

Meeting Date: 9/6/2016

Report Type: Consent

Report ID: 2016-00856

Title: Cooperative Purchase Agreement: Replacement Crane Truck and Dump Trucks

Location: Citywide

Recommendation: Pass a Motion 1) approving the use of the Houston-Galveston Area Council (HGAC) cooperative purchase agreement with Houston Freightliner, Inc. (Contract No. HT06-16) for the purchase of one replacement crane truck and four replacement dump trucks in an amount not to exceed \$710,712; and 2) authorizing the City Manager or the City Manager's designee to execute the purchase specified above.

Contact: Iseña Garcia, Program Specialist, (916) 808-1163; Mark Stevens, Fleet Manager, (916) 808-5869, Department of Public Works

Presenter: None

Department: Public Works Department

Division:

Dept ID:

Attachments:

1-Description/Analysis

2-Agreement

City Attorney Review

Approved as to Form
Gary Lindsey
8/31/2016 11:29:35 AM

Approvals/Acknowledgements

Department Director or Designee: Jerry Way - 8/18/2016 7:06:59 AM

Description/Analysis

Issue Detail: The Department of Public Works (DPW), Fleet Management Division, has a customer requirement to purchase one replacement crane truck for the DPW, Maintenance Services Division and four replacement dump trucks for the Department of Utilities (DOU), Operations and Maintenance Division. The crane truck will be used to lift and transport tree logs throughout the City.

Policy Considerations: The recommendations in this report are in accordance with City Code Chapter 3.56.

Economic Impacts: None

Environmental Considerations:

California Environmental Quality Act (CEQA): No environmental review is necessary because the recommendations in this report involve the purchase of vehicles and are not considered to be a project in accordance with Section 15378(b)(2) of the CEQA Guidelines.

Sustainability: The recommended purchase is consistent with the Fleet Sustainability Policy adopted by City Council on February 16, 2010 (Resolution No. 2010-083).

Commission/Committee Action: None

Rationale for Recommendation: After reviewing the available purchase options, Fleet Management has determined that using the cooperative purchase agreement with HGAC and Houston Freightliner, Inc. represents the most advantageous purchasing strategy. The contract was competitively bid, and HGAC receives greater discounts from the manufacturer due to a higher purchase volume than the City would receive if issuing its own bid.

In an ongoing effort to maximize cost savings and staff resources, many government agencies share contracting efforts through cooperative purchasing. This procurement approach increases pricing competitiveness and lowers operating costs through volume buying. When comparing the administrative costs of procurement, staff considers product research, source selection, specifications, advertising, staff reports, awarding, protest, and administration of the contract. It is often more cost-effective to eliminate the cost and time spent on these administrative processes and purchase items and services through a cooperative purchasing program.

The City has used both regional and national cooperative purchase agreements to complement its own contracting initiatives. Cooperative purchasing enables City departments to evaluate a broader range of contracting opportunities and to share resources with other

jurisdictions. Cooperative purchasing also leverages internal and external resources to maximize cost savings opportunities for the City.

Financial Considerations: The recommended purchase of one replacement crane truck and four replacement dump trucks in an amount not to exceed \$710,712 will be made from the DPW FY2016/17 operating budget (Fleet Fund, Fund 6501) and charged to the multi-year operating projects (MYOP) for replacement vehicles and equipment listed in the following table. Sufficient funds are available in each of these budgets to make the recommended purchase.

| Item | Customer | Qty | Fund Name | Fund No. | MYOP | Total |
|-------------|----------|-----|---------------------|----------|-----------|------------------|
| Crane Truck | DPW | 1 | General Fund | 1001 | I06150017 | \$192,724 |
| Dump Truck | DOU | 1 | Storm Drainage Fund | 6011 | I06141017 | \$129,497 |
| Dump Truck | DOU | 3 | Water Fund | 6005 | I06145017 | \$388,491 |
| | | | | | | \$710,712 |

Local Business Enterprise (LBE): Houston Freightliner, Inc. is not an LBE. The minimum LBE participation requirement is waived for the City’s use of cooperative purchase agreements that have been competitively bid, evaluated, and awarded by other governmental agencies that may or may not have similar LBE programs.

A CONTRACT BETWEEN
HOUSTON-GALVESTON AREA COUNCIL
 Houston, Texas
 AND
HOUSTON FREIGHTLINER, INC
 Houston, Texas

This Contract is made and entered into by the **Houston-Galveston Area Council of Governments**, hereinafter referred to as **H-GAC**, having its principal place of business at 3555 Timmons Lane, Suite 120, Houston, Texas 77027, AND, **Houston Freightliner, Inc**, hereinafter referred to as the **CONTRACTOR**, having its principal place of business at 9550 North Loop East, Houston, Texas 77039.

ARTICLE 1: **SCOPE OF SERVICES**

The parties have entered into a **Medium and Heavy Trucks & Truck Bodies** Contract to become effective as of June 1, 2016, and to continue through May 31, 2018 (the "**Contract**"), subject to extension upon mutual agreement of the **CONTRACTOR** and **H-GAC**. **H-GAC** enters into the Contract as Agent for participating governmental agencies, each hereinafter referred to as **END USER**, for the purchase of **Medium and Heavy Trucks & Truck Bodies** offered by the **CONTRACTOR**. The **CONTRACTOR** agrees to sell **Medium and Heavy Trucks & Truck Bodies** through the **H-GAC** Contract to **END USERS**.

ARTICLE 2: **THE COMPLETE AGREEMENT**

The Contract shall consist of the documents identified below in order of precedence:

1. The text of this Contract form, including but not limited to, Attachment A
2. General Terms and Conditions
3. Bid Specifications No: **HT06-16**, including any relevant suffixes
4. **CONTRACTOR's** Response to Bid No: **HT06-16**, including but not limited to, prices and options offered

All of which are either attached hereto or incorporated by reference and hereby made a part of this Contract, and shall constitute the complete agreement between the parties hereto. This Contract supersedes any and all oral or written agreements between the parties relating to matters herein. Except as otherwise provided herein, this Contract cannot be modified without the written consent of both parties.

ARTICLE 3: **LEGAL AUTHORITY**

CONTRACTOR and **H-GAC** warrant and represent to each other that they have adequate legal counsel and authority to enter into this Contract. The governing bodies, where applicable, have authorized the signatory officials to enter into this Contract and bind the parties to the terms of this Contract and any subsequent amendments thereto.

ARTICLE 4: **APPLICABLE LAWS**

The parties agree to conduct all activities under this Contract in accordance with all applicable rules, regulations, directives, issuances, ordinances, and laws in effect or promulgated during the term of this Contract.

ARTICLE 5: **INDEPENDENT CONTRACTOR**

The execution of this Contract and the rendering of services prescribed by this Contract do not change the independent status of **H-GAC** or **CONTRACTOR**. No provision of this Contract or act of **H-GAC** in performance of this Contract shall be construed as making **CONTRACTOR** the agent, servant or employee of **H-GAC**, the State of Texas or the United States Government. Employees of **CONTRACTOR** are subject to the exclusive control and supervision of **CONTRACTOR**. **CONTRACTOR** is solely responsible for employee payrolls and claims arising therefrom.

ARTICLE 6: **END USER AGREEMENTS**

H-GAC acknowledges that the **END USER** may choose to enter into an End User Agreement with the **CONTRACTOR** through this Contract and that the term of said Agreement may exceed the term of the **H-GAC** Contract. However this acknowledgement is not to be construed as **H-GAC's** endorsement or approval of the End User Agreement terms and conditions. **CONTRACTOR** agrees not to offer, agree to or accept from **END USER** any terms or conditions that conflict with or contravene those in **CONTRACTOR's H-GAC** contract. Further, termination of this Contract for any reason shall not result in the termination of the underlying End User Agreements entered into between **CONTRACTOR** and any **END USER** which shall, in each instance, continue pursuant to their stated terms and duration. The only effect of termination of this Contract is that **CONTRACTOR** will no longer be able to enter into any new End User Agreements with **END USERS** pursuant to this Contract. Applicable **H-GAC** order processing charges will be due and payable to **H-GAC** on any End User Agreements surviving termination of this Contract between **H-GAC** and **CONTRACTOR**.

ARTICLE 7: SUBCONTRACTS & ASSIGNMENTS

CONTRACTOR agrees not to subcontract, assign, transfer, convey, sublet or otherwise dispose of this Contract or any right, title, obligation or interest it may have therein to any third party without prior written notice to **H-GAC**. **H-GAC** reserves the right to accept or reject any such change. **CONTRACTOR** shall continue to remain responsible for all performance under this Contract regardless of any subcontract or assignment. **H-GAC** shall be liable solely to **CONTRACTOR** and not to any of its Subcontractors or Assignees.

ARTICLE 8: EXAMINATION AND RETENTION OF CONTRACTOR'S RECORDS

CONTRACTOR shall maintain during the course of its work, complete and accurate records of items that are chargeable to **END USER** under this Contract. **H-GAC**, through its staff or its designated public accounting firm, the State of Texas, or the United States Government shall have the right at any reasonable time to inspect copy and audit those records on or off the premises of **CONTRACTOR**. Failure to provide access to records may be cause for termination of this Contract. **CONTRACTOR** shall maintain all records pertinent to this Contract for a period of not less than five (5) calendar years from the date of acceptance of the final contract closeout and until any outstanding litigation, audit or claim has been resolved. The right of access to records is not limited to the required retention period, but shall last as long as the records are retained. **CONTRACTOR** further agrees to include in all subcontracts under this Contract, a provision to the effect that the subcontractor agrees that **H-GAC'S** duly authorized representatives, shall, until the expiration of five (5) calendar years after final payment under the subcontract or until all audit findings have been resolved, have access to, and the right to examine and copy any directly pertinent books, documents, papers, invoices and records of such subcontractor involving any transaction relating to the subcontract.

ARTICLE 9: REPORTING REQUIREMENTS

CONTRACTOR agrees to submit reports or other documentation in accordance with the General Terms and Conditions of the Bid Specifications. If **CONTRACTOR** fails to submit to **H-GAC** in a timely and satisfactory manner any such report or documentation, or otherwise fails to satisfactorily render performance hereunder, such failure may be considered cause for termination of this Contract.

ARTICLE 10: MOST FAVORED CUSTOMER CLAUSE

If **CONTRACTOR**, at any time during this Contract, routinely enters into agreements with other governmental customers within the State of Texas, and offers the same or substantially the same products/services offered to **H-GAC** on a basis that provides prices, warranties, benefits, and or terms more favorable than those provided to **H-GAC**, **CONTRACTOR** shall notify **H-GAC** within ten (10) business days thereafter of that offering and this Contract shall be deemed to be automatically amended effective retroactively to the effective date of the most favorable contract, wherein **CONTRACTOR** shall provide the same prices, warranties, benefits, or terms to **H-GAC** and its **END USER**. **H-GAC** shall have the right and option at any time to decline to accept any such change, in which case the amendment shall be deemed null and void. If **CONTRACTOR** is of the opinion that any apparently more favorable price, warranty, benefit, or term charged and/or offered a customer during the term of this Contract is not in fact most favored treatment, **CONTRACTOR** shall within ten (10) business days notify **H-GAC** in writing, setting forth the detailed reasons **CONTRACTOR** believes aforesaid offer which has been deemed to be a most favored treatment, is not in fact most favored treatment. **H-GAC**, after due consideration of such written explanation, may decline to accept such explanation and thereupon this Contract between **H-GAC** and **CONTRACTOR** shall be automatically amended, effective retroactively, to the effective date of the most favored agreement, to provide the same prices, warranties, benefits, or terms to **H-GAC**.

The Parties accept the following definition of routine: A prescribed, detailed course of action to be followed regularly; a standard procedure. **EXCEPTION: This clause shall not be applicable to prices and price adjustments offered by a bidder, proposer or contractor, which are not within bidder's/ proposer's control [example; a manufacturer's bid concession], or to any prices offered to the Federal Government and its agencies.**

ARTICLE 11: SEVERABILITY

All parties agree that should any provision of this Contract be determined to be invalid or unenforceable, such determination shall not affect any other term of this Contract, which shall continue in full force and effect.

ARTICLE 12: DISPUTES

Any and all disputes concerning questions of fact or of law arising under this Contract, which are not disposed of by agreement, shall be decided by the Executive Director of **H-GAC** or his designee, who shall reduce his decision to writing and provide notice thereof to **CONTRACTOR**. The decision of the Executive Director or his designee shall be final and conclusive unless, within thirty (30) days from the date of receipt of such notice, **CONTRACTOR** requests a rehearing from the Executive Director of **H-GAC**. In connection with any rehearing under this Article, **CONTRACTOR** shall be afforded an opportunity to be heard and offer evidence in support of its position. The decision of the Executive Director after any such rehearing shall be final and conclusive. **CONTRACTOR** may, if it elects to do so, appeal the final and conclusive decision of the Executive Director to a court of competent jurisdiction. Pending final decision of a dispute hereunder, **CONTRACTOR** shall proceed diligently with the performance of this Contract and in accordance with **H-GAC'S** final decision.

ARTICLE 13: LIMITATION OF CONTRACTOR'S LIABILITY

Except as specified in any separate writing between the **CONTRACTOR** and an **END USER**, **CONTRACTOR's** total liability under this Contract, whether for breach of contract, warranty, negligence, strict liability, in tort or otherwise, but excluding its obligation to indemnify **H-GAC** described in Article 14, is limited to the price of the particular products/services sold hereunder, and **CONTRACTOR** agrees either to refund the purchase price or to repair or replace product(s) that are not as warranted. In no event will **CONTRACTOR** be liable for any loss of use, loss of time, inconvenience, commercial loss, lost profits or savings or other incidental, special or consequential damages to the full extent such use may be disclaimed by law. **CONTRACTOR** understands and agrees that it shall be liable to repay and shall repay upon demand to **END USER** any amounts determined by **H-GAC**, its independent auditors, or any agency of State or Federal government to have been paid in violation of the terms of this Contract.

ARTICLE 14: LIMIT OF H-GAC'S LIABILITY AND INDEMNIFICATION OF H-GAC

H-GAC's liability under this Contract, whether for breach of contract, warranty, negligence, strict liability, in tort or otherwise, is limited to its order processing charge. In no event will **H-GAC** be liable for any loss of use, loss of time, inconvenience, commercial loss, lost profits or savings or other incidental, special or consequential damages to the full extent such use may be disclaimed by law. Contractor agrees, to the extent permitted by law, to defend and hold harmless **H-GAC**, its board members, officers, agents, officials, employees, and indemnities from any and all claims, costs, expenses (including reasonable attorney fees), actions, causes of action, judgments, and liens arising as a result of **CONTRACTOR's** negligent act or omission under this Contract. **CONTRACTOR** shall notify **H-GAC** of the threat of lawsuit or of any actual suit filed against **CONTRACTOR** relating to this Contract.

ARTICLE 15: TERMINATION FOR CAUSE

H-GAC may terminate this Contract for cause based upon the failure of **CONTRACTOR** to comply with the terms and/or conditions of the Contract; provided that **H-GAC** shall give **CONTRACTOR** written notice specifying **CONTRACTOR'S** failure. If within thirty (30) days after receipt of such notice, **CONTRACTOR** shall not have either corrected such failure, or thereafter proceeded diligently to complete such correction, then **H-GAC** may, at its option, place **CONTRACTOR** in default and the Contract shall terminate on the date specified in such notice. **CONTRACTOR** shall pay to **H-GAC** any order processing charges due from **CONTRACTOR** on that portion of the Contract actually performed by **CONTRACTOR** and for which compensation was received by **CONTRACTOR**.

ARTICLE 16: TERMINATION FOR CONVENIENCE

Either **H-GAC** or **CONTRACTOR** may cancel or terminate this Contract at any time by giving thirty (30) days written notice to the other. **CONTRACTOR** may be entitled to payment from **END USER** for services actually performed; to the extent said services are satisfactory to **END USER**. **CONTRACTOR** shall pay to **H-GAC** any order processing charges due from **CONTRACTOR** on that portion of the Contract actually performed by **CONTRACTOR** and for which compensation is received by **CONTRACTOR**.

ARTICLE 17: CIVIL AND CRIMINAL PROVISIONS AND SANCTIONS

CONTRACTOR agrees that it will perform under this Contract in conformance with safeguards against fraud and abuse as set forth by **H-GAC**, the State of Texas and the acts and regulations of any funding entity. **CONTRACTOR** agrees to notify **H-GAC** of any suspected fraud, abuse or other criminal activity related to this Contract through filing of a written report promptly after it becomes aware of such activity.

ARTICLE 18: GOVERNING LAW & VENUE

This Contract shall be governed by the laws of the State of Texas. Venue and jurisdiction of any suit or cause of action arising under or in connection with this Contract shall lie exclusively in Harris County, Texas. Disputes between **END USER** and **CONTRACTOR** are to be resolved in accord with the law and venue rules of the state of purchase. **CONTRACTOR** shall immediately notify **H-GAC** of such disputes.

ARTICLE 19: PAYMENT OF H-GAC ORDER PROCESSING CHARGE

CONTRACTOR agrees to sell its products to **END USERS** based on the pricing and other terms of this Contract, including, but not limited to, the payment of the applicable **H-GAC** order processing charge. On notification from an **END USER** that an order has been placed with **CONTRACTOR**, **H-GAC** will invoice **CONTRACTOR** for the applicable order processing charge. Upon delivery of any product/service by **CONTRACTOR** and acceptance by **END USER**, **CONTRACTOR** shall, within thirty (30) calendar days or ten (10) business days after receipt of payment, whichever is less, pay **H-GAC** the full amount of the applicable order processing charge, whether or not **CONTRACTOR** has received an invoice from **H-GAC**. For sales made by **CONTRACTOR** based on this contract, including sales to entities without Interlocal Contracts, **CONTRACTOR** shall pay the applicable order processing charges to **H-GAC**. Further, **CONTRACTOR** agrees to encourage entities who are not members of **H-GAC's** Cooperative Purchasing Program to execute an **H-GAC** Interlocal Contract. **H-GAC** reserves the right to take appropriate actions including, but not limited to, contract termination if **CONTRACTOR** fails to promptly remit **H-GAC's** order processing charge. In no event shall **H-GAC** have any liability to **CONTRACTOR** for any goods or services an **END USER** procures from **CONTRACTOR**.

ARTICLE 20:

LIQUIDATED DAMAGES

Any liquidated damages terms will be determined between CONTRACTOR and END USER at the time END USER's purchase order is placed.

ARTICLE 21:

PERFORMANCE AND PAYMENT BOND FOR INDIVIDUAL ORDERS

H-GAC's contractual requirements DO NOT include a Performance & Payment Bond (PPB), and offered pricing should reflect this cost saving. However, CONTRACTOR must be prepared to offer a PPB to cover any specific order if so requested by END USER. CONTRACTOR shall quote a price to END USER for provision of any requested PPB, and agrees to furnish the PPB within ten business (10) days of receipt of END USER's purchase order.

ARTICLE 22:

CHANGE OF CONTRACTOR STATUS

CONTRACTOR shall immediately notify H-GAC, in writing, of ANY change in ownership, control, dealership/franchisee status, Motor Vehicle license status, or name, and shall also advise whether or not this Contract shall be affected in any way by such change. H-GAC shall have the right to determine whether or not such change is acceptable, and to determine what action shall be warranted, up to and including cancellation of Contract.

ARTICLE 23:

LICENSING REQUIRED BY TEXAS MOTOR VEHICLE BOARD [IF APPLICABLE]

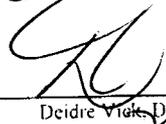
CONTRACTOR will, for the duration of this Contract, maintain current licenses that are required by the Texas Motor Vehicle Commission Code. If at any time during this Contract period, any CONTRACTOR'S license is not renewed, or is denied or revoked, CONTRACTOR shall be deemed to be in default of this Contract unless the Motor Vehicle Board issues a stay or waiver. Contractor shall promptly provide copies of all current applicable Texas Motor Vehicle Board documentation to H-GAC upon request.

IN WITNESS WHEREOF, the parties have caused this Contract to be executed by their duly authorized representatives.

Signed for Houston-Galveston
Area Council, Houston, Texas:


Jack Steele, Executive Director

Attest for Houston-Galveston
Area Council, Houston, Texas:


Deidre Vitek, Director of Public Services

Date: May 26, 2016

Signed for Houston Freightliner, Inc
Houston, Texas:



Printed Name & Title: Bob Garwood President

Date: 5-19, 2016

Attest for Houston Freightliner, Inc
Houston, Texas:



Printed Name & Title: Michael McCarty Account Manager

Date: 5-19, 2016

Attachment A
Houston Freightliner, Inc
Medium and Heavy Trucks & Truck Bodies
Contract No.: HT06-16

| MFGR | HGAC PRODUCT CODE | MODEL | BASE PRICE |
|--------------|----------------------------------|--|-----------------------|
| Freightliner | D1 | 108SD-70, Conv. Cab, SBFA, SRA | \$63,924 |
| Freightliner | D2 | 108SD-80, Conv. Cab, SBFA, TRA | \$73,872 |
| Freightliner | D3 | 114SD, Conv. Cab, SFFA, SRA | \$77,539 |
| Freightliner | D4 | 122SD, Conv Cab, SFFA, TRA | \$91,973 |
| Freightliner | D5 | M2-106-60, Conv. Cab, SBFA, SRA | \$57,272 |
| Freightliner | D6 | M2-106-70, Conv. Cab, SBFA, SRA | \$59,658 |
| Freightliner | D7 | M2-106-80, Conv. Cab, SBFA, TRA: | \$69,353 |
| Freightliner | D8 | M2-112, Conv. Cab, SBFA, TRA | \$74,735 |
| Freightliner | D9 | Cascadia CA113-DC, Conv Cab Tractor, SBFA, TRA | \$89,634 |



CONTRACT PRICING WORKSHEET
For MOTOR VEHICLES Only

Contract No.: HT06-16

Date Prepared: 28-Jul

This Worksheet is prepared by Contractor and given to End User. If a PO is issued, both documents MUST be faxed to H-GAC @ 713-993-4548. Therefore please type or print legibly.

| | | | |
|-----------------|-------------------------------|--------------|------------------------------|
| Buying Agency: | City of Sacramento | Contractor: | Houston Freightliner, Inc |
| Contact Person: | Mark Stevens | Prepared By: | Michael McCarthy |
| Phone: | 916-808-5869 | Phone: | 713-580-8122 |
| Fax: | | Fax: | 713-955-6282 |
| Email: | mstevens@cityofsacramento.org | Email: | Mike.McCarthy@STRHouston.com |

| | | | |
|---------------|----|--------------|----------------------------|
| Product Code: | D2 | Description: | 2017 Freightliner 108SD-80 |
|---------------|----|--------------|----------------------------|

A. Product Item Base Unit Price Per Contractor's H-GAC Contract: 73872

B. Published Options - Itemize below - Attach additional sheet(s) if necessary - Include Option Code in description if applicable.
(Note: Published Options are options which were submitted and priced in Contractor's bid.)

| Description | Cost | Description | Cost |
|--------------------------------------|------|--|--------|
| Cummins ISL 350 HP | 2030 | Electric Powered Windows | 147 |
| Allison 3000 RDS Transmission | 6146 | Air Driver Seat | 165 |
| 14700 LB Front Axle | 621 | 2 Man Passenger Seat | 178 |
| 14,600 LB Front Suspension | 382 | | |
| Trailer Towing Package | 854 | | |
| Air Cab Mounts | 118 | | |
| Air Conditioner | 850 | | |
| Tufftrac 40,000 LB Rear Suspension | 2761 | Special Custom Flatbed and Crane by Utility 1 Source | 85700 |
| 187" Wheelbase | 656 | | |
| 1/4" Frame Liner | 650 | | |
| | | Subtotal From Additional Sheet(s): | |
| Bendix AD-9 Air Dryer | 290 | Subtotal B: | 101548 |

C. Unpublished Options - Itemize below / attach additional sheet(s) if necessary.
(Note: Unpublished options are items which were not submitted and priced in Contractor's bid.)

| Description | Cost | Description | Cost |
|-------------|------|---|------|
| | | | |
| | | Subtotal From Additional Sheet(s): | 0 |
| | | Subtotal C: | 0 |

Check: Total cost of Unpublished Options (C) cannot exceed 25% of the total of the Base Unit Price plus Published Options (A+B). For this transaction the percentage is: 0%

D. Total Cost Before Any Applicable Trade-In / Other Allowances / Discounts (A+B+C)

| | | | | | | |
|-------------------|---|--------------------------|--------|---|-------------|--------|
| Quantity Ordered: | 1 | X Subtotal of A + B + C: | 175420 | = | Subtotal D: | 175420 |
|-------------------|---|--------------------------|--------|---|-------------|--------|

E. H-GAC Order Processing Charge (Amount Per Current Policy) Subtotal E: 1000

F. Trade-Ins / Special Discounts / Other Allowances / Freight / Installation / Miscellaneous Charges

| Description | Cost | Description | Cost |
|----------------------------|-----------|--------------------|---------|
| Discount | -2507 | | |
| Freight | 3900 | | |
| California State Sales Tax | 14,910.70 | | |
| | | Subtotal F: | 16303.7 |

Delivery Date: 12/1/2016 **G. Total Purchase Price (D+E+F):** 192723.7

Prepared for:
Mark Stevens
City of Sacramento
5730 24th Street
Sacramento, CA 95822
Phone: 916-808-5869

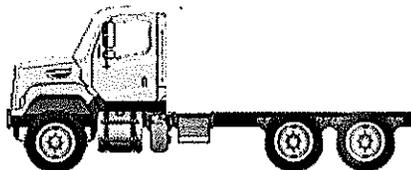
Prepared by:
Michael McCarthy
HOUSTON FREIGHTLINER,
WESTERN STAR
9550 NORTH LOOP EAST
HOUSTON, TX 77029
Phone: 713-580-8122
E-Mail:
mmccarthy@strhouston.com

A proposal for
City of Sacramento

Prepared by
HOUSTON FREIGHTLINER, WESTERN STAR
Michael McCarthy

Jul 06, 2016

Freightliner 108SD



Components shown may not reflect all spec'd options and are not to scale



Prepared for:
 Mark Stevens
 City of Sacramento
 5730 24th Street
 Sacramento, CA 95822
 Phone: 916-808-5869

Prepared by:
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 mmccarthy@strhouston.com

S P E C I F I C A T I O N P R O P O S A L

| Data Code | Description | Weight Front | Weight Rear |
|------------------------------|---|-----------------|----------------|
| Price Level | | | |
| PRL-14D | SD PRL-14D (EFF:10/05/15) | | |
| Data Version | | | |
| DRL-034 | SPECPRO21 DATA RELEASE VER 034 | | |
| Vehicle Configuration | | | |
| 001-176 | 108SD CONVENTIONAL CHASSIS | 6,829 | 3,748 |
| 004-217 | 2017 MODEL YEAR SPECIFIED | | |
| 002-004 | SET BACK AXLE - TRUCK | | |
| 019-001 | TRAILER TOWING PROVISION AT END OF FRAME FOR TRUCK | 10 | 10 |
| 003-001 | LH PRIMARY STEERING LOCATION | | |
| General Service | | | |
| AA1-003 | TRUCK/TRAILER CONFIGURATION | | |
| AA6-001 | DOMICILED, USA 50 STATES (INCLUDING CALIFORNIA AND CARB OPT-IN STATES) | | |
| A85-011 | CONSTRUCTION SERVICE | | |
| A84-1C0 | CONSTRUCTION BUSINESS SEGMENT | | |
| AA4-003 | DRY BULK COMMODITY | | |
| AA5-002 | TERRAIN/DUTY: 100% (ALL) OF THE TIME, IN TRANSIT, IS SPENT ON PAVED ROADS | | |
| AB1-008 | MAXIMUM 8% EXPECTED GRADE | | |
| AB5-001 | SMOOTH CONCRETE OR ASPHALT PAVEMENT - MOST SEVERE IN-TRANSIT (BETWEEN SITES) ROAD SURFACE | | |
| 995-1AE | FREIGHTLINER LEVEL II WARRANTY | | |
| A66-99D | EXPECTED FRONT AXLE(S) LOAD : 14600.0 lbs | | |
| A68-99D | EXPECTED REAR DRIVE AXLE(S) LOAD : 40000.0 lbs | | |
| A63-99D | EXPECTED GROSS VEHICLE WEIGHT CAPACITY : 54600.0 lbs | | |



Prepared for:
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 Sacramento, CA 95822
 Phone: 916-808-5869

Prepared by:
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 Phone: 713-580-8122
 E-Mail:
 mmccarthy@strhouston.com

| Data Code | Description | Weight Front | Weight Rear |
|------------------------------|--|--------------|-------------|
| A70-99D | EXPECTED GROSS COMBINATION WEIGHT : 80000.0 lbs | | |
| Truck Service | | | |
| AA3-005 | FLATBED/PLATFORM/STAKE BODY | | |
| Tractor Service | | | |
| AA2-005 | FLATBED TRAILER | | |
| AH6-001 | SINGLE (1) TRAILER | | |
| Engine | | | |
| 101-2XM | CUM ISL 350 HP @ 2000 RPM, 2200 GOV RPM, 1000 LB/FT @ 1400 RPM | | |
| Electronic Parameters | | | |
| 79A-065 | 65 MPH ROAD SPEED LIMIT | | |
| 79B-000 | CRUISE CONTROL SPEED LIMIT SAME AS ROAD SPEED LIMIT | | |
| 79G-104 | 5 MINUTE IDLE SHUTDOWN - TIMER RESET WITH CLUTCH AND SERVICE BRAKE | | |
| 79K-005 | PTO MODE ENGINE RPM LIMIT - 900 RPM | | |
| 79P-004 | PTO RPM WITH CRUISE SET SWITCH - 900 RPM | | |
| 79Q-004 | PTO RPM WITH CRUISE RESUME SWITCH - 900 RPM | | |
| 79S-001 | PTO MODE CANCEL VEHICLE SPEED - 5 MPH | | |
| 79U-007 | PTO GOVERNOR RAMP RATE - 250 RPM PER SECOND | | |
| 80G-004 | PTO MINIMUM RPM - 900 | | |
| 80J-001 | REGEN INHIBIT SPEED THRESHOLD - 0 MPH | | |
| Engine Equipment | | | |
| 99C-016 | 2016 ONBOARD DIAGNOSTICS/2010 EPA/CARB/GHG17 BUT NOT FINAL GHG17 CONFIGURATION | | |
| 99D-011 | 2008 CARB EMISSION CERTIFICATION - CLEAN IDLE (INCLUDES 6X4 INCH LABEL ON LOWER FORWARD CORNER OF DRIVER DOOR) | | |
| PMT-998 | NO 2013 ENGINE ESCALATOR | | |
| 13E-001 | STANDARD OIL PAN | | |
| 105-001 | ENGINE MOUNTED OIL CHECK AND FILL | | |
| 014-099 | SIDE OF HOOD AIR INTAKE WITH FIREWALL MOUNTED DONALDSON AIR CLEANER | | |
| 124-1D7 | DR 12V 160 AMP 28-SI QUADRAMOUNT PAD ALTERNATOR WITH REMOTE BATTERY VOLT SENSE | | |



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| Data Code | Description | Weight Front | Weight Rear |
|-----------|---|--------------|-------------|
| 292-098 | (2) ALLIANCE MODEL 1231, GROUP 31, 12 VOLT MAINTENANCE FREE 2250 CCA THREADED STUD BATTERIES | | |
| 290-017 | BATTERY BOX FRAME MOUNTED | | |
| 281-001 | STANDARD BATTERY JUMPERS | | |
| 282-003 | SINGLE BATTERY BOX FRAME MOUNTED LH SIDE BACK OF CAB | | |
| 291-017 | WIRE GROUND RETURN FOR BATTERY CABLES WITH ADDITIONAL FRAME GROUND RETURN | | |
| 289-001 | NON-POLISHED BATTERY BOX COVER | | |
| 107-032 | CUMMINS TURBOCHARGED 18.7 CFM AIR COMPRESSOR WITH INTERNAL SAFETY VALVE | | |
| 152-041 | ELECTRONIC ENGINE INTEGRAL SHUTDOWN PROTECTION SYSTEM | | |
| 128-076 | CUMMINS EXHAUST BRAKE INTEGRAL WITH VARIABLE GEOMETRY TURBO WITH ON/OFF DASH SWITCH | 20 | |
| 016-1C3 | RH OUTBOARD UNDER STEP MOUNTED HORIZONTAL AFTERTREATMENT SYSTEM ASSEMBLY WITH RH HORIZONTAL TAILPIPE | | |
| 28F-002 | ENGINE AFTERTREATMENT DEVICE, AUTOMATIC OVER THE ROAD REGENERATION AND DASH MOUNTED REGENERATION REQUEST SWITCH | | |
| 239-001 | STANDARD EXHAUST SYSTEM LENGTH | | |
| 237-052 | RH STANDARD HORIZONTAL TAILPIPE | | |
| 23U-002 | 13 GALLON DIESEL EXHAUST FLUID TANK | | |
| 30N-003 | 100 PERCENT DIESEL EXHAUST FLUID FILL | | |
| 23Y-001 | STANDARD DIESEL EXHAUST FLUID PUMP MOUNTING | | |
| 43X-002 | LH MEDIUM DUTY STANDARD DIESEL EXHAUST FLUID TANK LOCATION | | |
| 43Y-001 | STANDARD DIESEL EXHAUST FLUID TANK CAP | | |
| 273-018 | HORTON DRIVEMASTER ADVANTAGE ON/OFF FAN DRIVE | | |
| 276-001 | AUTOMATIC FAN CONTROL WITHOUT DASH SWITCH, NON ENGINE MOUNTED | | |
| 110-003 | CUMMINS SPIN ON FUEL FILTER | | |
| 118-008 | COMBINATION FULL FLOW/BYPASS OIL FILTER | | |
| 266-028 | 1200 SQUARE INCH ALUMINUM RADIATOR | | |
| 103-039 | ANTIFREEZE TO -34F, OAT (NITRITE AND SILICATE FREE) EXTENDED LIFE COOLANT | | |



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|-----------|---|--------------|-------------|
| 171-007 | GATES BLUE STRIPE COOLANT HOSES OR EQUIVALENT | | |
| 172-001 | CONSTANT TENSION HOSE CLAMPS FOR COOLANT HOSES | | |
| 270-016 | RADIATOR DRAIN VALVE | | |
| 132-004 | ELECTRIC GRID AIR INTAKE WARMER | | |
| 155-058 | DELCO 12V 38MT HD STARTER WITH INTEGRATED MAGNETIC SWITCH | | |

Transmission

| | | | |
|---------|--|--|--|
| 342-582 | ALLISON 3000 RDS AUTOMATIC TRANSMISSION WITH PTO PROVISION | | |
|---------|--|--|--|

Transmission Equipment

| | | | |
|---------|---|--|--|
| 343-339 | ALLISON VOCATIONAL PACKAGE 223 - AVAILABLE ON 3000/4000 PRODUCT FAMILIES WITH VOCATIONAL MODELS RDS, HS, MH AND TRV | | |
| 84B-012 | ALLISON VOCATIONAL RATING FOR ON/OFF HIGHWAY APPLICATIONS AVAILABLE WITH ALL PRODUCT FAMILIES | | |
| 84C-023 | PRIMARY MODE GEARS, LOWEST GEAR 1, START GEAR 1, HIGHEST GEAR 6, AVAILABLE FOR 3000/4000 PRODUCT FAMILIES ONLY | | |
| 84D-023 | SECONDARY MODE GEARS, LOWEST GEAR 1, START GEAR 1, HIGHEST GEAR 6, AVAILABLE FOR 3000/4000 PRODUCT FAMILIES ONLY | | |
| 84E-000 | PRIMARY SHIFT SCHEDULE RECOMMENDED BY DTNA AND ALLISON, THIS DEFINED BY ENGINE AND VOCATIONAL USAGE | | |
| 84F-000 | ENHANCED CONVERTER LOAD RELEASE - DISABLED, AVAILABLE FOR ALL PRODUCT FAMILIES ONLY | | |
| 84G-000 | PRIMARY SHIFT SPEED RECOMMENDED BY DTNA AND ALLISON, THIS DEFINED BY ENGINE AND VOCATIONAL USAGE | | |
| 84H-000 | SECONDARY SHIFT SPEED RECOMMENDED BY DTNA AND ALLISON, THIS DEFINED BY ENGINE AND VOCATIONAL USAGE | | |
| 84L-000 | LOAD BASED SHIFT SCHEDULE AND VEHICLE ACCELERATION CONTROL RECOMMENDED BY DTNA AND ALLISON, THIS DEFINED VOCATIONAL USAGE | | |
| 84U-000 | DRIVER SWITCH INPUT - DEFAULT - NO SWITCHES | | |



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| Data Code | Description | Weight Front | Weight Rear |
|-----------|--|--------------|-------------|
| 353-022 | VEHICLE INTERFACE WIRING CONNECTOR WITHOUT BLUNT CUTS, AT BACK OF CAB | | |
| 34C-001 | ELECTRONIC TRANSMISSION CUSTOMER ACCESS CONNECTOR FIREWALL MOUNTED | | |
| 362-035 | CUSTOMER INSTALLED CHELSEA 277 SERIES PTO | | |
| 363-001 | PTO MOUNTING, LH SIDE OF MAIN TRANSMISSION | | |
| 341-018 | MAGNETIC PLUGS, ENGINE DRAIN, TRANSMISSION DRAIN, AXLE(S) FILL AND DRAIN | | |
| 345-003 | PUSH BUTTON ELECTRONIC SHIFT CONTROL, DASH MOUNTED | | |
| 97G-004 | TRANSMISSION PROGNOSTICS - ENABLED 2013 | | |
| 370-015 | WATER TO OIL TRANSMISSION COOLER, IN RADIATOR END TANK | | |
| 346-003 | TRANSMISSION OIL CHECK AND FILL WITH ELECTRONIC OIL LEVEL CHECK | | |
| 35T-001 | SYNTHETIC TRANSMISSION FLUID (TES-295 COMPLIANT) | | |

Front Axle and Equipment

| | | | |
|---------|---|----|--|
| 400-1A8 | DETROIT DA-F-14.7-3 14,700# FF1 71.5 KPI/3.74 DROP SINGLE FRONT AXLE | | |
| 402-049 | MERITOR 16.5X5 Q+ CAST SPIDER CAM FRONT BRAKES, DOUBLE ANCHOR, FABRICATED SHOES | | |
| 403-002 | NON-ASBESTOS FRONT BRAKE LINING | | |
| 419-023 | CONMET CAST IRON FRONT BRAKE DRUMS | | |
| 409-021 | SKF SCOTSEAL PLUS XL FRONT OIL SEALS | | |
| 408-001 | VENTED FRONT HUB CAPS WITH WINDOW, CENTER AND SIDE PLUGS - OIL | | |
| 416-022 | STANDARD SPINDLE NUTS FOR ALL AXLES | | |
| 405-002 | MERITOR AUTOMATIC FRONT SLACK ADJUSTERS | | |
| 406-001 | STANDARD KING PIN BUSHINGS | | |
| 536-012 | TRW TAS-85 POWER STEERING | 40 | |
| 539-003 | POWER STEERING PUMP | | |
| 534-015 | 2 QUART SEE THROUGH POWER STEERING RESERVOIR | | |
| 40T-001 | ORGANIC SAE 80/90 FRONT AXLE LUBE | | |

Front Suspension



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| Data Code | Description | Weight Front | Weight Rear |
|-----------|---|--------------|-------------|
| 620-010 | 14,600# TAPERLEAF FRONT SUSPENSION | 170 | |
| 619-005 | MAINTENANCE FREE RUBBER BUSHINGS - FRONT SUSPENSION | | |
| 410-001 | FRONT SHOCK ABSORBERS | | |

Rear Axle and Equipment

| | | | |
|---------|---|----|-------|
| 420-1K3 | MT-40-14X 40,000# R-SERIES TANDEM REAR AXLE | | 2,500 |
| 421-529 | 5.29 REAR AXLE RATIO | | |
| 424-003 | IRON REAR AXLE CARRIER WITH OPTIONAL HEAVY DUTY AXLE HOUSING | | 40 |
| 386-074 | MXL 176T MERITOR EXTENDED LUBE MAIN DRIVELINE WITH HALF ROUND YOKES | 25 | 25 |
| 388-073 | MXL 17T MERITOR EXTENDED LUBE INTERAXLE DRIVELINE WITH HALF ROUND YOKES | | |
| 878-019 | (1) INTERAXLE LOCK VALVE FOR TANDEM OR TRIDEM DRIVE AXLES | | |
| 87A-001 | BLINKING LAMP WITH EACH INTERAXLE LOCK SWITCH, INTERAXLE UNLOCK DEFAULT WITH IGNITION OFF | | |
| 423-020 | MERITOR 16.5X7 Q+ CAST SPIDER CAM REAR BRAKES, DOUBLE ANCHOR, FABRICATED SHOES | | |
| 433-002 | NON-ASBESTOS REAR BRAKE LINING | | |
| 434-011 | BRAKE CAMS AND CHAMBERS ON FORWARD SIDE OF DRIVE AXLE(S) | | |
| 451-023 | CONMET CAST IRON REAR BRAKE DRUMS | | |
| 440-021 | SKF SCOTSEAL PLUS XL REAR OIL SEALS | | |
| 426-075 | HALDEX GOLDSEAL LONGSTROKE 2-DRIVE AXLES SPRING PARKING CHAMBERS | | 20 |
| 428-003 | HALDEX AUTOMATIC REAR SLACK ADJUSTERS | | |
| 41T-001 | ORGANIC SAE 80/90 REAR AXLE LUBE | | |
| 42T-001 | STANDARD REAR AXLE BREATHER(S) | | |

Rear Suspension

| | | | |
|---------|--|--|-----|
| 622-1A0 | TUFTRAC 40,000# REAR SPRING SUSPENSION | | 410 |
| 621-055 | TUFTRAC STANDARD RIDE HEIGHT | | |
| 431-003 | AXLE CLAMPING GROUP | | |
| 624-009 | 54 INCH AXLE SPACING | | |
| 623-006 | FORE/AFT AND TRANSVERSE CONTROL RODS | | |
| 439-001 | REAR SHOCK ABSORBERS - ONE AXLE | | |

Brake System

Application Version 8.9.114
 Data Version PRL-14D.034
 14ft Flatbed with Crane Truck



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| Data Code | Description | Weight Front | Weight Rear |
|-----------|--|--------------|-------------|
| 490-100 | WABCO 4S/4M ABS WITHOUT TRACTION CONTROL | | |
| 871-001 | REINFORCED NYLON, FABRIC BRAID AND WIRE BRAID CHASSIS AIR LINES | | |
| 904-001 | FIBER BRAID PARKING BRAKE HOSE | | |
| 412-001 | STANDARD BRAKE SYSTEM VALVES | | |
| 46D-002 | STANDARD AIR SYSTEM PRESSURE PROTECTION SYSTEM | | |
| 413-002 | STD U.S. FRONT BRAKE VALVE | | |
| 432-003 | RELAY VALVE WITH 5-8 PSI CRACK PRESSURE, NO REAR PROPORTIONING VALVE | | |
| 480-009 | BW AD-9 BRAKE LINE AIR DRYER WITH HEATER | 20 | |
| 479-015 | AIR DRYER FRAME MOUNTED | | |
| 460-001 | STEEL AIR BRAKE RESERVOIRS | | |
| 477-001 | PULL CABLE ON WET TANK, PETCOCK DRAIN VALVES ON ALL OTHER AIR TANKS | | |

Trailer Connections

| | |
|---------|--|
| 914-001 | AIR CONNECTIONS TO END OF FRAME WITH GLAD HANDS FOR TRUCK AND NO DUST COVERS |
| 296-010 | PRIMARY CONNECTOR/RECEPTACLE WIRED FOR SEPARATE STOP/TURN, ABS CENTER PIN POWERED THROUGH IGNITION |
| 297-001 | SAE J560 7-WAY PRIMARY TRAILER CABLE RECEPTACLE MOUNTED END OF FRAME |
| 335-004 | UPGRADED CHASSIS MULTIPLEXING UNIT |

Wheelbase & Frame

| | | | |
|---------|---|-----|-----|
| 545-450 | 4500MM (177 INCH) WHEELBASE | | |
| 546-102 | 7/16X3-9/16X11-1/8 INCH STEEL FRAME (11.11MMX282.6MM/0.437X11.13 INCH) 120KSI | 240 | 130 |
| 547-001 | 1/4 INCH (6.35MM) C-CHANNEL INNER FRAME REINFORCEMENT | 170 | 360 |
| 552-030 | 1600MM (63 INCH) REAR FRAME OVERHANG | | |
| 55W-006 | FRAME OVERHANG RANGE: 61 INCH TO 70 INCH | | |
| AC8-99D | CALC'D BACK OF CAB TO REAR SUSP C/L (CA) : 111.45 in | | |
| AE8-99D | CALCULATED EFFECTIVE BACK OF CAB TO REAR SUSPENSION C/L (CA) : 108.45 in | | |
| AE4-99D | CALC'D FRAME LENGTH - OVERALL : 279.37 | | |



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| Data Code | Description | Weight Front | Weight Rear |
|-----------|---|--------------|-------------|
| AM6-99D | CALC'D SPACE AVAILABLE FOR DECKPLATE : 111.45 in | | |
| FSS-0LH | CALCULATED FRAME SPACE LH SIDE : 12.66 in | | |
| FSS-0RH | CALCULATED FRAME SPACE RH SIDE : 52.76 in | | |
| 553-001 | SQUARE END OF FRAME | | |
| 550-001 | FRONT CLOSING CROSSMEMBER | | |
| 559-001 | STANDARD WEIGHT ENGINE CROSSMEMBER | | |
| 562-001 | STANDARD MIDSHIP #1 CROSSMEMBER(S) | | |
| 572-001 | STANDARD REARMOST CROSSMEMBER | | |
| 565-002 | HEAVY DUTY SUSPENSION CROSSMEMBER | | |

Chassis Equipment

| | | | |
|---------|--|--|--|
| 556-1E5 | 14 INCH PAINTED STEEL BUMPER | | |
| 574-001 | BUMPER MOUNTING FOR SINGLE LICENSE PLATE | | |
| 551-007 | GRADE 8 THREADED HEX HEADED FRAME FASTENERS | | |

Fuel Tanks

| | | | |
|---------|--|--|--|
| 204-151 | 60 GALLON/227 LITER ALUMINUM FUEL TANK - LH | | |
| 218-006 | 25 INCH DIAMETER FUEL TANK(S) | | |
| 215-005 | PLAIN ALUMINUM/PAINTED STEEL FUEL/HYDRAULIC TANK(S) WITH PAINTED BANDS | | |
| 212-007 | FUEL TANK(S) FORWARD | | |
| 664-001 | PLAIN STEP FINISH | | |
| 205-001 | FUEL TANK CAP(S) | | |
| 122-075 | ALLIANCE FUEL FILTER/WATER SEPARATOR | | |
| 216-020 | EQUIFLO INBOARD FUEL SYSTEM | | |
| 202-016 | HIGH TEMPERATURE REINFORCED NYLON FUEL LINE | | |

Tires

| | | | |
|---------|--|----|----|
| 093-ORC | MICHELIN XZY-3 12R22.5 16 PLY RADIAL FRONT TIRES | 82 | |
| 094-ODH | MICHELIN XDE M/S 11R22.5 14 PLY RADIAL REAR TIRES | | 56 |

Hubs

| | | | |
|---------|------------------------------------|--|--|
| 418-056 | CONMET PRESET PLUS IRON FRONT HUBS | | |
| 450-056 | CONMET PRESET PLUS IRON REAR HUBS | | |



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| Data Code | Description | Weight Front | Weight Rear |
|---------------------|--|--------------|-------------|
| Wheels | | | |
| 502-428 | ACCURIDE 28828 22.5X8.25 10-HUB PILOT 6.18 INSET 2-HAND HD STEEL DISC FRONT WHEELS | 26 | |
| 505-428 | ACCURIDE 28828 22.5X8.25 10-HUB PILOT 2-HAND HD STEEL DISC REAR WHEELS | | 104 |
| Cab Exterior | | | |
| 829-1A5 | 108 INCH BBC FLAT ROOF ALUMINUM CONVENTIONAL CAB | | |
| 650-008 | AIR CAB MOUNTS | | |
| 648-002 | NONREMOVABLE BUGSCREEN MOUNTED BEHIND GRILLE | | |
| 667-004 | FRONT FENDERS SET-BACK AXLE | | |
| 678-001 | LH AND RH GRAB HANDLES | | |
| 646-041 | STATIONARY BLACK GRILLE | | |
| 65X-004 | BLACK HOOD MOUNTED AIR INTAKE GRILLE | | |
| 644-004 | FIBERGLASS HOOD | | |
| 727-1AH | SINGLE 14 INCH ROUND POLISHED AIR HORN ROOF MOUNTED | | |
| 726-001 | SINGLE ELECTRIC HORN | | |
| 728-001 | SINGLE HORN SHIELD | | |
| 657-001 | DOOR LOCKS AND IGNITION SWITCH KEYED THE SAME | | |
| 575-001 | REAR LICENSE PLATE MOUNT END OF FRAME | | |
| 312-068 | HALOGEN COMPOSITE HEADLAMPS WITH BLACK BEZELS | | |
| 302-001 | (5) AMBER MARKER LIGHTS | | |
| 294-001 | INTEGRAL STOP/TAIL/BACKUP LIGHTS | | |
| 300-015 | STANDARD FRONT TURN SIGNAL LAMPS | | |
| 744-1BH | DUAL WEST COAST MOLDED-IN COLOR MIRRORS | | |
| 797-001 | DOOR MOUNTED MIRRORS | | |
| 796-001 | 102 INCH EQUIPMENT WIDTH | | |
| 729-001 | STANDARD SIDE/REAR REFLECTORS | | |
| 768-043 | 63X14 INCH TINTED REAR WINDOW | | |
| 661-004 | TINTED DOOR GLASS LH AND RH WITH TINTED OPERATING WING WINDOWS | | |
| 654-027 | RH AND LH ELECTRIC POWERED WINDOWS, PASSENGER SWITCHES ON DOOR(S) | 8 | |
| 663-013 | TINTED WINDSHIELD | | |



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| Data Code | Description | Weight Front | Weight Rear |
|---------------------|--|--------------|-------------|
| 659-007 | 8 LITER WINDSHIELD WASHER RESERVOIR, CAB MOUNTED, WITHOUT FLUID LEVEL INDICATOR | | |
| Cab Interior | | | |
| 707-1AK | OPAL GRAY VINYL INTERIOR | | |
| 706-026 | MOLDED PLASTIC DOOR PANEL WITHOUT VINYL INSERT WITH ALUMINUM KICKPLATE LOWER DOOR | | |
| 708-026 | MOLDED PLASTIC DOOR PANEL WITHOUT VINYL INSERT WITH ALUMINUM KICKPLATE LOWER DOOR | | |
| 772-006 | BLACK MATS WITH SINGLE INSULATION | | |
| 785-004 | DASH MOUNTED ASH TRAY(S) WITHOUT LIGHTER | | |
| 691-008 | FORWARD ROOF MOUNTED CONSOLE WITH UPPER STORAGE COMPARTMENTS WITHOUT NETTING | | |
| 694-010 | IN DASH STORAGE BIN | | |
| 742-007 | (2) CUP HOLDERS LH AND RH DASH | | |
| 680-006 | GRAY/CHARCOAL FLAT DASH | | |
| 720-003 | 5 LB. FIRE EXTINGUISHER | 10 | |
| 700-002 | HEATER, DEFROSTER AND AIR CONDITIONER | | |
| 701-001 | STANDARD HVAC DUCTING | | |
| 703-005 | MAIN HVAC CONTROLS WITH RECIRCULATION SWITCH | | |
| 170-015 | STANDARD HEATER PLUMBING | | |
| 130-033 | DENSO HEAVY DUTY AIR CONDITIONER COMPRESSOR | | |
| 702-002 | BINARY CONTROL, R-134A | | |
| 739-033 | STANDARD INSULATION | | |
| 285-013 | SOLID-STATE CIRCUIT PROTECTION AND FUSES | | |
| 280-007 | 12V NEGATIVE GROUND ELECTRICAL SYSTEM | | |
| 324-014 | DOME LIGHT WITH 3-WAY SWITCH ACTIVATED BY LH AND RH DOORS | | |
| 655-005 | LH AND RH ELECTRIC DOOR LOCKS | | |
| 284-023 | (1) 12 VOLT POWER SUPPLY IN DASH | | |
| 756-1J3 | BASIC HIGH BACK AIR SUSPENSION DRIVER SEAT WITH MECHANICAL LUMBAR AND INTEGRATED CUSHION EXTENSION | 30 | |
| 760-1C0 | 2 MAN TOOL BOX MID BACK NON SUSPENSION PASSENGER SEAT WITH HEADRESTS | 70 | 20 |



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|-----------|--|--------------|-------------|
| 711-004 | LH AND RH INTEGRAL DOOR PANEL ARMRESTS | | |
| 758-036 | VINYL WITH VINYL INSERT DRIVER SEAT | | |
| 761-036 | VINYL WITH VINYL INSERT PASSENGER SEAT | | |
| 763-006 | 3 POINT DRIVER AND PASSENGER AND 2 POINT CENTER FRONT SEAT BELT RETRACTORS | | |
| 532-001 | FIXED STEERING COLUMN | | |
| 540-015 | 4-SPOKE 18 INCH (450MM) STEERING WHEEL | | |
| 765-002 | DRIVER AND PASSENGER INTERIOR SUN VISORS | | |

Instruments & Controls

| | | | |
|---------|--|---|--|
| 732-004 | GRAY DRIVER INSTRUMENT PANEL | | |
| 734-004 | GRAY CENTER INSTRUMENT PANEL | | |
| 870-001 | BLACK GAUGE BEZELS | | |
| 486-001 | LOW AIR PRESSURE INDICATOR LIGHT AND AUDIBLE ALARM | | |
| 840-002 | 2 INCH PRIMARY AND SECONDARY AIR PRESSURE GAUGES | | |
| 198-025 | INTAKE MOUNTED AIR RESTRICTION INDICATOR WITHOUT GRADUATIONS | | |
| 149-013 | ELECTRONIC CRUISE CONTROL WITH SWITCHES IN LH SWITCH PANEL | | |
| 156-007 | KEY OPERATED IGNITION SWITCH AND INTEGRAL START POSITION; 4 POSITION OFF/RUN/START/ACCESSORY | | |
| 811-042 | ICU3S, 132X48 DISPLAY WITH DIAGNOSTICS, 28 LED WARNING LAMPS AND DATA LINKED | | |
| 160-038 | HEAVY DUTY ONBOARD DIAGNOSTICS INTERFACE CONNECTOR LOCATED BELOW LH DASH | | |
| 844-001 | 2 INCH ELECTRIC FUEL GAUGE | | |
| 148-003 | PROGRAMMABLE RPM CONTROL - ELECTRONIC ENGINE | | |
| 856-001 | ELECTRICAL ENGINE COOLANT TEMPERATURE GAUGE | | |
| 864-001 | 2 INCH TRANSMISSION OIL TEMPERATURE GAUGE | | |
| 830-017 | ENGINE AND TRIP HOUR METERS INTEGRAL WITHIN DRIVER DISPLAY | | |
| 372-035 | (1) DASH MOUNTED PTO SWITCH WITH INDICATOR LAMP | 5 | |
| 852-002 | ELECTRIC ENGINE OIL PRESSURE GAUGE | | |



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| Data Code | Description | Weight Front | Weight Rear |
|-----------|---|--------------|-------------|
| 746-1B3 | AM/FM/WB RADIO WITH BLUETOOTH AND MICROPHONE, FRONT USB PORT, FRONT AND REAR AUXILIARY INPUTS AND J1939 | 10 | |
| 747-001 | DASH MOUNTED RADIO | | |
| 750-002 | (2) RADIO SPEAKERS IN CAB | | |
| 753-001 | AM/FM ANTENNA MOUNTED ON FORWARD LH ROOF | 2 | |
| 810-027 | ELECTRONIC MPH SPEEDOMETER WITH SECONDARY KPH SCALE, WITHOUT ODOMETER | | |
| 817-001 | STANDARD VEHICLE SPEED SENSOR | | |
| 812-001 | ELECTRONIC 3000 RPM TACHOMETER | | |
| 162-002 | IGNITION SWITCH CONTROLLED ENGINE STOP | | |
| 329-010 | TWO ON/OFF ROCKER SWITCHES IN THE DASH WITH INDICATOR LIGHTS AND WIRE ROUTED TO CHASSIS AT BACK OF CAB, LABEL OPT | | |
| 482-001 | BW TRACTOR PROTECTION VALVE | | |
| 883-001 | TRAILER HAND CONTROL BRAKE VALVE | 2 | |
| 836-015 | DIGITAL VOLTAGE DISPLAY INTEGRAL WITH DRIVER DISPLAY | | |
| 660-008 | SINGLE ELECTRIC WINDSHIELD WIPER MOTOR WITH DELAY | | |
| 304-001 | MARKER LIGHT SWITCH INTEGRAL WITH HEADLIGHT SWITCH | | |
| 882-004 | TWO VALVE PARKING BRAKE SYSTEM WITH WARNING INDICATOR | | |
| 299-013 | SELF CANCELING TURN SIGNAL SWITCH WITH DIMMER, WASHER/WIPER AND HAZARD IN HANDLE | | |
| 298-039 | INTEGRAL ELECTRONIC TURN SIGNAL FLASHER WITH HAZARD LAMPS OVERRIDING STOP LAMPS | | |

Design

065-000 PAINT: ONE SOLID COLOR

Color

980-5F6 CAB COLOR A: L0006EB WHITE ELITE BC
 986-020 BLACK, HIGH SOLIDS POLYURETHANE CHASSIS PAINT
 98K-998 NO FUEL TANK CABINET PAINT
 962-972 POWDER WHITE (N0006EA) FRONT WHEELS/RIMS (PKWHT21, TKWHT21, W, TW)



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| Data Code | Description | Weight Front | Weight Rear |
|-----------|---|--------------|-------------|
| 966-972 | POWDER WHITE (N0006EA) REAR WHEELS/RIMS (PKWHT21, TKWHT21, W, TW) | | |
| 964-020 | STANDARD BLACK BUMPER PAINT | | |
| 963-003 | STANDARD E COAT/UNDERCOATING | | |

Certification / Compliance

| | | | |
|---------|---|--|--|
| 996-001 | U.S. FMVSS CERTIFICATION, EXCEPT SALES CABS AND GLIDER KITS | | |
|---------|---|--|--|

Secondary Factory Options

| | | | |
|---------|--------------------------------------|--|--|
| 998-001 | CORPORATE PDI CENTER IN-SERVICE ONLY | | |
|---------|--------------------------------------|--|--|

TOTAL VEHICLE SUMMARY

Weight Summary

| | Weight Front | Weight Rear | Total Weight |
|---------------------------------|-----------------|-----------------|------------------|
| Factory Weight ⁺ | 7769 lbs | 7423 lbs | 15192 lbs |
| Dealer Installed Options | 0 lbs | 0 lbs | 0 lbs |
| Total Weight⁺ | 7769 lbs | 7423 lbs | 15192 lbs |

Dealer Installed Options

| | | Weight Front | Weight Rear |
|---------------------------------------|------------------------------------|--------------|--------------|
| 706 | UTILITY 1 SOURCE FLATBED AND CRANE | 0 | 0 |
| 707 | FREIGHT TO SACRAMENTO | 0 | 0 |
| Total Dealer Installed Options | | 0 lbs | 0 lbs |

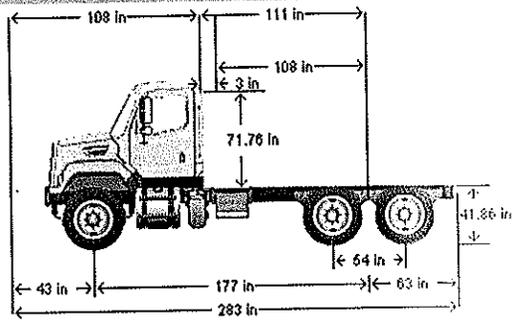
(+) Weights shown are estimates only.
 If weight is critical, contact Customer Application Engineering.



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D I M E N S I O N S



VEHICLE SPECIFICATIONS SUMMARY - DIMENSIONS

| | |
|--------------------------------------|--|
| Wheelbase (545) | 4500MM (177 INCH) WHEELBASE |
| Rear Frame Overhang (552) | 1600MM (63 INCH) REAR FRAME OVERHANG |
| Fifth Wheel (578) | NO FIFTH WHEEL |
| Mounting Location (577) | NO FIFTH WHEEL LOCATION |
| Maximum Forward Position (in) | 0 |
| Maximum Rearward Position (in) | 0 |
| Amount of Slide Travel (in) | 0 |
| Slide Increment (in) | 0 |
| Desired Slide Position (in) | 0.0 |
| Cab Size (829) | 108 INCH BBC FLAT ROOF ALUMINUM CONVENTIONAL CAB |
| Sleeper (682) | NO SLEEPER BOX/SLEEPER CAB |
| Exhaust System (016) | RH OUTBOARD UNDER STEP MOUNTED HORIZONTAL AFTERTREATMENT SYSTEM ASSEMBLY WITH RH HORIZONTAL TAILPIPE |

TABLE SUMMARY - DIMENSIONS



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| Dimensions | Inches |
|--|--------|
| Bumper to Back of Cab (BBC) | 108.3 |
| Bumper to Centerline of Front Axle (BA) | 42.7 |
| Min. Cab to Body Clearance (CB) | 3.0 |
| Back of Cab to Centerline of Rear Axle(s) (CA) | 111.4 |
| Effective Back of Cab to Centerline of Rear Axle(s) (Effective CA) | 108.4 |
| Back of Cab Protrusions (Exhaust/Intake) (CP) | 0.0 |
| Back of Cab Protrusions (Side Extenders/Trim Tab) (CP) | 0.0 |
| Back of Cab Protrusions (CNG Tank) | 0.0 |
| Back of Cab Clearance (CL) | 3.0 |
| Back of Cab to End of Frame | 174.4 |
| Cab Height (CH) | 71.8 |
| Wheelbase (WB) | 177.0 |
| Frame Overhang (OH) | 63.0 |
| Overall Length (OAL) | 282.7 |
| Rear Axle Spacing | 54.0 |
| Unladen Frame Height at Centerline of Rear Axle | 41.9 |

Performance calculations are estimates only. If performance calculations are critical, please contact Customer Application Engineering.



Manual # 99905931

22/153SL, 24/169SL, 26/180SL Technical Specifications

Revision Date: 03032015



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Revisions II

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26/180SL Performance

| | 26/180SL K2 | 26/180SL K3 | 26/180SL K4 | 26/180SL K5 | 26/180SL K6 | 26/180SL K7 | 26/180SL K8 |
|---|--|--|--|--|--|--|--|
| Loading group (EN12999) | H1/B3 |
| Load moment | 175039 ft lb (24.2tm) | 171422 ft lb (23.7tm) | 167083 ft lb (23.1tm) | 164189 ft lb (22.7tm) | 159850 ft lb (22.1tm) | 158403 ft lb (21.9tm) | 154786 ft lb (21.4tm) |
| Hydraulic reach | 326.77" (8.3 m) | 405.51" (10.3 m) | 492.12" (12.5 m) | 582.68" (14.8 m) | 677.17" (17.2 m) | 763.78" (19.4 m) | 854.33" (21.7 m) |
| Hydraulic telescopic movement | 150.80" (3830 mm) | 229.53" (5830 mm) | 312.20" (7930 mm) | 398.82" (10130 mm) | 489.78" (12440 mm) | 574.02" (14580 mm) | 661.02" (16790 mm) |
| Lifting capacity, hydraulic | 12301.79 lb - 169.29" (5580 kg - 4.3 m) | 11816.78 lb - 173.22" (5360 kg - 4.4 m) | 11353.81 lb - 177.17" (5150 kg - 4.5 m) | 10956.97 lb - 181.10" (4970 kg - 4.6 m) | 10538.10 lb - 181.10" (4780 kg - 4.6 m) | 10229.45 lb - 185.03" (4640 kg - 4.7 m) | 9854.66 lb - 188.98" (4470 kg - 4.8 m) |
| | 9487.79 lb - 244.09" (3850 kg - 6.2 m) | 8090.96 lb - 248.03" (3670 kg - 6.3m) | 7694.13 lb - 251.97" (3490 kg - 6.4 m) | 7363.44 lb - 251.97" (3340 kg - 6.4 m) | 7010.70 lb - 255.91" (3180 kg - 6.5 m) | 6768.19 lb - 259.84" (3070 kg - 6.6 m) | 6459.54 lb - 263.78" (2930 kg - 6.7 m) |
| | 6437.50 lb - 322.84" (2920 kg - 8.2 m) | 6062.71 lb - 322.84" (2750 kg - 8.2 m) | 5709.97 lb - 326.77" (2590 kg - 8.3 m) | 5379.28 lb - 330.71" (2440 kg - 8.4 m) | 5070.63 lb - 334.65" (2300 kg - 8.5 m) | 4828.12 lb - 334.65" (2190 kg - 8.5 m) | 4563.57 lb - 338.58" (2070 kg - 8.6 m) |
| | | 4850.17 lb - 401.57" (2200 kg - 10.2 m) | 4497.43 lb - 405.51" (2040 kg - 10.3 m) | 4188.78 lb - 409.45" (1900 kg - 10.4 m) | 3880.14 lb - 413.39" (1760 kg - 10.5 m) | 3659.67 lb - 413.39" (1660 kg - 10.5 m) | 3395.12 lb - 417.32" (1540 kg - 10.6 m) |
| | | | 3703.77 lb - 468.19" (1680 kg - 12.4 m) | 3395.12 lb - 492.13" (1540 kg - 12.5 m) | 3086.47 lb - 496.06" (1400 kg - 12.6 m) | 2866.01 lb - 496.06" (1300 kg - 12.6 m) | 2623.50 lb - 500" (1190 kg - 12.7 m) |
| | | | | 2843.96 lb - 578.74" (1290 kg - 14.7 m) | 2557.36 lb - 582.68" (1160 kg - 14.8 m) | 2336.90 lb - 582.68" (1060 kg - 14.8 m) | 2094.39 lb - 582.68" (950 kg - 14.9 m) |
| | | | | | 2182.58 lb - 673.23" (990 kg - 17.1 m) | 1984.16 lb - 673.23" (900 kg - 17.1 m) | 1741.65 lb - 677.17" (790 kg - 17.2 m) |
| 1521.19 lb - 763.78" (690 kg - 19.4 m) | 1344.82 lb - 850.39" (610 kg - 21.6 m) | | | | | | |
| Lifting capacity, manual extensions | | 2954.19 lb - 578.74" (1340 kg - 14.7 m) | 2204.62 lb - 673.23" (1000 kg - 17.1 m) | 1598.35 lb - 763.78" (725 kg - 19.4 m) | 1157.43 lb - 850.39" (525 kg - 21.6 m) | 705.48 lb - 940.95" (320 kg - 23.9 m) | |
| | | 2314.85 lb - 673.23" (1050 kg - 17.1 m) | 1763.70 lb - 763.78" (800 kg - 19.4 m) | 1157.43 lb - 854.33" (525 kg - 21.7 m) | 705.48 lb - 940.95" (320 kg - 23.9 m) | | |
| | | 1818.81 lb - 763.78" (825 kg - 19.4 m) | 1157.43 lb - 854.33" (525 kg - 21.7 m) | 705.48 lb - 21.7" (320 kg - 24.1 m) | | | |
| Slewing torque, gross | 19987.9 lb-ft (27.1 kNm) |
| Slewing angle | 400° | 400° | 400° | 400° | 400° | 400° | 400° |
| Max. heel at max. load moment | 5° | 5° | 5° | 5° | 5° | 5° | 5° |
| Slewing speed | 24°/s |

26/180SL Dimensions

| | 26/180SL K2 | 26/180SL K3 | 26/180SL K4 | 26/180SL K5 | 26/180SL K6 | 26/180SL K7 | 26/180SL K8 |
|---|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Height above chassis | 90.35" (2295 mm) |
| Width | 98.43" (2500 mm) |
| Length, no extra valves | 34.84" (885 mm) | 39.17" (995 mm) | 39.17" (995 mm) |
| Length, with extra valves (hose guides) | 39.57" (1005 mm) | | |
| Length, with 1 extra valve (hose reels) | | | | | | 39.17" (995 mm) | 39.17" (995 mm) |
| Length, with 2 extra valves (hose reels) | | | | | | 40.55" (1030 mm) | 40.55" (1030 mm) |
| Length, with extra valves (int. hose routing) | 34.84" (885 mm) | | |
| Stabilizer spread, S1 (standard) | 219.49" (5575 mm) |
| Stabilizer spread, D | 254.13" (6455 mm) |

26/180SL Weights, Basic Loader

| | 26/180SL K2 | 26/180SL K3 | 26/180SL K4 | 26/180SL K5 | 26/180SL K6 | 26/180SL K7 | 26/180SL K8 |
|---------------------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Standard loader 1), excl. Stabilizers | 4178 lb (1895 kg) | 4553 lb (2065 kg) | 4993 lb (2265 kg) | 5324 lb (2415 kg) | 5633 lb (2555 kg) | 5864 lb (2660 kg) | 6052 lb (2745 kg) |
| Stabilizers, S1 fixed | 639 lb (290 kg) |
| Stabilizers, S1 swing-up | 650 lb (295 kg) |
| Stabilizers, S1 hydr. swing-up | 661 lb (300 kg) |
| Stabilizers, D fixed | 805 lb (365 kg) |
| Stabilizers, D swing-up | 815 lb (370 kg) |
| Stabilizers, D hydr. swing-up | 827 lb (375 kg) |
| Mounting kit, 4 bolts | 143 lb (65 kg) |
| Mounting kit, 8 bolts | 132 lb (60 kg) |
| Tank, excl. oil (fitted on loader) | 88 lb (45 kg) |
| Manual extensions | | | 176 lb (80 kg) | 154 lb (70 kg) | 132 lb (60 kg) | 88 lb (45 kg) | 77 lb (35 kg) |
| | | | 154 lb (70 kg) | 132 lb (60 kg) | 88 lb (45 kg) | 77 lb (35 kg) | |
| | | | 132 lb (60 kg) | 88 lb (45 kg) | 77 lb (35 kg) | | |
| Oil in loader (stowing position) | 88 lb (40 kg) | 88 lb (45 kg) | 110 lb (50 kg) | 121 lb (55 kg) | 132 lb (60 kg) | 143 kg (65 kg) | 154 lb (70 kg) |

1) Weights ± 5% because of tolerances for plate thickness

26/180SL Weights, Equipment

| | 26/180SL K2 | 26/180SL K3 | 26/180SL K4 | 26/180SL K5 | 26/180SL K6 | 26/180SL K7 | 26/180SL K8 |
|--|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Stand-up controls (HS), std. | 132 lb (60 kg) |
| Stand-up controls (HS), direct valve control | 154 lb (70 kg) |
| Top seat (TS) | 198 lb (90 kg) |
| Top seat, ladder | 44 lb (20 kg) |
| 1 extra valve, hose guides | 121 lb (55 kg) | 143 lb (65 kg) | 165 lb (75 kg) | 187 lb (85 kg) | 209 lb (95 kg) | | |
| 1 extra valve, hose reels | | | | | | 209 lb (95 kg) | 209 lb (95 kg) |
| 1 extra valve, int. hose routing | 165 lb (75 kg) | 165 lb (75 kg) | 176 lb (80 kg) | 176 lb (80 kg) | 187 lb (85 kg) | | |
| 2 extra valves, hose guides | 165 lb (75 kg) | 198 lb (90 kg) | 231 lb (105 kg) | 264 lb (120 kg) | 135 lb (297 kg) | | |
| 2 extra valves, hose reels | | | | | | 408 lb (185 kg) | 408 lb (185 kg) |
| 2 extra valves, int. hose routing | 286 lb (130 kg) | 286 lb (130 kg) | 308 lb (140 kg) | 308 lb (145 kg) | 331 lb (150 kg) | | |
| Winch (1.5 t), single snatch block | 386 lb (175 kg) | 397 lb (180 kg) | 397 lb (180 kg) | 419 lb (190 kg) |
| Winch (1.5 t), double snatch block | 375 lb (170 kg) | 386 lb (175 kg) | 386 lb (175 kg) | 397 lb (180 kg) |
| Winch (2.5 t), single snatch block | 441 lb (200kg) | 441 lb (200kg) | 441 lb (200kg) | 441 lb (200kg) | 452 lb (205 kg) | 452 lb (205 kg) | 463 lb (210 kg) |
| Winch (2.5 t), double snatch block | 430 lb (195 kg) | 440 lb (200kg) | 440 lb (200 kg) | 452 lb (205 kg) |
| High-pressure filter | 15 lb (7 kg) |
| Oil cooler | 55 lb (25 kg) |

26/180SL Max. Load on Stabilizers (Per Stabilizer Cylinder)

| | 26/180SL K2 | 26/180SL K3 | 26/180SL K4 | 26/180SL K5 | 26/180SL K6 | 26/180SL K7 | 26/180SL K8 |
|--------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| S1, fixed | 88507 ft-lb (120 kN) |
| S1, swing-up | 88507 ft-lb (120 kN) |
| S1, hydr. swing-up | 88507 ft-lb (120 kN) |
| D, fixed | 73756 ft-lb (100 kN) |
| D, swing-up | 73756 ft-lb (100 kN) |
| D, hydr. swing-up | 73756 ft-lb (100 kN) |

26/180SL Power Consumption / Oil Capacity

| | 26/180SL K2 | 26/180SL K3 | 26/180SL K4 | 26/180SL K5 | 26/180SL K6 | 26/180SL K7 | 26/180SL K8 |
|--|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|
| Working pressure | 5004 PSI (345 Bar) |
| Tank capacity (fitted on loader) | 23.78 Gallons (90 L) |
| Max. pump performance, Hydrocontrol, 1-circuit | 15.85 Gallon/min (60 L/min) |
| Max. pump performance, Hydrocontrol, 2-circuit | - | - | - | - | - | - | - |
| Max. pump performance, Danfoss fixed flow | 18.49 Gallon/min (70 L/min) |
| Max. pump performance, Danfoss variable | 31.70 Gallon/min (120 L/min) |

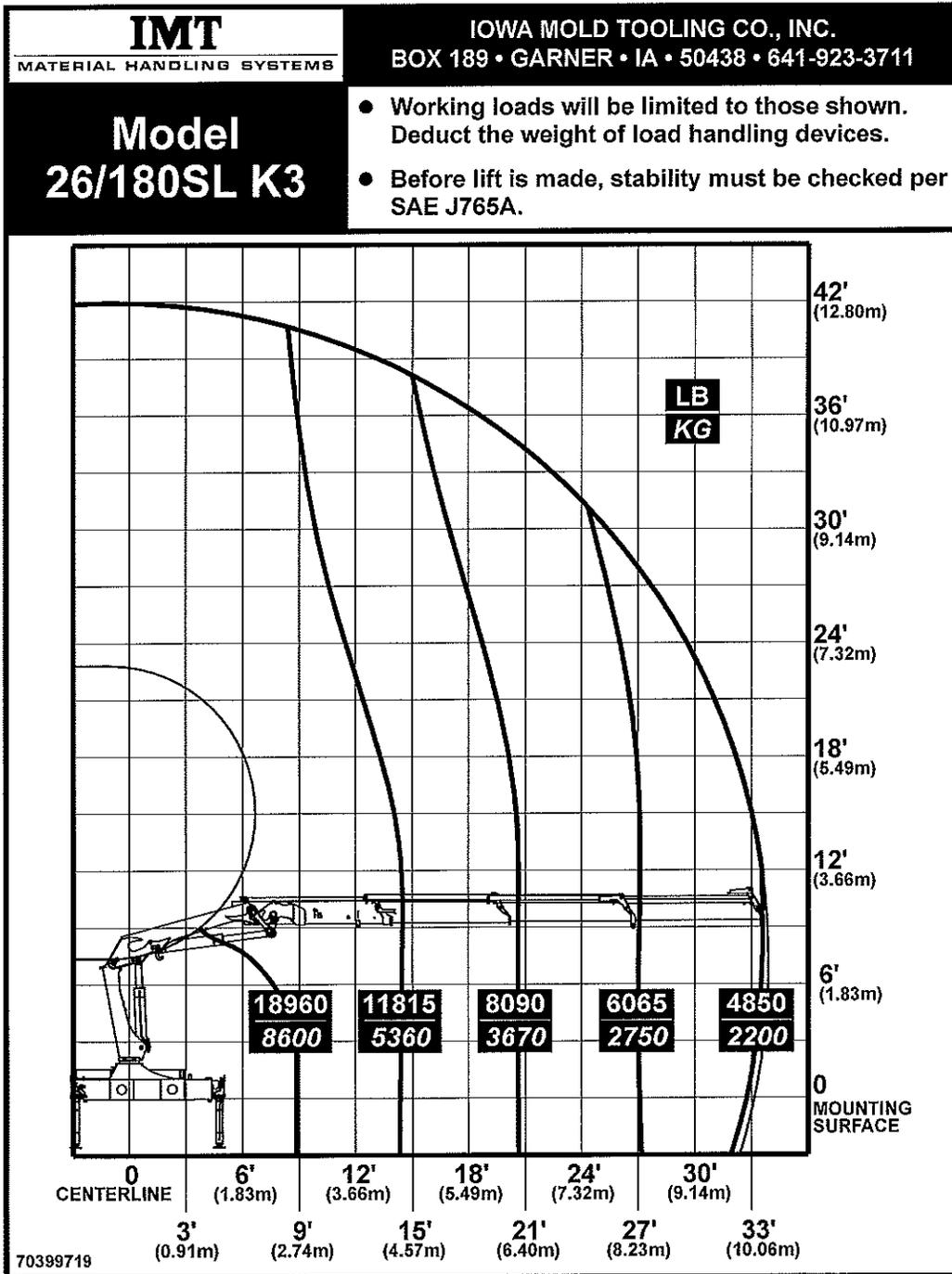
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CHAPTER 6

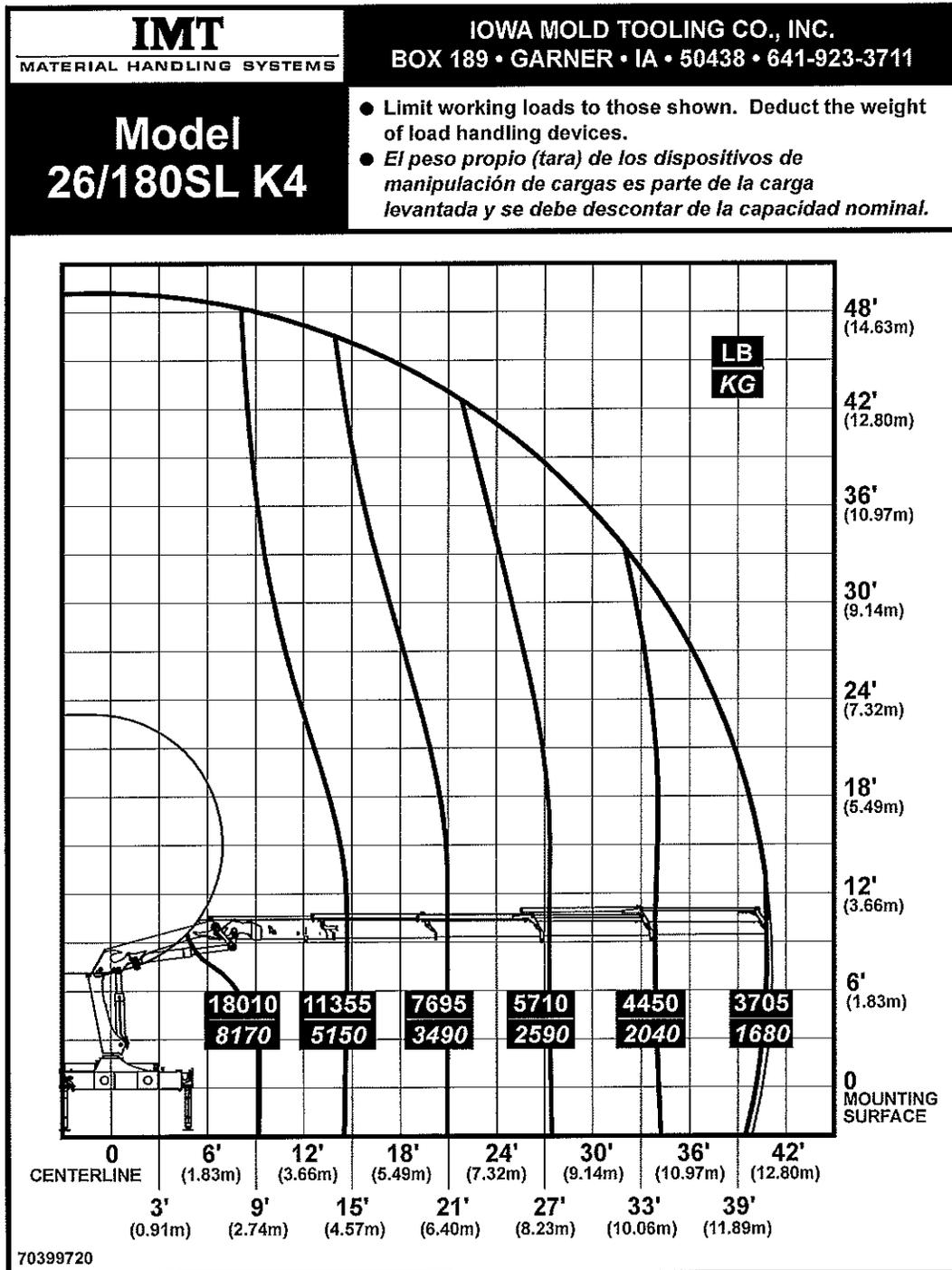
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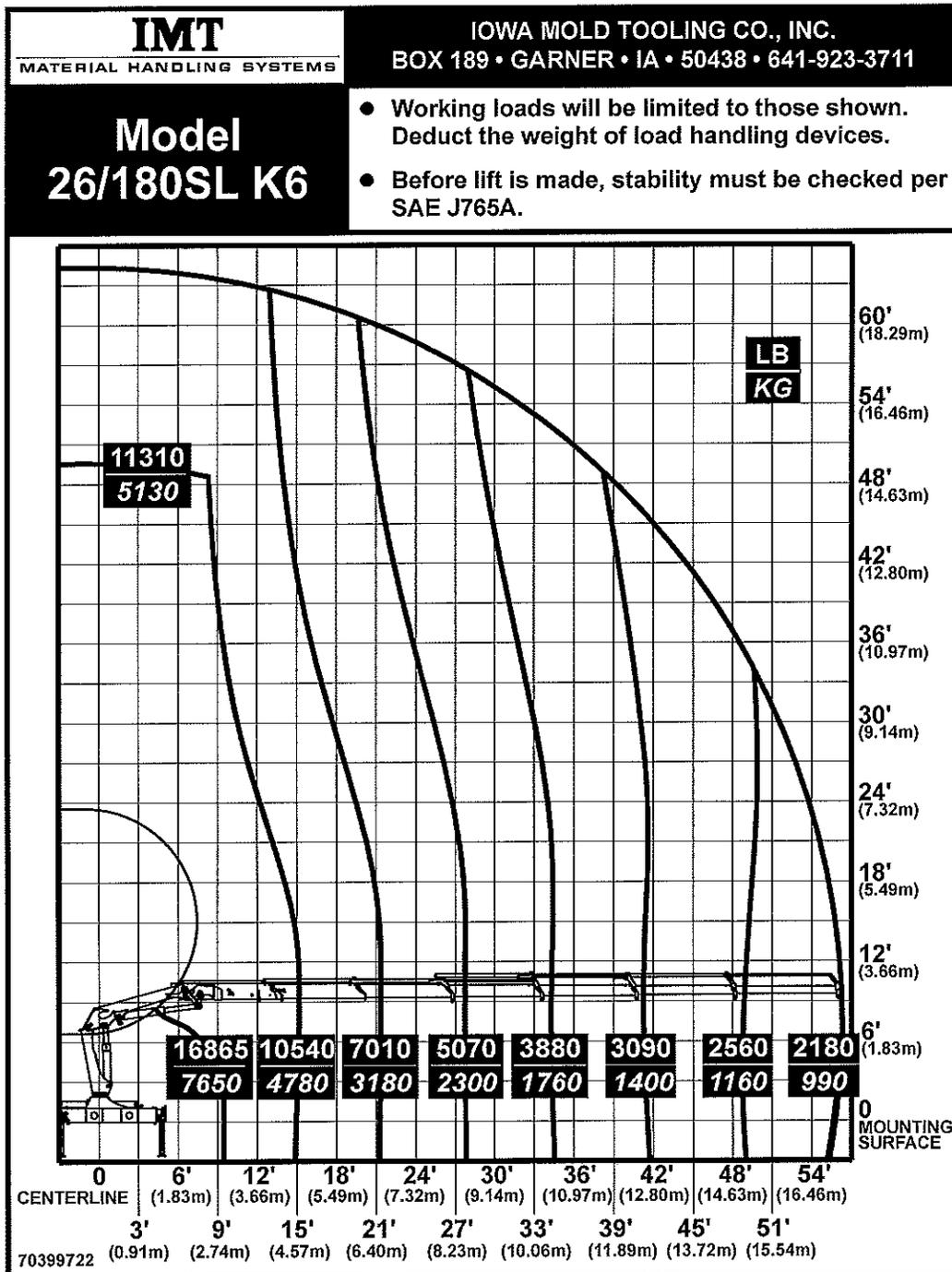
26/180SL Capacity Chart K3



26/180SL Capacity Chart K4

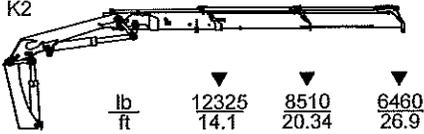


26/180SL Capacity Chart K6

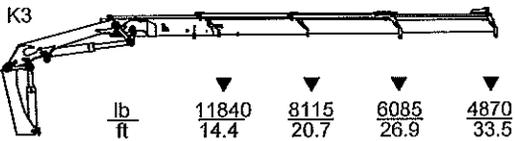


26/180SL Capacity Chart K2 - K8

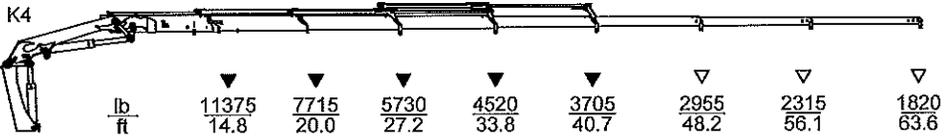
K2



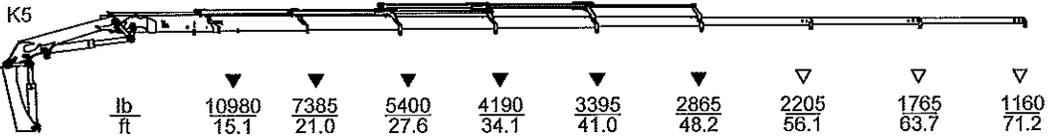
K3



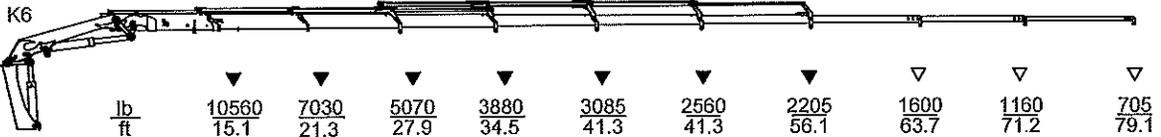
K4



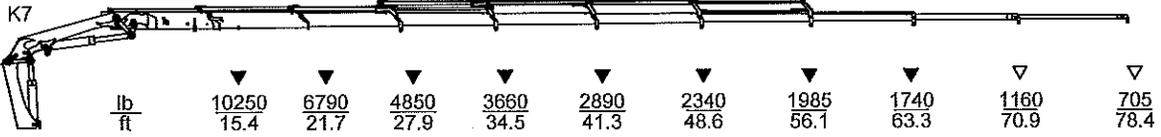
K5



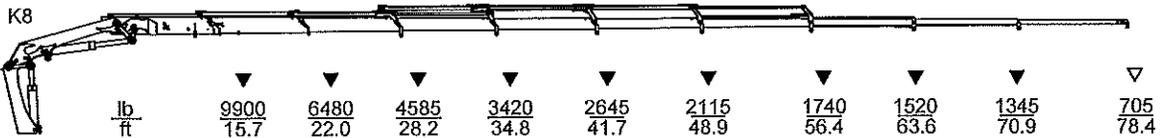
K6



K7



K8



- ▼ Lifting capacity with man. extensions
- ▼ Lifting capacity without man. extensions

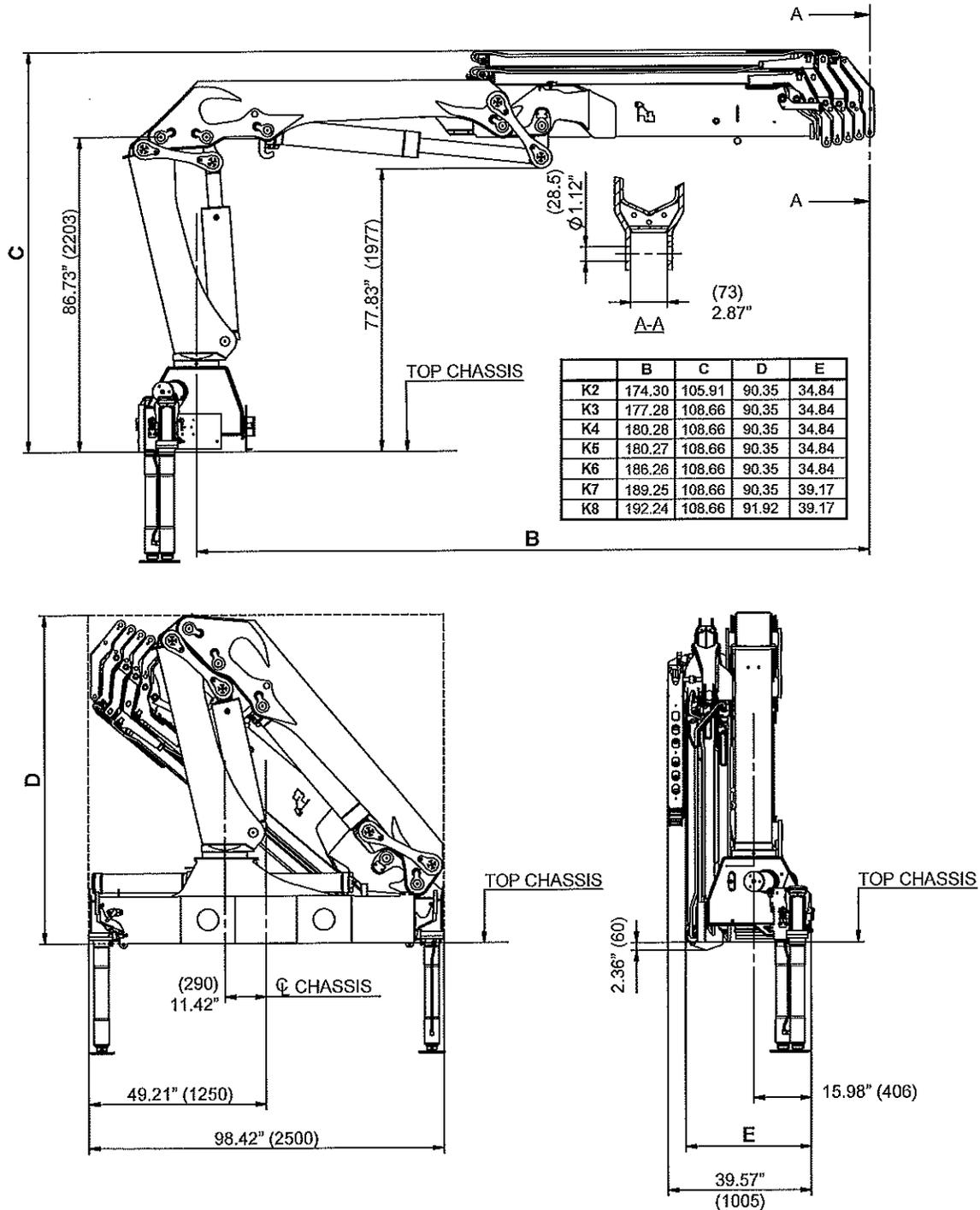
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CHAPTER 7

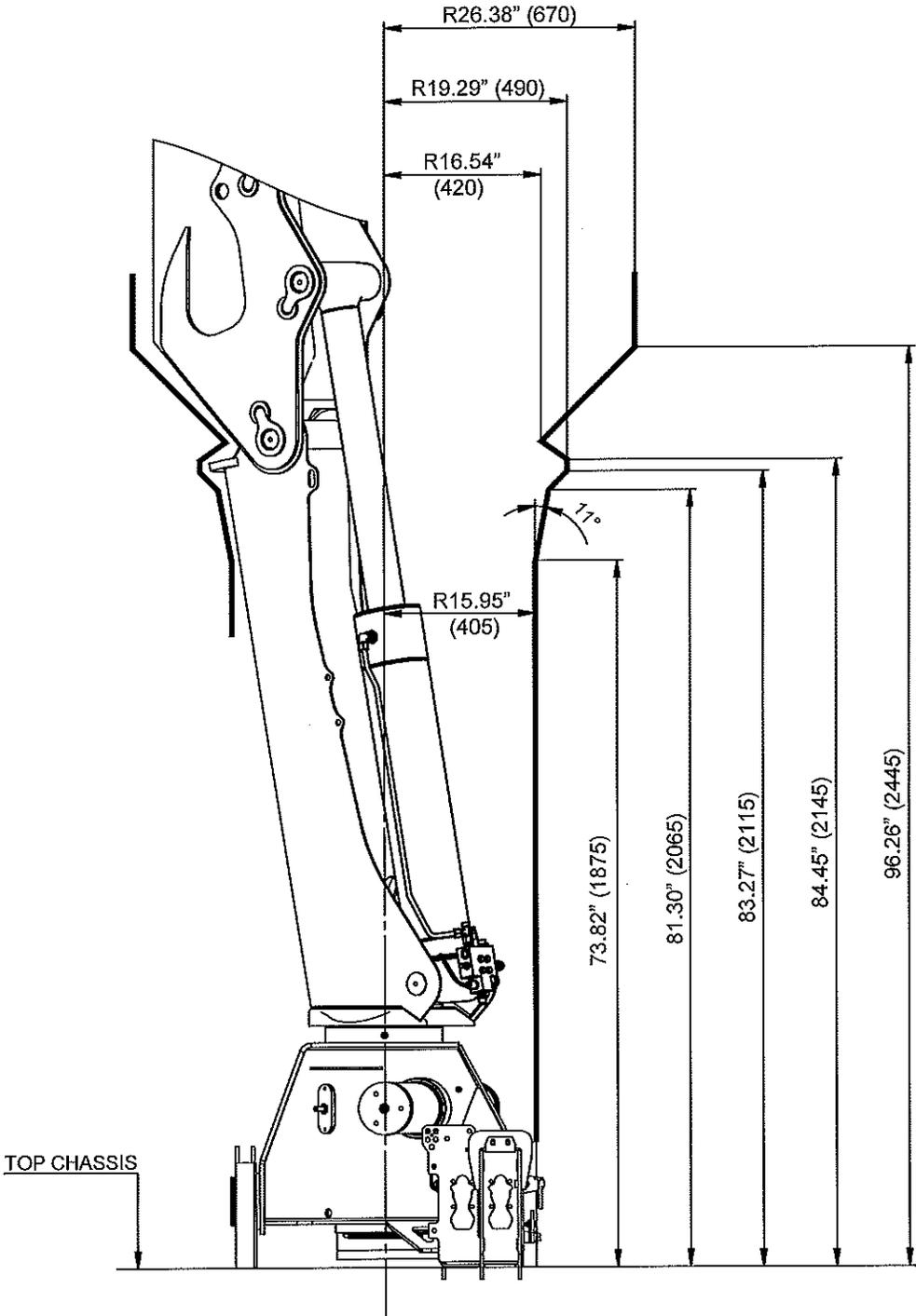
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Dimension Sketch



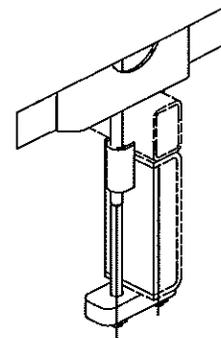
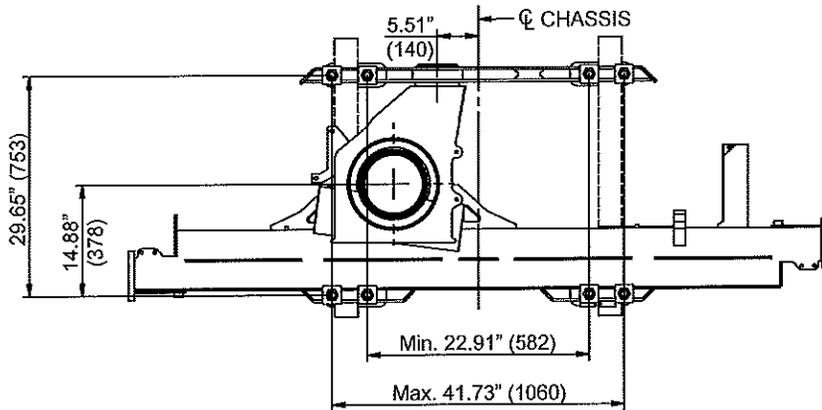
Slewing Radius



Dimensional Drawing Sketch for Truck-Mounted Loader

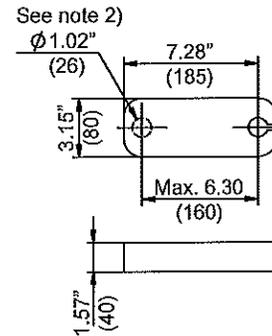
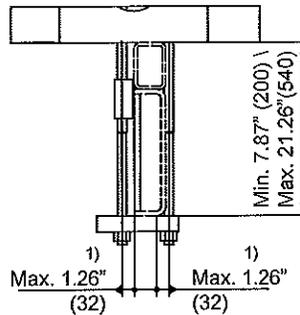
Truck-Mounted Loader

Mounting kit 8 x M24x2 bolts

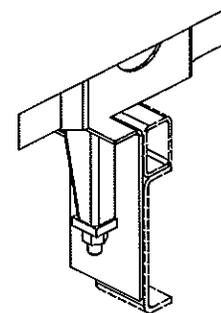
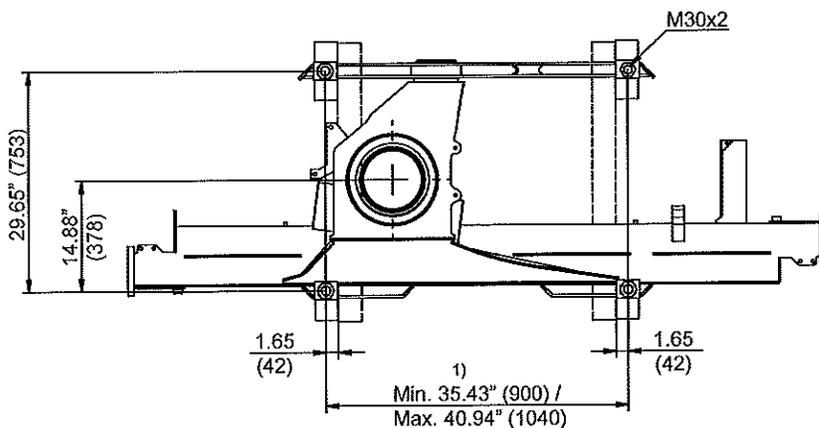


Notes:

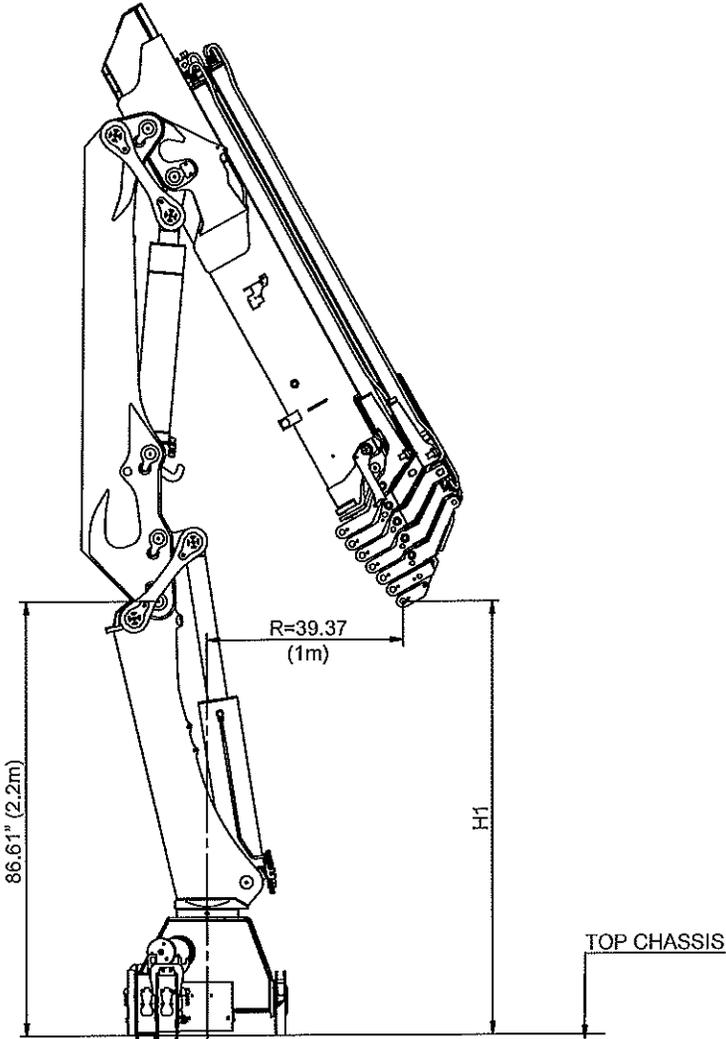
- 1) Values dictated by strength considerations.
- 2) Drill hole when assembling
- 3) As regards installation - please see IMT Installation Manual
- 4) Mounting kits or spare parts - please see the Spare Parts Catalogue of the individual loader



Mounting kit 3 x M33x2 bolts + 1 x M30x2 bolts

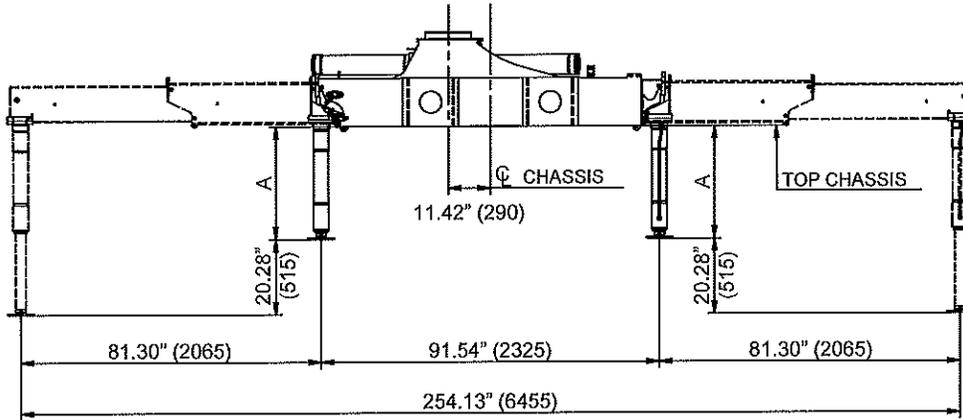
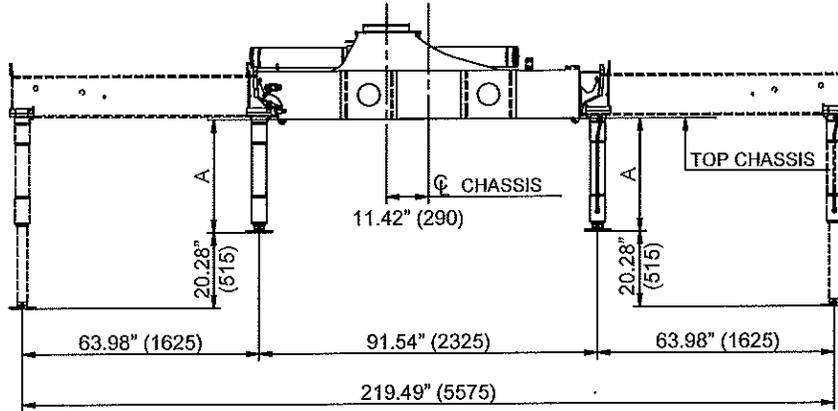


Lifting Height at Column



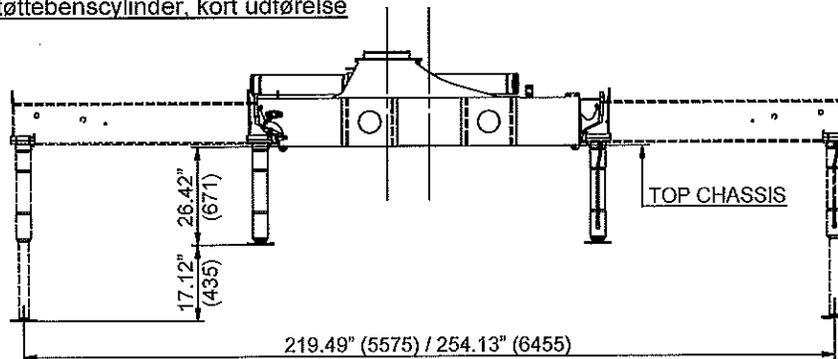
| | H1 | H1 |
|----|-------|---------|
| K2 | 2.74m | 107.87" |
| K3 | 2.65m | 104.33" |
| K4 | 2.56m | 100.79" |
| K5 | 2.47m | 97.24" |
| K6 | 2.38m | 93.70" |
| K7 | 2.29m | 90.16" |
| K8 | 2.21m | 87.01" |

Fixed Stabilizer Legs

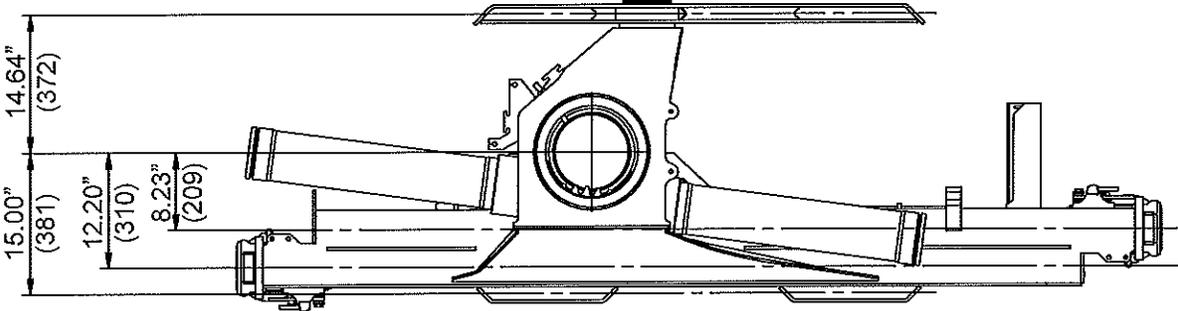


| |  |  |  |
|---|---|---|---|
| A | 770 | 870 | 970 |
| A | 30.31" | 34.25" | 38.19" |

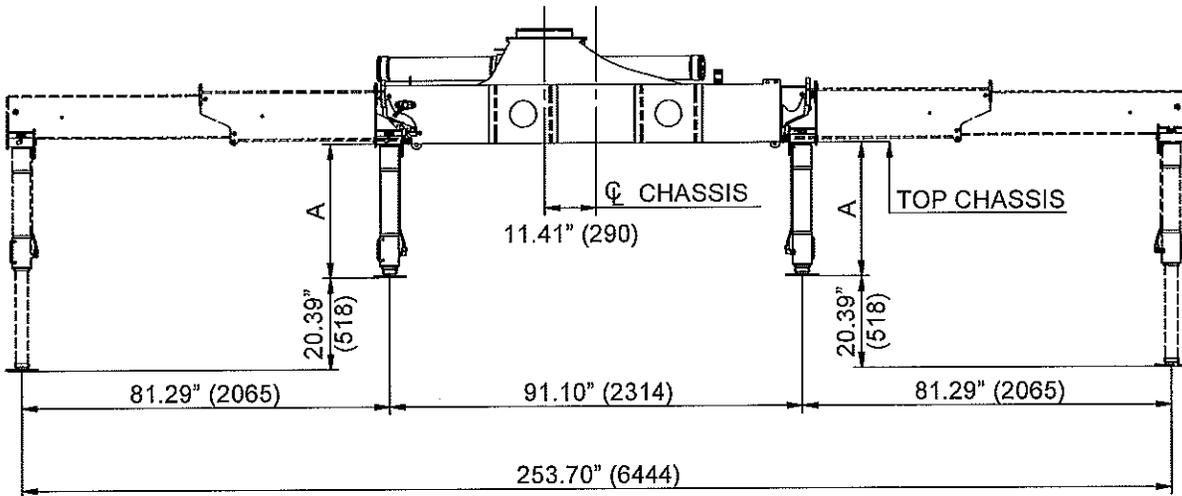
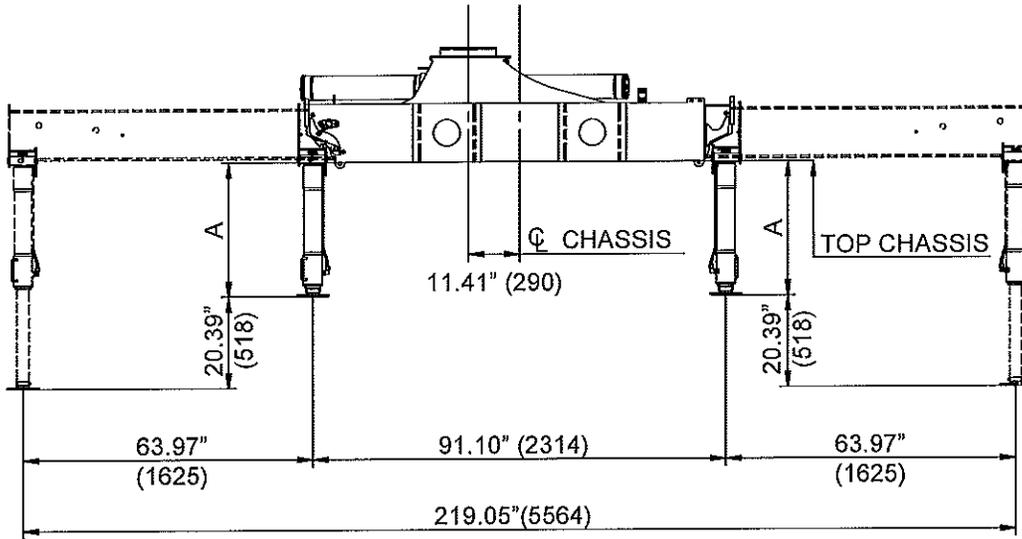
Støttebencylinder, kort udførelse

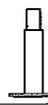


Fixed Stabilizer Legs



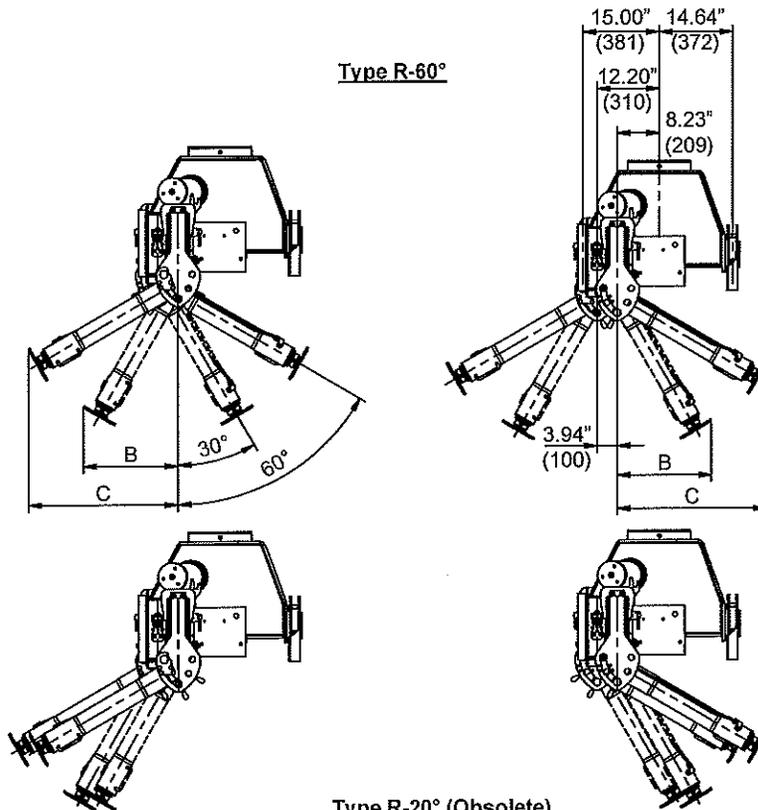
Swing-up Stabilizer Legs 20° - 60° (Manual)



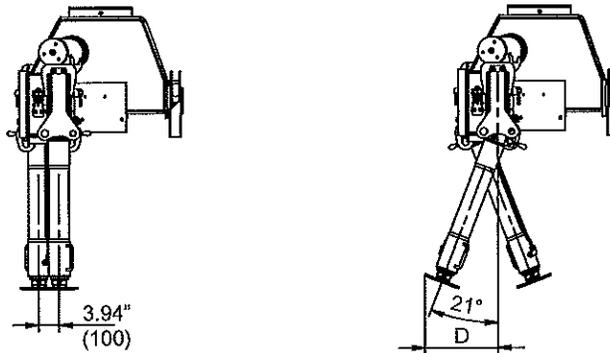
| |  |  |  |
|-------------------------|---|---|---|
| A Type R-60° | 30.12" (765) | 34.05" (865) | 37.99" (965) |
| A Type R-20° (Obsolete) | 29.80" (757) | 33.74" (857) | 37.68" (957) |

Swing-up Stabilizer Legs 20° - 60° (Manual)

Type R-60°

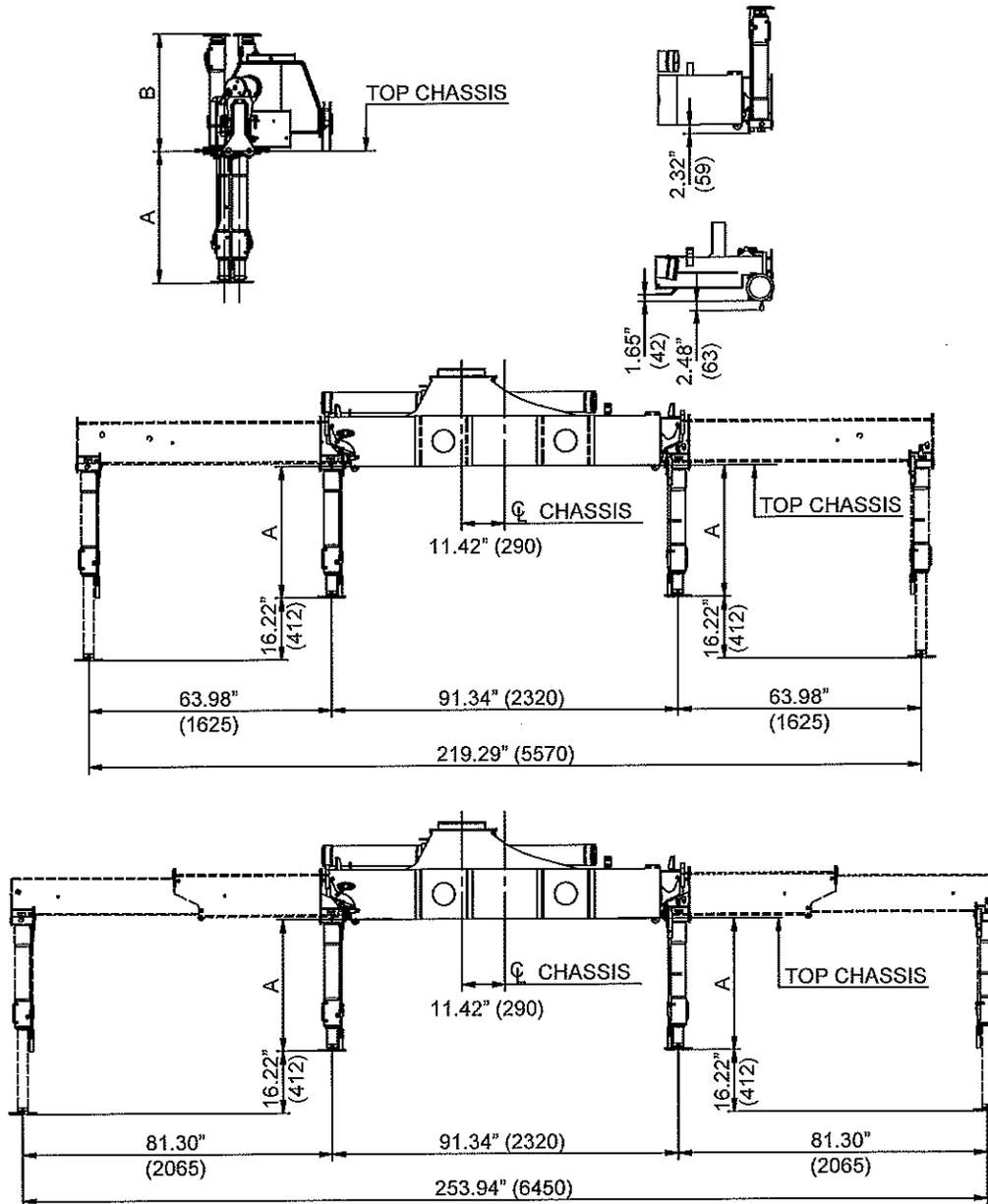


Type R-20° (Obsolete)



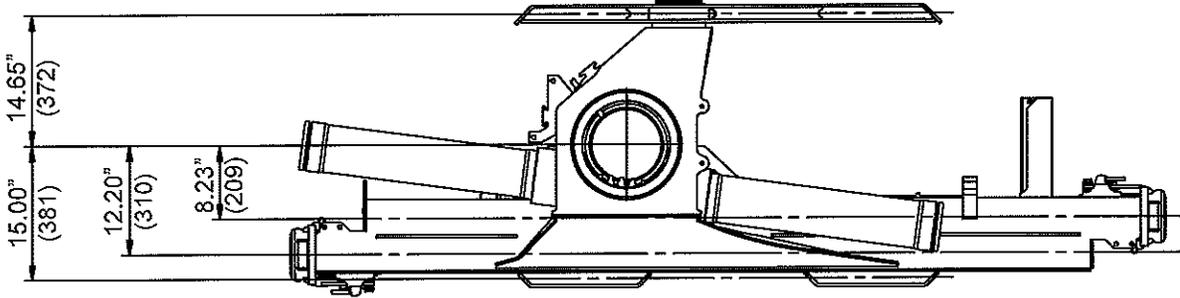
| |  |  |  |
|---|---|---|---|
| B | 18.66" (474) | 20.63" (524) | 22.60" (574) |
| C | 29.53" (750) | 32.91" (836) | 36.34" (923) |
| D | 14.41" (366) | 15.83" (402) | 17.24" (438) |

Swing-up Stabilizer Legs 180° (Manual + Hydraulic)

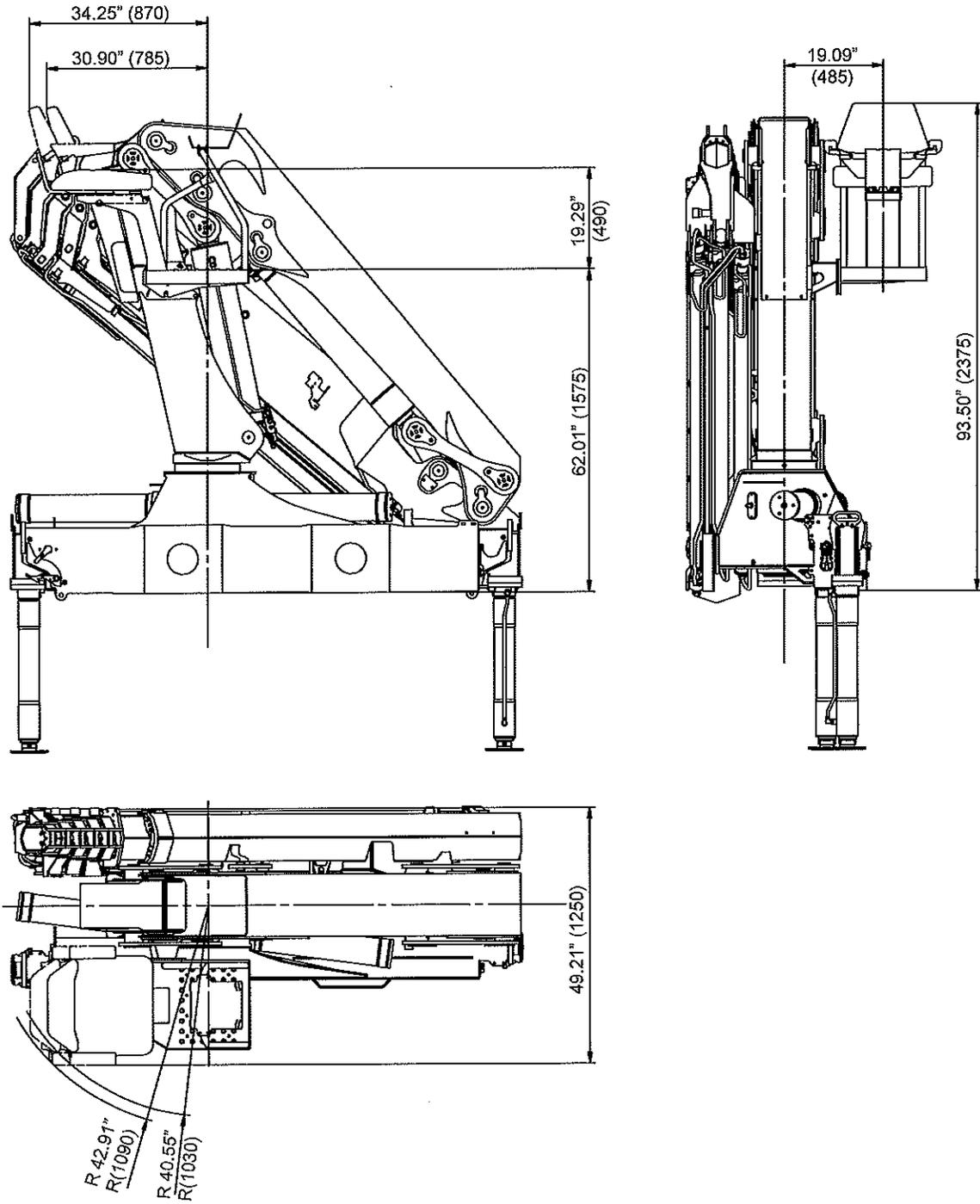


| |  |  |  |
|---|---|---|---|
| A | 34.45" (875) | 38.38" (975) | 42.32" (1075) |
| B | 30.75" (781) | 34.68" (881) | 38.62" (981) |

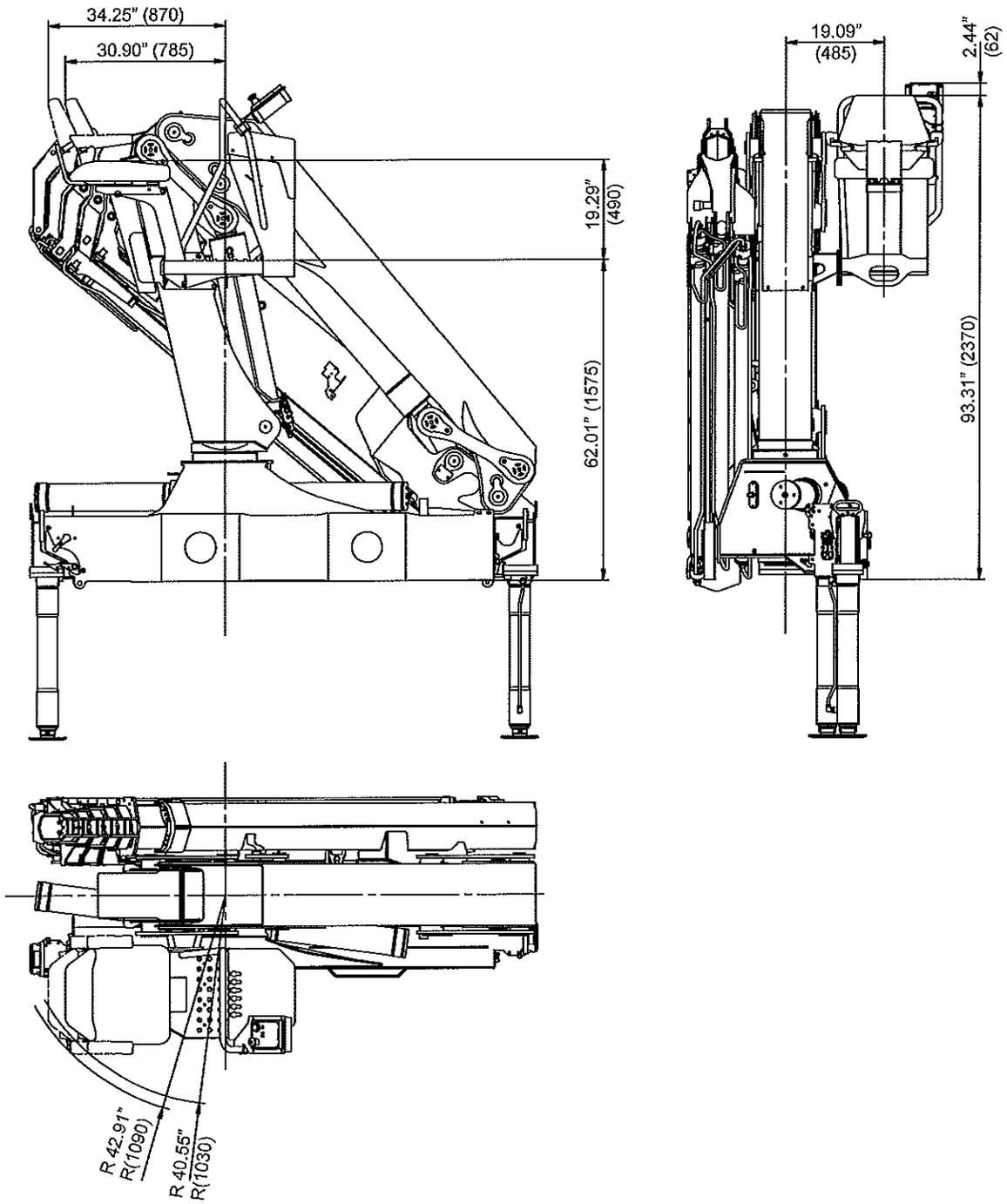
Swing-up Stabilizer Legs 180° (Manual + Hydraulic)



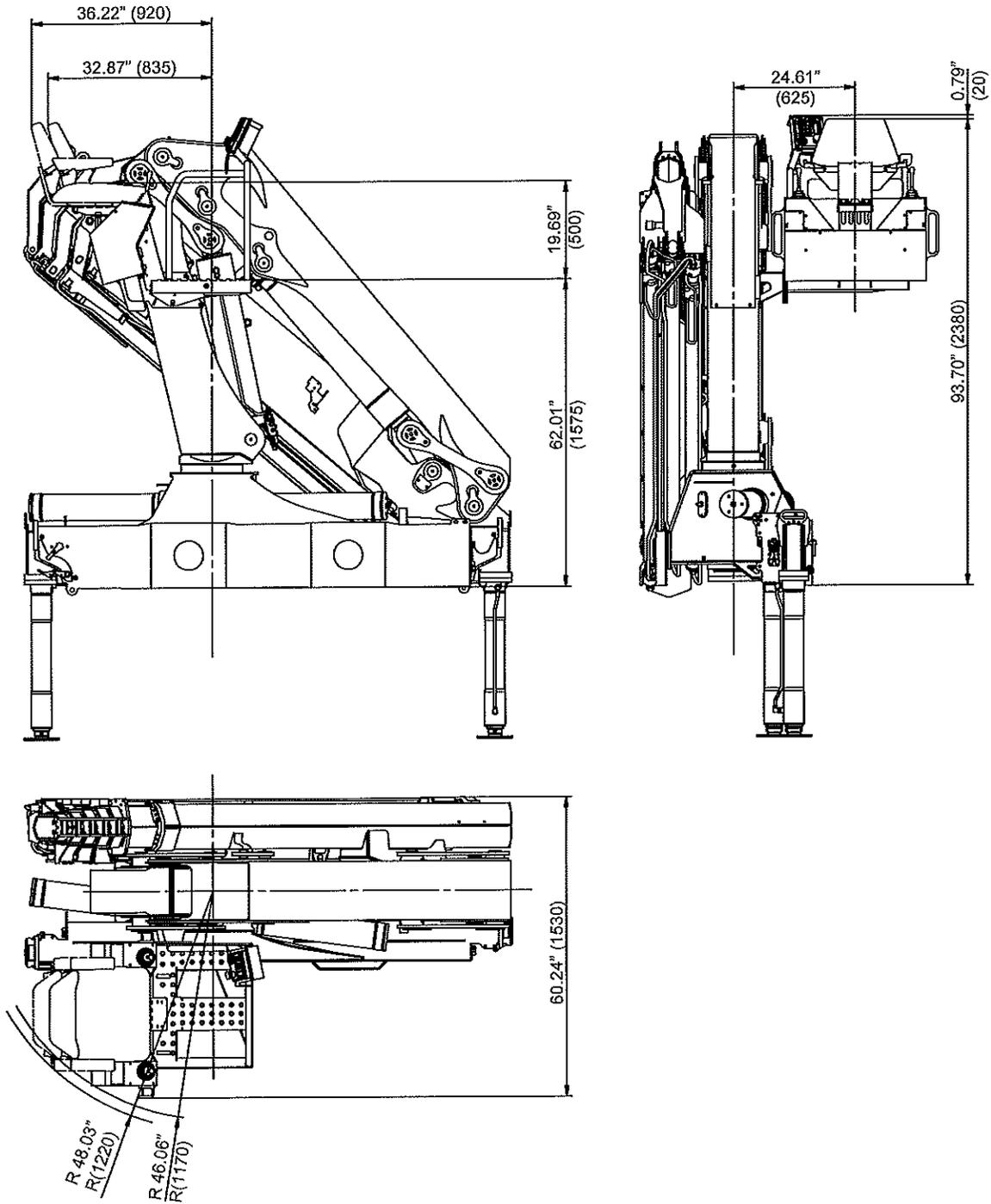
TS Top Seat (RC)



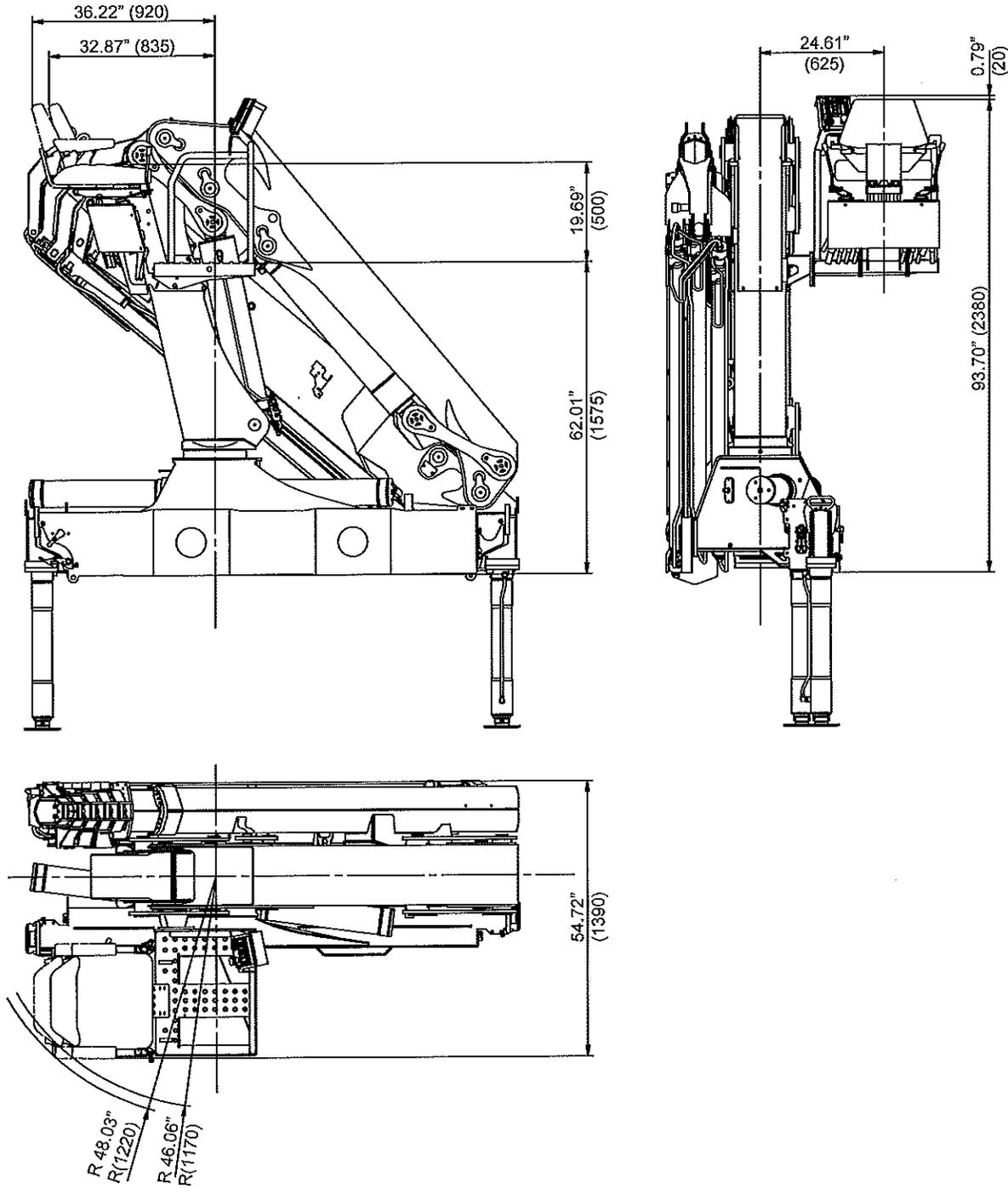
TS Top Seat (HC Linear)



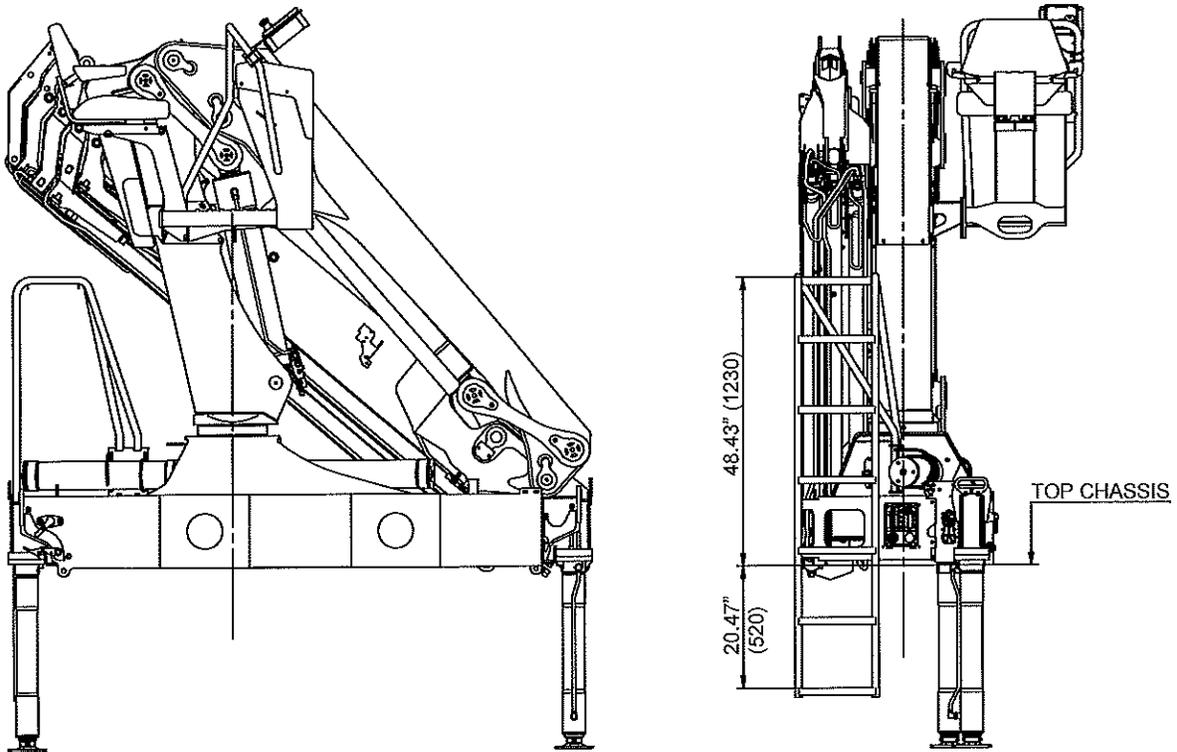
TS Top Seat (Danfoss X)



TS Top Seat (HC X)



Ladder for TS



Notes:

- 1) Ladder cannot be used for TS RC
- 2) There is no access to the top seat when the loader is in stowing position

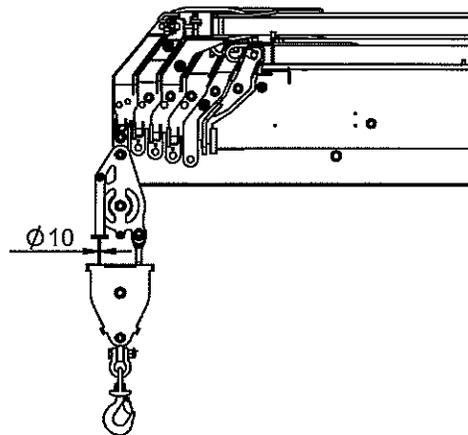
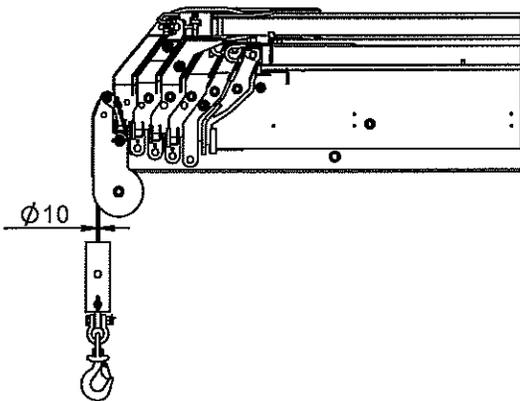
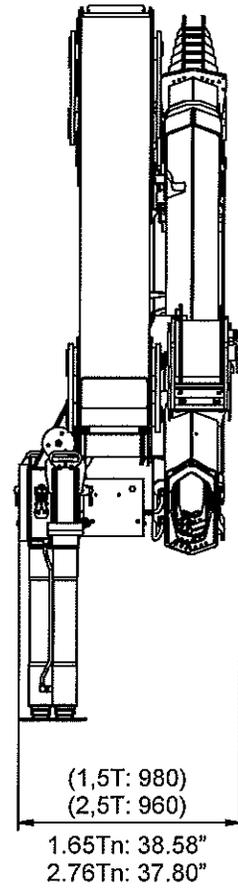
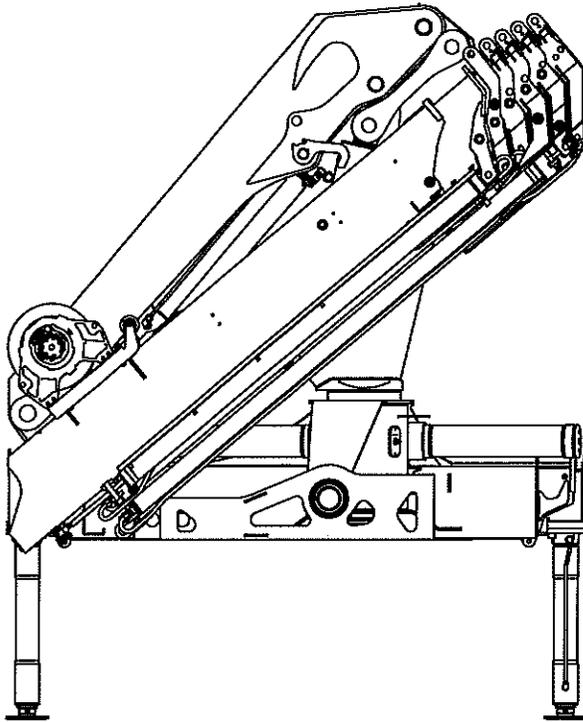
Winch

| Performance (at 150 bar): | 1.5T winch | 1.65tn winch | 2.5T winch | 2.75tn winch |
|----------------------------|------------|--------------|------------|--------------|
| Max. wire pull – 1st layer | 1500kg | 3307lb | 2500kg | 5512lb |
| Max. wire pull – 2nd layer | 1370kg | 3020lb | 2300kg | 5071lb |
| Max. wire pull – 3rd layer | 1260kg | 2777lb | 2100kg | 4630lb |
| Max. wire pull – 4th layer | 1170kg | 2579lb | 1950kg | 4299lb |

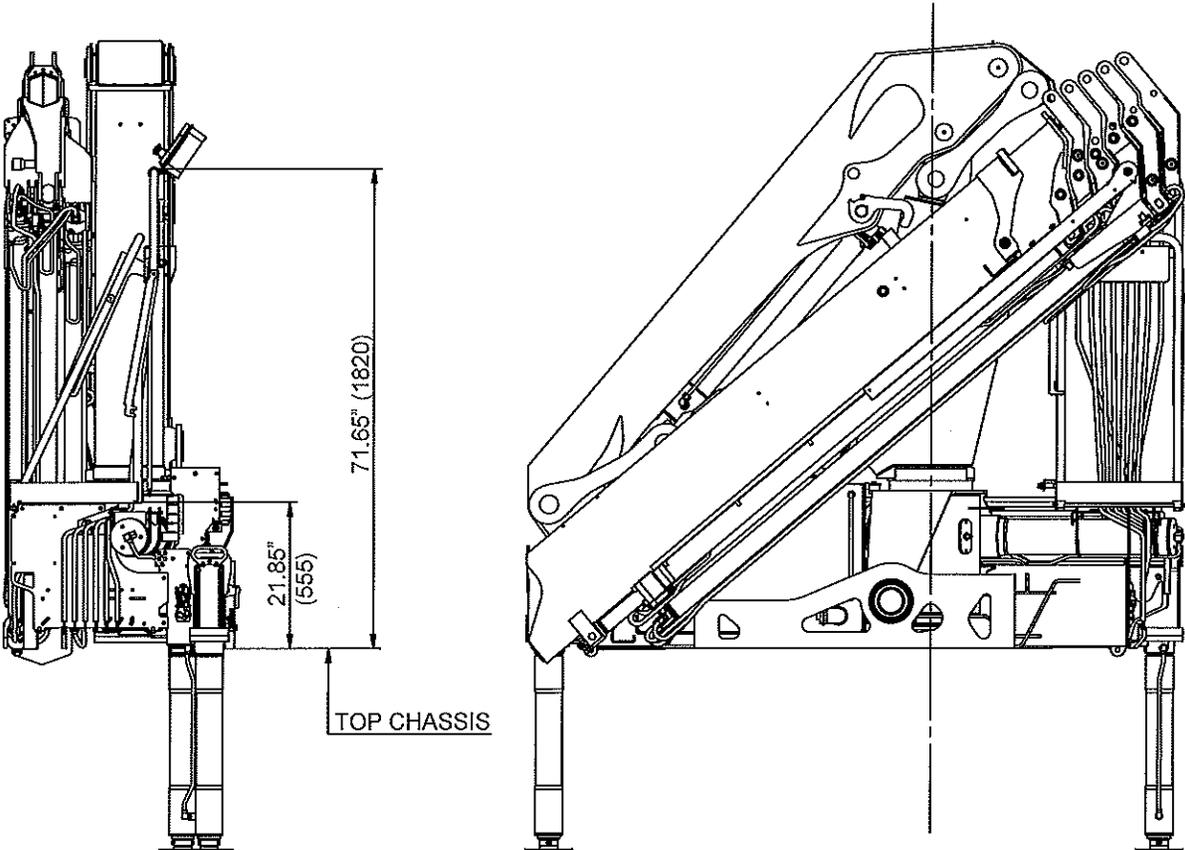
| Wire speed (at 40 l/min.): | 1.5T winch | 1.65tn winch | 2.5T winch | 2.75tn winch |
|-----------------------------|------------|--------------|------------|--------------|
| Max. wire speed – 1st layer | 22 m/min | 72 ft/min | 24 m/min | 79 ft/min |
| Max. wire speed – 2nd layer | 24 m/min | 79 ft/min | 26 m/min | 85 ft/min |
| Max. wire speed – 3rd layer | 26 m/min | 85 ft/min | 28 m/min | 92 ft/min |
| Max. wire speed – 4th layer | 28 m/min | 92 ft/min | 30 m/min | 98 ft/min |

| Weights: | 1.5T winch | 1.65tn winch | 2.5T winch | 2.75tn winch |
|---|------------|--------------|------------|--------------|
| Tare weight, winch (CE) | 65kg | 143lb | 90kg | 198lb |
| Fixed parts (valve section, brackets, hoses etc.) | 50kg | 110lb | 50kg | 110lb |
| Wire Ø10 x50 m | 30kg | 66lb | 30kg | 66lb |
| Spare parts, single snatch block | 30kg | 66lb | 30kg | 66lb |
| Spare parts, double snatch block | 40kg | 88lb | 40kg | 88lb |

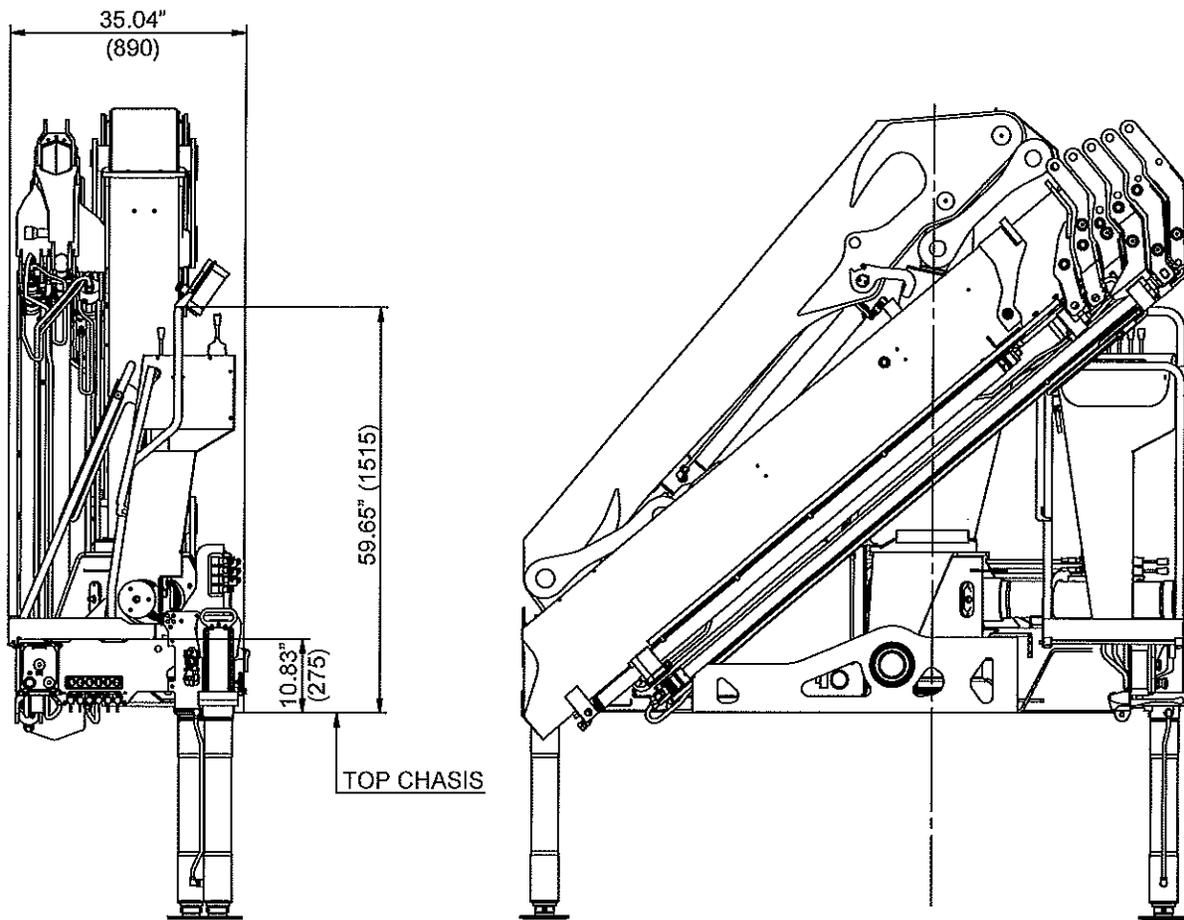
Winch



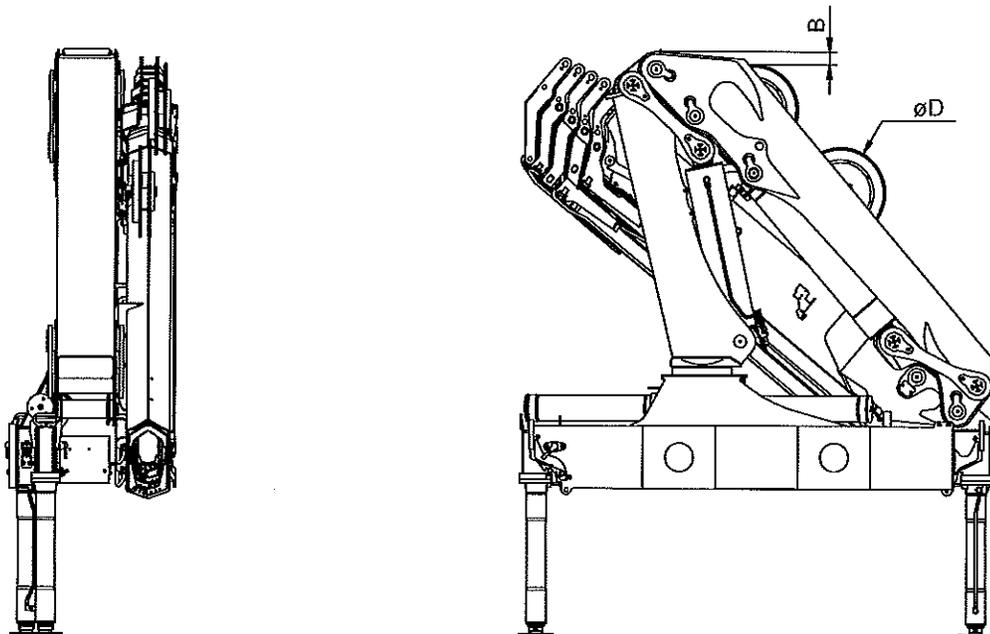
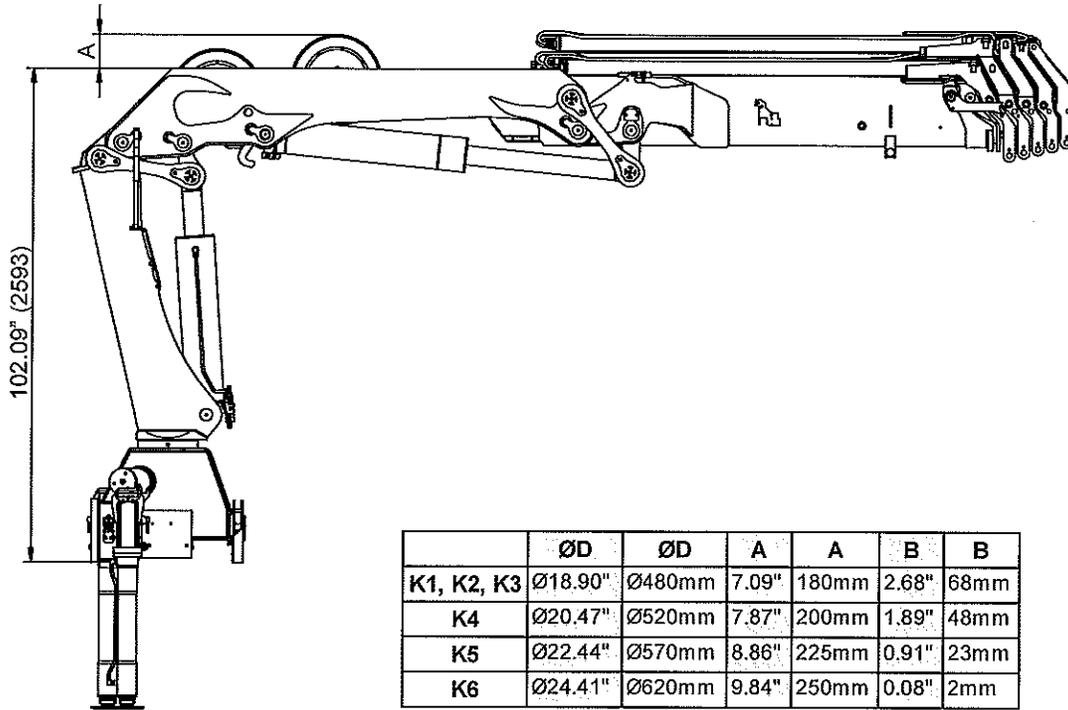
Stand-Up Platform (Std)



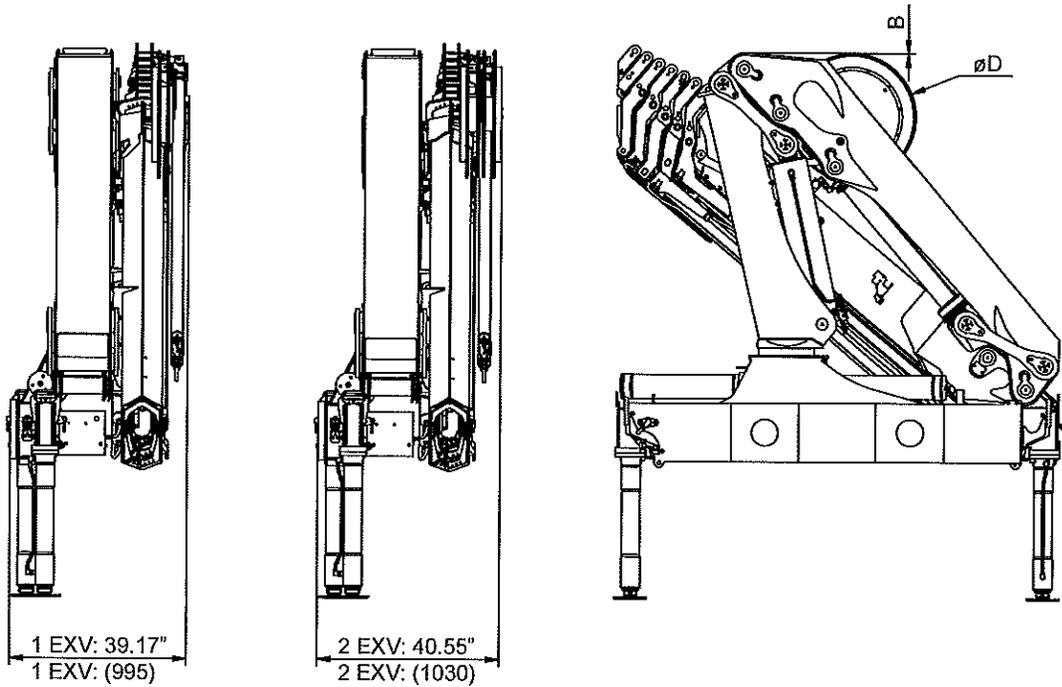
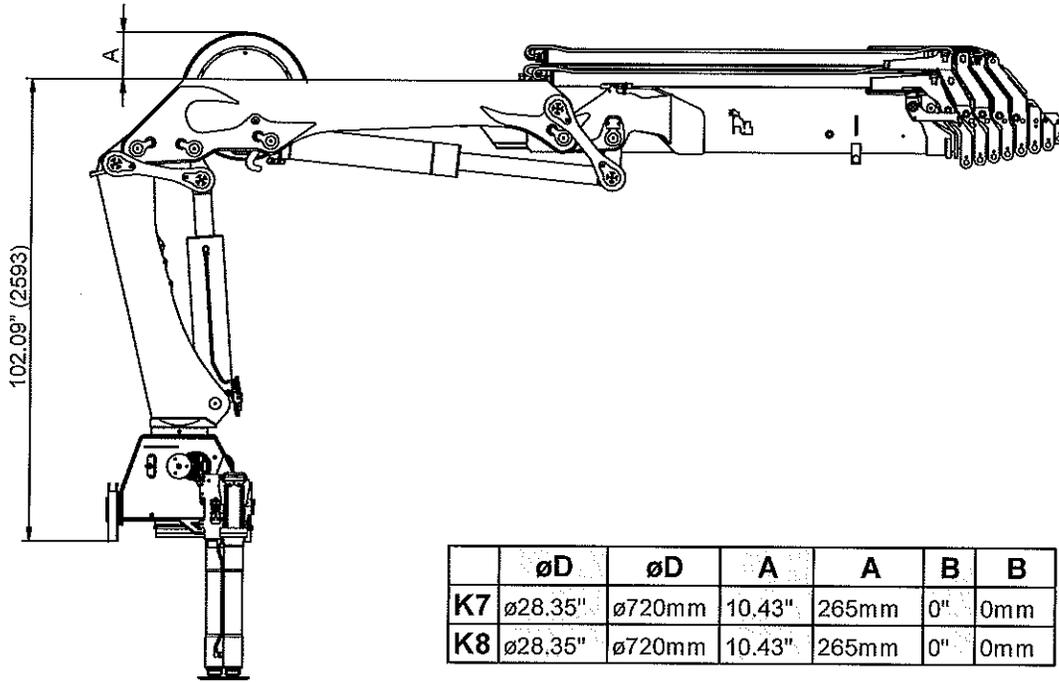
Stand-Up Platform (Valve Control)



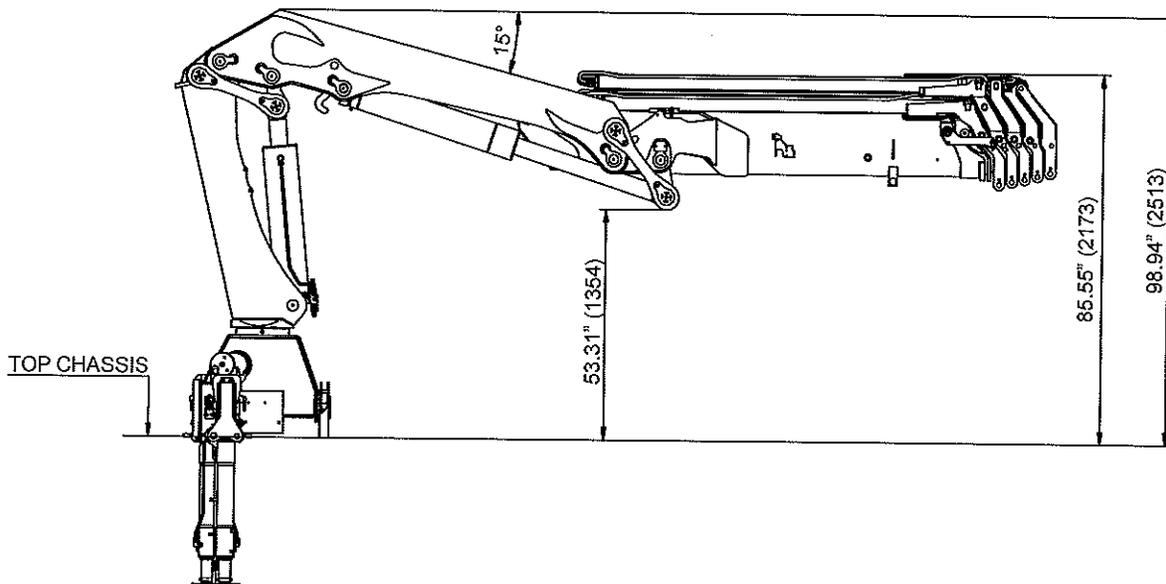
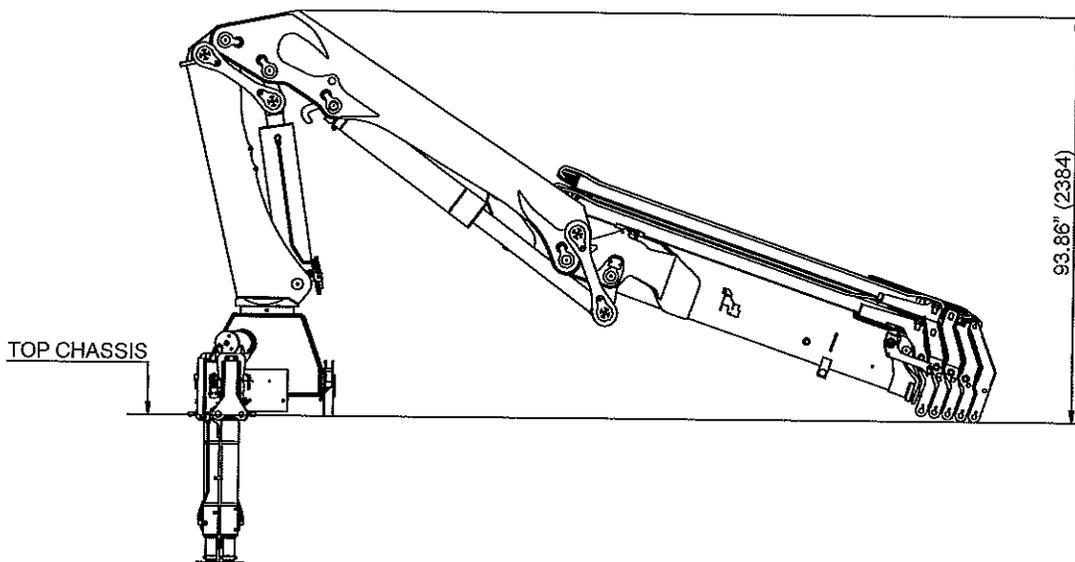
Internal Hose Routing K2-K6



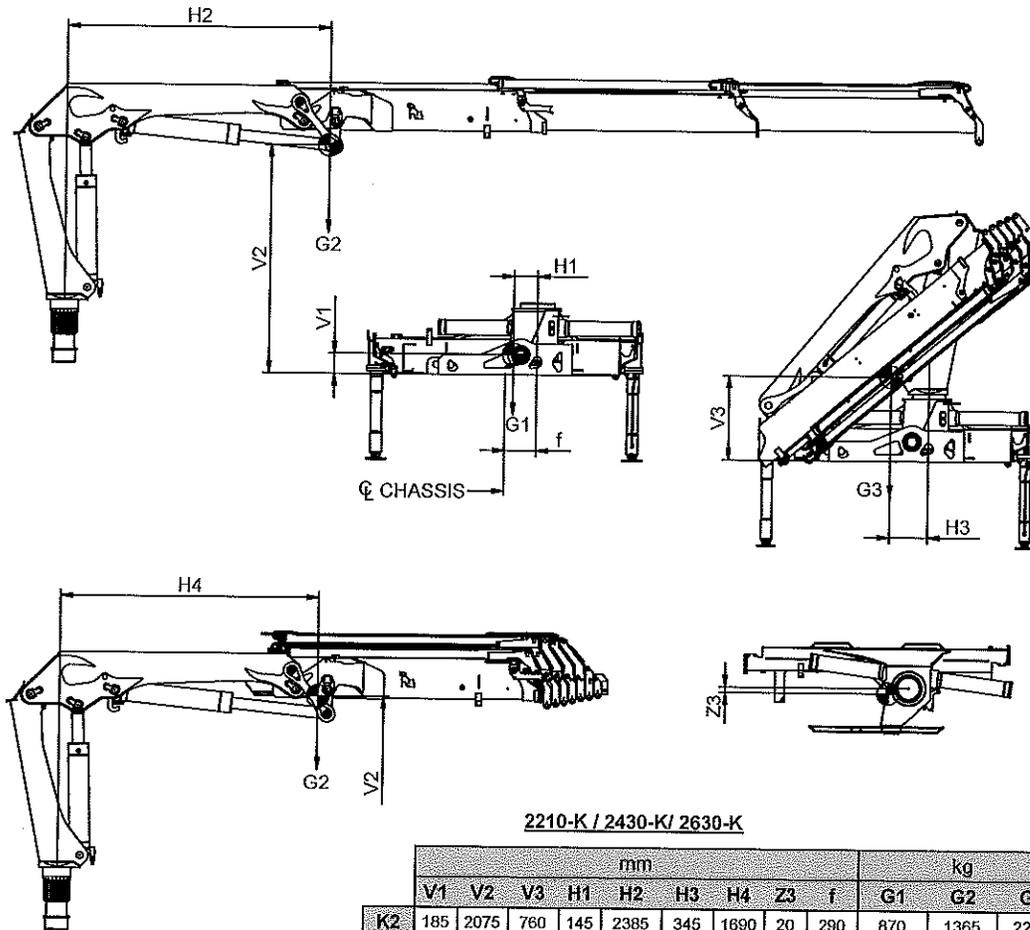
Extra Valves K7,K8



Stowed in Truck Body



Centers of Gravity



2210-K / 2430-K/ 2630-K

| | mm | | | | | | | | | kg | | |
|----|-----|------|-----|-----|------|-----|------|-----|-----|-----|------|------|
| | V1 | V2 | V3 | H1 | H2 | H3 | H4 | Z3 | f | G1 | G2 | G3 |
| K2 | 185 | 2075 | 760 | 145 | 2385 | 345 | 1690 | 20 | 290 | 870 | 1365 | 2235 |
| K3 | 185 | 2115 | 785 | 145 | 3085 | 340 | 1865 | 40 | 290 | 870 | 1530 | 2400 |
| K4 | 185 | 2150 | 810 | 145 | 3845 | 325 | 2020 | 55 | 290 | 870 | 1695 | 2565 |
| K5 | 185 | 2175 | 830 | 145 | 4580 | 310 | 2115 | 75 | 290 | 870 | 1840 | 2710 |
| K6 | 185 | 2185 | 845 | 145 | 5325 | 300 | 2210 | 85 | 290 | 870 | 1990 | 2860 |
| K7 | 185 | 2210 | 865 | 145 | 5930 | 285 | 2280 | 100 | 290 | 870 | 2080 | 2950 |
| K8 | 185 | 2225 | 880 | 145 | 6535 | 280 | 2350 | 110 | 290 | 870 | 2205 | 3075 |

| | in | | | | | | | | | lb | | |
|----|------|-------|-------|------|--------|-------|-------|------|-------|---------|---------|---------|
| | V1 | V2 | V3 | H1 | H2 | H3 | H4 | Z3 | f | G1 | G2 | G3 |
| K2 | 7.28 | 81.69 | 29.92 | 5.71 | 93.90 | 13.58 | 66.54 | 0.79 | 11.42 | 1918.02 | 3009.31 | 4927.33 |
| K3 | 7.28 | 83.27 | 30.91 | 5.71 | 121.46 | 13.39 | 73.43 | 1.57 | 11.42 | 1918.02 | 3373.07 | 5291.09 |
| K4 | 7.28 | 84.65 | 31.89 | 5.71 | 151.38 | 12.80 | 79.53 | 2.17 | 11.42 | 1918.02 | 3736.83 | 5654.85 |
| K5 | 7.28 | 85.63 | 32.68 | 5.71 | 180.31 | 12.20 | 83.27 | 2.95 | 11.42 | 1918.02 | 4056.50 | 5974.52 |
| K6 | 7.28 | 86.42 | 33.27 | 5.71 | 209.65 | 11.81 | 87.01 | 3.35 | 11.42 | 1918.02 | 4387.19 | 6305.21 |
| K7 | 7.28 | 87.01 | 34.06 | 5.71 | 233.46 | 11.22 | 89.76 | 3.94 | 11.42 | 1918.02 | 4585.61 | 6503.63 |
| K8 | 7.28 | 87.60 | 34.65 | 5.71 | 257.28 | 11.02 | 92.52 | 4.33 | 11.42 | 1918.02 | 4861.19 | 6779.21 |



CONTRACT PRICING WORKSHEET
For MOTOR VEHICLES Only

Contract No.: HT06-16

Date Prepared: 28-Jul

This Worksheet is prepared by Contractor and given to End User. If a PO is issued, both documents MUST be faxed to H-GAC @ 713-993-4548. Therefore please type or print legibly.

| | | | |
|-----------------|-------------------------------|--------------|------------------------------|
| Buying Agency: | City of Sacramento | Contractor: | Houston Freightliner, Inc |
| Contact Person: | Mark Stevens | Prepared By: | Michael McCarthy |
| Phone: | 916-808-5869 | Phone: | 713-580-8122 |
| Fax: | | Fax: | 713-955-6282 |
| Email: | mstevens@cityofsacramento.org | Email: | Mike.McCarthy@STRHouston.com |

| | | | |
|---------------|----|--------------|----------------------------|
| Product Code: | D2 | Description: | 2017 Freightliner 108SD-80 |
|---------------|----|--------------|----------------------------|

A. Product Item Base Unit Price Per Contractor's H-GAC Contract: 73872

B. Published Options - Itemize below - Attach additional sheet(s) if necessary - Include Option Code in description if applicable.
(Note: Published Options are options which were submitted and priced in Contractor's bid.)

| Description | Cost | Description | Cost |
|---|------|---|-------|
| Cummins ISL 350 HP | 2030 | Electric Powered Windows | 147 |
| Allison 3000 RDS Transmission | 6146 | Air Driver Seat | 165 |
| 14700 LB Front Axle | 621 | 2 Man Passenger Seat | 178 |
| 14,600 LB Front Suspension | 382 | | |
| Trailer Towing Package | 854 | | |
| RH Outboard Understep Exhaust with Verticle Stack | 629 | | |
| Air Cab Mounts | 118 | | |
| Air Conditioner | 850 | | |
| Tufftrac 40,000 LB Rear Suspension | 2761 | Special 14 YD Cooks Equipment Dumps | 31500 |
| 177" Wheelbase | 402 | | |
| 1/4" Frame Liner | 650 | | |
| | | Subtotal From Additional Sheet(s): | |
| Bendix AD-9 Air Dryer | 290 | | |
| | | Subtotal B: | 47723 |

C. Unpublished Options - Itemize below / attach additional sheet(s) if necessary.
(Note: Unpublished options are items which were not submitted and priced in Contractor's bid.)

| Description | Cost | Description | Cost |
|-------------|------|---|------|
| | | | |
| | | | |
| | | Subtotal From Additional Sheet(s): | 0 |
| | | Subtotal C: | 0 |

Check: Total cost of Unpublished Options (C) cannot exceed 25% of the total of the Base Unit Price plus Published Options (A+B). **For this transaction the percentage is:** 0%

D. Total Cost Before Any Applicable Trade-In / Other Allowances / Discounts (A+B+C)

| | | | | | | |
|-------------------|---|--------------------------|--------|---|-------------|--------|
| Quantity Ordered: | 4 | X Subtotal of A + B + C: | 121595 | = | Subtotal D: | 486380 |
|-------------------|---|--------------------------|--------|---|-------------|--------|

E. H-GAC Order Processing Charge (Amount Per Current Policy) Subtotal E: 1000

F. Trade-Ins / Special Discounts / Other Allowances / Freight / Installation / Miscellaneous Charges

| Description | Cost | Description | Cost |
|----------------------|--------|--------------------|-------|
| Discount | -10736 | | |
| California Sales Tax | 41342 | | |
| | | Subtotal F: | 30606 |

Delivery Date: 11/1/2016 **G. Total Purchase Price (D+E+F):** 517986

Prepared for:
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City of Sacramento
5730 24th Street
Sacramento, CA 95822
Phone: 916-808-5869

Prepared by:
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WESTERN STAR
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Phone: 713-580-8122
E-Mail:
mmccarthy@strhouston.com

A proposal for
City of Sacramento

Prepared by
HOUSTON FREIGHTLINER, WESTERN STAR
Michael McCarthy

Jul 28, 2016

Freightliner 108SD



Components shown may not reflect all spec'd options and are not to scale

Application Version 9.0.007
Data Version PRL-14D.035
14ft Dump Truck



07/28/2016 3:28 PM

Page 1 of 16

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S P E C I F I C A T I O N P R O P O S A L

| Data Code | Description | Weight Front | Weight Rear |
|------------------------------|---|-----------------|----------------|
| Price Level | | | |
| PRL-14D | SD PRL-14D (EFF:10/05/15) | | |
| Data Version | | | |
| DRL-035 | SPECPRO21 DATA RELEASE VER 035 | | |
| Vehicle Configuration | | | |
| 001-176 | 108SD CONVENTIONAL CHASSIS | 6,829 | 3,748 |
| 004-217 | 2017 MODEL YEAR SPECIFIED | | |
| 002-004 | SET BACK AXLE - TRUCK | | |
| 019-001 | TRAILER TOWING PROVISION AT END OF FRAME FOR TRUCK | 10 | 10 |
| 003-001 | LH PRIMARY STEERING LOCATION | | |
| General Service | | | |
| AA1-003 | TRUCK/TRAILER CONFIGURATION | | |
| AA6-001 | DOMICILED, USA 50 STATES (INCLUDING CALIFORNIA AND CARB OPT-IN STATES) | | |
| A85-011 | CONSTRUCTION SERVICE | | |
| A84-1CO | CONSTRUCTION BUSINESS SEGMENT | | |
| AA4-003 | DRY BULK COMMODITY | | |
| AA5-002 | TERRAIN/DUTY: 100% (ALL) OF THE TIME, IN TRANSIT, IS SPENT ON PAVED ROADS | | |
| AB1-008 | MAXIMUM 8% EXPECTED GRADE | | |
| AB5-001 | SMOOTH CONCRETE OR ASPHALT PAVEMENT - MOST SEVERE IN-TRANSIT (BETWEEN SITES) ROAD SURFACE | | |
| 995-1AE | FREIGHTLINER LEVEL II WARRANTY | | |
| A66-99D | EXPECTED FRONT AXLE(S) LOAD : 14600.0 lbs | | |
| A68-99D | EXPECTED REAR DRIVE AXLE(S) LOAD : 40000.0 lbs | | |
| A63-99D | EXPECTED GROSS VEHICLE WEIGHT CAPACITY : 54600.0 lbs | | |



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 E-Mail:
 mmccarthy@strhouston.com

| Data Code | Description | Weight Front | Weight Rear |
|------------------------------|--|--------------|-------------|
| A70-99D | EXPECTED GROSS COMBINATION WEIGHT : 80000.0 lbs | | |
| Truck Service | | | |
| AA3-005 | FLATBED/PLATFORM/STAKE BODY | | |
| Tractor Service | | | |
| AA2-005 | FLATBED TRAILER | | |
| AH6-001 | SINGLE (1) TRAILER | | |
| Engine | | | |
| 101-2XM | CUM ISL 350 HP @ 2000 RPM, 2200 GOV RPM, 1000 LB/FT @ 1400 RPM | | |
| Electronic Parameters | | | |
| 79A-065 | 65 MPH ROAD SPEED LIMIT | | |
| 79B-000 | CRUISE CONTROL SPEED LIMIT SAME AS ROAD SPEED LIMIT | | |
| 79G-104 | 5 MINUTE IDLE SHUTDOWN - TIMER RESET WITH CLUTCH AND SERVICE BRAKE | | |
| 79K-005 | PTO MODE ENGINE RPM LIMIT - 900 RPM | | |
| 79P-004 | PTO RPM WITH CRUISE SET SWITCH - 900 RPM | | |
| 79Q-004 | PTO RPM WITH CRUISE RESUME SWITCH - 900 RPM | | |
| 79S-001 | PTO MODE CANCEL VEHICLE SPEED - 5 MPH | | |
| 79U-007 | PTO GOVERNOR RAMP RATE - 250 RPM PER SECOND | | |
| 80G-004 | PTO MINIMUM RPM - 900 | | |
| 80J-001 | REGEN INHIBIT SPEED THRESHOLD - 0 MPH | | |
| Engine Equipment | | | |
| 99C-016 | 2016 ONBOARD DIAGNOSTICS/2010 EPA/CARB/GHG17 BUT NOT FINAL GHG17 CONFIGURATION | | |
| 99D-011 | 2008 CARB EMISSION CERTIFICATION - CLEAN IDLE (INCLUDES 6X4 INCH LABEL ON LOWER FORWARD CORNER OF DRIVER DOOR) | | |
| PMT-998 | NO 2013 ENGINE ESCALATOR | | |
| 13E-001 | STANDARD OIL PAN | | |
| 105-001 | ENGINE MOUNTED OIL CHECK AND FILL | | |
| 014-099 | SIDE OF HOOD AIR INTAKE WITH FIREWALL MOUNTED DONALDSON AIR CLEANER | | |
| 124-1D7 | DR 12V 160 AMP 28-SI QUADRAMOUNT PAD ALTERNATOR WITH REMOTE BATTERY VOLT SENSE | | |



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 mmccarthy@strhouston.com

| Data Code | Description | Weight Front | Weight Rear |
|-----------|---|--------------|-------------|
| 292-098 | (2) ALLIANCE MODEL 1231, GROUP 31, 12 VOLT MAINTENANCE FREE 2250 CCA THREADED STUD BATTERIES | | |
| 290-017 | BATTERY BOX FRAME MOUNTED | | |
| 281-001 | STANDARD BATTERY JUMPERS | | |
| 282-003 | SINGLE BATTERY BOX FRAME MOUNTED LH SIDE BACK OF CAB | | |
| 291-017 | WIRE GROUND RETURN FOR BATTERY CABLES WITH ADDITIONAL FRAME GROUND RETURN | | |
| 289-001 | NON-POLISHED BATTERY BOX COVER | | |
| 107-032 | CUMMINS TURBOCHARGED 18.7 CFM AIR COMPRESSOR WITH INTERNAL SAFETY VALVE | | |
| 152-041 | ELECTRONIC ENGINE INTEGRAL SHUTDOWN PROTECTION SYSTEM | | |
| 128-076 | CUMMINS EXHAUST BRAKE INTEGRAL WITH VARIABLE GEOMETRY TURBO WITH ON/OFF DASH SWITCH | 20 | |
| 016-1C2 | RH OUTBOARD UNDER STEP MOUNTED HORIZONTAL AFTERTREATMENT SYSTEM ASSEMBLY WITH RH B-PILLAR MOUNTED VERTICAL TAILPIPE | 30 | 25 |
| 28F-002 | ENGINE AFTERTREATMENT DEVICE, AUTOMATIC OVER THE ROAD REGENERATION AND DASH MOUNTED REGENERATION REQUEST SWITCH | | |
| 239-026 | 10 FOOT 06 INCH (126 INCH+0/-5.9 INCH) EXHAUST SYSTEM HEIGHT | | |
| 237-1CR | RH CURVED VERTICAL TAILPIPE B-PILLAR MOUNTED ROUTED FROM STEP | | |
| 23U-002 | 13 GALLON DIESEL EXHAUST FLUID TANK | | |
| 30N-003 | 100 PERCENT DIESEL EXHAUST FLUID FILL | | |
| 23Y-001 | STANDARD DIESEL EXHAUST FLUID PUMP MOUNTING | | |
| 43X-002 | LH MEDIUM DUTY STANDARD DIESEL EXHAUST FLUID TANK LOCATION | | |
| 43Y-001 | STANDARD DIESEL EXHAUST FLUID TANK CAP | | |
| 242-011 | ALUMINUM AFTERTREATMENT DEVICE/MUFFLER/TAILOPIPE SHIELD(S) | | |
| 273-018 | HORTON DRIVEMASTER ADVANTAGE ON/OFF FAN DRIVE | | |
| 276-001 | AUTOMATIC FAN CONTROL WITHOUT DASH SWITCH, NON ENGINE MOUNTED | | |
| 110-003 | CUMMINS SPIN ON FUEL FILTER | | |
| 118-008 | COMBINATION FULL FLOW/BYPASS OIL FILTER | | |



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| Data Code | Description | Weight Front | Weight Rear |
|-----------|---|--------------|-------------|
| 266-028 | 1200 SQUARE INCH ALUMINUM RADIATOR | 10 | |
| 103-039 | ANTIFREEZE TO -34F, OAT (NITRITE AND SILICATE FREE) EXTENDED LIFE COOLANT | | |
| 171-007 | GATES BLUE STRIPE COOLANT HOSES OR EQUIVALENT | | |
| 172-001 | CONSTANT TENSION HOSE CLAMPS FOR COOLANT HOSES | | |
| 270-016 | RADIATOR DRAIN VALVE | | |
| 132-004 | ELECTRIC GRID AIR INTAKE WARMER | | |
| 155-058 | DELCO 12V 38MT HD STARTER WITH INTEGRATED MAGNETIC SWITCH | | |

Transmission

| | |
|---------|--|
| 342-582 | ALLISON 3000 RDS AUTOMATIC TRANSMISSION WITH PTO PROVISION |
|---------|--|

Transmission Equipment

| | |
|---------|---|
| 343-339 | ALLISON VOCATIONAL PACKAGE 223 - AVAILABLE ON 3000/4000 PRODUCT FAMILIES WITH VOCATIONAL MODELS RDS, HS, MH AND TRV |
| 84B-012 | ALLISON VOCATIONAL RATING FOR ON/OFF HIGHWAY APPLICATIONS AVAILABLE WITH ALL PRODUCT FAMILIES |
| 84C-023 | PRIMARY MODE GEARS, LOWEST GEAR 1, START GEAR 1, HIGHEST GEAR 6, AVAILABLE FOR 3000/4000 PRODUCT FAMILIES ONLY |
| 84D-023 | SECONDARY MODE GEARS, LOWEST GEAR 1, START GEAR 1, HIGHEST GEAR 6, AVAILABLE FOR 3000/4000 PRODUCT FAMILIES ONLY |
| 84E-000 | PRIMARY SHIFT SCHEDULE RECOMMENDED BY DTNA AND ALLISON, THIS DEFINED BY ENGINE AND VOCATIONAL USAGE |
| 84F-000 | ENHANCED CONVERTER LOAD RELEASE - DISABLED, AVAILABLE FOR ALL PRODUCT FAMILIES ONLY |
| 84G-000 | PRIMARY SHIFT SPEED RECOMMENDED BY DTNA AND ALLISON, THIS DEFINED BY ENGINE AND VOCATIONAL USAGE |
| 84H-000 | SECONDARY SHIFT SPEED RECOMMENDED BY DTNA AND ALLISON, THIS DEFINED BY ENGINE AND VOCATIONAL USAGE |
| 84L-000 | LOAD BASED SHIFT SCHEDULE AND VEHICLE ACCELERATION CONTROL RECOMMENDED BY DTNA AND ALLISON, THIS DEFINED VOCATIONAL USAGE |



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| Data Code | Description | Weight Front | Weight Rear |
|-----------|--|--------------|-------------|
| 84U-000 | DRIVER SWITCH INPUT - DEFAULT - NO SWITCHES | | |
| 353-022 | VEHICLE INTERFACE WIRING CONNECTOR WITHOUT BLUNT CUTS, AT BACK OF CAB | | |
| 34C-001 | ELECTRONIC TRANSMISSION CUSTOMER ACCESS CONNECTOR FIREWALL MOUNTED | | |
| 362-035 | CUSTOMER INSTALLED CHELSEA 277 SERIES PTO | | |
| 363-001 | PTO MOUNTING, LH SIDE OF MAIN TRANSMISSION | | |
| 341-018 | MAGNETIC PLUGS, ENGINE DRAIN, TRANSMISSION DRAIN, AXLE(S) FILL AND DRAIN | | |
| 345-003 | PUSH BUTTON ELECTRONIC SHIFT CONTROL, DASH MOUNTED | | |
| 97G-004 | TRANSMISSION PROGNOSTICS - ENABLED 2013 | | |
| 370-015 | WATER TO OIL TRANSMISSION COOLER, IN RADIATOR END TANK | | |
| 346-003 | TRANSMISSION OIL CHECK AND FILL WITH ELECTRONIC OIL LEVEL CHECK | | |
| 35T-001 | SYNTHETIC TRANSMISSION FLUID (TES-295 COMPLIANT) | | |

Front Axle and Equipment

| | | | |
|---------|---|----|--|
| 400-1A8 | DETROIT DA-F-14.7-3 14,700# FF1 71.5 KPI/3.74 DROP SINGLE FRONT AXLE | | |
| 402-049 | MERITOR 16.5X5 Q+ CAST SPIDER CAM FRONT BRAKES, DOUBLE ANCHOR, FABRICATED SHOES | | |
| 403-002 | NON-ASBESTOS FRONT BRAKE LINING | | |
| 419-023 | CONMET CAST IRON FRONT BRAKE DRUMS | | |
| 409-021 | SKF SCOTSEAL PLUS XL FRONT OIL SEALS | | |
| 408-001 | VENTED FRONT HUB CAPS WITH WINDOW, CENTER AND SIDE PLUGS - OIL | | |
| 416-022 | STANDARD SPINDLE NUTS FOR ALL AXLES | | |
| 405-002 | MERITOR AUTOMATIC FRONT SLACK ADJUSTERS | | |
| 406-001 | STANDARD KING PIN BUSHINGS | | |
| 536-012 | TRW TAS-85 POWER STEERING | 40 | |
| 539-003 | POWER STEERING PUMP | | |
| 534-015 | 2 QUART SEE THROUGH POWER STEERING RESERVOIR | | |
| 40T-001 | ORGANIC SAE 80/90 FRONT AXLE LUBE | | |



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| Data Code | Description | Weight Front | Weight Rear |
|--------------------------------|---|--------------|-------------|
| Front Suspension | | | |
| 620-010 | 14,600# TAPERLEAF FRONT SUSPENSION | 170 | |
| 619-005 | MAINTENANCE FREE RUBBER BUSHINGS - FRONT SUSPENSION | | |
| 410-001 | FRONT SHOCK ABSORBERS | | |
| Rear Axle and Equipment | | | |
| 420-1K3 | MT-40-14X 40,000# R-SERIES TANDEM REAR AXLE | | 2,500 |
| 421-529 | 5.29 REAR AXLE RATIO | | |
| 424-003 | IRON REAR AXLE CARRIER WITH OPTIONAL HEAVY DUTY AXLE HOUSING | | 40 |
| 386-074 | MXL 176T MERITOR EXTENDED LUBE MAIN DRIVELINE WITH HALF ROUND YOKES | 25 | 25 |
| 388-073 | MXL 17T MERITOR EXTENDED LUBE INTERAXLE DRIVELINE WITH HALF ROUND YOKES | | |
| 878-019 | (1) INTERAXLE LOCK VALVE FOR TANDEM OR TRIDEM DRIVE AXLES | | |
| 87A-001 | BLINKING LAMP WITH EACH INTERAXLE LOCK SWITCH, INTERAXLE UNLOCK DEFAULT WITH IGNITION OFF | | |
| 423-020 | MERITOR 16.5X7 Q+ CAST SPIDER CAM REAR BRAKES, DOUBLE ANCHOR, FABRICATED SHOES | | |
| 433-002 | NON-ASBESTOS REAR BRAKE LINING | | |
| 434-011 | BRAKE CAMS AND CHAMBERS ON FORWARD SIDE OF DRIVE AXLE(S) | | |
| 451-023 | CONMET CAST IRON REAR BRAKE DRUMS | | |
| 440-021 | SKF SCOTSEAL PLUS XL REAR OIL SEALS | | |
| 426-075 | HALDEX GOLDSEAL LONGSTROKE 2-DRIVE AXLES SPRING PARKING CHAMBERS | | 20 |
| 428-003 | HALDEX AUTOMATIC REAR SLACK ADJUSTERS | | |
| 41T-001 | ORGANIC SAE 80/90 REAR AXLE LUBE | | |
| 42T-001 | STANDARD REAR AXLE BREATHER(S) | | |
| Rear Suspension | | | |
| 622-1A0 | TUFTRAC 40,000# REAR SPRING SUSPENSION | | 410 |
| 621-055 | TUFTRAC STANDARD RIDE HEIGHT | | |
| 431-003 | AXLE CLAMPING GROUP | | |
| 624-009 | 54 INCH AXLE SPACING | | |
| 623-006 | FORE/AFT AND TRANSVERSE CONTROL RODS | | |
| 439-001 | REAR SHOCK ABSORBERS - ONE AXLE | | |



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| Data Code | Description | Weight Front | Weight Rear |
|------------------------------|--|--------------|-------------|
| Brake System | | | |
| 490-100 | WABCO 4S/4M ABS WITHOUT TRACTION CONTROL | | |
| 871-001 | REINFORCED NYLON, FABRIC BRAID AND WIRE BRAID CHASSIS AIR LINES | | |
| 904-001 | FIBER BRAID PARKING BRAKE HOSE | | |
| 412-001 | STANDARD BRAKE SYSTEM VALVES | | |
| 46D-002 | STANDARD AIR SYSTEM PRESSURE PROTECTION SYSTEM | | |
| 413-002 | STD U.S. FRONT BRAKE VALVE | | |
| 432-003 | RELAY VALVE WITH 5-8 PSI CRACK PRESSURE, NO REAR PROPORTIONING VALVE | | |
| 480-009 | BW AD-9 BRAKE LINE AIR DRYER WITH HEATER | 20 | |
| 479-015 | AIR DRYER FRAME MOUNTED | | |
| 460-001 | STEEL AIR BRAKE RESERVOIRS | | |
| 477-001 | PULL CABLE ON WET TANK, PETCOCK DRAIN VALVES ON ALL OTHER AIR TANKS | | |
| Trailer Connections | | | |
| 914-001 | AIR CONNECTIONS TO END OF FRAME WITH GLAD HANDS FOR TRUCK AND NO DUST COVERS | | |
| 296-010 | PRIMARY CONNECTOR/RECEPTACLE WIRED FOR SEPARATE STOP/TURN, ABS CENTER PIN POWERED THROUGH IGNITION | | |
| 297-001 | SAE J560 7-WAY PRIMARY TRAILER CABLE RECEPTACLE MOUNTED END OF FRAME | | |
| 335-004 | UPGRADED CHASSIS MULTIPLEXING UNIT | | |
| Wheelbase & Frame | | | |
| 545-450 | 4500MM (177 INCH) WHEELBASE | | |
| 546-102 | 7/16X3-9/16X11-1/8 INCH STEEL FRAME (11.11MMX282.6MM/0.437X11.13 INCH) 120KSI | 240 | 130 |
| 547-001 | 1/4 INCH (6.35MM) C-CHANNEL INNER FRAME REINFORCEMENT | 170 | 360 |
| 552-030 | 1600MM (63 INCH) REAR FRAME OVERHANG | | |
| 55W-006 | FRAME OVERHANG RANGE: 61 INCH TO 70 INCH | | |
| AC8-99D | CALC'D BACK OF CAB TO REAR SUSP C/L (CA) : 111.45 in | | |
| AE8-99D | CALCULATED EFFECTIVE BACK OF CAB TO REAR SUSPENSION C/L (CA) : 108.45 in | | |
| AE4-99D | CALC'D FRAME LENGTH - OVERALL : 279.37 | | |



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| Data Code | Description | Weight Front | Weight Rear |
|--------------------------|--|--------------|-------------|
| AM6-99D | CALC'D SPACE AVAILABLE FOR DECKPLATE : 111.45 in | | |
| FSS-0LH | CALCULATED FRAME SPACE LH SIDE : 12.66 in | | |
| FSS-0RH | CALCULATED FRAME SPACE RH SIDE : 52.76 in | | |
| 553-001 | SQUARE END OF FRAME | | |
| 550-001 | FRONT CLOSING CROSSMEMBER | | |
| 559-001 | STANDARD WEIGHT ENGINE CROSSMEMBER | | |
| 562-001 | STANDARD MIDSHIP #1 CROSSMEMBER(S) | | |
| 572-001 | STANDARD REARMOST CROSSMEMBER | | |
| 565-002 | HEAVY DUTY SUSPENSION CROSSMEMBER | | |
| Chassis Equipment | | | |
| 556-1E5 | 14 INCH PAINTED STEEL BUMPER | | |
| 574-001 | BUMPER MOUNTING FOR SINGLE LICENSE PLATE | | |
| 551-007 | GRADE 8 THREADED HEX HEADED FRAME FASTENERS | | |
| Fuel Tanks | | | |
| 204-151 | 60 GALLON/227 LITER ALUMINUM FUEL TANK - LH | | |
| 218-006 | 25 INCH DIAMETER FUEL TANK(S) | | |
| 215-005 | PLAIN ALUMINUM/PAINTED STEEL FUEL/HYDRAULIC TANK(S) WITH PAINTED BANDS | | |
| 212-007 | FUEL TANK(S) FORWARD | | |
| 664-001 | PLAIN STEP FINISH | | |
| 205-001 | FUEL TANK CAP(S) | | |
| 122-075 | ALLIANCE FUEL FILTER/WATER SEPARATOR | | |
| 216-020 | EQUIFLO INBOARD FUEL SYSTEM | | |
| 202-016 | HIGH TEMPERATURE REINFORCED NYLON FUEL LINE | | |
| Tires | | | |
| 093-0RC | MICHELIN XZY-3 12R22.5 16 PLY RADIAL FRONT TIRES | 82 | |
| 094-0DH | MICHELIN XDE M/S 11R22.5 14 PLY RADIAL REAR TIRES | | 56 |
| Hubs | | | |
| 418-056 | CONMET PRESET PLUS IRON FRONT HUBS | | |
| 450-056 | CONMET PRESET PLUS IRON REAR HUBS | | |



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| Data Code | Description | Weight Front | Weight Rear |
|---------------------|--|--------------|-------------|
| Wheels | | | |
| 502-428 | ACCURIDE 28828 22.5X8.25 10-HUB PILOT 6.18 INSET 2-HAND HD STEEL DISC FRONT WHEELS | 26 | |
| 505-428 | ACCURIDE 28828 22.5X8.25 10-HUB PILOT 2-HAND HD STEEL DISC REAR WHEELS | | 104 |
| Cab Exterior | | | |
| 829-1A5 | 108 INCH BBC FLAT ROOF ALUMINUM CONVENTIONAL CAB | | |
| 650-008 | AIR CAB MOUNTS | | |
| 648-002 | NONREMOVABLE BUGSCREEN MOUNTED BEHIND GRILLE | | |
| 667-004 | FRONT FENDERS SET-BACK AXLE | | |
| 678-001 | LH AND RH GRAB HANDLES | | |
| 646-041 | STATIONARY BLACK GRILLE | | |
| 65X-004 | BLACK HOOD MOUNTED AIR INTAKE GRILLE | | |
| 644-004 | FIBERGLASS HOOD | | |
| 727-1AH | SINGLE 14 INCH ROUND POLISHED AIR HORN ROOF MOUNTED | | |
| 726-001 | SINGLE ELECTRIC HORN | | |
| 728-001 | SINGLE HORN SHIELD | | |
| 657-001 | DOOR LOCKS AND IGNITION SWITCH KEYED THE SAME | | |
| 575-001 | REAR LICENSE PLATE MOUNT END OF FRAME | | |
| 312-068 | HALOGEN COMPOSITE HEADLAMPS WITH BLACK BEZELS | | |
| 302-001 | (5) AMBER MARKER LIGHTS | | |
| 294-001 | INTEGRAL STOP/TAIL/BACKUP LIGHTS | | |
| 300-015 | STANDARD FRONT TURN SIGNAL LAMPS | | |
| 744-1BH | DUAL WEST COAST MOLDED-IN COLOR MIRRORS | | |
| 797-001 | DOOR MOUNTED MIRRORS | | |
| 796-001 | 102 INCH EQUIPMENT WIDTH | | |
| 729-001 | STANDARD SIDE/REAR REFLECTORS | | |
| 768-043 | 63X14 INCH TINTED REAR WINDOW | | |
| 661-004 | TINTED DOOR GLASS LH AND RH WITH TINTED OPERATING WING WINDOWS | | |
| 654-027 | RH AND LH ELECTRIC POWERED WINDOWS, PASSENGER SWITCHES ON DOOR(S) | 4 | |
| 663-013 | TINTED WINDSHIELD | | |



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| Data Code | Description | Weight Front | Weight Rear |
|---------------------|--|--------------|-------------|
| 659-007 | 8 LITER WINDSHIELD WASHER RESERVOIR, CAB MOUNTED, WITHOUT FLUID LEVEL INDICATOR | | |
| Cab Interior | | | |
| 707-1AK | OPAL GRAY VINYL INTERIOR | | |
| 706-026 | MOLDED PLASTIC DOOR PANEL WITHOUT VINYL INSERT WITH ALUMINUM KICKPLATE LOWER DOOR | | |
| 708-026 | MOLDED PLASTIC DOOR PANEL WITHOUT VINYL INSERT WITH ALUMINUM KICKPLATE LOWER DOOR | | |
| 772-006 | BLACK MATS WITH SINGLE INSULATION | | |
| 785-004 | DASH MOUNTED ASH TRAY(S) WITHOUT LIGHTER | | |
| 691-008 | FORWARD ROOF MOUNTED CONSOLE WITH UPPER STORAGE COMPARTMENTS WITHOUT NETTING | | |
| 694-010 | IN DASH STORAGE BIN | | |
| 742-007 | (2) CUP HOLDERS LH AND RH DASH | | |
| 680-006 | GRAY/CHARCOAL FLAT DASH | | |
| 720-003 | 5 LB. FIRE EXTINGUISHER | 10 | |
| 700-002 | HEATER, DEFROSTER AND AIR CONDITIONER | | |
| 701-001 | STANDARD HVAC DUCTING | | |
| 703-005 | MAIN HVAC CONTROLS WITH RECIRCULATION SWITCH | | |
| 170-015 | STANDARD HEATER PLUMBING | | |
| 130-033 | DENSO HEAVY DUTY AIR CONDITIONER COMPRESSOR | | |
| 702-002 | BINARY CONTROL, R-134A | | |
| 739-033 | STANDARD INSULATION | | |
| 285-013 | SOLID-STATE CIRCUIT PROTECTION AND FUSES | | |
| 280-007 | 12V NEGATIVE GROUND ELECTRICAL SYSTEM | | |
| 324-014 | DOMELIGHT WITH 3-WAY SWITCH ACTIVATED BY LH AND RH DOORS | | |
| 655-005 | LH AND RH ELECTRIC DOOR LOCKS | | |
| 284-023 | (1) 12 VOLT POWER SUPPLY IN DASH | | |
| 756-1J3 | BASIC HIGH BACK AIR SUSPENSION DRIVER SEAT WITH MECHANICAL LUMBAR AND INTEGRATED CUSHION EXTENSION | 30 | |
| 760-1C0 | 2 MAN TOOL BOX MID BACK NON SUSPENSION PASSENGER SEAT WITH HEADRESTS | 70 | 20 |



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|-----------------------------------|--|--------------|-------------|
| 711-004 | LH AND RH INTEGRAL DOOR PANEL ARMRESTS | | |
| 758-036 | VINYL WITH VINYL INSERT DRIVER SEAT | | |
| 761-036 | VINYL WITH VINYL INSERT PASSENGER SEAT | | |
| 763-101 | BLACK SEAT BELTS | | |
| 532-001 | FIXED STEERING COLUMN | | |
| 540-015 | 4-SPOKE 18 INCH (450MM) STEERING WHEEL | | |
| 765-002 | DRIVER AND PASSENGER INTERIOR SUN VISORS | | |
| Instruments & Controls | | | |
| 732-004 | GRAY DRIVER INSTRUMENT PANEL | | |
| 734-004 | GRAY CENTER INSTRUMENT PANEL | | |
| 870-001 | BLACK GAUGE BEZELS | | |
| 486-001 | LOW AIR PRESSURE INDICATOR LIGHT AND AUDIBLE ALARM | | |
| 840-002 | 2 INCH PRIMARY AND SECONDARY AIR PRESSURE GAUGES | | |
| 198-025 | INTAKE MOUNTED AIR RESTRICTION INDICATOR WITHOUT GRADUATIONS | | |
| 149-013 | ELECTRONIC CRUISE CONTROL WITH SWITCHES IN LH SWITCH PANEL | | |
| 156-007 | KEY OPERATED IGNITION SWITCH AND INTEGRAL START POSITION; 4 POSITION OFF/RUN/START/ACCESSORY | | |
| 811-042 | ICU3S, 132X48 DISPLAY WITH DIAGNOSTICS, 28 LED WARNING LAMPS AND DATA LINKED | | |
| 160-038 | HEAVY DUTY ONBOARD DIAGNOSTICS INTERFACE CONNECTOR LOCATED BELOW LH DASH | | |
| 844-001 | 2 INCH ELECTRIC FUEL GAUGE | | |
| 148-003 | PROGRAMMABLE RPM CONTROL - ELECTRONIC ENGINE | | |
| 856-001 | ELECTRICAL ENGINE COOLANT TEMPERATURE GAUGE | | |
| 864-001 | 2 INCH TRANSMISSION OIL TEMPERATURE GAUGE | | |
| 830-017 | ENGINE AND TRIP HOUR METERS INTEGRAL WITHIN DRIVER DISPLAY | | |
| 372-035 | (1) DASH MOUNTED PTO SWITCH WITH INDICATOR LAMP | 5 | |
| 852-002 | ELECTRIC ENGINE OIL PRESSURE GAUGE | | |



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| Data Code | Description | Weight Front | Weight Rear |
|-----------|---|--------------|-------------|
| 746-1B3 | AM/FM/WB RADIO WITH BLUETOOTH AND MICROPHONE, FRONT USB PORT, FRONT AND REAR AUXILIARY INPUTS AND J1939 | 10 | |
| 747-001 | DASH MOUNTED RADIO | | |
| 750-002 | (2) RADIO SPEAKERS IN CAB | | |
| 753-001 | AM/FM ANTENNA MOUNTED ON FORWARD LH ROOF | 2 | |
| 810-027 | ELECTRONIC MPH SPEEDOMETER WITH SECONDARY KPH SCALE, WITHOUT ODOMETER | | |
| 817-001 | STANDARD VEHICLE SPEED SENSOR | | |
| 812-001 | ELECTRONIC 3000 RPM TACHOMETER | | |
| 162-002 | IGNITION SWITCH CONTROLLED ENGINE STOP | | |
| 329-010 | TWO ON/OFF ROCKER SWITCHES IN THE DASH WITH INDICATOR LIGHTS AND WIRE ROUTED TO CHASSIS AT BACK OF CAB, LABEL OPT | | |
| 482-001 | BW TRACTOR PROTECTION VALVE | | |
| 883-001 | TRAILER HAND CONTROL BRAKE VALVE | | |
| 836-015 | DIGITAL VOLTAGE DISPLAY INTEGRAL WITH DRIVER DISPLAY | | |
| 660-008 | SINGLE ELECTRIC WINDSHIELD WIPER MOTOR WITH DELAY | | |
| 304-001 | MARKER LIGHT SWITCH INTEGRAL WITH HEADLIGHT SWITCH | | |
| 882-004 | TWO VALVE PARKING BRAKE SYSTEM WITH WARNING INDICATOR | | |
| 299-013 | SELF CANCELING TURN SIGNAL SWITCH WITH DIMMER, WASHER/WIPER AND HAZARD IN HANDLE | | |
| 298-039 | INTEGRAL ELECTRONIC TURN SIGNAL FLASHER WITH HAZARD LAMPS OVERRIDING STOP LAMPS | | |

Design

065-000 PAINT: ONE SOLID COLOR

Color

980-5F6 CAB COLOR A: L0006EB WHITE ELITE BC
 986-020 BLACK, HIGH SOLIDS POLYURETHANE CHASSIS PAINT
 98K-998 NO FUEL TANK CABINET PAINT
 962-972 POWDER WHITE (N0006EA) FRONT WHEELS/RIMS (PKWHT21, TKWHT21, W, TW)



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| Data Code | Description | Weight Front | Weight Rear |
|-----------|---|--------------|-------------|
| 966-972 | POWDER WHITE (N0006EA) REAR WHEELS/RIMS (PKWHT21, TKWHT21, W, TW) | | |
| 964-020 | STANDARD BLACK BUMPER PAINT | | |
| 963-003 | STANDARD E COAT/UNDERCOATING | | |

Certification / Compliance

| | |
|---------|---|
| 996-001 | U.S. FMVSS CERTIFICATION, EXCEPT SALES CABS AND GLIDER KITS |
|---------|---|

Secondary Factory Options

| | |
|---------|--------------------------------------|
| 998-001 | CORPORATE PDI CENTER IN-SERVICE ONLY |
|---------|--------------------------------------|

TOTAL VEHICLE SUMMARY

Weight Summary

| | Weight Front | Weight Rear | Total Weight |
|---------------------------------|-----------------|-----------------|------------------|
| Factory Weight ⁺ | 7803 lbs | 7448 lbs | 15251 lbs |
| Dealer Installed Options | 0 lbs | 0 lbs | 0 lbs |
| Total Weight⁺ | 7803 lbs | 7448 lbs | 15251 lbs |

Dealer Installed Options

| | | Weight Front | Weight Rear |
|--------------------------------|------------------------------------|--------------|-------------|
| 706 | UTILITY 1 SOURCE FLATBED AND CRANE | 0 | 0 |
| 707 | FREIGHT TO SACRAMENTO | 0 | 0 |
| Total Dealer Installed Options | | 0 lbs | 0 lbs |

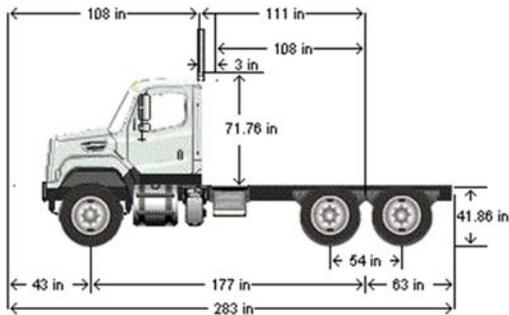
(+) Weights shown are estimates only.
 If weight is critical, contact Customer Application Engineering.



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D I M E N S I O N S



VEHICLE SPECIFICATIONS SUMMARY - DIMENSIONS

| | |
|-------------------------------------|---|
| Wheelbase (545)..... | 4500MM (177 INCH) WHEELBASE |
| Rear Frame Overhang (552)..... | 1600MM (63 INCH) REAR FRAME OVERHANG |
| Fifth Wheel (578) | NO FIFTH WHEEL |
| Mounting Location (577) | NO FIFTH WHEEL LOCATION |
| Maximum Forward Position (in) | 0 |
| Maximum Rearward Position (in)..... | 0 |
| Amount of Slide Travel (in) | 0 |
| Slide Increment (in)..... | 0 |
| Desired Slide Position (in)..... | 0.0 |
| Cab Size (829) | 108 INCH BBC FLAT ROOF ALUMINUM CONVENTIONAL CAB |
| Sleeper (682) | NO SLEEPER BOX/SLEEPERCAB |
| Exhaust System (016)..... | RH OUTBOARD UNDER STEP MOUNTED HORIZONTAL AFTERTREATMENT SYSTEM ASSEMBLY WITH RH B-PILLAR MOUNTED VERTICAL TAILPIPE |

TABLE SUMMARY - DIMENSIONS



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| Dimensions | Inches |
|--|--------|
| Bumper to Back of Cab (BBC) | 108.3 |
| Bumper to Centerline of Front Axle (BA) | 42.7 |
| Min. Cab to Body Clearance (CB) | 3.0 |
| Back of Cab to Centerline of Rear Axle(s) (CA) | 111.4 |
| Effective Back of Cab to Centerline of Rear Axle(s) (Effective CA) | 108.4 |
| Back of Cab Protrusions (Exhaust/Intake) (CP) | 1.5 |
| Back of Cab Protrusions (Side Extenders/Trim Tab) (CP) | 0.0 |
| Back of Cab Protrusions (CNG Tank) | 0.0 |
| Back of Cab Clearance (CL) | 3.0 |
| Back of Cab to End of Frame | 174.4 |
| Cab Height (CH) | 71.8 |
| Wheelbase (WB) | 177.0 |
| Frame Overhang (OH) | 63.0 |
| Overall Length (OAL) | 282.7 |
| Rear Axle Spacing | 54.0 |
| Unladen Frame Height at Centerline of Rear Axle | 41.9 |

Performance calculations are estimates only. If performance calculations are critical, please contact Customer Application Engineering.

