulic Motor

- Geared

### Vanguard Rotary Screw Compressor Oil

- Full synthetic oil exclusively created for rotary screw compressors
- Flash point: 257° C/495° F
- Pour Point: -45° C / -50° F
- Outstanding thermal and oxidative stability
- Reduced oil disposal due to extended drain intervals

### Safety Equipment

- High-temperature shutdown
- High-pressure shutdown
- Air pressure-relief safety valve
- Minimum pressure valve
- Automatic blowdown on shutdown
- Oil fill plug safety relief

### OPTIONS/ACCESSORIES

- External, spin-on air-oil separating element
- Dual pressure
- Service/control line moisture separators
- Filter/lubricator/regulator (FLR)
- Air hoses, hose reels, and fittings
- OSHA safety valve (velocity fuse)
- Sullair® air tools
- Tool oiler/lubricator
- Post drivers
- Biodegradable Vanguard Green synthetic oil

### DIMENSIONS – (without fittings)

#### 60, 85, 125, 160 and 185 CFM Model

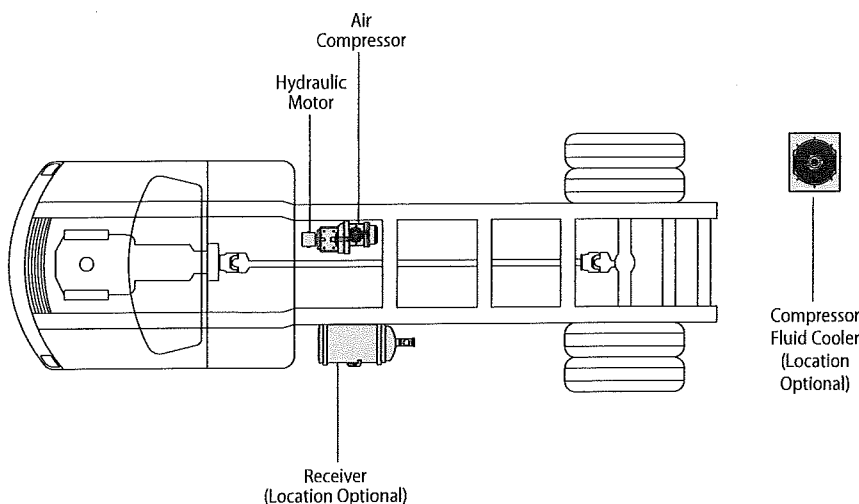
Compressor (in.) – 11.9 W x 18 L x 13 H

Air/fluid receiver (in.) – 10.25 D x 21.5 L

Remote air to oil cooler (in.) – 26.5 W x 19.25 H x 9.25 D

Hydraulic coupling including

motor (in.) – 12.25 W x 30.25 L x 15.5 H



### HYDRAULIC SYSTEM REQUIREMENTS

Vanair highly recommends consulting a hydraulic supply expert for specifying the correct hydraulic pump size and type, oil reservoir size, hydraulic cooler, hydraulic pressure relief, and other hydraulic supply components for your application. Please take into consideration the following:

- The hydraulic flow and pressure requirements of the air compressor
- Keep in mind that when the compressor is running there is a continuous hydraulic load
- The duty cycle and ambient operating temperatures
- Other hydraulic equipment which may share the same hydraulic supply system (Vanair recommends a dedicated pump and hydraulic circuit)



**VANAIR®**  
MOBILE POWER SOLUTIONS™

Specifications subject to change without notice.  
HYDRAULICCOMPONENT-072215

*Product improvement is a continuing goal. Design and specifications are subject to change without notice or obligations.*