

NDOT
BID 5992 OF
TANDEM AXLE CHASSIS W/RDS BODY & TOW PLOW

State of Nebraska - INVITATION TO BID CONTRACT

Return to:
State Purchasing Bureau
1526 K Street, Suite 130
Lincoln, Nebraska 68508

Telephone: 402-471-6500
Fax: 402-471-2089

Date	1/9/19	Page	1 of 3
Solicitation Number	5992 OF REVISED		
Opening Date and Time	01/30/19	2:00 pm	
Buyer	JULIE SCHILTZ (AS)		

DESTINATION OF GOODS

DEPARTMENT OF TRANSPORTATION
5001 S 14TH ST
PO BOX 94759
LINCOLN NE 68509-4759

Per Nebraska's Transparency in Government Procurement Act, DAS is required to collect statistical information regarding the number of contracts awarded to Nebraska contractors. This information is for statistical purposes only and will not be considered for contract award purposes.

X NEBRASKA CONTRACTOR AFFIDAVIT: Bidder hereby attests that bidder is a Nebraska Contractor. "Nebraska Contractor" shall mean any bidder who has maintained a bona fide place of business and at least one employee within this state for at least the six (6) months immediately preceding the posting date of this ITB.

_____ I hereby certify that I am a Resident disabled veteran or business located in a designated enterprise zone in accordance with Neb. Rev. Stat. §73-107 and wish to have preference, if applicable, considered in the award of this contract.

Contract to supply and deliver TANDEM AXLE CHASSIS MIN 60,000 GVWR W/RDS BODY AND TOWFLOW to the State of Nebraska as per the attached specifications for a one (1) year period from date of award. The contract may be renewed for four (4) additional one (1) year periods when mutually agreeable to the vendor and the State of Nebraska.

(vc 1/8/19)

INVITATION

Line	Description	Quantity	Unit of Measure	Unit Price	Extended Price
1	TANDEM AXLE CHASSIS MIN 60,000 GVWR W/14' RDS BODY & TOWFLOW	7.0000	EA	333,070.00	2,331,490.00
2	TANDEM AXLE CHASSIS MIN 60,000 GVWR W/14' BODY NO TOW PLOW	7.0000	EA	212,390.00	1,486,730.00
3	DEDUCT FULLER 13 SPEED TRANSMISSION RTLO-16913A	7.0000	EA	(6,378.00)	(44,646.00)
4	DEDUCT FULLER 10 TRANSMISSION RTLO-16908LL	7.0000	EA	(7,186.00)	(50,302.00)

BIDDER MUST COMPLETE THE FOLLOWING

DISCOUNT PAYMENT TERMS: NET % 10 DAYS

By signing this Invitation to Bid form, the bidder guarantees compliance with the provisions stated in this Invitation to Bid, agrees to the terms and conditions unless otherwise agreed to (see Section III) and certifies that bidder maintains a drug free work place environment. Vendor will furnish the items requested within 395 days after receipt of order. Failure to enter Delivery Date may cause quotation to be REJECTED.

Sign *Bill Collier*
Here (Authorized Signature MANDATORY - MUST BE SIGNED IN INK)

Enter Contact Information Below

VENDOR#

VENDOR: TRUCK CENTER COMPANIES

Address: 5701 ARBOR ROAD

PO BOX 29468

LINCOLN, NE 68517

Contact BILL COLLIER

Telephone 402-464-2444

Facsimile 402-464-9166

Email bcollier@truckcentercompanies.com

State of Nebraska - INVITATION TO BID CONTRACT

Return to:
State Purchasing Bureau
1526 K Street, Suite 130
Lincoln, Nebraska 68508

Telephone: 402-471-6500
Fax: 402-471-2089

Date	1/9/19	Page	2 of 3
Solicitation Number	5992 OF REVISED		
Opening Date and Time	01/30/19	2:00 pm	
Buyer	JULIE SCHILTZ (AS)		

DESTINATION OF GOODS

DEPARTMENT OF TRANSPORTATION
5001 S 14TH ST
PO BOX 94759
LINCOLN NE 68509-4759

INVITATION

Line	Description	Quantity	Unit of Measure	Unit Price	Extended Price
5	DEDUCT EATON FULLER AUTO SHIFT TRANSMISSION FO-16E308LL-VCS	7.0000	EA	(3,148.00)	(22,036.00)
6	CHASSIS TECHNICAL REPAIRMANUAL PRICE FOR PAPER IF N/A ON LINE	7.0000	EA	AVAILABLE ON LINE	
7	ENGINE SHOP REPAIR MANUAL PRICE FOR PAPER IF N/A ON LINE	7.0000	EA	AVAILABLE ON LINE	
8	CHASSIS PARTS MANUAL PRICE FOR PAPER IF N/A ON LINE	7.0000	EA	AVAILABLE ON LINE	
9	ENGINE PARTS MANUAL PRICE FOR PAPER IF N/A ON LINE	7.0000	EA	AVAILABLE ON LINE	
10	PARTS CD-ROM FOR CHASSIS AND ENGINE	7.0000	EA	176.00	1,232.00
11	TRANSMISSION TECHNICAL REPAIR MANUAL	7.0000	EA	AVAILABLE ON LINE	
12	TRANSMISSION TECHNICAL REPAIR AUTOMATIC	7.0000	EA	AVAILABLE ON LINE	
13	ELECTRICAL WIRING DIAGRAM MANUAL PAPER PRICE IF N/A ON	7.0000	EA	AVAILABLE ON LINE	
14	P.C. DIAGNOSTIC COMPATABLE SOFTWARE W/DATA LINK CONNECTIO	7.0000	EA	1,430.00	10,010.00
15	V-PLOW WITH V-PLOW QUICK ATTAC HITCH PER ATTACHMENT PAGE	7.0000	EA	15,360.00	107,520.00
16	V-PLOW QUICK ATTACH HITCH WITH OUT V-PLOW PER ATTACHMENT PAGE	7.0000	EA	3,112.00	21,784.00
17	FRONT MOUNT PATROL WING PER ATTACHMENT PAGE	7.0000	EA	11,585.00	81,095.00
18	RIGHT HAND BENCHING WING PER ATTACHMENT PAGE	7.0000	EA	15,957.00	111,699.00
19	RIGHT HAND HIGH BENCHING WING PER ATTACHMENT	7.0000	EA	17,397.00	121,779.00

State of Nebraska - INVITATION TO BID CONTRACT

Return to:
State Purchasing Bureau
1526 K Street, Suite 130
Lincoln, Nebraska 68508

Telephone: 402-471-6500
Fax: 402-471-2089

Date	1/9/19	Page	3 of 3
Solicitation Number	5992 OF REVISED		
Opening Date and Time	01/30/19	2:00 pm	
Buyer	JULIE SCHILTZ (AS)		

DESTINATION OF GOODS
DEPARTMENT OF TRANSPORTATION
5001 S 14TH ST
PO BOX 94759
LINCOLN NE 68509-4759

INVITATION

Line	Description	Quantity	Unit of Measure	Unit Price	Extended Price
20	RIGHT SEVERE DUTY HIGH BENCHIN WING	7.0000	EA	<u>19,301.00</u>	<u>135,107.00</u>
21	PRE WET PER ATTACHMENT	7.0000	EA	<u>4,647.00</u>	<u>32,529.00</u>
22	RIGHT HAND MID-MOUNT WING PER ATTACHMENT	7.0000	EA	<u>8,464.00</u>	<u>59,248.00</u>
23	LEFT HAND MID-MOUNT WING PER ATTACHMENT	7.0000	EA	<u>8,721.00</u>	<u>61,047.00</u>
24	3 JOYSTICK CONTROL IN LIEU OF SINGLE JOYSTICK CONTROL	7.0000	EA	<u>3,500.00</u>	<u>24,500.00</u>
25	ADD TOW PLOW	7.0000	EA	<u>126,137.00</u>	<u>882,959.00</u>
26	CHASSIS OLY: NO RDS, NO TOW PLOW HITCH OR HYDRAULICS	7.0000	EA	<u>111,687.00</u>	<u>781,809.00</u>
27	CHASSIS HYDRAULIC TO RUN BI-DIRECTIONAL TOW PLOW	7.0000	EA	<u>800.00</u>	<u>5,600.00</u>
28	ADD BI-DIRECTIONAL TOW PLOW	7.0000	EA	<u>160,567.00</u>	<u>1,123,969.00</u>
29	SAFETY LIGHTING INSTALL ON CHASSIS	7.0000	EA	<u>5,360.00</u>	<u>37,520.00</u>
30	PLOW BALANCE VALVE	7.0000	EA	<u>740.00</u>	<u>5,180.00</u>

ADDENDUM ONE, REVISION TO ITB

Date: 1/4/19
To: All Bidders
From: Julie Schiltz, Buyer
AS Materiel State Purchasing Bureau
RE: Addendum for Invitation to Bid Number 5992 OF to be opened January 30, 2019 at
2:00 p.m. Central

Scope of Addendum

Revised posted ITB with Invitation to Bid Contract

This addendum will become part of the ITB/proposal and should be acknowledged with the Invitation to Bid response.

ADDENDUM TWO, REVISED ITB and SCHEDULE OF EVENTS

Date: 1/9/19

To: All Bidders

From: Julie Schiltz, Buyer
AS Materiel State Purchasing Bureau

RE: Addendum for Invitation to Bid Number 5992 OF to be opened January 30, 2019 at 2:00 p.m. Central

Scope of Addendum

Revised posted ITB with Invitation to Bid Contract and Schedule of Events

	ACTIVITY	DATE/TIME
1.	Release ITB	01/02/2019
2.	Last day to submit "Notification of Intent to Attend Pre-Bid Conference"	01/14/2019
3.	Last day to submit written questions	01/14/2019
4.	Mandatory Pre-Bid Conference Location: State Purchasing Bureau 1526 K Street, Suite 130 Lincoln, NE 68508 10:00 A.M. to 11:30 A.M., Central Time <i>* Registration Advisement: Bids will only be accepted from those Companies/Firms which properly register their attendance at this meeting by completing all of the required information on the State Registration Sheet.</i>	01/16/2019
5.	Last day to submit written questions after Pre-Bid Conference	01/17/2019
6.	State responds to written questions through ITB "Addendum" and/or "Amendment" to be posted to the Internet at: http://das.nebraska.gov/materiel/purchasing.html	01/23/2019
7.	Bid opening Location: State Purchasing Bureau 1526 K Street, Suite 130 Lincoln, NE 68508	01/30/2019 2:00 PM Central Time
8.	Review for conformance of mandatory requirements	TBA

ACTIVITY		DATE/TIME
9.	Evaluation period	TBA
10.	Post "Letter of Intent to Contract" to Internet at: http://das.nebraska.gov/materiel/purchasing.html	TBA
11.	Contract finalization period	TBA
12.	Contract award	TBA
13.	Contractor start date	TBA

This addendum will become part of the ITB/proposal and should be acknowledged with the Invitation to Bid response.

ADDENDUM THREE, QUESTIONS and ANSWERS

Date: January 23, 2019

To: All Bidders

From: Julie Schiltz, Buyer
AS Materiel State Purchasing

RE: Addendum for Invitation to Bid Number 5992 OF Pre-Bid Conference to be opened January 30, 2019 at 2:00 p.m. Central Time.

Questions and Answers

Following are the questions submitted and answers provided for the above mentioned Invitation to Bid. The questions and answers are to be considered as part of the Invitation to Bid. It is the Bidder's responsibility to check the State Purchasing Bureau website for all addenda or amendments.

<u>Question Number</u>	<u>ITB Section Reference</u>	<u>ITB Page Number</u>	<u>Question</u>	<u>State Response</u>
1.	A	37	On VII.Body A.Bodies 12. Side brace support. Can we remove this side brace? We have removed this on our standard bodies. We can now get more liquid capacity with this removed. Monroe can provide 270 gallon tanks per side for liquid.	No: Please comply with specifications as written
2.	G		Transmission / Can verbiage be change to HD4000 or HD4500 as these are current models?	Yes NDOT will use the HD4000 and HD4500 as the models for Allison transmission
3.	J.		Brakes / AD-IP not available. As the OEM standard, is the Wabco System Saver HP with integral air governor acceptable?	Yes NDOT will accept the Wabco System Saver with integral air governor.
4.	K.		Fuel Tanks / Davco 384 is not available. Is the Davco 487 Fuel/Water Separator With ESOC and 12 Volt Preheater	Yes NDOT will accept the Davco 487 Fuel/Water separator with ESOC and 12 volt preheater.
5.			Will the State of Nebraska accept an automated manual transmission in lieu of the Allison 4500 RDS? The technology has evolved to where they are now better and more fuel efficient than the Allison. Every OEM now offers a 12 speed automated transmission.	No: Please comply with specifications as written

6.			<p>Will the State increase the CFM requirement of the air compressor to 30+ due to the tow plow and the additional air volume requirement it creates? 18 CFM is less than the standard on all OEMs.</p>	<p>No NDOT will not increase Minimum CFM.</p> <p>Per Viking Tow Plow this is the minimum need.</p> <p>This is just minimum we will accept higher CFM's.</p>
7.			<p>Will the State give consideration to production turnaround in the event that a bid is nominally higher? Some OEMs have lead times in excess of 365 days which is NOT conducive to the State's truck purchasing needs.</p>	<p>Per section I.DD ... bids will be awarded according to the provisions in the ITB Price; Location; Quality; Delivery time; and, NDOT will review all build lead times of all bidders.</p>
8.			<p>Will the State accept unitized front axles?</p>	<p>No: Please comply with specifications as written</p>
9.			<p>There isn't a cross auger section in the valve spec. If we quote what you need, we won't be priced the same as those who quote what is specified. If we quote what is asked for, it won't be correct on the truck. Are these still the functions you want? Hoist*-Tow Plow Steer**-tow plow lift**-Priority**-plow lift**-plow angle**-conveyor reversing**-cross auger**-pre-wet**-spinner**-tow plow pre-wet.</p> <p>Wing-Wing-Wing on different valve section per options requested.</p>	<p>NDOT will change this to read: for the correct bidding.</p> <p>Valves is to be arranged as follows:</p> <ul style="list-style-type: none"> a. Closed center inlet with relief b. Hoist=4 way, 26 GPM,500 psi down port relief. c. Plow lift=4 way, 16gpm d. Plow angle=4 way, 10gpm e. Wing toe=4way, 10gpm, 500 psi down port relief f. Wing heel=4 way, 10gpm, 500 psi down port relief, 2000 psi up port relief (required) g. Auger=4 way, 17gpm motor spool h. Spinner=4 way, 10gpm motor spool i. Prewet=4 way, 6gpm motor spool j. Tow Plow steering=4 way, 10 gpm k. Tow Plow raise/lower=3 way, 10gpm l. Trailer spreader=4 way,

				<p>15gpm motor spool</p> <p>m. Trailer spinner=4 way, 10gpm motor spool</p> <p>n. Trailer prewet=4 way, 6gpm motor spool</p> <p>o. Endcover</p>
10.			<p>Will the State increase the minimum CFM of the air compressor since the addition of the tow plow more than doubles the air volume required for safety in case of an air leak being able to maintain brake pressure and avoid an accident. 18 CFM is less than the standard CFM of a 6.7 liter medium duty engine. The CFM really needs to be a minimum of 30 CFM to avoid accidents.</p>	<p>Please refer to question #6 for NDOT's answer</p>
11.			<p>Will the State allow for automated transmissions to be bid as a direct competitor to the Allison in lieu of as an option price? PTO is off of the crankshaft so there is no reason to require a torque converted transmission. Fuel economy is 10-15% better with an automated transmission. Automotive OEMs are ALL moving to an automated transmission because the technology has made them better than the torque converted gearboxes. The 10 speed transmission that both Ford and General Motors use in their pickups is a dual clutch automated manual.</p>	<p>Please refer to question # 5 for NDOT's answer</p>
12.	VII.Body A	14	<p>The bid it calls out for Whelen light boxes in the dump body on Page37 VII.Body A. 14. We have been installing the complete Whelen light package on the other trucks but it doesn't call that out in the spec. I would just like clarification if we are to include the Whelen lights in the base bid.</p>	<p>On primary bid we just call out for the Whelen light boxes to be part of the body</p> <p>There is a line item for the installation of the Whelen Safety light systems.</p>

This addendum will become part of the ITB and should be acknowledged with the Invitation to Bid response.

II. TERMS AND CONDITIONS

Bidders should complete Section IV through XVIII as part of their bid. Bidder is expected to read the Terms and Conditions and must initial either accept, reject, or reject and provide alternative language for each clause. The Bidder should also provide an explanation of why the Bidder rejected the clause or rejected the clause and provided alternate language using 'Track Changes'. Upon request an electronic copy of the bid with 'Track Changes' must be submitted in an editable Word format. By signing the ITB Bidder is agreeing to be legally bound by all the accepted terms and conditions, and any proposed alternative terms and conditions submitted with the bid. The State reserves the right to negotiate rejected or proposed alternative language. If the State and Bidder fail to agree on the final Terms and Conditions, the State reserves the right to reject the bid. The State is soliciting bids in response to the ITB. The State reserves the right to reject bids that attempt to substitute the Bidder's commercial contracts and/or documents for this ITB.

The Bidder should submit with their bid any license, user agreement, service level agreement, or similar documents that the Bidder wants incorporated in the Contract. Upon notice of Intent to Award, the Bidder must submit a copy of these documents in an editable Word format. The State will not consider incorporation of any document not submitted with the Bidder's bid. These documents shall be subject to negotiation and will be incorporated as addendums if agreed to by the Parties.

If a conflict or ambiguity arises after the addendums have been negotiated and agreed to, the addendums shall be interpreted as follows:

1. If only one (1) Party's document has a particular clause then that clause shall control;
2. If both Party's documents have a similar clause, but the clauses do not conflict, the clauses shall be read together;
3. If both Party's documents have a similar clause, but the clauses conflict, the State's clause shall control.

A. GENERAL

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within ITB Response (Initial)	NOTES/COMMENTS:
bc			

The contract resulting from this ITB shall incorporate the following documents:

1. Invitation to Bid and Addenda;
2. Amendments to the ITB;
3. Questions and Answers;
4. Contractor's bid (ITB);
5. Award;
6. The executed Contract and any Addenda; and,
7. Amendments to the Contract

These documents constitute the entirety of the contract.

Unless otherwise specifically stated in a future contract amendment, in case of any conflict between the incorporated documents, the documents shall govern in the following order of preference with number one (1) receiving preference over all other documents and with each lower numbered document having preference over any higher numbered document: 1) Amendment to the executed Contract with the most recent dated amendment having the highest priority, 2) executed Contract and any attached Addenda, 3) Amendments to ITB and any Questions and Answers, 4) the original ITB document and any Addenda, and 5) the Contractor's submitted Bid.

Any ambiguity or conflict in the contract discovered after its execution, not otherwise addressed herein, shall be resolved in accordance with the rules of contract interpretation as established in the State.

B. NOTIFICATION

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within ITB Response (Initial)	NOTES/COMMENTS:
bc			

Contractor and State shall identify the contract manager who shall serve as the point of contact for the executed contract.

Communications regarding the executed contract shall be in writing and shall be deemed to have been given if delivered personally or mailed, by U.S. Mail, postage prepaid, return receipt requested, to the parties at their respective addresses set forth below, or at such other addresses as may be specified in writing by either of the parties. All notices, requests, or communications shall be deemed effective upon personal delivery or five (5) calendar days following deposit in the mail.

Either party may change its address for notification purposes by giving notice of the change, and setting forth the new address and an effective date.

C. GOVERNING LAW

Notwithstanding any other provision of this contract, or any amendment or addendum(s) entered into contemporaneously or at a later time, the parties understand and agree that, (1) the State of Nebraska is a sovereign state and its authority to contract is therefore subject to limitation by the State's Constitution, statutes, common law, and regulation; (2) this contract will be interpreted and enforced under the laws of the State of Nebraska; (3) any action to enforce the provisions of this agreement must be brought in the State of Nebraska per state law; (4) the person signing this contract on behalf of the State of Nebraska does not have the authority to waive the State's sovereign immunity, statutes, common law, or regulations; (5) the indemnity, limitation of liability, remedy, and other similar provisions of the final contract, if any, are entered into subject to the State's Constitution, statutes, common law, regulations, and sovereign immunity; and, (6) all terms and conditions of the final contract, including but not limited to the clauses concerning third-party use, licenses, warranties, limitations of liability, governing law and venue, usage verification, indemnity, liability, remedy or other similar provisions of the final contract are entered into specifically subject to the State's Constitution, statutes, common law, regulations, and sovereign immunity.

The Parties must comply with all applicable local, state and federal laws, ordinances, rules, orders, and regulations.

D. CHANGE ORDERS OR SUBSTITUTIONS

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within ITB Response (Initial)	NOTES/COMMENTS:
bc			

The State and the Contractor, upon the written agreement, may make changes to the contract within the general scope of the ITB. Changes may involve specifications, the quantity of work, or such other items as the State may find necessary or desirable. Corrections of any deliverable, service, or work required pursuant to the contract shall not be deemed a change. The Contractor may not claim forfeiture of the contract by reasons of such changes.

The State or Contractor may prepare a written description of the work required due to the change and the Contractor shall prepare an itemized cost sheet for the change. Changes in work and the amount of compensation to be paid to the Contractor shall be determined in accordance with applicable unit prices if any, a pro-rated value, or through negotiations. The State shall not incur a price increase for changes that should have been included in the Contractor's bid, were foreseeable, or result from difficulties with or failure of the Contractor's bid or performance.

No change shall be implemented by the Contractor until approved by the State, and the Contract is amended to reflect the change and associated costs, if any. If there is a dispute regarding the cost, but both parties agree that immediate implementation is necessary, the change may be implemented, and cost negotiations may continue with both Parties retaining all remedies under the contract and law.

Vendor will not substitute any item that has been awarded without prior written approval of SPB.

E. BREACH

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within ITB Response (Initial)	NOTES/COMMENTS:
BC			

Either Party may terminate the contract, in whole or in part, if the other Party breaches its duty to perform its obligations under the contract in a timely and proper manner. Termination requires written notice of default and a thirty (30) calendar day (or longer at the non-breaching Party's discretion considering the gravity and nature of the default) cure period. Said notice shall be delivered by Certified Mail, Return Receipt Requested, or in person with proof of delivery. Allowing time to cure a failure or breach of contract does not waive the right to immediately terminate the contract for the same or different contract breach which may occur at a different time.

In case of breach by the Contractor, the State may, without unreasonable delay, make a good faith effort to make a reasonable purchase or contract to purchased goods in substitution of those due from the contractor. The State may recover from the Contractor as damages the difference between the costs of covering the breach. Notwithstanding any clause to the contrary, the State may also recover the contract price together with any incidental or consequential damages defined in UCC Section 2-715, but less expenses saved in consequence of Contractor's breach.

The State's failure to make payment shall not be a breach, and the Contractor shall retain all available statutory remedies. (See Indemnity - Self-Insurance and Payment)

F. NON-WAIVER OF BREACH

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within ITB Response (Initial)	NOTES/COMMENTS:
BC			

The acceptance of late performance with or without objection or reservation by a Party shall not waive any rights of the Party nor constitute a waiver of the requirement of timely performance of any obligations remaining to be performed.

G. SEVERABILITY

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within ITB Response (Initial)	NOTES/COMMENTS:
BC			

If any term or condition of the contract is declared by a court of competent jurisdiction to be illegal or in conflict with any law, the validity of the remaining terms and conditions shall not be affected, and the rights and obligations of the parties shall be construed and enforced as if the contract did not contain the provision held to be invalid or illegal.

H. INDEMNIFICATION

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within ITB Response (Initial)	NOTES/COMMENTS:
BC			

1. GENERAL

The Contractor agrees to defend, indemnify, and hold harmless the State and its employees, volunteers, agents, and its elected and appointed officials ("the indemnified parties") from and against any and all claims, liens, demands, damages, liability, actions, causes of action, losses, judgments, costs, and expenses of every nature, including investigation costs and expenses, settlement costs, and attorney fees and expenses ("the claims"), sustained or asserted against the State for personal injury, death, or property loss or damage, arising out of, resulting from, or attributable to the willful misconduct, negligence, error, or omission of the Contractor, its employees, Subcontractors, consultants, representatives, and agents, resulting from this contract, except to the extent such Contractor liability is attenuated by any action of the State which directly and proximately contributed to the claims.

2. SELF-INSURANCE (Statutory)

The State is self-insured for any loss and purchases excess insurance coverage pursuant to Neb. Rev. Stat. § 81-8,239.01 (Reissue 2008). If there is a presumed loss under the provisions of this agreement, Contractor may file a claim with the Office of Risk Management pursuant to Neb. Rev. Stat. §81-8,829 through 81-8,306 for review by the State Claims Board. The State retains all rights and immunities under the State Miscellaneous (Section 81-8,294), Tort (Section 81-8,209), and Contract Claim Acts (Section 81-8,302), as outlined in Neb. Rev. Stat. § 81-8,209 et seq. and under any other provisions of law and accepts liability under this agreement to the extent provided by law.

I. ATTORNEY'S FEES

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within ITB Response (Initial)	NOTES/COMMENTS:
bc			

In the event of any litigation, appeal, or other legal action to enforce any provision of the contract, the Parties agree to pay all expenses of such action, as permitted by law and if order by the court, including attorney's fees and costs, if the other party prevails.

J. ASSIGNMENT, SALE, OR MERGER

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within ITB Response (Initial)	NOTES/COMMENTS:
bc			

Either party may assign the contract upon mutual written agreement of the other party. Such agreement shall not be unreasonably withheld.

The Contractor retains the right to enter into a sale, merger, acquisition, internal reorganization, or similar transaction involving Contractor's business. Contractor agrees to cooperate with the State in executing amendments to the contract to allow for the transaction. If a third party or entity is involved in the transaction, the Contractor will remain responsible for performance of the contract until such time as the person or entity involved in the transaction agrees in writing to be contractually bound by this contract and perform all obligations of the contract.

K. CONTRACTING WITH OTHER POLITICAL SUB-DIVISIONS OF THE STATE OR ANOTHER STATE

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within ITB Response (Initial)	NOTES/COMMENTS:
bc			

The Contractor may, but shall not be required to, allow agencies, as defined in Neb. Rev. Stat. §81-145, to use this contract. The terms and conditions, including price, of the contract may not be amended. The State shall not be contractually obligated or liable for any contract entered into pursuant to this clause.

The Contractor may, but shall not be required to, allow other states, agencies or divisions of other states, or political subdivisions of other states to use this contract. The terms and conditions, including price, of this contract shall apply to any such contract, but may be amended upon mutual consent of the Parties. The State of Nebraska shall not be contractually or otherwise obligated or liable under any contract entered into pursuant to this clause. The State shall be notified if a contract is executed based upon this contract.

L. FORCE MAJEURE

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within ITB Response (Initial)	NOTES/COMMENTS:
bc			

Neither party shall be liable for any costs or damages, or for default resulting from its inability to perform any of its obligations under the contract due to a natural or manmade event outside the control and not the fault of the affected party ("Force Majeure Event"). The Party so affected shall immediately make a written request for relief to the other party, and shall have the burden of proof to justify the request. The other Party may granted the relief requested; relief may not be unreasonably withheld. Labor disputes with the impacted party's own employees will not be considered a Force Majeure Event.

M. CONFIDENTIALITY

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within ITB Response (Initial)	NOTES/COMMENTS:
bc			

All materials and information provided by the Parties or acquired by a Party on behalf of the other Party shall be regarded as confidential information. All materials and information provided or acquired shall be handled in accordance with federal and state law, and ethical standards. Should said confidentiality be breached by a Party, the Party shall notify the other Party immediately of said breach and take immediate corrective action.

It is incumbent upon the Parties to inform their officers and employees of the penalties for improper disclosure imposed by the Privacy Act of 1974, 5 U.S.C. 552a. Specifically, 5 U.S.C. 552a (i)(1), which is made applicable by 5 U.S.C. 552a (m)(1), provides that any officer or employee, who by virtue of his/her employment or official position has possession of or access to agency records which contain individually identifiable information, the disclosure of which is prohibited by the Privacy Act or regulations established thereunder, and who knowing that disclosure of the specific material is prohibited, willfully discloses the material in any manner to any person or agency not entitled to receive it, shall be guilty of a misdemeanor and fined not more than \$5,000.

N. EARLY TERMINATION

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within ITB Response (Initial)	NOTES/COMMENTS:
bc			

The contract may be terminated as follows:

1. The State and the Contractor, by mutual written agreement, may terminate the contract at any time.
2. The State, at its sole discretion, may terminate the contract for any reason upon thirty (30) calendar day's written notice to the Contractor. Such termination shall not relieve the Contractor of warranty or other service obligations incurred under the terms of the contract. In the event of termination the Contractor shall be entitled to payment, determined on a pro rata basis, for products or services satisfactorily performed or provided.
3. The State may terminate the contract immediately for the following reasons:
 - a. if directed to do so by statute;
 - b. Contractor has made an assignment for the benefit of creditors, has admitted in writing its inability to pay debts as they mature, or has ceased operating in the normal course of business;
 - c. a trustee or receiver of the Contractor or of any substantial part of the Contractor's assets has been appointed by a court;
 - d. fraud, misappropriation, embezzlement, malfeasance, misfeasance, or illegal conduct pertaining to performance under the contract by its Contractor, its employees, officers, directors, or shareholders;
 - e. an involuntary proceeding has been commenced by any party against the Contractor under any one of the chapters of Title 11 of the United States Code and (i) the proceeding has been pending for at least sixty (60) calendar days; or (ii) the Contractor has consented, either expressly or by operation of law, to the entry of an order for relief; or (iii) the Contractor has been decreed or adjudged a debtor;
 - f. a voluntary petition has been filed by the Contractor under any of the chapters of Title 11 of the United States Code;
 - g. Contractor intentionally discloses confidential information;
 - h. Contractor has or announces it will discontinue support of the deliverable; and,
 - i. In the event funding is no longer available.

O. CONTRACT CLOSEOUT

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within ITB Response (Initial)	NOTES/COMMENTS:
BC			

Upon termination of the contract for any reason the Contractor shall within thirty (30) days, unless stated otherwise herein:

1. Transfer all completed or partially completed deliverables to the State;
2. Transfer ownership and title to all completed or partially completed deliverables to the State;
3. Return to the State all information and data, unless the Contractor is permitted to keep the information or data by contract or rule of law. Contractor may retain one copy of any information or data as required to comply with applicable work product documentation standards or as are automatically retained in the course of Contractor's routine back up procedures;
4. Cooperate with any successor contractor, person or entity in the assumption of any or all of the obligations of this contract;
5. Cooperate with any successor contractor, person or entity with the transfer of information or data related to this contract;
6. Return or vacate any state owned real or personal property;

Nothing in this Section should be construed to require the Contractor to surrender intellectual property, real or person property, or information or data owned by the Contractor for which the State has no legal claim.

III. CONTRACTOR DUTIES

A. INDEPENDENT CONTRACTOR / OBLIGATIONS

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within ITB Response (Initial)	NOTES/COMMENTS:
PC			

It is agreed that the Contractor is an independent contractor and that nothing contained herein is intended or should be construed as creating or establishing a relationship of employment, agency, or a partnership.

The Contractor is solely responsible for fulfilling the contract. The Contractor or the Contractor's representative shall be the sole point of contact regarding all contractual matters.

The Contractor shall secure, at its own expense, all personnel required to perform the services under the contract. The personnel the Contractor uses to fulfill the contract shall have no contractual or other legal relationship with the State; they shall not be considered employees of the State and shall not be entitled to any compensation, rights or benefits from the State, including but not limited to, tenure rights, medical and hospital care, sick and vacation leave, severance pay, or retirement benefits.

By-name personnel commitments made in the Contractor's bid shall not be changed without the prior written approval of the State. Replacement of these personnel, if approved by the State, shall be with personnel of equal or greater ability and qualifications.

The Contractor warrants that all persons assigned to the project shall be employees of the Contractor or a Subcontractor, and shall be fully qualified to perform the work required herein. Personnel employed by the Contractor or a subcontractor to fulfill the terms of the contract shall remain under the sole direction and control of the Contractor or the subcontractor respectively.

With respect to its employees, the Contractor agrees to be solely responsible for the following:

1. Any and all pay, benefits, and employment taxes and/or other payroll withholding;
2. Any and all vehicles used by the Contractor's employees, including all insurance required by state law;
3. Damages incurred by Contractor's employees within the scope of their duties under the contract;
4. Maintaining Workers' Compensation and health insurance that complies with state and federal law and submitting any reports on such insurance to the extent required by governing law;
5. Determining the hours to be worked and the duties to be performed by the Contractor's employees; and,
6. All claims on behalf of any person arising out of employment or alleged employment (including without limit claims of discrimination alleged against the Contractor, its officers, agents, or subcontractors or subcontractor's employees).

If the Contractor intends to utilize any subcontractor, the Subcontractor's level of effort, tasks, and time allocation must be clearly defined in the Contractor's bid. The Contractor shall agree that it will not utilize any Subcontractors not specifically included in its bid in the performance of the contract without the prior written authorization of the State.

The State reserves the right to require the Contractor to reassign or remove from the project any Contractor or Subcontractor employee.

Contractor shall insure that the terms and conditions contained in any contract with a sub-contractor does not conflict with the terms and conditions of this contract.

The Contractor shall include a similar provision, for the protection of the State, in the contract with any Subcontractor engaged to perform work on this contract.

B. EMPLOYEE WORK ELIGIBILITY STATUS

The Contractor is required and hereby agrees to use a federal immigration verification system to determine the work eligibility status of employees physically performing work within the State. A federal immigration verification system means the electronic verification of the work authorization program authorized by the Illegal Immigration Reform and Immigrant Responsibility Act of 1996, 8 U.S.C. 1324a, known as the E-Verify Program, or an equivalent federal

program designated by the United States Department of Homeland Security or other federal agency authorized to verify the work eligibility status of an employee.

If the Contractor is an individual or sole proprietorship, the following applies:

1. The Contractor must complete the United States Citizenship Attestation Form, available on the DAS website at <http://das.nebraska.gov/materiel/purchasing.html>

The completed United States Attestation Form should be submitted with the ITB response.

2. If the Contractor indicates on such attestation form that he or she is a qualified alien, the Contractor agrees to provide the U.S. Citizenship and Immigration Services documentation required to verify the Contractor's lawful presence in the United States using the Systematic Alien Verification for Entitlements (SAVE) Program.
3. The Contractor understands and agrees that lawful presence in the United States is required and the Contractor may be disqualified or the contract terminated if such lawful presence cannot be verified as required by Neb. Rev. Stat. § 4-108.

C. COMPLIANCE WITH CIVIL RIGHTS LAWS AND EQUAL OPPORTUNITY EMPLOYMENT / NONDISCRIMINATION (Statutory)

The Contractor shall comply with all applicable local, state, and federal statutes and regulations regarding civil rights laws and equal opportunity employment. The Nebraska Fair Employment Practice Act prohibits Contractors of the State, and their Subcontractors, from discriminating against any employee or applicant for employment, with respect to hire, tenure, terms, conditions, compensation, or privileges of employment because of race, color, religion, sex, disability, marital status, or national origin (Neb. Rev. Stat. §48-1101 through 48-1125). The Contractor guarantees compliance with the Nebraska Fair Employment Practice Act, and breach of this provision shall be regarded as a material breach of contract. The Contractor shall insert a similar provision in all Subcontracts for goods or services to be covered by any contract resulting from this ITB.

D. COOPERATION WITH OTHER CONTRACTORS

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within ITB Response (Initial)	NOTES/COMMENTS:
bc			

Contractor may be required to work with or in close proximity to other contractors or individuals that may be working on the same or different projects. The Contractor shall agree to cooperate with such other contractors or individuals, and shall not commit or permit any act which may interfere with the performance of work by any other contractor or individual. Contractor is not required to compromise Contractor's intellectual property or proprietary information unless expressly required to do so by this contract.

E. PERMITS, REGULATIONS, LAWS

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within ITB Response (Initial)	NOTES/COMMENTS:
bc			

The contract price shall include the cost of all royalties, licenses, permits, and approvals, whether arising from patents, trademarks, copyrights or otherwise, that are in any way involved in the contract. The Contractor shall obtain and pay for all royalties, licenses, and permits, and approvals necessary for the performance of the contract. The Contractor must guarantee that it has the full legal right to the materials, supplies, equipment, software, and other items used to execute this contract.

F. INSURANCE REQUIREMENTS

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within ITB Response (Initial)	NOTES/COMMENTS:
BL			

The Contractor shall throughout the term of the contract maintain insurance as specified herein and provide the State a current Certificate of Insurance/Accord Form (COI) verifying the coverage. The Contractor shall not commence work on the contract until the insurance is in place. If Contractor subcontracts any portion of the Contract the Contractor must, throughout the term of the contract, either:

1. Provide equivalent insurance for each subcontractor and provide a COI verifying the coverage for the subcontractor;
2. Require each subcontractor to have equivalent insurance and provide written notice to the State that the Contractor has verified that each subcontractor has the required coverage; or,
3. Provide the State with copies of each subcontractor's Certificate of Insurance evidencing the required coverage.

The Contractor shall not allow any Subcontractor to commence work until the Subcontractor has equivalent insurance. The failure of the State to require a COI, or the failure of the Contractor to provide a COI or require subcontractor insurance shall not limit, relieve, or decrease the liability of the Contractor hereunder.

In the event that any policy written on a claims-made basis terminates or is canceled during the term of the contract or with in one (1) years of termination or expiration of the contract, the contractor shall obtain an extended discovery or reporting period, or a new insurance policy, providing coverage required by this contract for the term of the contract and one (1) years following termination or expiration of the contract.

If by the terms of any insurance a mandatory deductible is required, or if the Contractor elects to increase the mandatory deductible amount, the Contractor shall be responsible for payment of the amount of the deductible in the event of a paid claim.

Notwithstanding any other clause in this Contract, the State may recover up to the liability limits of the insurance policies required herein.

1. WORKERS' COMPENSATION INSURANCE

The Contractor shall take out and maintain during the life of this contract the statutory Workers' Compensation and Employer's Liability Insurance for all of the contractors' employees to be engaged in work on the project under this contract and, in case any such work is sublet, the Contractor shall require the Subcontractor similarly to provide Worker's Compensation and Employer's Liability Insurance for all of the Subcontractor's employees to be engaged in such work. This policy shall be written to meet the statutory requirements for the state in which the work is to be performed, including Occupational Disease. **The policy shall include a waiver of subrogation in favor of the State. The COI shall contain the mandatory COI subrogation waiver language found hereinafter.** The amounts of such insurance shall not be less than the limits stated hereinafter. For employees working in the State, the policy must be written by an entity authorized by the State of Nebraska Department of Insurance to write Workers' Compensation and Employer's Liability Insurance for Nebraska employees.

2. COMMERCIAL GENERAL LIABILITY INSURANCE AND COMMERCIAL AUTOMOBILE LIABILITY INSURANCE

The Contractor shall take out and maintain during the life of this contract such Commercial General Liability Insurance and Commercial Automobile Liability Insurance as shall protect Contractor and any Subcontractor performing work covered by this contract from claims for damages for bodily injury, including death, as well as from claims for property damage, which may arise from operations under this contract, whether such operation be by the Contractor or by any Subcontractor or by anyone directly or indirectly employed by either of them, and the amounts of such insurance shall not be less than limits stated hereinafter.

The Commercial General Liability Insurance shall be written on an **occurrence basis**, and provide Premises/Operations, Products/Completed Operations, Independent Contractors, Personal Injury, and Contractual Liability coverage. **The policy shall include the State, and others as required by the contract**

documents, Nebraska Department Of Transportation as Additional Insured(s). This policy shall be primary, and any insurance or self-insurance carried by the State shall be considered secondary and non-contributory. The COI shall contain the mandatory COI liability waiver language found hereinafter. The Commercial Automobile Liability Insurance shall be written to cover all Owned, Non-owned, and Hired vehicles.

REQUIRED INSURANCE COVERAGE	
BUILDERS RISK	
All Risk Insurance – Cost of the Job including Soft Costs	
COMMERCIAL GENERAL LIABILITY	
General Aggregate	\$2,000,000
Products/Completed Operations Aggregate	\$2,000,000
Personal/Advertising Injury	\$1,000,000 per occurrence
Bodily Injury/Property Damage	\$1,000,000 per occurrence
Fire Damage	\$50,000 any one fire
Medical Payments	\$10,000 any one person
Damage to Rented Premises	\$300,000 each occurrence
Contractual	Included
Independent Contractors	Included
If higher limits are required, the Umbrella/Excess Liability limits are allowed to satisfy the higher limit.	
WORKER'S COMPENSATION	
Employers Liability Limits	\$500K/\$500K/\$500K
Statutory Limits- All States	Statutory - State of Nebraska
Voluntary Compensation	Statutory
COMMERCIAL AUTOMOBILE LIABILITY	
Bodily Injury/Property Damage	\$1,000,000 combined single limit
Include All Owned, Hired & Non-Owned Automobile liability	Included
Motor Carrier Act Endorsement	Where Applicable
GARAGE LIABILITY	
\$1,000,000 Each Accident	
\$2,000,000 Aggregate	
GARAGE KEEPERS LEGAL LIABILITY	
Includes Comprehensive & Collision	Limits sufficient to cover all vehicles in the insured's care, custody or control.
UMBRELLA/EXCESS LIABILITY	
Over Primary Insurance	\$5,000,000 per occurrence
COMMERCIAL CRIME	
Crime/Employee Dishonesty Including 3rd Party Fidelity	\$1,000,000
CONTRACTOR'S POLLUTION LIABILITY	
Each Occurrence/Aggregate Limit	\$2,000,000
Includes Non-Owned Disposal Sites	
MANDATORY COI SUBROGATION WAIVER LANGUAGE	
"Workers' Compensation policy shall include a waiver of subrogation in favor of the State of Nebraska."	
MANDATORY COI LIABILITY WAIVER LANGUAGE	
"Commercial General Liability & Commercial Automobile Liability policies shall be primary and any insurance or self-insurance carried by the State shall be considered secondary and non-contributory. State of Nebraska shall be included as additionally insured."	

If the mandatory COI subrogation waiver language or mandatory COI liability waiver language on the COI states that the waiver is subject to, condition upon, or otherwise limit by the insurance policy a copy of the relevant sections of the policy must be submitted with the COI so the State can review the limitations imposed by the insurance policy.

3. EVIDENCE OF COVERAGE

The Contractor should furnish the State, prior to beginning work and upon, a certificate of insurance coverage complying with the above requirements to the attention of:

Fleet Management
 5001 S 14th St
 Lincoln, NE 68512

These certificates or the cover sheet shall reference the ITB number, and the certificates shall include the name of the company, policy numbers, effective dates, dates of expiration, and amounts and types of coverage afforded. If the State is damaged by the failure of the Contractor to maintain such insurance, then the Contractor shall be responsible for all reasonable costs properly attributable thereto.

Reasonable notice of cancellation of any required insurance policy must be submitted to Administrative Services State Purchasing Bureau when issued and a new coverage binder shall be submitted immediately to ensure no break in coverage.

4. DEVIATIONS

The insurance requirements are subject to limited negotiation. Negotiation typically includes, but is not necessarily limited to, the correct type of coverage, necessity for Workers' Compensation, and the type of automobile coverage carried by the Contractor.

G. NOTICE OF POTENTIAL CONTRACTOR BREACH

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within ITB Response (Initial)	NOTES/COMMENTS:
BC			

If Contractor breaches the contract or anticipates breaching the contract the Contractor shall immediately give written notice to the State. The notice shall explain the breach or potential breach, and may include a request for a waiver of the breach if so desired. The State may, at its discretion, temporarily or permanently waive the breach. By granting a temporary waiver, the State does not forfeit any rights or remedies to which the State is entitled by law or equity, or pursuant to the provisions of the contract. Failure to give immediate notice, however, may be grounds for denial of any request for a waiver of a breach.

H. ANTITRUST

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within ITB Response (Initial)	NOTES/COMMENTS:
BC			

The Contractor hereby assigns to the State any and all claims for overcharges as to goods and/or services provided in connection with this contract resulting from antitrust violations which arise under antitrust laws of the United States and the antitrust laws of the State.

I. CONFLICT OF INTEREST

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within ITB Response (Initial)	NOTES/COMMENTS:
BC			

By submitting a bid, Contractor certifies that there does not now exist a relationship between the Contractor and any person or entity which is or gives the appearance of a conflict of interest related to this ITB or project.

The Contractor certifies that it shall not take any action or acquire any interest, either directly or indirectly, which will conflict in any manner or degree with the delivery of its goods hereunder or which creates an actual or an appearance of conflict of interest.

The Contractor certifies that it will not employ any individual known by Contractor to have a conflict of interest.

The Parties shall not knowingly, for a period of two years after execution of the contract, recruit or employ any employee or agent of the other Party who has worked on the ITB or project, or who had any influence on decisions affecting the ITB or project.

J. STATE PROPERTY

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within ITB Response (Initial)	NOTES/COMMENTS:
bc			

The Contractor shall be responsible for the proper care and custody of any State-owned property which is furnished for the Contractor's use during the performance of the contract. The Contractor shall reimburse the State for any loss or damage of such property; normal wear and tear is expected.

K. SITE RULES AND REGULATIONS

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within ITB Response (Initial)	NOTES/COMMENTS:
bc			

The Contractor shall use its best efforts to ensure that its employees, agents, and Subcontractors comply with site rules and regulations while on State premises. If the Contractor must perform on-site work outside of the daily operational hours set forth by the State, it must make arrangements with the State to ensure access to the facility and the equipment has been arranged. No additional payment will be made by the State on the basis of lack of access, unless the State fails to provide access as agreed to in writing between the State and the Contractor.

L. ADVERTISING

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within ITB Response (Initial)	NOTES/COMMENTS:
bc			

The Contractor agrees not to refer to the contract award in advertising in such a manner as to state or imply that the company or its goods are endorsed or preferred by the State. Any publicity releases pertaining to the project shall not be issued without prior written approval from the State.

M. DRUG POLICY

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within ITB Response (Initial)	NOTES/COMMENTS:
<i>bc</i>			

Contractor certifies it maintains a drug free work place environment to ensure worker safety and workplace integrity. Contractor agrees to provide a copy of its drug free workplace policy at any time upon request by the State.

IV. PAYMENT

A. TAXES

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within ITB Response (Initial)	NOTES/COMMENTS:
BC			

The State is not required to pay taxes and assumes no such liability as a result of this solicitation. The Contractor may request a copy of the Nebraska Department of Revenue, Nebraska Resale or Exempt Sale Certificate for Sales Tax Exemption, Form 13 for their records. Any property tax payable on the Contractor's equipment which may be installed in a state-owned facility is the responsibility of the Contractor.

B. INVOICES

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within ITB Response (Initial)	NOTES/COMMENTS:
BC			

Invoices for payments must be submitted by the Contractor to the agency requesting the services with sufficient detail to support payment. The terms and conditions included in the Contractor's invoice shall be deemed to be solely for the convenience of the parties. No terms or conditions of any such invoice shall be binding upon the State, and no action by the State, including without limitation the payment of any such invoice in whole or in part, shall be construed as binding or estopping the State with respect to any such term or condition, unless the invoice term or condition has been previously agreed to by the State as an amendment to the contract.

C. INSPECTION AND APPROVAL

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within ITB Response (Initial)	NOTES/COMMENTS:
BC			

Final inspection and approval of all work required under the contract shall be performed by the designated State officials.

The State and/or its authorized representatives shall have the right to enter any premises where the Contractor or Subcontractor duties under the contract are being performed, and to inspect, monitor or otherwise evaluate the work being performed. All inspections and evaluations shall be at reasonable times and in a manner that will not unreasonably delay work.

If a simple inspection of the goods would reveal nonconformity, notice of nonconformity should be provided to the vendor as soon as reasonably practical, but not to exceed thirty (30) days from receipt of goods. This includes visual inspection of product to ensure packaging is not damaged, dented or compromised.

D. PAYMENT (Statutory)

State will render payment to Contractor when the terms and conditions of the contract and specifications have been satisfactorily completed on the part of the Contractor as solely determined by the State. (Neb. Rev. Stat. Section 73-506(1)). The State may require the Contractor to accept payment by electronic means such as ACH deposit. In no event shall the State be responsible or liable to pay for any services provided by the Contractor prior to the Effective Date of the contract, and the Contractor hereby waives any claim or cause of action for any such services.

E. LATE PAYMENT (Statutory)

The Contractor may charge the responsible agency interest for late payment in compliance with the State of Nebraska Prompt Payment Act (See Neb. Rev. Stat. §§ 81-2401 through 81-2408).

F. SUBJECT TO FUNDING / FUNDING OUT CLAUSE FOR LOSS OF APPROPRIATIONS (Statutory)

The State's obligation to pay amounts due on the Contract for a fiscal years following the current fiscal year is contingent upon legislative appropriation of funds. Should said funds not be appropriated, the State may terminate the contract with respect to those payments for the fiscal year(s) for which such funds are not appropriated. The State will give the Contractor written notice thirty (30) calendar days prior to the effective date of termination. All obligations of the State to make payments after the termination date will cease. The Contractor shall be entitled to receive just and equitable compensation for any authorized work which has been satisfactorily completed as of the termination date. In no event shall the Contractor be paid for a loss of anticipated profit.

G. RIGHT TO AUDIT (Statutory)

The State shall have the right to audit the Contractor's performance of this contract upon a thirty (30) day written notice. Contractor shall utilize generally accepted accounting principles, and shall maintain the accounting records, and other records and information relevant to the contract (Information) to enable the State to audit the contract. (Neb. Rev. Stat. §84-304 et seq.) The State may audit and the Contractor shall maintain the information during the term of the contract and for a period of five (5) years after the completion of this contract or until all issues or litigation are resolved, whichever is later. The Contractor shall make the Information available to the State at Contractor's place of business or a location acceptable to both Parties during normal business hours. If this is not practical or the Contractor so elects, the Contractor may provide electronic or paper copies of the Information. The State reserves the right to examine, make copies of, and take notes on any Information relevant to this contract, regardless of the form or the Information, how it is stored, or who possesses the Information. In no circumstances will contractor be required to create or maintain documents not kept in the ordinary course of contractor's business operations, nor will contractor be required to disclose any information, including but not limited to product cost data, which is confidential or proprietary to contractor.

The Parties shall pay their own costs of the audit unless the audit finds a previously undisclosed overpayment by the State. If a previously undisclosed overpayment exceeds one-half of one percent (.5%) of the total contract billings, or if fraud, material misrepresentations, or non-performance is discovered on the part of the Contractor, the Contractor shall reimburse the State for the total costs of the audit. Overpayments and audit costs owed to the State shall be paid within ninety (90) days of written notice of the claim. The Contractor agrees to correct any material weaknesses or condition found as a result of the audit.

V. SCOPE OF WORK

The Bidder should provide the following information in response to this ITB.

A. SCOPE

It is the intent of this bid invitation to establish a contract to supply Tandem Axle Chassis MIN 60,000 GVWR W/RDS Body and TOWPLOW per the attached specifications from date of award for a period of one (1) year with the option to renew for an additional four (4) one-year renewal periods when mutually agreeable to the vendor and the State. The State reserves the right to extend the period of this contract beyond the end date when mutually agreeable to the vendor and the State.

Complete specifications, manufacturer's current descriptive literature and/or advertising data sheets with cuts or photographs must be included with the bid for the IDENTICAL items proposed. Any information necessary to show compliance with these specifications not given on the manufacturer's descriptive literature and/or advertising data sheets must be supplied in writing on or attached to the bid document. If manufacturer's information necessary to show compliance with these specifications is not attached to the bid document, the Bidder may be required to submit requested information within three (3) business days of a written request. Failure to submit requested descriptive literature or advertising data sheets may be grounds to reject the bid.

B. AMENDMENT

This Contract may be amended in writing, within scope, upon the agreement of both parties.

C. REVISIONS

In the event any product is discontinued or replaced upon mutual consent during the contract period, the State reserves the right to amend this contract to include the alternate product at the same price.

VI. CAB AND CHASSIS

A. BIDDER INSTRUCTIONS

Bidder must respond to each of the following statements in Sections VI through XVIII. Specifications listed are minimum conditions that must be met in order for a Bidder to qualify for the award.

"YES" response means the Bidder guarantees they can meet this condition.

"NO" response means the Bidder cannot meet this condition and will not be considered.

"NO & PROVIDE ALTERNATIVE" responses should be used only with a narrative response in the NOTES/COMMENTS section explaining in detail any deviation from the Bidder's ability to meet the condition, and an explanation of how this would be determined to be an acceptable alternative to meeting the condition. Alternatives must be detailed in such a way that allows such deviations to be fully evaluated. The State shall determine at its sole discretion whether or not the Bidder's alternative is an acceptable alternative.

B. NON-COMPLIANCE STATEMENT

YES	NO	NO & PROVIDE ALTERNATIVE	
x			1. Read these specifications carefully. Any and all exceptions to these specifications must be written on or attached to quotation request. Any noncompliance may void your quotation. Non-compliance to any single specification can void your quotation.
x			2. It is the responsibility of Bidders to obtain information and clarifications as provided below. The State is not responsible for any erroneous or incomplete understandings or wrongful interpretations of this ITB by any Bidder.
x			3. No interpretation related to the meaning of bid specifications or other pre-bid documents will be made orally to any Bidder by the State. Any ITB interpretation must be put in writing and faxed by the Bidder to: the State Purchasing Bureau, Fax (402) 471-2089 or e-mailed to AS Materiel Purchasing as.materielpurchasing@nebraska.gov by the last day to submit written questions that is specified in the Schedule of Events. (Inquiries received after the last day to submit written questions may not be addressed).
NOTES/COMMENTS:			

C. BASIC SPECIFICATIONS

YES	NO	NO & PROVIDE ALTERNATIVE	
x			1. Shall be not less than 60,000 Gross Vehicle Weight Rating a. VIN door shall show full GWR and not reflect calculated bridge capacity rating
x			2. Wheel Base: a. Between 206 and 220 inches or as required by body installer to meet requirements to mount dump body, wings and other options b. Cab to trunnion shall be minimum 136 to 140 inches as required to meet RDS body specifications. This shall be clear; useable space above the rails with exception that vertical stack and heat shield may extend up to 6 inches into CT area as long as:

X			<ul style="list-style-type: none"> i. Stack with shield is near rear corner of cab. Right side preferred. ii. None of exhaust system in CT area crosses over chassis rail
X			3. Frame resisting bending moment shall equal or exceed 2,500,000 inch pounds.
X			4. Minimum 18-inch integral front frame extension on truck will be required, front only bumper and fenders to be furnished.
X			5. Hood shall be tilt-forward hood fenders with: <ul style="list-style-type: none"> a. Service access panels required. b. Engine shall be equipped with any OEM available extension tube to allow engine oil and automatic transmission fluid to be conveniently checked and filled at service access panel. c. Butterfly type hood for convenient access to engine is acceptable if tilt-forward hood/fender with services access panel(s) are not available by manufacturer.
NOTES/COMMENTS:			

D. ENGINE

YES	NO	NO & PROVIDE ALTERNATIVE	
X			1. Diesel, minimum 440 HP; 12 Liter, minimum 1,600 LB FOOT torque. Engine shall be certified to meet current EPA emissions standards for current model year at time of order NO OTHER ENGINE WILL BE ACCEPTABLE without written approval by Department of Transportation Fleet Management prior to bid opening. Alternative engines may only be requested during the pre-bid conference and/or during the question and answer period. Please specify: <u>DD13 12.8L</u> 450 HP 1650 LB/FT <ul style="list-style-type: none"> a. Vender shall provide a copy of the Certificate of Conformity letter sent to the Original Equipment Manufacturer from United States Environmental Protection Agency office of Transportation and air quality. Certificate of Conformity letter should be provided at time of bid opening. Failure to provide Certificate of Conformity letter shall be cause for bid rejection. b. The State of NE will not accept a chassis with any engine that is not compliant or OEM is pay non-compliance penalties to sell said engine/chassis within State of NE
X			2. Muffler to be horizontal with vertical stack on right hand side with 90 degree elbowed exhaust outlet that is ABOVE top cab shields. Elbowed exhaust outlet must be equivalent material and finished as stack and may be dealer installed. Vertical system heat shield required. Horizontal exhaust is acceptable only if required with body and/or wing mounting. If

X			horizontal is used it must have exhaust suppression to prevent damage to pavement during emission system regeneration.
X			3. Temperature controlled fan.
X			4. Engine to be equipped with 110 volt AC engine coolant heater: male receptacle with cover for electrical wire for engine heater is to be sturdily mounted.
	X		5. Cold starting aid-KBI Dieselmatic cartridge type or equivalent; cartridge to be furnished with warm engine cut off switch may be dealer installed unless equipped with glow plugs or pre-heater. OEM engine software system to aid cold engine start also acceptable. Please specify: <u>N/A WITH THE DD13 ENGINE</u> NOT APPROVED FOR USE ON THE DETROIT ENGINE
X			6. Exterior and interior to engine compartment air inlet system for air cleaner. Air cleaner with dual elements if available. Please specify <u>SNOW DOOR & DONALDSON</u>
X			7. Front crankshaft provisions required for power take off.
	X		8. Stainless steel oil pan if available from manufacturer. Please specify: <u>N/A</u>
NOTES/COMMENTS:			

E. FILTERS

YES	NO	NO & PROVIDE ALTERNATIVE	
X			1. Oil filter to be full flow, throw-away type.
X			2. Dual element air cleaner if available by manufacturer, Donaldson or equivalent Please specify: <u>DONALDSON</u>
NOTES/COMMENTS:			

F. COOLING

YES	NO	NO & PROVIDE ALTERNATIVE	
X			1. Manufacture's heaviest duty cooling capacity radiator to be compatible with front mounted PTO.
	X		2. Coolant filter if required by engine manufacturer.

X			3. Truck shall have manufacturer's recommended long life antifreeze protection to no less than 34 degrees below zero Fahrenheit.
NOTES/COMMENTS:			

G. TRANSMISSION

YES	NO	NO & PROVIDE ALTERNATIVE	
X			1. Allison HD4060 or 4560 automatic transmission with a hold feature in all gears with transmission oil temperature gauge or warning system on or near dash. Transmission to be most compatible with engine horsepower and torque. <ul style="list-style-type: none"> a. Transmission should have Allison Prognostic, load base shift scheduling and shift energy management features as available. b. Ground speed signal connecting point shall be provided by chassis OEM regardless of transmission installed. Connecting point to be easily accessible by body/hydraulic system installers. c. Transmission electronic control box to be mounted in cab if available from manufacturer. N/A
X			2. Synthetic oil to be OEM factory fill for transmission.
NOTES/COMMENTS:			

H. AXLE AND SPRINGS

YES	NO	NO & PROVIDE ALTERNATIVE	
X			1. Minimum 20,000 pounds rated capacity axle in front with corresponding multi-leaf springs. Front axle to be set forward design with front bumper to axle measurement of no more than 31 ½ inches. Shall be measured from front of hood or front hood line to center of axle. <ul style="list-style-type: none"> a. OIL FILLED, FRONT WHEEL HUBS WITH WINDOW REQUIRED.
X			2. Rear suspension assembly shall be Hendrickson PRIMAAX heavy duty on/off road with minimum 46,000 pounds rated capacity. <ul style="list-style-type: none"> a. Tandem axle assembly shall be rated at minimum 40,000 pounds of 46,000 pounds capacity as per OEM requirements. b. Inter-wheel and inter-axle full locking differentials of manufacturer's recommended brand. Switches shall have indicator lights c. Adequate gear ratios must be available to sustain road speed of 75 MPH plus or minus 3 MPH at governed engine RPM.
X			3. Front and rear springs to also meet manufacture's GVWR requirements.

X			4. Manual dump valve for air suspension with indicator light.
X			5. Rear axles to have synthetic oil installed.
NOTES/COMMENTS:			

I. STEERING

YES	NO	NO & PROVIDE ALTERNATIVE	
X			1. Manufacturer's power steering required. a. Dual Power steering gearboxes required.
✓			2. Tilt steering wheel required.
NOTES/COMMENTS:			

J. BRAKES

YES	NO	NO & PROVIDE ALTERNATIVE	
✓			1. Services brakes shall be six wheel, full air, with automatic slack adjusters. a. Brakes shall be ABS design.
X			2. Two shoes per wheel, double anchored when brakes are drum type.
X			3. Services brakes may also be combination of rear drum brakes and front disc brakes or all disc brakes. Please specify: <u>ALL SHOE/DRUM</u>
X			4. Dust shields are required on all axles.
X			5. Anti-lock brakes system on all wheels required.
X			6. A spring loaded parking brake system designed to automatically apply parking brakes to all four rear wheels when pressure in main air reservoir drops below safe pressure with warning signal is required. a. Forward facing brake chambers.
X			7. The compressor shall be single or two stage water cooled type with minimum air flow of 18 CFM.
X			8. Bendix AD-IP dryer or OEM equivalent required, which may be dealer installed if not available by manufacturer. Spin on filter required. OEM brand air dryer must be approved by NDOT prior to bid opening. Alternatives may only be requested during the pre-bid conference and/or during the question and answer period.
X			9. Drain valve system for all air tanks must be conveniently operated from side of chassis; system may be dealer installed if not available by manufacturer.

X			10. Trailer brakes – truck to be equipped with hand air control valve, break away valve and all necessary lines and connections mounted to rear of truck chassis required for coupling air brakes on trailer.
NOTES/COMMENTS:			

K. FUEL TANKS

YES	NO	NO & PROVIDE ALTERNATIVE	
X			1. Fuel tank to be left side mounted and 100 gallon capacity. State tank size being bid: <ul style="list-style-type: none"> a. Tank extending beyond rear line of cab shall not interfere with wing mount. b. Stainless steel tank if available from manufacturer. Please specify: <u>ALUMINUM / STAINLESS STEEL</u> N/A c. Stainless steel fuel tank straps if available from manufacturer. Please specify: <u>YES</u>
X			2. Fuel tank shall be regular accessory units AS SHOWN AND LISTED IN TRUCK MANUFACTURE'S DATA BOOKS. <ul style="list-style-type: none"> a. Suction line from tank to pump to be OEM plastic or stratoflex. Stratoflex is preferred. Please specify: <u>HIGH TEMP REINFORCED NYLON</u>
X			3. Fuel/water separator with heater required. Davco brand 384 preferred. Please specify: <u>DAVCO 487</u> <ul style="list-style-type: none"> a. Shall be compatible with Bio-diesel fuel.
X			4. Minimum fourteen inches ground clearance required under fuel tank, DEF tank and supports.
X			5. OEM DEF tank if applicable shall not interfere with mounting of wing frame, cab shield, etc.
NOTES/COMMENTS:			

L. WHEELS

YES	NO	NO & PROVIDE ALTERNATIVE	
X			1. Quantity eight (8)- 22.5 inch by minimum 8.25 inches, ventilated, 10 stud, hub-pilot, steel disc type with 11-1/4 inch diameter bolt circle; identical including color, interchangeable; rear wheels and tires must be spaced to permit use of tire chains.

X			2. Quantity three (3) – 22.5 x 12.25 (front and spare) otherwise meeting specification.
NOTES/COMMENTS:			

M. TIRE SPECIFICATIONS

YES	NO	NO & PROVIDE ALTERNATIVE	
X			1. Steel belted radials of tubeless type. a. Quantity eight (8) – 11R22.5 "H" load range or equivalent metric size rear. i. Tread design to be Michelin XDN@ or equivalent on other brands. ii. Fronts and spare shall be 425/65R22.5J of Michelin XZY3 or equivalent tread.
X			2. Tires must be Goodyear, Michelin, Bridgestone, Firestone Continental or General and shall carry said company name. Please specify: <u>MICHELIN</u>
NOTES/COMMENTS:			

N. CAB SPECIFICATIONS

YES	NO	NO & PROVIDE ALTERNATIVE	
X			1. Air suspension cab with locks on doors
X			2. National Brand Model 200 series or OEM equivalent high back seat with air lumbar support on both driver and passage sides, both with cloth covering and able to adjust forward and backwards on gliders. Please specify: <u>OEM PREMIUM BY NATIONAL</u> a. Seats must be able to provide 6.5 inches of travel. b. Seat mounted arm rest outboard to be furnished on both driver and passage seats. If outboard arm rest is available by molded arm rest on door of truck that is acceptable.
X			3. Power electric windows on both side windows.
X			4. Two (2) padded sun visors.
X			5. Tinted safety glass in cab.
X			6. Front windshield shall include heated defroster grids to aid melting of snow and/or ice buildup during winter operations.

✓			7. Window in bottom, front part of right door if available from manufacturer.
✓			8. Step or running board on each side of cab.
✓			9. Interior finished to exclude excessive noise and weather.
✓			10. Exterior and/or interior cab grab handles on both sides to facilitate entry into the truck shall be provided.
✓			11. Minimum 107 inches from grade to top of cab required.
✓			12. Cab to have minimum 72 inches of shoulder room per specification sheet.
✓			13. Cab to have minimum of 56 inches floor to headliner height.
✓			14. Air suspension cab required. If manufacture does not have air suspension cab available, then Cab mate by Link manufacturing Ltd. is acceptable which maybe dealer installed. Please specify: <u>FACTORY AIR RIDE</u>
NOTES/COMMENTS:			

O. COLOR

YES	NO	NO & PROVIDE ALTERNATIVE	
✓			1. Truck will be highway safety yellow, vendor to provide color chip for approval.
✓			2. Paint will be base coat/clear coat acrylic, activator-hardened acrylic or polyurethane type.
NOTES/COMMENTS:			

P. MIRRORS

YES	NO	NO & PROVIDE ALTERNATIVE	
✓			1. Rear vision rectangular western type. a. Mirrors to be stainless steel or OEM bright finished equivalent heated type with tinted or non-glare glass. b. Mirrors shall be electorally adjustable from driver seat.
✓			2. Size 16 inch by 7 inch or approximately 110 square inches.
✓			3. Mounted on right and left doors of cab. Extendable to maximum legal width.
✓			4. 8 inch convex mirror or equivalent size to be mounted below the 16 inch by 7 inch mirror on each side. Convex mirror not to overlap main mirror. Convex mirror to be heated type.

NOTES/COMMENTS:

Q. LIGHTS

YES	NO	NO & PROVIDE ALTERNATIVE	
X			1. Halogen or LED high beam headlights with low beam, parking, dome, double tail and stop lights, front and rear directional turn signal lights. a. Turn signals shall be self-canceling if available from OEM.
X			2. LED double tail and stop lights required for chassis orders. OEM chassis lights may be omitted for dump body orders as LED lights are required with dump body installation.
X			3. Wiring harness with connector for auxiliary lighting is required if available from manufacturer. Switch circuit to be battery power if available. Auxiliary snow plow lighting is required with dump body installation.
NOTES/COMMENTS:			

R. ELECTRICAL

YES	NO	NO & PROVIDE ALTERNATIVE	
X			1. System to 12 volts.
X			2. Manufacture's recommended batteries for diesel engine bid; minimum of three (3) batteries with 2700 CCA.
X			3. Alternator shall be a Delco 28Si or Bosch of minimum 160 amperes. Please specify: <u>DELCO 28 SI</u>
X			4. Positive and negative jump start studs required. Must be easily accessible at side of chassis. Use of frame or frame hardware is not acceptable for negative stud. Jump stud, cable and mount shall be dealer installed if not available from factory.
X			5. Chassis shall have easily accessible battery disconnect switch near the battery box or other OEM mounting location that is easily accessible for operators. Please specify location of switch: <u>OUTBOARD OF DRIVERS SEAT</u>
X			6. Trailer lighting harness and 7 pin ATA plug required at end of frame for trailer hookup.
NOTES/COMMENTS:			

S. CONTROLS AND INSTUMENTS

YES	NO	NO & PROVIDE ALTERNATIVE	
X			1. Key locking ignition switch; head, parking and dome light switch; traffic hazards switch; headlight beam control; electronic engine speed control for cruise and PTO/idle functions. Speedometer.
X			2. Voltmeter; oil pressure gauge; fuel gauge; engine temperature gauge and air pressure gauge.
X			3. High beam indicator light, flasher turn-indicator lights, turn signal switch located on steering Colum.
X			4. Engine hour meter, tachometer and vacuum restriction gauge for air cleaner are required, which shall be dash mounted. If manufacturer does not offer a vacuum restriction gauge on dash then a Filter Minder brand of gauge that is dash mounted is acceptable, which may be dealer installed.
X			5. Control for inter-wheel inter-axle locking differentials shall have dash mounted indicator light.
X			6. Rearview camera system is required and may be Installed by dump body installer. Camera system shall include a minimum 5 inch color monitor and one camera mounted to provide clear view of area behind truck with dump body and spreader installed. Camera will activate when chassis transmission is place in reverse and NDOT would also prefer that operator could activate system for view at any time. Please specify: <u>MONROE INSTALLED</u>
X			7. Camera System monitor shall have minimum of 3 camera input to allow additional cameras to be installed by NDOT at later date.
X			8. Rear view camera should have: a. Minimum 170 degree field of view. b. Camera with heated lens. c. Camera to be mounted in the area above pintle plate that will provide view under tailgate spreader when installed.
NOTES/COMMENTS:			

T. WINDSHIELD WIPERS

YES	NO	NO & PROVIDE ALTERNATIVE	
X			1. Heaviest duty dual electrical wipers available with intermittent capability.
X			2. Dual electric windshield washers. a. Washer nozzles to be integrated into wiper arms.

S. CONTROLS AND INSTRUMENTS

YES	NO	NO & PROVIDE ALTERNATIVE	
			1. Key locking ignition switch, head, parking and dome light switch; traffic hazards switch; headlight beam control; electronic engine speed control for cruise and PTO/idle functions. Speedometer.
			2. Voltmeter; oil pressure gauge; fuel gauge; engine temperature gauge and air pressure gauge.
			3. High beam indicator light, flasher turn-indicator lights, turn signal switch located on steering Column.
			4. Engine hour meter, tachometer and vacuum restriction gauge for air cleaner are required, which shall be dash mounted. If manufacturer does not offer a vacuum restriction gauge on dash then a Filter Minder brand of gauge that is dash mounted is acceptable, which may be dealer installed.
			5. Control for inter-wheel inter-axle locking differentials shall have dash mounted indicator light.
✓			6. Rearview camera system is required and may be installed by dump body installer. Camera system shall include a minimum 5 inch color monitor and one camera mounted to provide clear view of area behind truck with dump body and spreader installed. Camera will activate when chassis transmission is placed in reverse and NDOT would also prefer that operator could activate system for view at any time. Please specify <u>ZONE DEFENSE</u>
✓			7. Camera System monitor shall have minimum of 3 camera input to allow additional cameras to be installed by NDOT at later date.
✓			8. Rear view camera should have: a. Minimum 170 degree field of view. b. Camera with heated lens. c. Camera to be mounted in the area above pintle plate that will provide view under tailgate spreader when installed.
NOTES/COMMENTS:			

T. WINDSHIELD WIPERS

YES	NO	NO & PROVIDE ALTERNATIVE	
			1. Heaviest duty dual electrical wipers available with intermittent capability.
			2. Dual electric windshield washers. a. Washer nozzles to be integrated into wiper arms

NOTES/COMMENTS:

U. GENERAL

YES	NO	NO & PROVIDE ALTERNATIVE	
X			1. Dual electric horns: a. Manufacturer's standard air horn(s) shall be provided.
X			2. Truck manufacturer's recommended outside air intake heater with defroster to entire windshield, power outlet on dash.
X			3. Manufacturer's standard manually controlled air conditioning; seat belts for right and left seats with retractors, lap/shoulder type.
X			4. Factory installed AM/FM radio, preferable with antenna mounted on cowlings instead of top of cab.
X			5. Three sets of keys required per vehicle
NOTES/COMMENTS:			

V. RADIO FREQUENCY SHIELDING- Caution!!

YES	NO	NO & PROVIDE ALTERNATIVE	
X			1. The chassis and/ or installed components and equipment shall be compatible with use of NDOT mobile and/or two way communication devices. Main communication radio operates in low band range 47 MHz to 48 MHz, but all frequencies apply including low band, high band, UHF and VHF.
X			2. The chassis and/or installed components and equipment shall be manufactured to meet all current SAE and/or ISO standards applicable and/ or relevant to Electromagnetic Compatibility.
X			3. NDOT will conduct testing of radio/two-way when installed in chassis. NDOT will notify vendor if normal operational parameters are not met due to degradation of signal caused by electromagnetic emissions from chassis, or installed components and equipment. Vendor shall be required to work with NDOT personal to reduce interference level to a point acceptable to NDOT normal radio operating parameters. Vendor shall have 30 days to resolve RFI issue.
X			4. Vendor and/or manufacturer will be responsible for any and all cost to replace and/or modify any parts found to cause radio frequency interference. If NDOT and vendor cannot resolve source of RFI the unit will be sent to independent accredited lab for testing to ensure SAE and/or ISO standards which were current at date of bid. Should the chassis and/or installed components and equipment fail testing at the accredited lab, the vendor shall be responsible for all cost incurred for testing.

X			5. If after testing NDOT and/or accredited lab, the vendor is unable or unwilling to incur the cost and correct the RFI issue to the satisfaction of NDOT. ALL ORDERS AND CORRESPONDING CONTRACT WILL BE CANCELED.
NOTES/COMMENTS:			

W. FACTORY INSPECTION

YES	NO	NO & PROVIDE ALTERNATIVE	
X			1. The first truck chassis manufactured shall be made available for inspection by Department of Transportation Personal at factory.
X			2. Vendor representative(s) shall accompany Department of Transportation personal during inspection. a. Vendor shall be responsible to have body and hitch representatives in attendance at inspection to resolve any possible problems
X			3. Transportation, meals and lodging cost for Department of Transportation representatives to perform required inspection shall be the vendor's expense. Vendor/manufacturer must provide space inside building with truck to do inspection. With a minimum 2 hours.
NOTES/COMMENTS:			

X. WARRANTY

YES	NO	NO & PROVIDE ALTERNATIVE	
X			1. The manufacturer's regular warranty certificate will be required with each unit delivered and the warranty shall apply, in all cases with the following exceptions: a. Because of the installation or attachment of auxiliary or supplementary equipment by the Department of Transportation or subcontractor, the effective date of warranty will be after field assignment. As each unit is assigned for service the Department will maintain a record of serial number and assignment date. b. Manufacturer's written warranty includes engine, transmission and differential must accompany delivered units. c. Full manufacturer's warranty coverage will be required for the stated warranty period, beginning at assignment date, in addition to the time between delivery and field assignment. d. Prior to the awarding of, or entering into any agreement or contract, it shall be the responsibility of the manufacturer and/or the successful bidder to warrant to the State of Nebraska, in writing that it has factory authorized dealers in the State of Nebraska who will provide warranty/services and repair work without undue delay. e. Provide any information on towing available and what is covered.

NOTES/COMMENTS:

Y. SERVICE

YES	NO	NO & PROVIDE ALTERNATIVE	
X			1. Manufacturer's standard warranty, completed pre-delivery inspection certificate, Manufacturer's Statement of Origin and line sheet will be required at time each unit is delivered.
X			2. Service policy shall be honored by all of the manufacturer's authorized dealers in the State of Nebraska.
X			3. Dealer's decals, stickers, or other signs shall not be put on units; manufacturer's nameplate, stampings and other similar signs are acceptable.
NOTES/COMMENTS:			

Z. MANUALS

YES	NO	NO & PROVIDE ALTERNATIVE	
X			1. Owners/operator's manual must accompany each unit delivered.
X			2. All manuals must be furnished prior to payment and delivered to Fleet Management, Equipment Data Coordinator.
X			3. Failure to deliver all manuals that are ordered may result in non-payment of ten percent of the purchase order total, until all manuals are delivered.
X			4. NDOT shall be granted access to online engine, chassis, transmission services and parts manuals as available through OEM at no cost to NDOT. Vendor to provide NDOT personal training for online manuals. Vendor to enter VIN numbers into OEM data base: Please specify: <u>YOU SHOULD BE USING ALREADY</u>
NOTES/COMMENTS:			

AA. SPECIFICATION FORM

YES	NO	NO & PROVIDE ALTERNATIVE	
X			1. Successful bidder must complete form for each unit delivered and must accompany each unit when delivered. Forms will be supplied by Department of Transportation to successful bidder after purchase order is awarded.

X			2. If vendor does not properly complete form for each unit, a sum of \$250.00 per unit will be deducted from the purchase order amount.
NOTES/COMMENTS:			

BB. INSURANCE

YES	NO	NO & PROVIDE ALTERNATIVE	
X			1. The vendor will be required to fully insure all chassis, for all perils, until delivery to and accepted by the Department of Transportation, Fleet Management, 5001 South 14 th Street, Lincoln, Nebraska 68512.
X			2. Proof of insurance must be furnished within five days after notification of award to State Purchasing Bureau at address on the invitation to bid.
X			3. If delivery is earlier than indicated by bidder on invitation to bid, vendor must furnish insurance from actual delivery date to date specified on invitation to bid.
X			4. The State of Nebraska assumes, ownership at time of actual delivery at 5001 South 14 th Street, Lincoln, Nebraska 68512 and acceptance of complete unit.
NOTES/COMMENTS:			

VII. BODY

A. BODIES

YES	NO	NO & PROVIDE ALTERNATIVE	
✓			1. Body shall be Stainless steel Monroe RDS model and meet following specifications. a. Stainless steel construction will be 201 or 304
✓			2. Length of 14 feet required, requires a minimum CA of 133 inches.
✓			3. Top inside width shall be 87 inches with total outside width being 96 inches
✓			4. Side height of 50 inches minimum required. May be sloped front to rear to match tailgate height
✓			5. Tailgate height of 50 inches
✓			6. Capacity of 10.43 cubic yards
✓			7. The longills shall be fabricated from 1/4" stainless steel, 14" deep a. Sections of 4" x 5.4# channel are welded every two (2) feet, the length of the spreader at the base of the longills, where the longills are then boxed in with 1/2" stainless steel b. Then there shall be 3/16" x 3" x 3" structural angle welding every 12" the full length of the conveyor at the top of the longills.
✓			8. The unit shall have a 1/2" stainless steel replaceable floor with 3/16" removable chain guards.
✓			9. The sides must be of a radius design for strength and to allow free flow of granular material to the conveyor.
✓			10. The boxed top rail shall be a minimum of 3/16 inch formed channel.
✓			11. The front shall be sloped to accommodate a headlift cylinder with partial doghouse and conform with the radius of the body and shall be 100% welded on the inside and outside
✓			12. Side supports shall be added and shall have 3/16" x 4" 4" tube extending through long members with a 3/16" boxed section welded 100% from top rail of the body to cross tube, a. 3/16 inch stainless steel construction
✓			13. Top rail of RDS body shall be compatible for tarp installation. Top rail may be sloped front to back.
✓			14. Box shall have the Whelen heated taillight housing part number 11-487697-1ss or equivalent with approval from NDOT Fleet management before bid opening. Alternatives may only be requested during the pre-bid conference and/or during the questions and answers period. Please specify <u>WHELEN</u>

NOTES/COMMENTS:

B. ROLL TARP

YES	NO	NO & PROVIDE ALTERNATIVE	
/			<p>1. The tarp system shall be a Shurco Super Duty Shur-Lok kit or equal, and consist of the following minimum</p> <ul style="list-style-type: none"> a. 22-ounce vinyl coated tarp with tailflap. b. Roll-away ridge pole. c. Stainless steel front endcap. d. Aluminum latch plate. e. One heavy duty rear tarp bow. f. Three easy off offset tarp stops. g. Four crank retainers h. long shur-flex crank arm i. Front end shur-return system.
/			<p>2. Installation shall be such that the tarp can be secured for travel in either the open or covered mode.</p>

C. TAILGATE

YES	NO	NO & PROVIDE ALTERNATIVE	
/			<p>1. Tailgate shall be compatible for use with roll tarp.</p> <ul style="list-style-type: none"> A. Shall be manufactured from 3/16 inch stainless steel on the bottom and 1/4 inch formed channels on the sides.
/			<p>2. Tailgate shall be double-acting with a squared perimeter, having two horizontal braces of 10 gauge material lull width of the tailgate.</p> <ul style="list-style-type: none"> a. Material door shall extend 16 inches into the interior of the body to prevent material from escaping through the partially opened door over the conveyor. b. Opening shall be 21 inches in width by 8-1/2 inches in height. c. Tailgate shall have 1 x 4 inch bar stock tailgate hardware with d. Harden pins. e. Air tailgate latches shall be 1 inch flame cut, with each latch being adjustable with threaded clevis and keeper pins f. Latch shall be an over center type. g. Solid hook to hold tow plow hoses at lower passage side of tailgate
/			<p>3. Tailgate to be air operated with in cab switch to control tailgate release.</p>
<p>NOTES/COMMENTS:</p>			

D. CONVEYOR ASSEMBLY

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. The body conveyor shall be minimum 32 inches in width and shall have 28,000 pound tensile strength per strand pintle chain, with 1-1/2 inch x 1/2" inch bar flights on 4-1/2 inch centers. Pintle chain shall 30.50 center to center on. <ul style="list-style-type: none"> a. Conveyor to be driven by two high torque/variable speed 6:1 spur gearboxes and two hydraulic motor with ground speed sensor capability. Preferably gearboxes are to be retained by a clevis type torque arm mount. b. There shall be 8 tooth sprockets keyed to the 2 inch drive and idler shafts.
/			2. Conveyor drive shaft shall be heavy duty, dust sealed self-aligning four bolt flange bearings.
/			3. There shall be a heavy duty idler assembly that will provide adjustment for proper conveyor chain tension by use of slide rail style adjusters.
NOTES/COMMENTS:			

E. FRONT CROSS CONVEYOR

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. The unit shall have a front cross conveyor with spinner.
/			2. The conveyor shall be minimum 19 inches wide and shall utilize a two-ply rubber belt <ul style="list-style-type: none"> a. The belt shall be heavy duty, with top cover measuring 3/16 inch and the bottom ply measuring 1/16 inch. Total thickness being 3/8 inch. b. The belt shall have a working tension of 150 pounds per inch of width.
/			3. The conveyor shall be direct driven by a 5 inch roller on one end of conveyor, the main idler roller shall also be a 5 inch diameter. <ul style="list-style-type: none"> a. There shall also be two 3 inch idler rollers for belt return and four idler 2 bolt flange bearings.
/			4. The conveyor will have five 1-1/4 inch bearing with four bolt flanges and three 1-1/4 inch bearings with cast housings that are adjustable in a rail type frame.
NOTES/COMMENTS:			

F. SPINNER ASSEMBLY

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. The spinner assembly shall be manufactured from 3/16 inch stainless steel and shall have a material deflector shield integral to the body.

/			2. The spinner motor shall be high torque/low speed mounted directly to the spinner disc with a cast hub.
/			3. The spinner disc shall be 20 inch in diameter and manufactured of polyurethane with six molded-in fins.
NOTES/COMMENTS:			

G. STATIONARY CAB SHIELD

YES	NO	NO & PROVIDE ALTERNATIVE	
/			<p>1. Cab shield shall cover rear, one half of cab and be constructed of 201 stainless steel.</p> <ul style="list-style-type: none"> a. Be 6 to 12 inches to top of cab. b. Allow visibility from rear cab window. c. Shall be the same width as widest part of cab above doors. d. Standard (12) inch channel will be used as uprights to top part of cab shield and top cross-member. Twelve (12) inch channel shall be minimum of 19.5 pound per foot Formed channels may also be used providing they are as strong as or stronger than standard 12 inch channel. Formed channels to be approved by NDOT prior to use and installation. e. Each upright shall be bolted with minimum of five each of 5/8 inch grade 8 bolts to chassis rail. Welding and gusseting of right hand upright to wing sub-frame is acceptable. f. Upright flanges shall face away from center of chassis. g. Uprights shall be further stiffened to rail with 8 inch length of 3/8 inch by 3 inch by 3 inch angle irons placed on top of rans and properly welded to uprights. This angle iron may also act as the bottom support for the hydraulic reservoir. This angle iron shall not be welded to frame rails but must rest squarely on chassis rail. h. All seems to be continuous, skip weld will not be accepted.
/			2. Top cross member shall be adequately welded to uprights and gusseted with two 1/4 inch steel plates of 6 inch by 6 inch by about 8-1/2 inch dimensions at rear art of assembly.
/			<p>3. Flame cut openings in cab shield shall allow vision thru rear window area.</p> <ul style="list-style-type: none"> a. Shield shall be placed to allow ample visibility from rear window. b. Outer skirts of cab shield shall extend a minimum of six (6) inches below rear cab window. c. A two (2) inch angle iron will be welded to uprights near top of hydraulic reservoir. d. An approximate three (3) inch opening from top of reservoir to angle iron is required to allow hand access
/			<p>4. Cab shield shall be welded to uprights and top cross member. Cab shield material shall be minimum 10 gauge thickness.</p> <ul style="list-style-type: none"> a. Reinforced and welded to cross member with two 3 inch by 1 3/8 (4. 1) channel Irons, which extend the full length of cab shield and align with eight (8) inch channel uprights.

/			<ul style="list-style-type: none"> b. Adequately gusseted from 3 inch x 4.1 channel iron to eight inch c. Channel iron. d. Welded to 4.1 channel iron with flanges downward e. Meet all OSHA standards. f. Have provisions that do not allow ponding of water. (No Drain Holes).
/			5. Adequately-sized openings with rounded corners will be necessary in eight (8) inch channel uprights for filler tube, temperature/sight gauge and other hydraulic components to be mounted on left side of truck. Openings will be done in a professional manner with straight sides with minimum one-half inch radius corners.
/			6. Welding to be continuous on both sides of gussets, channels and cross members.
/			<p>7. Three (3) strobe light mounting brackets are required to be installed on each unit. Bracket sample will be provided by NDOT to provide successful bidder with proper bolt pattern for NDOT lighting.</p> <ul style="list-style-type: none"> a. Brackets to be welded to cab shield b. One (1) bracket shall be center mounted on top of cab shield. The other two (2) brackets shall be mounted on top of cab shield, one on each side. Placement of brackets shall be such that auxiliary plow lights will not impair visibility of strobe lights.
NOTES/COMMENTS:			

H. MUDFLAPS

YES	NO	NO & PROVIDE ALTERNATIVE	
/			<p>1. Mounted behind and in front of tandems as per Nebraska Statues.</p> <ul style="list-style-type: none"> a. Front mud flap bracket can either be truck frame or body mounted. Must provide for anti-sail and not interfere with any of the truck components. b. Rear mud flaps shall be attached to a stationary mount not on body. If attach to body it will be by adequately-sized chain links.
/			2. Dealer nameplate(s) and or other dealer sign(s) on rear mud flaps shall not face to rear of truck.
/			3. Curved fenders for tandem axle chassis required.
NOTES/COMMENTS:			

I. HOISTS

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. Mailhot single, front-mounted, telescoping, inverted, trunnion mounted dual acting power up – power down.
/			2. Minimum national truck equipment Association class 80 rating.

/			3. Minimum dump angle approximately 45 degrees.
/			4. Hoist should not protrude above front side of box or front bow cap of tarp. a. To be roll tarp compatible.
NOTES/COMMENTS:			

J. HYDRALIC SYSTEM

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. The truck hydraulic pump shall be directly driven via a Spicer Number 1350 driveshaft connected to an OEM supplied PTO drive flange mounted on the engine front crankshaft dampener.
/			2. Driveshaft shall pass under or through the engine radiator; under if possible.
/			3. Drive flange attachment bolts and the hydraulic pump shaft set screw shall be safety wired.
/			4. The driveline grease zerks shall be easily serviced.
/			5. A heavy duty PTO shield is required from pump to front of chassis, which shall be attached to snow plow hitch or be a part thereof.
/			6. The truck hydraulic pump shall be a minimum 8.75 cubic inch (145cc) variable displacement load-sense designed for continuous operation, the pump shall be a Parker P2145 or equivalent. Please specify <u>PARKER P2145</u> a. The hydraulic pump be capable of producing a normal 60 GPM flow at 1800 engine RPM with minimum 3000 PSI operation pressure.
/			7. Hydraulic system pressure will be set to operate a 2500 PSI. a. Hydraulic system must be capable of operating chassis spreader and trailer spreader simultaneously.
/			8. Hydraulic pump outlet port shall have an electronically operated valve to be operated by low hydraulic oil sensor. Valve will close when hydraulic oil is low.
/			9. ½ inch hydraulic hoses from hydraulic stack valve to the front of the snow plow hitch for raise-lower and plow angle functions.
/			10. Hoses to be rigidly mounted with ISO 16028 flat face interchange couplings. Couplers (one male and one female) placed so as not to interfere with plow hitch or plow function.
/			11. Couplers or equivalent: Faster FFH0812NPT/Faster FFH0812NPTM (FPO Premier) Parker FEM-501-BFP-ZP/Parker FEM-502-8FP-ZJ (XTR) Stucchi Part#231718B/2317189 (Z Plated). Couplers to meet ISO 9227 standards to a minimum of 400 hours salt spray test.
/			12. Hoses with one of the above listed couplers (one male and one female) shall be installed to Plow cylinder.

✓			13. Plow up-down couplers to be mounted on plow hitch on passenger's side of truck. Plow angle couplers to be mounted on plow hitch on driver's side of truck.
✓			14. Plow angle circuit will have pressure relief valve. To be mounted inside frame rail near hitch.
✓			15. Only steel wire braided hoses are acceptable.
✓			16. Hydraulic oil to be multi-purpose, all season type. Please specify: <u>ISO 32</u>
✓			17. The hydraulic control valve(s) to be a stack valve type load independent proportional valve which is closed center, load sensing and pressure compensated to control three (3) functions simultaneously. A valve assembly utilizing a modular manifold with individual valve sections would also be acceptable. The control center console shall be floor mounted.
✓			18. The valve is to be controlled by electrical proportional actuation.
✓			19. Each valve section shall be equipped with adjustable trim control, flow control, spool stroke limiters or other means to control oil flow for each function independently. a. Valve section spool to have maximum 20cc leakage rate.
✓			20. Valve is to be arranged as follows: a. Closed center inlet with relief. b. Hoist= 4 way, 26 gpm, 500 psi down port relief. c. Plow lift= 4 way, 10 gpm. d. Plow angle= 4 way, 10 gpm. e. Wing toe - 4 way, 10 gpm, 500 psi down port relief (if required). f. Wing heel= 4 way, 10 gpm, 500 psi down port relief, 2000 psi up g. Port relief (if required). h. Auger - 4 way, 17 gpm motor spool or cartridge valve i. Spinner= 3 way, 10 gpm motor spool or cartridge valve. j. Prewet = 3 way, 6 gpm motor spool or cartridge valve. k. Anti-Ice= 3 way, 16 gpm motor spool or cartridge valve. l. Endcover.
✓			21. Hydraulic control valve to be mounted behind cab in a weatherproof enclosure with hydraulic oil tank. Location and hose routine to be reviewed during pilot inspection.
✓			22. The Control center shall be floor mount type with integral arm rest for controlling all hydraulics functions, spreader control functions and auxiliary lighting and warning indicators.
✓			23. A drawing of proposed design should be submitted with invitation to bid.
✓			24. Control of hydraulic functions with single joystick is to be located in the armrest. The armrest must be adjustable.
✓			25. Joystick operations described as follows. a. Shall operate proportionally and shall have the ability to run three functions simultaneously. b. Hoist function-with operator activated safety lock. c. Plow lift-forward/backward axis, d. Plow angle-left/right axis.

/			<ul style="list-style-type: none"> e. Wing function- dual axis with operator activate safety lock. f. Wing lift=forward/backward axis, g. wing heel=left/right axis, h. Benching wing rear slide forward/backward axis.
/			<p>26. Spreader control shall be a Certified Power brand, Freedom XDS, Force America brand, SSC-6100 or Cirrus brand, SpreadSmart RX Touch. All spreader controls must meet all other specifications.</p> <p>Indicate spreader control: <u>SSC-6100</u></p>
/			<p>27. It shall be capable of controlling the application rates of granular, with pre-wetting agents, and/or anti-icing agents simultaneously or independently, regardless of vehicle speed.</p>
/			<p>28. Hydraulic system must be capable of operating chassis spreader and trailer spreader simultaneously with working either truck blade raise or tow plow blade raise</p>
/			<p>29. Control must be GPS compatible. The spreader controller shall provide a standard output of real-time streaming data including but not limited to: Ground speed, surface and air temperature, material selected, material application rate, lane(s) material being applied to and pre-wet rate.</p> <ul style="list-style-type: none"> a. The output shall be in standard format such as ASCII through a standard 9 pin, USB or other connector that meet NDOT approval. b. The data shall be formatted so that 3rd party devices can read informational data in real time. All hardware, software and information necessary for 3rd party device to read the data output shall be provided on all units at no additional charge to NDOT.
/			<p>30. It must be possible to reprogram the controller by upgrading the software.</p>
/			<p>31. The control shall be installed onto the control console. Mounted onto the dash or other pre-approved area. Installation shall position the control so it is easy for the operator to see and reach.</p>
/			<p>32. Anti-ice feature shall include a 3-lane selective lane switch box mounted in, under or near the console or through the soft keys of controller. Box shall have four (4) switches, the first to allow selection of either anti-ice or granular system, the remaining three (3) shall be lane selections switches: Left, center and right.</p> <ul style="list-style-type: none"> a. Anti-ice system shall adjust pump output to maintain selected rate as lanes are activated or deactivated. b. Anti-ice system to close valves to prevent gravitational flow of liquid when truck is stopped or 'pass' button is pushed. c. Anti-ice system to provide an audio alarm for insufficient application of liquid. Display shall show actual rate being applied. d. An electronic display capable of being reset to indicate gallons remaining in tank or gallons used since rest. Gallon usage reading should be stand-alone function but may also be attained from resettable daily storm total.
/			<p>33. Control shall allow up to a minimum of ten different preprogrammed application rates plus a manual override feature, it shall be capable of four granular products and tow liquid products. A blast feature shall be incorporated.</p>

/			Controller blast button shall immediately cause full hydraulic flow to the auger section, causing maximum spreader material output. The blast system shall be equipped with a timer. Blast feature shall also work with Anti-Ice function.
/			34. Controller shall default to 'pass or stand by' upon startup of truck even if console master switch is 'on'. This will eliminate material being spread when truck starts to move in yard or is started in shop bay.
/			35. A data lock key shall be part of the controller to prevent data or programs from being changed or deleted without key access. Password program also acceptable.
/			36. A key shall be provided for each controller.
/			37. Granular rates may be selectively displayed in pounds-per-lane-mile or kilograms-per-kilometer. Liquid pre-wet rates may be selectively displayed in gallons-per-ton or liters-per-metric ton.
/			38. Controller shall have a non-volatile memory to store all program and data when it is disconnected from a power source.
/			39. A LCD color display, minimum of five (5) inches diagonal shall provide the operator with instant access to. <ul style="list-style-type: none"> a. Total distance. b. Total granular applied. c. Total liquid applied. d. Vehicle speed. e. Distance traveled. f. Low oil indicator. g. Body up indicator.
/			40. All spreader control harnessing shall meet ISO IP68 and NEMA 6 standards. The connectors should be die cast E-coated, and be designed to have NO corrosion after 500 hours in a 35C salt spray. Each should have three sealing points (1) the lock ring itself, (2) a raised portion of the molded plastic around each pin, and (3) a Viton O-ring that seals the whole connector. Wiring to be equivalent to Daniel Woodhead, Brad Harrison electrical connector and wiring.
/			41. Switch panel to be Wired-Rite System Inc., Touchguard or Force America brands. Switches will have built-in bus bar connecting, silk screen backlit function indicators and magnetic automatic reset internal circuit breakers. Wiring shall include adequate slack to allow entire panel to be easily removed for service or replacement. Please specify: <u>FORCE AMERICA</u>
/			42. Main 12 volt battery feed into truck cab control box shall be protected by a 60 amp manual resetting waterproof circuit breaker (Wired Rite DB-SOR or equivalent) installed on the truck cab fire wall or within battery cover enclosure.
/			43. The power feed line to the 80 amp breaker shall be a minimum of 4-aaue fine strand copper.
/			44. The positive/negative wires into the cab from the breaker and truck frame ground shall be 4-gauge.
/			45. Switch circuits will be either a battery or ignition type. Battery circuits shall be always hot. Ignition circuits will receive power through a Bosch model 0332002150 75 amp relay when the ignition switch is in both the accessory or run positions.

/			<p>46. The switches and lames shall be labeled and function as follows:</p> <ul style="list-style-type: none"> a. Plow/Truck Lights, (if OEM chassis supplied this is to be changed to an auxiliary switch SPST off/on) Battery DPDT. 2 position. ON/ON. b. Cab/Hood Plow Lights Battery DPDT, 2 position ONION. c. Auxiliary Switch ignition SPST. ON/OFF. d. Amber Strobe Light Battery SPST, ON/OFF. e. Blue Strobe Light Battery SPST, ON/OFF. f. White Strobe Light Battery SPST, ON/OFF. g. Spreader Light ignition SPST. ON/OFF. h. Auxiliary Switch ignition SPSTON/OFF. i. Winter/Summer DPDT. 2 position, ON/ON.
/			<p>47. The Winter/Summer switch shall control power to the dump body height warning circuit. In the winter mode it will power the height warning feature of the dump body up lamp circuit causing it to function as designed. In the summer mode, it will not allow power to the dump height warning circuit</p> <ul style="list-style-type: none"> a. Switch panel to be located on the armrest portion of the control console and not interfere with the operation of the joystick.
/			<p>48. A guarded/protected switch is also required to allow temporary override of low hydraulic oil shut down solenoid. This will allow operator to possibly operate any function to allow unit to be moved off roadway.</p>
/			<p>49. The body up indicator lamp shall function as a dump body height warning system. In both the winter and summer mode, it shall illuminate whenever the body is raised.</p> <ul style="list-style-type: none"> a. In addition, in the winter mode, working through an adjustable angle mercury switch, this system shall also include a flasher and audible alarm that will engage adjustment of the mercury switch. b. Alarm must be loud enough to be heard over any truck noise.
/			<p>50. The Winter/Summer switch shall control power to the dump body height warning circuit. In the winter mode it will power the height warning feature of the dump body up lamp circuit causing it to function as designed. In the summer mode, it will not allow power to the dump height warning circuit.</p>
/			<p>51. Switch panel to be located on the armrest portion of the control console and not interfere with the operation of the joystick.</p>
/			<p>52. 13 Hydraulic reservoir to be minimum fifty (50) gallon oil capacity with five (5) gallon expansion space for total 55 gallon.</p>
/			<p>53. Reservoir to be sturdily mounted, and complete with suction strainer return filter and adequate shut-off valves for servicing.</p>
/			<p>54. Return filter shall have a 10 micron rating. Filter shall be interchangeable with such filters as Donaldson P550388, Wix 1759, or Baldwin TB287-10.</p> <p>Please specify: <u>ZINGA SE-10</u></p>
/			<p>55. Suction strainer shall be 100 mesh with 5 PSI relief valve.</p>
/			<p>56. A gate-type or ball valve shut-off valve, of at least the size of the suction line, is required between the reservoir and the suction line itself.</p>

/			57. 14 Reservoir tank shall be mounted between the cab and the body within the confines of twelve (12) inch channel upright for cab shield.
/			58. The 7 gauge steel reservoir will be twelve inches wide.
/			59. The approximate height will be 32 inches and approximate width of 33.5 inches. a. The reservoir must be of such height to allow visibility through rear cab window and to accommodate other chassis/body requirements.
/			60. Reservoir will have a 45 to 70 degree filler pipe. Filler pipe will extend a minimum of three (13) inches through upright. a. Filler neck shall be removable from top of tank.
/			61. A sight gauge with Fahrenheit temperature scale for checking proper oil level shall be furnished. a. Sight gauge location shall be on same side of reservoir as filler tube.
/			62. A hydraulic oil low level alarm or indicator light is required. a. Alarm or light to be mounted in the cab.
/			63. Bottom rear of tank on each side will have flat steel plates welded to back of tank with holes for bolting to upright flange. a. Upper part of tank will have 1/4 -inch x 6-inch flat plate welded to center of tank with holes for bolting to angle iron cross member between uprights. Bolts to be Grade 8. b. Tank shall be mounted so as to have adequate clearance from chassis components and so that it can be conveniently removed without moving the twelve inch uprights that secure the tank.
/			64. The filter will be mounted on the same side of tank as filler tube. a. Reservoir will have a 1-inch magnetic drain plug and baffle(s) as needed. b. All components of hydraulic system shall be of size that will not restrict flow and withstand a minimum working pressure of 2,500 PSI.
/			65. Vendor will minimize the number of critical rub points for hydraulic hoses, where critical rub points exist; they shall be wrapped with spiral metal or adequate rubber wrap.
/			66. System shall permit the dump body to be raised or lowered while vehicle is traveling at highway speeds up to 35 MPH as well as when vehicle is not moving. a. Partially or fully raised box shall not creep up or down when vehicle is not moving or when hydraulic valve has been returned to neutral position and vehicle is traveling at 35 MPH or less.
/			67. Hydraulic hookup for TowPlow. a. Coupler stack to be located rear passage side of RDS body. i. Couplers to be ISO interchange ii. Faster 3P508G-4-12G-MC/Faster 2P508G-4-12G-FC b. Hydraulic circuit for steering and moldboard lift shall have pressure relief valve also mounted at rear passage side of RDS body.

/			<p>68. Detailed literature and manufacturer's specification and data sheets on PTO, Joystick Control, Spreader control crankshaft drive, hydraulic pump, valves, filters and flexible cable control system will be provided with bid. BIDS MAY NOT BE CONSIDERED WITHOUT THE INCLUSION OF THIS INFORMATION NECESSARY TO EVALUATE THE BID.</p>
/			<p>69. Hydraulic/spreader system training and support shall be provided by company representative.</p> <ul style="list-style-type: none"> a. Training for operators and mechanics shall be provided by spreader control/hydraulic system representative. <ul style="list-style-type: none"> i. Training shall be done at any of the units, assigned locations and/or district within the State of Nebraska. ii. Training session shall be a minimum of four (4) hours for operators. An additional four (4) hours of training shall be provided to mechanics for diagnostic procedures and repair of controller system. iii. Training shall include basic operation, calibration procedures, and basic trouble shooting. Training to be required and provided annually for each NOOT District. b. Technical support shall be provided for systems. <ul style="list-style-type: none"> i. Vendor shall make a representative available to travel within the State of Nebraska and assist mechanic with system failures. ii. Vendor representative shall travel to any of the unit's assigned location to make repairs during warranty.
/			<p>70. The Hydraulic/Spreader control system shall be free of RFI Emissions</p>
/			<p>71. The hydraulic/spreader control system and/or installed components and equipment shall be compatible with use of NOOR mobile and/or two-way communication devices. Main communication radio operates in low band range of 47 MHz to 48 MHz, but all frequencies apply including low band, high band, UHF and VHF.</p>
/			<p>72. The hydraulic/spreader control system and/or installed components and equipment shall be manufactured to meet all current SAE and/or ISO Standard applicable and/or relevant to Electromagnetic Compatibility</p>
/			<p>73. NDOT will conduct testing of radio/two-way when installed in chassis. NDOT will notify vendor if normal operational parameters are not met due to degradation of signals caused by electromagnetic emissions from control system and/or installed components and equipment. Vendor shall be required to work with NDOT personnel to reduce interference level to a point acceptable to NDOT normal radio operation parameters. Vendor shall have 30 days to resolve RFI issue.</p>
/			<p>74. Vendor and/or manufacturer will be responsible for any and all cost to replace and/or modify any parts found to cause radio frequency interference. If NOOT and vendor cannot resolve source of RFI, the unit will sent to an independent accredited lab for testing to ensure SAE and/or ISO Standards compliance. Testing shall be done to SAE and/or ISO Standard which were current at time of bid. Should the unit fail testing at the accredited lab, the vendor shall be responsible for all cost incurred for testing</p>
/			<p>75. If after testing by NDOT and/or accredited lab, the vendor is unable or unwilling to incur cost and correct the RFI issue to the satisfaction</p>

			of NDOT, ALL ORDERS AND CORRESPONDING CONTRACT WILL BE CANCELED.
NOTES/COMMENTS:			

K. SNOW PLOW HITCH

YES	NO	NO & PROVIDE ALTERNATIVE	
/			<p>1. Shall be heavy duty, universal quick hitch Monroe, Viking, Henke, Henderson or other equivalent approved in writing by Fleet Management prior to bid opening. Alternatives may only be requested during the pre-bid conference and/or the question and answer period. A minimum of four inch double acting hydraulic cylinder. Hitch may be powder coat finish or primer and paint finish. Paint will be base coat/clear coat acrylic, activator-hardened acrylic or polyurethane type.</p> <ul style="list-style-type: none"> a. Center line hitch mounting is to be 30.5" b. Lower plow mount pin approximately 14 inches from grade. c. Height of hitch mast shall be 40-44 inches from plow attachment pin to pivot of lift arm. d. Plow lift shall be adjustable to length. e. Hitch shall be tilt design, Manual or hydraulic.
/			2. Hitch will include attaching pins and A-frame lift arm with lifting lug or clevis.
/			3. All thrust loads must be transferred to chassis frame and not to chassis axle or spring assemblies.
/			4. The crankshaft drive- pump must be supported and protected by this hitch assembly
/			5. Hitch to be made so that filling hood/fenders will tilt fully forward with mast in tilted position. Mast shall be tilting design by either manual or hydraulic function.
/			6. Hitch will be installed with Grade 8 bolts to chassis and as per hitch manufacturer's recommendations.
/			<p>7. A drawing of hitch to include material specifications of materials used shall be provided prior to bid award.</p> <ul style="list-style-type: none"> a. Pump shall be located as reasonably close as possible to chassis components after bumper removal. b. Bumper to be put in dump body when delivered. All mounting brackets and hardware shall be left intact with bumper and shall be delivered with the same truck as which was removed from.
NOTES/COMMENTS:			

L. INSTALLATION

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. All installations shall be made so that no body member will touch or interfere with proper alignment of the body hinge assembly, truck suspension or other components.
/			2. The longitudinal truck frame members are to be cut off and properly ground at the rear of the truck chassis.
/			3. A minimum 3/4-inch steel pintle plate shall be continuously welded across the width of the body's rear hinge and to the truck's frame. Minimum 3/8, inch steel plate gussets shall be continuously welded to the hitch plate at an angle toward the bottom of the hitch and to the truck's frame forwardly as far as practical or a minimum of 12 inches.
/			4. The pintle plate shall be recessed approximately 3/8 inch into frame rails to allow double welding of entire plate on both sides. The pintle plate shall be frame width at pintle eye height.
/			5. Double welds shall be thick, heavy duty type or additional welds will be required.
/			6. Pintle plate shall not extend lower than 3 inches below lower mounting bolt of pintle hook.
/			7. A pintle hitch, Holland PH-310 rated at 50 tons, shall be centrally attached with Grade 8 bolts to the pintle plate. Proper adjustment of the hitch's air cushion plunger shall be done using Holland's adjustment gauge (part number T0-03147). All installation and adjustments shall follow manufacturer's guidelines where otherwise not noted. Eye height to be approximately 28 inches from grade with air suspension at operating height.
/			8. Two safety chain brackets with load capacity of 30,000 pounds each. Premier Number 9 or equivalent of use as attachment of trailer safety. <ul style="list-style-type: none"> a. These are to be closely attached to frame rails welded to the right and left of pintle hitch. b. Reference drawing and/or pictures will be provided to vendor after award to show NDOT preferred placement of chain hook, trailer airline/gladhands and trailer electrical plug.
/			9. The frame cut-off must also be made so as to position the face of the channel cross member or angle iron 9 inches, plus or minus 1/2 inch forward of the reared e of the dump box floor
/			10. Dump box, electric adjustable, lift limit, weatherproof valve control must be provided. To stop oil flow to dump box cylinder. <ul style="list-style-type: none"> a. It shall be capable of limiting overall box height from 12 feet above ground level up to maximum possible dump angle.
/			11. All bare wire to bare wire electrical connections shall be properly soldered and weather sealed with heat shrink tubing. <ul style="list-style-type: none"> a. Wires from chassis to body lights shall be in flexible conduit or loom.
/			12. Professional techniques and workmanship are required. <ul style="list-style-type: none"> a. No welding or cutting of chassis rails except as stated elsewhere in the specifications. b. Welds must be chipped free of slag and thoroughly protected with yellow or black enamel as appropriate. c. Improper mounting, poor welding practices, the presence of slag, hydraulic oil leaks or inadequate paint coverage will be cause for rejection of any unit. In which

/			case, the vendor will be notified to call for the vehicle and remove it from State property for remedy of defects
NOTES/COMMENTS:			

M. FOLDING LADDER

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. Shall be fabricated of standard, one inch square, tubular stainless steel stock.
/			2. Rungs of stainless steel with 1-1/16 inch width and be put on right front side of body ahead of front tandem tire.
/			3. Shall be made so access is from about two feet from grade with approximately four rungs.
/			4. Space must be provided behind all rungs to allow for adequate toe room.
/			5. When ladder is folded in upright position, it shall not extend out beyond edge of main body.
/			6. Adequate latch to keep foldable portion of ladder in upright position when traveling is required.
NOTES/COMMENTS:			

N. AUXILIARY HEADLAMP/TURN SIGNALS

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. Two sets are required.
/			2. One set shall be mounted on cab shield near front corners of cab with a heavy bracket positioning the light so that the top of light will be about same height as top of cab shield. Plow light mounting not to interfere with strobe light mounting position.
/			3. One set referred to as hood lights, will be attached with a sturdy bracket preferably using existing chassis bolts to alleviate fiberglass cracking.
/			4. Height of centerline of hood lights will be slightly above the top of hood.
/			5. Light sets shall consist of ABL LED Snow Plow Light with heated lens ABL number is #3800 or approved equivalent. Lights other than those above must be approve by NDOT Fleet Management prior to bid opening. Alternatives may only be requested during the pre-bid conference and/or during the question and answer period.
/			6. Two toggle switches are required to switch between chassis headlights. Cab lights or hood lights.
/			7. Use of dimmer switch in all modes required.

/			8. A permanent-type decal or sign shall be installed by switches indicating "chassis headlights" or "hood lights"
/			9. Wires from lights to entrance of cab shall be in flexible conduit or loom, adequately attached and with the proper grommets.
/			10. Additional holes are not permitted in cab for light wire entrance, unless existing manufacturer's holes in firewall or elsewhere do not allow wire entrance; FLEET MANAGEMENT must then be contacted for acceptable access.
/			11. Wire entrance must be properly grommet or otherwise silicone sealed so as not to permit moisture entrance
/			12. Turn lights will be wired so they function when factory installed turn signals.
/			13. Heavy duty flasher is required, unless original chassis flasher is recommended for the additional lights. a. Is original chassis flasher recommended for additional lights? _____
/			14. A halogen spotlight or LED is acceptable that is fixed for wing operation is required. Unit will be a six inch diameter, round or rectangular shaped light mounted on cab shield, Mounting of light will allow light beam to be direct to heel of wing moldboard in operating position.
NOTES/COMMENTS:			

O. CLEARANCE REFLECTORS

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. All reflectors used in lieu of lights shall be placed front, sides and rear as required by State and Federal laws.
NOTES/COMMENTS:			

P. CONVEX MIRRORS

YES	NO	NO & PROVIDE ALTERNATIVE	
X			1. Required for each front fender of Phillip Fender Guides or Velvac 8 inch round convex mirrors. An equivalent could be acceptable but must be approved in writing by Fleet Management prior to bid opening. Alternatives may only be requested during the pre-bid conference and/or during the question and answer period. Please specify. <u>VELVAC</u>
X			2. Mirrors proposed must be recommended by mirror manufacturer for install on front fenders of dump truck.
X			3. Mirrors shall be mounted so they do not interfere with auxiliary headlamps.

X			4. Mirrors to be heated type if available. Please specify: <u>HEATED</u>
NOTES/COMMENTS:			

Q. TOOL BOX

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. An approximate 24 inch long by 12 inch by 14 inch waterproof unit of Knaack Weatherguard brand Model WG 525-5-01, Knapheide TBU2414A or Omaha Brand 824-B is required. Please specify <u>WEATHERGUARD</u>
/			2. Box must be sturdily mounted on chassis frame.
/			3. Bidder shall note that air dryer, air tank or battery box may need to be relocated to accommodate the box.
NOTES/COMMENTS:			

R. SAFETY EQUIPMENT

YES	NO	NO & PROVIDE ALTERNATIVE	
X			1. Electronic type back-up alarm that meets OSHA standards.
/			2. Rear view camera system required as per Section Chassis S-6
NOTES/COMMENTS:			

S. ROADWATCH SENSOR

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. Roadwatch Sensor Head and Roadwatch display or its equivalent from Force America or Certified Controls will be furnished and mounted on truck. a. Hard wired no wireless.
/			2. Unit is to be wired into control panel.
NOTES/COMMENTS:			

T. WARRANTY

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. One year on parts and labor beginning after field assignment a. As each unit is assigned for service the Department of Transportation will maintain a record of assignment date.
/			2. Prior to awarding of, or entering into any agreement or contract, it shall be the responsibility of the Manufacturer and or the successful bidder to warrant to the State of Nebraska, in writing that it has factory authorized dealers in the State of Nebraska who will provide warranty/service and repair work without undue delay.
NOTES/COMMENTS:			

U. GENERAL

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. Rolled edges or protective curved strips shall be attached to brackets and mountings of installed switches and similar devices in cab that have exposed sharp edges.
/			2. Stickers, decals and similar signs shall not be affixed in cab where sun reflects from them in driver's or passenger's eyes.
/			3. Dealer's decals, stickers, or other signs shall not be put on units; manufacturer's nameplates, stampings and other similar signs are acceptable
/			4. The first truck and body installation ready for delivery for each year of orders must be made available for inspection by Nebraska Department of Transportation (NDOT) personnel.
/			5. Vendor representative shall accompany Nebraska Department of Transportation (NDOT) personnel during inspection
/			6. Components and parts that require vendor cutting, welding, grinding and similar operations shall not be painted prior to inspection. A light coating of primer is acceptable.
/			7. Approval of the body, ladder, toolbox, lights, snow plow hitch and hydraulic mount must be obtained before additional units are assembled.
/			8. The chassis, body, snow plow hitch, sander and hydraulics shall be delivered as a complete unit and ready for satisfactory operation.
/			9. After the pilot inspection no changes to the chassis, dump body, body mountings, hydraulic system or any other components shall be made without documented permission from NOOT fleet management.
/			10. Transportation, meals, and lodging cost for Nebraska Department of Transportation (NOOT) representatives to perform required inspection(s) shall be at the vendor's expense. Vendor/manufacturer must provide space in building to do inspection.

NOTES/COMMENTS:

V. MANUALS

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. Following will be furnished with each unit delivered.
/			2. One dump body manual and parts listing a. One hydraulic system manual including information on schematic of system tank, pump, valves, driveline, cables, levers and other relevant items to include operation calibration and trouble shooting.
/			3. May be a print format, CD-ROM, flash drive or online.
/			4. All manuals must be furnished prior to payment and delivered to Fleet Management personal.
/			5. Failure to deliver all manuals that are ordered may result in non-payment of ten percent (10%) of purchase order total until all manuals are delivered.
NOTES/COMMENTS:			

W. SPECIFICATION FORM

YES	NO	NO & PROVIDE ALTERNATIVE	
			1. Successful bidder must complete form to the fullest extent possible for each unit delivered and must accompany each unit when delivered. Forms will be supplied by Nebraska Department of Transportation (NDOT) to successful bidder after purchase order is awarded.
			2. If vendor does not properly complete form for each unit. A sum of \$250.00 per unit will be deducted from purchase order amount.
NOTES/COMMENTS:			

X. DELIVERY

YES	NO	NO & PROVIDE ALTERNATIVE	
			1. After vendor completes pre-delivery service, vendor shall deliver the unit to NDOT, 5001 South 14th St. Lincoln NE 68512, between 9:00am and 3:00pm, except on Saturdays, Sundays and State Holidays.
			2. Each unit shall be delivered with a minimum of 20 gallons of fuel in tank.

			3. Vendor must notify NDOT Fleet Management a minimum of 24 hours prior to delivery of units. Contact number for NDOT Fleet Management are 402479-4319 or 402-479-4323.
			4. Manufacturer's Statement of Origin and other pertinent purchasing documents must accompany invoice at time of delivery.
			5. All deliveries and pricing are to be F.O.B. 5001 S 14th Street, Lincoln, Nebraska 68512.
			6. Delivery of completed chassis with dump body is desired within 200 days of receipt of order by vendor. Delivery time beyond 200 days may result in bid not being considered. Indicate delivery days ARO: <u>270 DAYS ARO</u>
NOTES/COMMENTS: #6 - CHASSIS will need to be on ground in Monroe Wi., no later than 180 DAYS ARO			

Y. WARRANTY

YES	NO	NO & PROVIDE ALTERNATIVE	
			1. Contractor must warrant the average life expectancy supplies hereunder to be not less than that stated in the manufacturer's price list and agree to replace, without cost, all supplies falling to meet this requirement, except where the reduced life is due to conditions beyond the control of the Contractor. Defective parts or those damaged in shipment must be replaced by the Contractor at no charge to the State of Nebraska. The manufacturer's standard warranty shall apply and be in effect for at least one year from the date the equipment was placed in service.
NOTES/COMMENTS:			

VIII. Attachment-RDS Pre wet System-240 gallon Dual 120 gallon tanks

A. GENERAL

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. Pre-wetter will be used to apply liquid ice control material onto granular material at the spreader spinner.
/			2. Pump system shall have a design rating of 4 GPM @ 70 PSI with input of 3 GPM hydraulic flow.
/			3. Tanks shall have 120 US gallons capacity. (Dual)
/			4. System must be fully tested and calibrated to 10 gallons per ton rate upon delivery to the Department of Transportation. System shall be flushed and winterized with suitable antifreeze solution to prevent damage.
/			5. All components, parts, pieces, fasteners, etc. shall be manufactured for nonferrous/non-rusting materials.
/			6. Liquid ice control material hoses be ½ polyester braid reinforced clear PVC or hose pressure and chemical rated for deicing liquid and suitable for cold weather use.
/			7. All hoses shall be long enough to allow the dump body tailgate to open for dumping over the spreader.
/			8. Tanks must mount on top of the fenders and fit in the area along the sides of the body
/			9. Cables to be ISO IP68 NEMA 6 rating
NOTES/COMMENTS:			

B. TANKS

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. Tanks shall be specifically designed to fit Department of Transportation's snow removal truck RDS body. When installed they shall not extend beyond the side of the fender.
/			2. Wedge style tanks shall be approximately 5.5 inches wide at the top and 19.5 inches at the bottom. Height shall be 22 inches, overall length shall be 100 inches.
/			3. Tank shall be constructed from rotationally molded UV stabilized polyethylene. Design liquid rating shall be a minimum of 14.5 lbs. per gallon.
/			4. There shall be three molded-in stiffeners, each approximately 4 inches wide, evenly spaced in the tank length.
/			5. Tanks shall include a 1 inch baffle vent installed at the top.
		/	6. Tanks shall have a two top mounted 3 inch NPT fill lids. Lids shall be tethered
/			7. Tanks to include two 1-114 inch NPT molded in ports on each end. Ports to be located as close to the bottom of the tank as possible (spin weld and/or bulkhead fittings are not acceptable at this location).

✓			8. A 1-1/4 inch ID cross over hose with fittings is required.
NOTES/COMMENTS: #6 = 2" NPT			

C. FITTINGS

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. All anti-icing liquid fittings are to be made of glass reinforced polypropylene for strength.
/			2. A 3/4 -inch Y-type strainer with a stainless 20 mesh screen must be installed between the tanks and pump.
/			3. A 1-1/2 inch male cam lock connector shall be installed to allow bulk filling. A matching cam lock cover cap shall be provided. Bulk fill fitting must be accessible from the ground.
/			4. The right rear facing port shall have a 1-114 NPT plug screwed into it.
/			5. A 3/4 inch 3-way valve shall be installed into the suction plumbing. When this valve is closed, normal flow of the anti-ice material shall occur. When the 3-way valve is turned to the closed position and this valve opened, flush material shall be sucked into the plumbing and pumping system, thoroughly displacing all corrosive materials. An approximate 12-inch hose piece shall be attached to this fitting to allow easy flush material introduction via a plastic jug.
NOTES/COMMENTS:			

D. PUMP SYSTEM AND FLOW METER

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. Material pump shall be a solid brass gear type, direct coupled to the hydraulic motor that will power the pre-wetter.
/			2. Pre-wetter hydraulic system shall obtain its flow directly from the valve motor manifold circuit identified for this purpose.
/			3. Flow control shall be electrically controlled by the spreader control in the truck cab, allowing precise metering of the oil flow.
/			4. Pump system shall incorporate a calibrated turbine style flow meter. Flow meter signal shall be sent to the spreader control, allowing a precise ground oriented liquid application rate. Rate shall be adjustable up to the limits of the pump design output.
/			5. A float switch placed in the bottom of the tank to indicate low level or empty tank. Float switch shall be compatible and connected to spreader control system.
/			6. Pump and associated plumbing to be enclosed in a fiberglass weather resistant enclosure.
/			7. Enclosure to be mounted alongside of body.

NOTES/COMMENTS:

E. MOUNTING SYSTEM

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. Pre-wet system shall attach to the dump body fenders via a full stainless steel framework. Frame shall fully support the tank.
/			2. Polyethylene tank shall be retained in the stainless steel mounting cradle with three 3 inch wide UV stabilized nylon tie down straps. Straps shall have a heavy duty threaded I-bolt mount on each end. Bolts shall pass through the mounting framework and be tension adjustable with stainless nuts.
NOTES/COMMENTS:			

F. NOZZLE DELIVERY SYSTEM

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. Pre-wet liquid shall travel from the pump out to be applied on the spreader spinner.
/			2. Two brass nozzles, each rated 1.0 GPM flow shall be furnished and mounted on to a bracket, attached to the spreader spinner with stainless .bolt. Nozzles shall be directed to spray on the centerline of the spinner.
/			3. A suitable cam lock type quick connector shall be installed in the delivery line running to the nozzles. It shall be positioned in the line to approximately correspond to where the hydraulic quick connectors for the spinner assembly are, allowing the entire spinner assembly to be easily removed with the nozzle bracket assembly attached.
/			4. A one-way check valve system must be installed in the delivery line directly before or at the nozzles to prevent line drain down when the system is shut-off.
NOTES/COMMENTS:			

IX. Attachment-Front Mount Patrol Wing

A. WINGS

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. Wing to have a minimum 11-foot long moldboard.
/			2. Height of Moldboard shall be minimum 29 inches.
/			3. Moldboard thickness to be minimum 3/16 inch. Moldboard steel shall meet ASTM A36 specification.
/			4. Cutting edge of 518 inch by 8 inches. AASHTO punched.
/			5. Moldboard bottom angle or base angle shall be a minimum 4 inch x 4 inch by 3/4 inch structural angle.
/			6. Minimum seven moldboard flame cut ribs. Ribs must be 1/2-inch thick minimum. Ribs to be one-piece. Spliced ribs are unacceptable.
/			7. A halogen spotlight that is fixed for wing operation is required. Unit will be a six inch diameter, round or rectangular shaped light mounted on cab shield. , Mounting of light will allow light beam to be directed to heel of wing moldboard In operating position.
NOTES/COMMENTS:			

B. MOUNTING REQUIREMENTS

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. Wing must be able to be mounted to work in conjunction with a State provided reversible plow or a one way plow.
/			2. Rear push arm frame assembly shall be designed for mounting on a chassis so that it is not necessary to require additional cab to body spacing.
/			3. Two adjustable length push arm assemblies shall be required.
/			4. Upper push arm shall have an extension spring and slide assembly to allow moldboard to trip.
/			6. The wing shall be able to be mounted so that it will fold closely to the truck and shall be provided with a safety chain on the heel to secure the wing in a folded position for travel.
/			6. When the wing is in the lowered plowing position, the wing shall provide sufficient tire clearance for turning left and right.
/			7. All necessary parts, brackets, hardware, fittings etc. for complete and satisfactory installation of wing shall be furnished.
/			8. The upper push arm shall have a built-in slide assembly for the rear cylinder pickup and attachments for rear spring assembly.
/			9. The wing heel lift cylinder shall be 3 inch x 15-inch minimum. <ul style="list-style-type: none"> a. The rod diameter shall be a minimum of 2 inch and be double acting.

NOTES/COMMENTS:

C. WING POST

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. The front post shall be fabricated from a 3/8 inch thick T1 steel and must be made of two interlaced side flanges and a center web plate for additional strength.
/			2. It shall be fabricated and reinforced in such a manner to allow the full travel of the front slide plate from the top to the bottom.
/			3. The front slide plate must be a minimum of 1/2" thick steel and incorporate a minimum of 5 inches mechanical float.
			4. The slide plate must be welded in permanently.
		/	5. The wing post cross tube is to be a minimum of 5 inch x 7 inch x 3/8 inch thick wall tubing.
/			6. The front wing post shall be attached to the frame of the truck with 1/2,-inch side plates bolted to the front frame extension of the truck.

NOTES/COMMENTS:
 #50 4" x 6" x 1/2" wall

D. HYDRUALICS

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. To be compatible with the truck hydraulics. Two stack valve sections are required for satisfactory operation of the win.
/			2. Needs to be compatible with joystick controls as specified by the body.
/			3. Toe cylinder hydraulic hoses shall be furnished with couplers as specified in the main body. Quick coupler connect shall be made via bulkhead fittings mounted through a 1/2 inch thick plate welded to the stationary portion of the snow plow push frame. Quick couplers shall not be installed directly to cylinder.
/			4. All the appropriate hydraulic cylinders, fittings, hardware, and other parts necessary for mounting shall be furnished.

NOTES/COMMENTS:

E. WEIGHT OF ATTACHMENT

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. Maximum advertised weight of complete wing assembly (front wing post, moldboard and push tubes 2,800 pounds.

/			2. Components listing with all weights for complete assembly including frames to be provided prior to bid award.
NOTES/COMMENTS:			

F. SUSPENSION

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. Vendor needs to add aftermarket air bag on right side to compensate for extra right side weight of wing.
/			2. Size to be installed so when air bag inflated, unit sets level when wing is raised in folded back position
NOTES/COMMENTS:			

G. MANUALS

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. One operators manual must be furnished at time of delivery with each unit.
/			2. All manual(s) must be furnished prior to payment and delivered to Fleet Management, Equipment Data Coordinator. Failure to deliver all manuals that are ordered may result in non-payment of ten percent of purchase order total until all manuals are delivered.
NOTES/COMMENTS:			

H. COLOR

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. Wing moldboard is to be painted black. Power coating is preferred.
/			2. Moldboard plowing surface to be aluminum paint.
/			3. All attaching components of the wing are to be painted black. Powder coating is preferred.
NOTES/COMMENTS:			

I. WARRANTY

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. Manufacturer's standard warranty shall apply and be for at least one year.
/			2. Dealer's decals, stickers or other signs shall not be on unit(s); manufacturer's nameplates, stampings and other similar signs are acceptable.
NOTES/COMMENTS:			

X. Attachment-Right Hand Mid-Mount Patrol Wing

A. WINGS

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. Wing to have a minimum 8 foot long moldboard.
/			2. Height of Moldboard inboard shall be minimum 24 inches and outboard height shall be a minimum 28 inches. Measurements include the eight inch cutting edge installed.
/			3. Moldboard thickness to be minimum 3/16 inch. a. Moldboard to be made of commercial grade A36 steel or equivalent. Please specify: _____
/			4. Cutting edge of 5/8 Inch by 8 inches. AASHTO punched.
/			5. Moldboard bottom angle or base angle shall be a minimum 4" x 4" x 3/4" structural angle with a triangle shaped 3" x 3" x 1/2" plate gusset between each bolt hole.
/			6. Minimum seven moldboard flame cut ribs. a. Ribs must be 3/8-inch thick minimum. b. Ribs to be one-piece. Spliced ribs are unacceptable. c. Ribs are to be continuously welded.
/			7. Moldboard too formed channel shall be a minimum 2 1/2" x 1".
/			8. Wing light position to light moldboard mount as not to reflect off exhaust.
NOTES/COMMENTS:			

B. PUSH ARM

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. The outer tube of the push arm is to be a minimum 3 1/2" O.D. schedule 80 pipe.
/			2. The inner shaft shall be a solid 2 7/8" O.D. -1045 steel shaft
/			3. The wino shall have a single spring cushioned push arm.
/			4. The push arm shall be adjustable and have a safety shear pin.
/			5. Both ends of the arm will have fabricated pivot blocks.
NOTES/COMMENTS:			

C. WING POST

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. The front wing cross tube shall be fabricated from 4" x 6" x 1/2" wall structural tube which spans both frame rails of the truck.
/			2. The outboard end of the cross tube shall be constructed from 7" structural I-beam with a minimum 3 5/8" flange vertically attached so as to be the foundation of a front wing post assembly.
/			3. The I-beam shall be reinforced with two fully welded diagonal pieces of 3" x 3/8" steel bar from the cross tube to the I-beam. These shall be further reinforced with a 1" x 1/2" piece of steel bar welded to the face.
/			4. The front mast slide to be 3/4" plate steel and is a minimum of 5 7/8" wide.
/			5. The front of the moldboard shall be mounted to the front slide plate with a single 1-1/2" diameter grade #5 bolt with a top lock nut the slide plate to allow for 5 inch float.
/			6. The front cross tube shall be mounted under the truck frame and supported by two steel elates a minimum of 1/2" x 12" x 24".
/			7. The front of the wing is raised by a single 4"ID x 12" double acting lift cylinder.
/			8. The cylinder attaches to the backside of the front mast at the top with an 1 1/4" grade #5 bolt and at the bottom with a minimum 1" diameter pin. It is mounted through two gussets welded to both the I-beam and cross tube for structural rigidity.
/			9. The slide assembly will allow mounting of the moldboard by means of a 3/4" reinforced steel plate approximately 10" x 18" which is mounted to the slide assembly with a single heat treated steel pin approximately 1-1/2" x 12".
/			10. The rear wing cross tube assembly shall be fabricated from 6" x 4" x 1/2," mild steel tubing.
/			11. The cross tube shall be mounted underneath truck by two steel mounting plates approximately 12" x 28" x 1/2," with flame cut holes for the cross tube to pass through.
/			12. The rear lift wing cylinder shall be a single 4" ID x 10" double acting hydraulic cylinder attached to the moldboard's mechanical float linkage. <ul style="list-style-type: none"> a. No cable or chains acceptable hydraulically operated only. b. The moldboard/wing heel lift cylinder shall have a lock valve to prevent wing from falling in event of failed hoses.
NOTES/COMMENTS:			

D. HYRAULICS

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. To be compatible with the truck hydraulics. Two stack valve sections are required for satisfactory operation of the wing.
/			2. Needs to be compatible with joystick controls as specified in main body.
/			3. Toe cylinder hydraulic hoses shall be furnished with one of the listed flat face quick couplers (33.F.1.a.). Quick coupler connect shall be made via bulkhead fittings mounted through a 1/4-inch thick plate welded to the stationary portion of the snow plow push frame, Quick couplers shall not be installed directly to cylinder.
/			4. All the appropriate hydraulic cylinders, fittings, hardware and other parts necessary for mounting shall be furnished.
NOTES/COMMENTS:			

E. MANUALS

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. One operator manual must be furnished at time of delivery with each unit.
/			2. All manual(s) must be furnished prior to payment and delivered to Fleet Management, Equipment Data Coordinator. Failure to deliver all manuals that are ordered may result in non-payment of ten percent of purchase order total until all manuals are delivered.
NOTES/COMMENTS:			

F. COLOR

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. Wing moldboard is to be painted black except plowing surfaces to be painted aluminum. Powder coating is referred.
/			2. All attaching components of the wing are to be painted black. Powder coating is referred.
NOTES/COMMENTS:			

G. WARRANTY

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. Manufacture's standard warranty shall apply and be at least one year.
/			2. Dealers decals, stickers or other signs shall not be on unit(s); manufacturer's nameplates, stampings and other similar signs are acceptable.
NOTES/COMMENTS:			

XI. Attachment-Left hand mid-mount patrol wing

A. MOUNTING

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. Wing shall be mounted behind cab and forward of tandem axle on driver's side of chassis. Wing mounting will not interfere with entry into cab.
/			2. Chassis vendor and body vendor will be responsible for repositioning components such as fuel tank, battery box, air tanks, etc. to allow for ample free area for proper mounting of wing frame to left hand side of chassis.
NOTES/COMMENTS:			

B. WINGS

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. The outer tube of the push arm is to be a minimum 3 1/2" O.D. schedule 80 pipe.
/			2. The inner shaft shall be a solid 2 7/8" O.D. - 1045 steel shaft.
/			3. The wing shall have a single spring cushioned push arm.
/			4. The push arm shall be adjustable and have a safety shear pin.
/			5. Both ends of the arm will have fabricated pivot blocks.
NOTES/COMMENTS:			

C. WING POST

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. The front wing cross tube shall be fabricated from 4" x 6" x 1/2" wall structural tube which spans both frame rails of the truck.
/			2. The outboard end of the cross tube shall be constructed from 7" structural I-beam with a minimum 3 5/8" flange vertically attached so as to be the foundation of a front wing post assembly.
/			3. The I-beam shall be reinforced with two fully welded diagonal pieces of 3" x 3/8" steel bar from the cross tube to the I-beam. These shall be further reinforced with a 1" x 1/2" piece of steel bar welded to the face.
/			4. The front mast slide to be 3/4" plate steel and is a minimum of 5 7/8" wide.
/			5. The front of the moldboard shall be mounted to the front slide plate with a single 1-1/2" diameter grade #5 bolt with a top lock nut. The slide plate to allow for 5 inch float.

/			6. The front cross tube shall be mounted under the truck frame and supported by two steel plates a minimum of ½" x 12" x 24".
/			7. The front of the wing is raised by a single 4" I.D x 12" double acting lift cylinder.
/			8. The cylinder attaches to the backside of the front mast at the top with a 1-1/4" grade #5 bolt and at the bottom with a minimum 1" diameter pin. It is mounted through two gussets welded to both the I-beam and cross tube for structural rigidity.
/			9. The slide assembly will allow mounting of the moldboard by means of a ¾" reinforced steel plate approximately 10" x 18" which is mounted to the slide assembly with a single heat treated steel pin approximately 1-1/2" x 12".
/			10. The rear wing cross tube assembly shall be fabricated from 6" x 4" x ½" mild steel tubing.
/			11. The cross tube shall be mounted underneath truck by two steel mounting plates approximately 12" x 28" x ½" with flame cut holes for the cross tube to pass through.
/			12. The rear lift wing cylinder shall be a single 4" ID x 10" double acting hydraulic cylinder attached to the moldboard's mechanical float linkage. <ul style="list-style-type: none"> a. No cable or chains acceptable, hydraulically operated only. b. The moldboard/wing heel lift cylinder shall have a lock valve to prevent wing from falling in event of failed hoses.
NOTES/COMMENTS:			

D. HYRAULICS

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. To be compatible with the truck hydraulics. Two stack valve sections are required for satisfactory operation of the wing.
/			2. Needs to be compatible with joystick controls as specified in main body.
/			3. Toe cylinder hydraulic hoses shall be furnished with one of the listed flat face quick couplers (33.F.1.a.). Quick coupler connect shall be made via bulkhead fittings mounted through a 1/4-inch thick plate welded to the stationary portion of the snow plow push frame, Quick couplers shall not be installed directly to cylinder.
/			4. All the appropriate hydraulic cylinders, fittings, hardware and other parts necessary for mounting shall be furnished.
NOTES/COMMENTS:			

E. MANUALS

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. One operator manual must be furnished at time of delivery with each unit.
/			2. All manual(s) must be furnished prior to payment and delivered to Fleet Management, Equipment Data Coordinator. Failure to deliver all manuals that are ordered may result in non-payment of ten percent of purchase order total until all manuals are delivered.
NOTES/COMMENTS:			

F. COLOR

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. Wing moldboard is to be painted black except plowing surfaces to be painted aluminum. Powder coating is referred.
/			2. All attaching components of the wing are to be painted black. Powder coating is referred.
NOTES/COMMENTS:			

G. WARRANTY

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. Manufacture's standard warranty shall apply and be at least one year.
/			2. Dealer's decals, stickers or other signs shall not be on unit(s); manufacturer's nameplates, stampings and other similar signs are acceptable.
NOTES/COMMENTS:			

XII. Attachment- Benching Wing

A. WINGS

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. Right hand wing full hydraulic with overall length of about 11 feet.
/			2. Wing will have overall length of about 11 feet <ul style="list-style-type: none"> a. Cutting edge of ½ inch by an inches and reversible. b. Moldboard thickness minimum 8 gauge. c. Front frame mounted. d. AASHTO punched. e. Hydraulically operated including rear slide. Front and rear of wing shall be of power-down type. <ul style="list-style-type: none"> i. Hydraulic stack valve assembly shall have a four way section added for operation of rear slide. Provision shall be made in Joystick for control of this function. ii. The moldboard/wing heel lift cylinder shall have a safety lock valve to prevent wing from falling in event if failed hoses. f. Full trip moldboard type. g. Skid plate of bottom of front wing post with sloped front and back is required. h. Skids to be minimum ½ inch thick and have a total width of at least four inches. i. Minimum benching height shall not be less than 36 inches
/			3. Color of wing to be painted flat black except plowing surfaces to be aluminum.
/			4. Cab shield may be attached to wing mast frame and sturdily reinforced, Assembly shall be constructed and bolted to frame rails with appropriate size and number of Grade B bolts in which case the assembly shall be sturdily braced.
NOTES/COMMENTS:			

XIII. Attachment-High Benching Wing

A. WINGS

YES	NO	NO & PROVIDE ALTERNATIVE	
-			1. Right hand wing full hydraulic with overall length of about 11 feet.
✓			2. Wing will have overall length of about 11 feet <ul style="list-style-type: none"> a. Cutting edge of ½ inch by an inches and reversible. b. Moldboard thickness minimum 8 gauge. c. Front frame mounted. d. AASHTO punched. e. Hydraulically operated including rear slide. Front and rear of wing shall be of power-down type. <ul style="list-style-type: none"> i. Hydraulic stack valve assembly shall have a four way section added for operation of rear slide. Provision shall be made in Joystick for control of this function. ii. The moldboard/wing heel lift cylinder shall have a safety lock valve to prevent wing from falling in event if failed hoses. f. Full trip moldboard type. g. Skid plate of bottom of front wing post with sloped front and back is required. h. Skids to be minimum ½ inch thick and have a total width of at least four inches. i. Minimum benching height shall not be less than 54 inches.
-			3. Color of wing to be painted flat black except plowing surfaces to be aluminum.
✓			4. Cab shield may be attached to wing mast frame and sturdily reinforced, Assembly shall be constructed and bolted to frame rails with appropriate size and number of Grade B bolts in which case the assembly shall be sturdily braced.
NOTES/COMMENTS:			

XIV. Attachment- Sever High Benching Wing

A. WINGS

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. Right hand wing full hydraulic with overall length of about 11 feet.
/			2. Wing will have overall length of about 11 feet <ul style="list-style-type: none"> a. Cutting edge of ½ inch by an inches and reversible. b. Moldboard thickness minimum 8 gauge. c. Front frame mounted. d. AASHTO punched. e. Hydraulically operated including rear slide. Front and rear of wing shall be of power-down type. <ul style="list-style-type: none"> i. Hydraulic stack valve assembly shall have a four way section added for operation of rear slide. Provision shall be made in Joystick for control of this function ii. The moldboard/wing heel lift cylinder shall have a safety lock valve to prevent wing from falling in event if failed hoses. iii. Rear slide will 3 stage hydraulic cylinder. f. Full trip moldboard type. g. Skid plate of bottom of front wing post with sloped front and back is required. h. Skids to be minimum ½ inch thick and have a total width of at least four inches. i. Minimum benching height shall not be less than 80 inches.
/			3. Color of wing to be painted flat black except plowing surfaces to be aluminum.
/			4. Cab shield may be attached to wing mast frame and sturdily reinforced, Assembly shall be constructed and bolted to frame rails with appropriate size and number of Grade B bolts in which case the assembly shall be sturdily braced.
NOTES/COMMENTS:			

XV. Attachment-V-Plow with V-Plow hitch

A. V-PLOW

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. Will be a Monroe, Viking, Henke, Henderson, Falls or equivalent quick hitch with 14 inch pin height, approved in writing by Fleet Management prior to bid opening. Alternatives may only be requested during the pre-bid conference and/or during the question and answer period. Please specify: <u>HENKE V10</u>
/			2. Unit will have a 9 foot cutting width.
/			3. Appropriate moldboard spread for rest of plow. Please specify: <u>150"</u>
/			4. Approximate 4 foot nose height.
/			5. Approximate 6 foot 9 inch high at rear of moldboard.
/			6. Minimum 8 gauge moldboard thickness and approximate weight of 2,500 pounds
/			7. Skid shoes will have maximum, feasible number of tungsten carbide inserts of minimum 3/16 inch thickness on bottom surface.
/			8. V-plow will have minimum 10 inch ground clearance in raised position.
/			9. V-Plow will be painted flat black except plowing surface of aluminum color.
/			10. V-Plow shall be fully mounted at the body builder, tested for proper fit and operation prior to shipment to NDOT.
NOTES/COMMENTS:			

B. PLOW MOUNTING

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. Hitch will be mounted for both wing and plow(s) using Grade 8 bolts.
/			2. Will include ½ inch thick steel, bolted-on, hydraulic pump guard at front part of hitch.
/			3. V-Plow and wing shall be mounted on unit if required.

/			4. Front part of wing shall be capable of full vertical travel range, without interference from V-plow or fender, when the V-plow is in either raised or lowered position.
NOTES/COMMENTS:			

C. HEAVY DUTY SNOW PLOW HITCH (In lieu of hitch from main specification)

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. Shall be heavy duty, power tilt design with quick hitch type with minimum four (4) inch hydraulic cylinder and 14 inch pin height a. Pivot pin of lift arm to be 48-54 inches above quick connect pin. b. Compatible with V-Plow being supplied and for use with one-way snow plow.
/			2. Hitch will include attaching pins and A-frame lift arm with lifting lug or clevis
/			3. All thrust loads must be transferred to chassis frame and not to chassis axle or spring assemblies.
/			4. The crankshaft driven pump must be supported and protected by this hitch assembly.
/			5. Hitch to be made so that tilting hood/fenders will tilt fully forward with mast in tilted position.
/			6. Hitch will be installed with Grade 8 bolts to chassis and as per hitch manufacturer's recommendations.
/			7. A drawing of hitch to include material specifications of materials used shall be provided prior to bid award. a. Pump shall be located as reasonably close as possible to chassis components after bumper removal. b. Bumper to be put in dump body when delivered. All mounting brackets and hardware shall be left intact with bumper and shall be delivered with the same truck as which it was removed from.
NOTES/COMMENTS:			

XVI. Attachment-V-Plow with V-plow Hitch without V-plow

A SNOW PLOW HITCH (in lieu of hitch from main specification)

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. Shall be heavy duty, power tilt design with quick hitch type with minimum four (4) inch hydraulic cylinder and 14 inch pin height. a. Pivot pin of lift arm to be 48-54 inches above quick connect pin. b. Recommended by V-Plow and one-way snow plow manufacturer for use on proposed chassis
/			2. Hitch will include attaching pins and A-frame lift arm with lifting lug or clevis.
/			3. All thrust loads must be transferred to chassis frame and not to chassis axle or spring assemblies.
/			4. The crankshaft driven pump must be supported and protected by this hitch Assembly.
/			5. Hitch to be made so that tilting hood/fenders will tilt fully forward with mast in tilted position.
/			6. Hitch will be installed with Grade 8 bolts to chassis and as per hitch manufacturer's recommendations.
/			7. Drawing of hitch to include material specifications of materials used shall be provided prior to bid award. a. Pump shall be located as reasonably close as possible to chassis components after bumper removal. b. Bumper to be put in dump body when delivered. All mounting brackets and hardware shall be left intact with bumper and shall be delivered with the same truck as which it was removed from.
NOTES/COMMENTS:			

XVII. Specification for the Viking Cives Tow Plow

Scope the Viking Cives 26' tow plow trailer with material spreader shall be the latest current model of proven performance and under standard production by manufacturer and is to be of standard design, complete as regularly advertised and marketed including all specified accessories, tools and special features. All necessary parts for satisfactory operation of the equipment whether or not they may be specifically mentioned below. Complete detailed specification and advertised data sheets with cuts or photographs should be attached to the invitation to bid on the identical equipment proposed. Any information necessary to show compliance with these specifications. In addition to information given on advertising data sheets, should be supplied in writing and attached to the Invitation To Bid. The Viking Cives 26' tow plow trailer with material spreader must meet or exceed the following requirements.

A. FRAME AND MOLDBOARDS

YES	NO	NO & PROVIDE ALTERNATIVE	
✓			1. Swivel tongue to control offset.
✓			2. One (1) 12 foot moldboard,
✓			3. One (1) 14 foot moldboard
	✓	1/4" overlay	4. Moldboards to be 10 gauge steel with 3/8" poly overlay.
✓			5. Moldboard to be approximately 30" high.
✓			6. Moldboards to be raised and lowered by hydraulic cylinders.
✓			7. Moldboard base angle to be AASHTO punched to accept all standard cutting edges.
NOTES/COMMENTS:			

B. WEIGHT

YES	NO	NO & PROVIDE ALTERNATIVE	
	✓	36,000 lbs.	1. Gross allowable trailer weight of 32,000 pounds
NOTES/COMMENTS:			

C. AXLES

YES	NO	NO & PROVIDE ALTERNATIVE	
	✓	Arvin Meritor 16,000	1. Dual Arvin Meritor 16,000 Pound steering axle's w/connecting linkage.
✓			2. ABS air brake system.
✓			3. Solid suspension.
✓			4. Fenders over tires.

✓			<p>5. Four (4) TIRES TO BE 385/r22.5.</p> <p>a. Tires must be Goodyear, Michelin, Bridgestone, Firestone, Continental or General and shall carry said company name.</p> <p>Please specify: <u>Goodyear</u></p>
✓			<p>6. Hydraulic steering of axles to deploy Tow Plow to approximately 30 degrees.</p>
NOTES/COMMENTS:			

D. HYDRAULICS

YES	NO	NO & PROVIDE ALTERNATIVE	
✓			<p>1. Vendor will minimize the number of critical rub points for hydraulic hoses. Where critical rub points exist, they shall be wrapped with spiral metal or adequate rubber wrap.</p>
✓			<p>2. Only steel wire braided hoses are acceptable.</p>
✓			<p>3. Hoses to be ISO 16028 flat face interchange couplings. Example of couplers: Faster 3P508G-4-12G-MC/2P508G-4-12G-FC Couplers to meet ISO 9227 standards to minimum of 400 hours salt spray test.</p>
✓			<p>4. Hoses with one of the above listed couplers (one male and one female) shall be installed on each of the following.</p> <p>a. Steering cylinder.</p> <p>b. Raise/lower cylinder.</p> <p>c. Spreader spinner.</p> <p>d. Pre-Wet.</p>
NOTES/COMMENTS:			

E. LIGHTS

YES	NO	NO & PROVIDE ALTERNATIVE	
✓			<p>1. Federal safety lights and reflectors required.</p>
✓			<p>2. Rear stop/turn/tail and marker lights in swivel mast, which remains perpendicular to the travel lane.</p>
✓			<p>3. Two pedestal with warning light/beacons installed per NDOT specification on color and strobe</p>
✓			<p>4. Light mounted on top middle of tow plow moldboard shining towards heel of plow. Light to be shielded from snow and ice.</p>
NOTES/COMMENTS:			

F. MATERIAL SPREADER

YES	NO	NO & PROVIDE ALTERNATIVE	
✓			1. Constructed from ¼ Stainless steel.
✓			2. Approximately 7.8 cubic yards.
✓			3. 24 inch wide conveyor.
✓			4. Front discharge spinner assembly.
✓			5. Gear box to be 50:1.
✓			6. Body top screens.
✓			7. Conveyor motor sensor with 180 max pulse count.
✓			8. All spreader control harnessing shall meet ISO IP68 and NEMA6 standards. The connectors should be die cast E-coated and be designed to have NO corrosion after 500 hours in 35C salt spray.
✓			9. Sealed harness with a length capable of reaching rear of truck to include M-12 plug.
NOTES/COMMENTS:			

G. ROLL TARP

YES	NO	NO & PROVIDE ALTERNATIVE	
✓			1. The tarp system shall be a Shurco Super Duty Shur-Lok kit or equivalent and consist of the following minimums: a. 22-ounce vinyl coated tarp with tailflap. b. Roll-away ridge pole. c. Stainless steel front endcap. d. Aluminum latch plate. e. One heavy duty rear tarp bow. f. Three easy-off offset tarp stops. g. Four crank retainers. h. Long Surfex crank arm. i. Front end shur-return system.
✓			2. Installation shall be such that the tarp can be secured for travel in either the open or covered mode.
NOTES/COMMENTS:			

H. PRE WET SYSTEM

YES	NO	NO & PROVIDE ALTERNATIVE	
✓			1. 325 gallon poly tank mounted to the tow plow.

	✓		2. Tank to have low level float switch to signal spreader control when empty.
	✓		3. Pre-wetter will be used to apply liquid ice control material onto granular material at the spinner spreader.
	✓		4. All components, parts pieces fasteners etc. shall be manufactured with nonferrous/non-rusting materials.
	✓		5. Liquid ice control material hoses shall be ½ polyester braided reinforced clear PVC. Suitable for cold weather use.
	✓		6. Liquid rate control to be separate from truck pre wet.
	✓		7. Two brass nozzles each rated 2.0GPM flow shall be mounted onto bracket attached to the spreader spinner with stainless bolts. Nozzles shall be directed to spray on the centerline of the spinner.
	✓		8. System must be fully tested and calibrated to a 10 gallon per ton rate upon delivery to the department. System shall be flushed and winterized with suitable antifreeze solution to prevent damage.
NOTES/COMMENTS: Number 2-8 are Monroe's responsibility			

I. PRE WET PUMP SYSTEM WITH FLOW METER

YES	NO	NO & PROVIDE ALTERNATIVE	
	✓		1. Material pump shall be a solid brass gear type, direct coupled to the hydraulic motor that will power the pre-wetter.
	✓		2. Pump system shall incorporate a calibration turbine style flow meter precise ground oriented liquid application rate. Rate shall be adjustable to the limits of the pump design output.
	✓		3. Pump, flow meter and associated plumbing to be enclosed in a fiberglass weather resistant enclosure.
NOTES/COMMENTS: Monroe's Responsibility			

J. MANUALS

YES	NO	NO & PROVIDE ALTERNATIVE	
✓			1. One operator manual must be furnished at time of delivery with each unit.
✓			2. All manual(s) must be furnished prior to payment and delivered to Fleet Management, Equipment Data Coordinator. Failure to deliver all manuals that are ordered may result in non-payment of ten percent of purchase order total until all manuals are delivered.
NOTES/COMMENTS:			

✓			2. Tank to have low level float switch to signal spreader control when empty.
✓			3. Pre-wetter will be used to apply liquid ice control material onto granular material at the spinner spreader.
✓			4. All components, parts pieces fasteners etc. shall be manufactured with nonferrous/non-rusting materials.
✓			5. Liquid ice control material hoses shall be ½ polyester braided reinforced clear PVC. Suitable for cold weather use.
✓			6. Liquid rate control to be separate from truck pre wet.
✓			7. Two brass nozzles each rated 2.0GPM flow shall be mounted onto bracket attached to the spreader spinner with stainless bolts. Nozzles shall be directed to spray on the centerline of the spinner.
✓			8. System must be fully tested and calibrated to a 10 gallon per ton rate upon delivery to the department. System shall be flushed and winterized with suitable antifreeze solution to prevent damage.
NOTES/COMMENTS:			
PER MONROE			

I. PRE WET PUMP SYSTEM WITH FLOW METER

YES	NO	NO & PROVIDE ALTERNATIVE	
✓			1. Material pump shall be a solid brass gear type, direct coupled to the hydraulic motor that will power the pre-wetter.
✓			2. Pump system shall incorporate a calibration turbine style flow meter precise ground oriented liquid application rate. Rate shall be adjustable to the limits of the pump design output.
✓			3. Pump, flow meter and associated plumbing to be enclosed in a fiberglass weather resistant enclosure.
NOTES/COMMENTS:			
PER MONROE			

J. MANUALS

YES	NO	NO & PROVIDE ALTERNATIVE	
			1. One operator manual must be furnished at time of delivery with each unit.
			2. All manual(s) must be furnished prior to payment and delivered to Fleet Management, Equipment Data Coordinator. Failure to deliver all manuals that are ordered may result in non-payment of ten percent of purchase order total until all manuals are delivered.
NOTES/COMMENTS:			

K. MISCELLANEOUS

YES	NO	NO & PROVIDE ALTERNATIVE	
✓		None required	1. The bidder should submit with their bid a list of special tools they will furnish with each machine.
✓			2. Dealer's decals, stickers or other signs shall not be affixed to units: manufacture's nameplate, stamping and other similar, signs acceptable.
✓			3. Dealer pre-delivery services required.
✓			4. Color-Plow shall be painted to match OEM chassis, Chassis vendor to provide OEM paint code to Viking-Cives.
✓			5. Professional techniques and workmanship are required. <ul style="list-style-type: none"> a. No welding or cutting of chassis rails expect as stated elsewhere in specifications. b. Welds must be chipped free of slag and thoroughly protected with yellow or black enamel as appropriate. c. Improper mounting, poor welding practices, the presence of slag, hydraulic oil leaks or inadequate paint coverage will be cause for rejection of any unit. In which case, the vendor will be notified to call for the vehicle and remove it from State property for remedy of defects.
NOTES/COMMENTS:			

L. WARRANTY

YES	NO	NO & PROVIDE ALTERNATIVE	
✓			1. Manufacturer's usual warranty shall apply, and shall be in effect of a minimum of one year from the date the equipment was placed in i services.
✓			2. Vendor shall be responsible for all repairs to include parts, and labor during the 12 month usual warranty period.
✓			3. All transportation costs to and from the nearest authorized repair facility will be the responsibility of Nebraska Department of Transportation.
✓			4. Prior to the awarding of, or entering into any agreement or contract it shall be the responsibility of manufacturer and/or the successful bidder to warrant to the State of Nebraska, in writing, that it has factory authorized dealers in the State of Nebraska who will provide warranty/services and repair work without undue delay.
NOTES/COMMENTS:			
Factory Field Service available			

M. SPECIFICATION FORM

YES	NO	NO & PROVIDE ALTERNATIVE	
✓			1. Successful bidder will be required to complete a form to the fullest extent possible for each unit and must accompany each unit when delivered.
✓			2. Forms will be supplied by Department of Transportation to successful bidder after purchase orders is awarded.
NOTES/COMMENTS:			

XVIII. MISCELLANEOUS

A. MOTOR VEHICLE INDUSTRIES REGULATION ACT

YES	NO	NO & PROVIDE ALTERNATIVE	
X			1. All Bidders must comply with the licensing requirements for motor vehicle dealers established under the Motor Vehicle Industries Regulation Act, Nebraska Revised Statutes, § Chapter 60, Article 14 at time of bid. Bids will only be accepted from Bidders who are fully compliant with the Motor Vehicle Industries Regulation Act, Chapter 60, and Article 14.
NOTES/COMMENTS:			

B. ANNUAL USAGE, ESTIMATED

YES	NO	NO & PROVIDE ALTERNATIVE	
X			1. Annual usage figures provided are estimates and are not to be construed as either a minimum or maximum purchase quantity. The orders shall be for the actual quantities of each item ordered by or for any agency during the life of the contract. Vendor shall not impose minimum order requirements.
NOTES/COMMENTS:			

C. USAGE REPORT

YES	NO	NO & PROVIDE ALTERNATIVE	
X			1. The vendor shall, provide a quarterly usage report of this contract by state agencies and political subdivisions. Information will include agency name, item, and dollar amount. Information may be requested at any time by the SPB, as determined by the State.
NOTES/COMMENTS:			

D. DELIVERY ARO

YES	NO	NO & PROVIDE ALTERNATIVE	
		X	1. Delivery desired within 180 days after receipt of order(s). AS OF TODAY 395 DAYS FROM RECEIPT OF ORDER
NOTES/COMMENTS:			

E. DELIVER LOCATIONS/INSTRUCTIONS (BIDDER IS CERTIFYING THAT THEY CAN MEET THE DELIVER LOCATIONS/INSTRUCTIONS)

YES	NO	NO & PROVIDE ALTERNATIVE	
X			1. Delivery to: Nebraska Department of Transportation 5001 South 14th St Lincoln, NE 68512
X			2. Delivery times Monday-Friday 8:00am-3:30pm Not including Holidays
X			3. Must inform Keith Jordan 24 hours before delivery via phone 402-479-4323
NOTES/COMMENTS:			

F. ORDERS

YES	NO	NO & PROVIDE ALTERNATIVE	
X			1. Orders will be placed either by, phone, fax, e-mail or Internet (if available and not to the exclusion of the other methods). All orders must reference a purchase order number and the purchase order number must be referenced on the packing slip, and invoice. Invoices are to be sent to the "Invoice to" address on the purchase order.
NOTES/COMMENTS:			

G. QUALITY

YES	NO	NO & PROVIDE ALTERNATIVE	
X			1. Product quality must meet specifications and be consistent for the term of the contract. A guarantee of satisfactory performance by the supplier and meeting delivery dates are considered to be an integral part of the purchase contract resulting from this bid invitation. All materials must be of first quality, under standard production by the manufacturer and be of standard design, complete as regularly advertised and marketed and be of proven performance. Products are to be fully guaranteed and may be returned for full credit or replacement (at the State's option) for any reason during the initial warranty period with no additional charges for shipping or restocking.
NOTES/COMMENTS:			

H. PRICES

YES	NO	NO & PROVIDE ALTERNATIVE	
X			<p>1. Price quoted shall be unit price and shall be firm for 180 from date of an award and are to be net; including transportation and delivery charges fully prepaid by the Bidder F.O.B. Destination as specified. No additional charges will be allowed for packing, handling, fuel surcharge, or partial delivery costs. Any request for an increase must be submitted in writing to the SPB a minimum of thirty (30) days prior to proposed effective date of increase, and must show cause and be accompanied by supporting documentation (such as notification letter from manufacturer). Further documentation may be required by the State, to authenticate the increase (such as manufacturer invoices). Failure to supply any requested supporting documentation may be grounds to cancel the contract. In no instance may a price increases be billed to the State until the contract is amended. The State further reserves the right to reject any proposed price increase(s), cancel the contract and re-bid if determined to be in the best interest of the State. The State will be given full proportionate benefit of any decrease for the term of the contract. Contract supplier or suppliers may honor pricing and extend the contract to political sub-divisions, cities, and counties. Terms and conditions of the contract must be met by political sub-divisions, cities, and counties.</p>
NOTES/COMMENTS:			

I. AUTHORIZED DEALER & WARRANTY

YES	NO	NO & PROVIDE ALTERNATIVE	
X			<p>1. To the extent required by the manufacturer, the Bidder shall be an authorized dealer. Bidder may be required to substantiate that he/she is an authorized dealer. Proof, if required, must be submitted to the SPB within three (3) days of the request and prior to the award of any contract. The terms of the original manufacturer's standard warranty shall apply to all equipment acquired from this solicitation for the entire warranty period.</p>
NOTES/COMMENTS:			

J. SUBSTITUTIONS

YES	NO	NO & PROVIDE ALTERNATIVE	
X			<p>1. Vendor will not substitute any item that has been awarded without prior written approval of SPB.</p>
NOTES/COMMENTS:			

K. SECRETARY OF STATE REGISTRATION REQUIREMENTS

CHOOSE "YES" TO BEST ANSWER ONLY, CHOOSE "NO" FOR REMAINING LINES

YES	NO	*Prior to contract award and/or upon request of SPB, potential award recipient(s) will be asked to certify compliance with Nebraska Secretary of State Registration by providing a true and exact copy of current (dated within 90 days) valid Certificate of Good Standing or Letter of Good Standing.
		<p>1. Bidder is a SOLE PROPRIETORSHIP (in which case, no Letter of Good Standing/Certificate of Good Standing is required)</p> <p>If the Bidder is an Individual or Sole Proprietorship, the following applies:</p> <p>a. The Bidder must complete the United States Citizenship Attestation Form, available on the Department of Administrative Services website at http://das.nebraska.gov/materiel/purchasing.html</p> <p>The completed United States Attestation Form should be submitted with the Invitation to Bid response.</p> <p>b. If the Bidder indicates on such attestation form that he or she is a qualified alien, the Contractor agrees to provide the U.S. Citizenship and Immigration Services documentation required to verify the Contractor's lawful presence in the United States using the Systematic Alien Verification for Entitlements (SAVE) Program.</p> <p>c. The Bidder understands and agrees that lawful presence in the United States is required and the Contractor may be disqualified or the contract terminated if such lawful presence cannot be verified as required by Neb. Rev. Stat. § 4-108.</p>
		<p>2. Bidder is a GENERAL PARTNERSHIP (in which case, no Letter of Good Standing/Certificate of Good Standing is required).</p>
		<p>3. Bidder is a FOREIGN or DOMESTIC CORPORATION or BUSINESS and a copy of current Letter of Good Standing/Certificate of Good Standing from the Nebraska Secretary of State is provided within bid submission documents.</p>
X		<p>4. Bidder is a FOREIGN or DOMESTIC CORPORATION or BUSINESS and a copy of current Letter of Good Standing/Certificate of Good Standing from the Nebraska Secretary of State will be provided in a timely manner upon request prior to award.</p>

Form A
Bidder Contact Sheet
Invitation To Bid Number 5992 OF

Form A should be completed and submitted with each response to this ITB. This is intended to provide the State with information on the Bidder's name and address, and the specific person(s) who are responsible for preparation of the Bidder's response.

Preparation of ITB Contact Information	
Bidder Name:	TRUCK CENTER COMPANIES
Bidder Address:	5701 ARBOR ROAD / PO BOX 29468 LINCOLN, NE 68517
Contact Person & Title:	BILL COLLIER / SALES REPRESENTATIVE
E-mail Address:	bcollier@truckcentercompanies.com
Telephone Number (Office):	402-464-2444
Telephone Number (Cellular):	402-440-7511
Fax Number:	402-464-9166

Each Bidder shall also designate a specific contact person who will be responsible for responding to the State if any clarifications of the Bidder's response should become necessary.

Communication with the State Contact Information	
Bidder Name:	SAME AS ABOVE
Bidder Address:	
Contact Person & Title:	
E-mail Address:	
Telephone Number (Office):	
Telephone Number (Cellular):	
Fax Number:	



Prepared for:
Keith Jordan
Nebraska Department of
Transportation
5001 S 14th Street
P O Box 94759
Lincoln, NE 68509
Phone: 402-479-4323

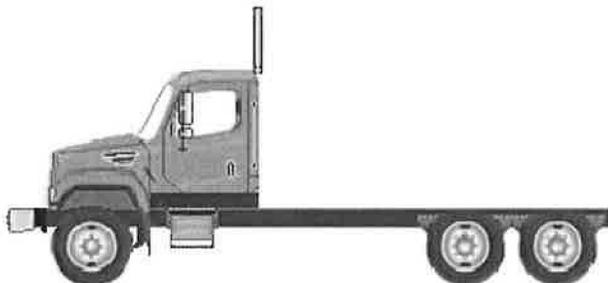
Prepared by:
Bill Collier
TRUCK CENTER COMPANIES
5701 ARBOR RD.
LINCOLN, NE 68517
Phone: 402-464-2444

A proposal for
Nebraska Department of Transportation

Prepared by
TRUCK CENTER COMPANIES
Bill Collier

Jan 29, 2019

Freightliner 114SD



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



Prepared for:
 Keith Jordan
 Nebraska Department of
 Transportation
 5001 S 14th Street
 P O Box 94759
 Lincoln, NE 68509
 Phone: 402-479-4323

Prepared by:
 Bill Collier
 TRUCK CENTER COMPANIES
 5701 ARBOR RD.
 LINCOLN, NE 68517
 Phone: 402-464-2444

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	Retail Price
Price Level				
PRL-19D	SD PRL-19D (EFF:01/15/19)			STD
Data Version				
DRL-003	SPECPRO21 DATA RELEASE VER 003			N/C
Vehicle Configuration				
001-177	114SD CONVENTIONAL CHASSIS	7,934	6,476	\$154,920.00
004-220	2020 MODEL YEAR SPECIFIED			STD
002-003	SET FORWARD AXLE - TRUCK			STD
019-001	TRAILER TOWING PROVISION AT END OF FRAME FOR TRUCK	10	10	\$1,235.00
003-001	LH PRIMARY STEERING LOCATION			STD
General Service				
AA1-003	TRUCK/TRAILER CONFIGURATION			N/C
AA6-002	DOMICILED, USA (EXCLUDING CALIFORNIA AND CARB OPT-IN STATES)			N/C
A85-010	UTILITY/REPAIR/MAINTENANCE SERVICE			N/C
A84-1GM	GOVERNMENT BUSINESS SEGMENT			N/C
AA4-010	DIRT/SAND/ROCK COMMODITY			N/C
AA5-002	TERRAIN/DUTY: 100% (ALL) OF THE TIME, IN TRANSIT, IS SPENT ON PAVED ROADS			STD
AB1-008	MAXIMUM 8% EXPECTED GRADE			STD
AB5-001	SMOOTH CONCRETE OR ASPHALT PAVEMENT - MOST SEVERE IN-TRANSIT (BETWEEN SITES) ROAD SURFACE			STD
995-1AE	FREIGHTLINER LEVEL II WARRANTY			N/C
A66-99D	EXPECTED FRONT AXLE(S) LOAD : 20000.0 lbs			
A68-99D	EXPECTED REAR DRIVE AXLE(S) LOAD : 40000.0 lbs			
A63-99D	EXPECTED GROSS VEHICLE WEIGHT CAPACITY : 60000.0 lbs			
A70-99D	EXPECTED GROSS COMBINATION WEIGHT : 80000.0 lbs			



Prepared for:
 Keith Jordan
 Nebraska Department of
 Transportation
 5001 S 14th Street
 P O Box 94759
 Lincoln, NE 68509
 Phone: 402-479-4323

Prepared by:
 Bill Collier
 TRUCK CENTER COMPANIES
 5701 ARBOR RD.
 LINCOLN, NE 68517
 Phone: 402-464-2444

Data Code	Description	Weight Front	Weight Rear	Retail Price
Truck Service				
AA3-018	FRONT PLOW/END DUMP BODY			N/C
AF3-142	MONROE TRUCK EQUIPMENT			N/C
Tractor Service				
AA2-005	FLATBED TRAILER			N/C
AH6-001	SINGLE (1) TRAILER			N/C
Engine				
101-2YA	DETROIT DD13 12.8L 450 HP @ 1625 RPM, 1900 GOV RPM, 1650 LB/FT @ 975 RPM			\$1,187.00
Electronic Parameters				
79A-075	75 MPH ROAD SPEED LIMIT			N/C
79B-000	CRUISE CONTROL SPEED LIMIT SAME AS ROAD SPEED LIMIT			N/C
79G-006	5 MINUTES IDLE SHUTDOWN WITH CLUTCH AND SERVICE BRAKE OVERRIDE			N/C
79K-007	PTO MODE ENGINE RPM LIMIT - 1100 RPM			N/C
79M-002	PTO MODE BRAKE OVERRIDE - SERVICE BRAKE APPLIED OR PARK BRAKE NOT APPLIED			N/C
79P-002	PTO RPM WITH CRUISE SET SWITCH - 700 RPM			N/C
79Q-003	PTO RPM WITH CRUISE RESUME SWITCH - 800 RPM			N/C
79W-001	ONE REMOTE PTO SPEED			N/C
79X-005	PTO SPEED 1 SETTING - 900 RPM			N/C
80D-001	SOFT CRUISE CONTROL ENABLED			N/C
80G-001	PTO MINIMUM RPM - 600			N/C
Engine Equipment				
99C-017	2016 ONBOARD DIAGNOSTICS/2010 EPA/CARB/FINAL GHG17 CONFIGURATION			STD
99D-011	2008 CARB EMISSION CERTIFICATION - CLEAN IDLE (INCLUDES 6X4 INCH LABEL ON LOWER FORWARD CORNER OF DRIVER DOOR)			\$109.00
13E-001	STANDARD OIL PAN			STD
105-001	ENGINE MOUNTED OIL CHECK AND FILL			STD
014-108	SIDE OF HOOD AIR INTAKE WITH FIREWALL MOUNTED DONALDSON AIR CLEANER WITH SAFETY ELEMENT AND INSIDE/OUTSIDE AIR WITH SNOW DOOR	10		\$562.00
124-1D7	DR 12V 160 AMP 28-SI QUADRAMOUNT PAD ALTERNATOR WITH REMOTE BATTERY VOLT SENSE			STD



Prepared for:
 Keith Jordan
 Nebraska Department of
 Transportation
 5001 S 14th Street
 P O Box 94759
 Lincoln, NE 68509
 Phone: 402-479-4323

Prepared by:
 Bill Collier
 TRUCK CENTER COMPANIES
 5701 ARBOR RD.
 LINCOLN, NE 68517
 Phone: 402-464-2444

Data Code	Description	Weight Front	Weight Rear	Retail Price
292-209	(3) DTNA GENUINE, FLOODED STARTING, MIN 3375CCA, 585RC, THREADED STUD BATTERIES			STD
290-017	BATTERY BOX FRAME MOUNTED			STD
281-001	STANDARD BATTERY JUMPERS			STD
282-001	SINGLE BATTERY BOX FRAME MOUNTED LH SIDE UNDER CAB			\$18.00
291-017	WIRE GROUND RETURN FOR BATTERY CABLES WITH ADDITIONAL FRAME GROUND RETURN			STD
289-001	NON-POLISHED BATTERY BOX COVER			STD
87P-001	CAB AUXILIARY POWER CABLE	5		\$60.00
293-058	POSITIVE LOAD DISCONNECT WITH CAB MOUNTED CONTROL SWITCH MOUNTED OUTBOARD DRIVER SEAT	8		\$206.00
295-029	POSITIVE AND NEGATIVE POSTS FOR JUMPSTART LOCATED ON FRAME NEXT TO STARTER	2		\$97.00
107-044	BW MODEL BA-921 19.0 CFM SINGLE CYLINDER AIR COMPRESSOR WITH SAFETY VALVE			STD
152-041	ELECTRONIC ENGINE INTEGRAL SHUTDOWN PROTECTION SYSTEM			STD
128-002	JACOBS COMPRESSION BRAKE			STD
016-1C2	RH OUTBOARD UNDER STEP MOUNTED HORIZONTAL AFTERTREATMENT SYSTEM ASSEMBLY WITH RH B-PILLAR MOUNTED VERTICAL TAILPIPE	30	25	\$823.00
28F-002	ENGINE AFTERTREATMENT DEVICE, AUTOMATIC OVER THE ROAD REGENERATION AND DASH MOUNTED REGENERATION REQUEST SWITCH			STD
239-026	10 FOOT 06 INCH (126 INCH+0/-5.9 INCH) EXHAUST SYSTEM HEIGHT			(\$3.00)
237-1CR	RH CURVED VERTICAL TAILPIPE B-PILLAR MOUNTED ROUTED FROM STEP			N/C
23U-001	6 GALLON DIESEL EXHAUST FLUID TANK	-35	-10	(\$95.00)
30N-003	100 PERCENT DIESEL EXHAUST FLUID FILL			(\$17.00)
23Y-001	STANDARD DIESEL EXHAUST FLUID PUMP MOUNTING			STD
43X-002	LH MEDIUM DUTY STANDARD DIESEL EXHAUST FLUID TANK LOCATION			STD
43Y-001	STANDARD DIESEL EXHAUST FLUID TANK CAP			STD
242-011	ALUMINUM AFTERTREATMENT DEVICE/MUFFLER/TAILPIPE SHIELD(S)			N/C
273-036	BORG WARNER (KYSOR) REAR AIR ON/OFF ENGINE FAN CLUTCH			STD



Prepared for:
 Keith Jordan
 Nebraska Department of
 Transportation
 5001 S 14th Street
 P O Box 94759
 Lincoln, NE 68509
 Phone: 402-479-4323

Prepared by:
 Bill Collier
 TRUCK CENTER COMPANIES
 5701 ARBOR RD.
 LINCOLN, NE 68517
 Phone: 402-464-2444

Data Code	Description	Weight Front	Weight Rear	Retail Price
276-001	AUTOMATIC FAN CONTROL WITHOUT DASH SWITCH, NON ENGINE MOUNTED			STD
110-068	DDC SUPPLIED ENGINE MOUNTED FUEL FILTER/FUEL WATER SEPARATOR WITH WATER-IN-FUEL INDICATOR			STD
118-001	FULL FLOW OIL FILTER			STD
266-057	1500 SQUARE INCH ALUMINUM RADIATOR			STD
267-006	MOUNTING FOR FIREWALL MOUNTED SURGE TANK			N/C
103-039	ANTIFREEZE TO -34F, OAT (NITRITE AND SILICATE FREE) EXTENDED LIFE COOLANT			STD
171-007	GATES BLUE STRIPE COOLANT HOSES OR EQUIVALENT			STD
172-001	CONSTANT TENSION HOSE CLAMPS FOR COOLANT HOSES			STD
270-023	HDEP FIXED RATIO COOLANT PUMP AND RADIATOR DRAIN VALVE			STD
360-013	1350 ADAPTER FLANGE FOR FRONT PTO PROVISION	25		\$534.00
138-005	PHILLIPS-TEMRO 1500 WATT/115 VOLT BLOCK HEATER	4		\$113.00
140-053	BLACK PLASTIC ENGINE HEATER RECEPTACLE MOUNTED UNDER LH DOOR			N/C
155-075	mitsubishi 12V MOD 3.175-DP60 STARTER WITH INTEGRATED MAGNETIC SWITCH			STD
Transmission				
342-1M1	ALLISON 4000 RDS AUTOMATIC TRANSMISSION WITH PTO PROVISION	260	100	\$12,424.00
Transmission Equipment				
343-339	ALLISON VOCATIONAL PACKAGE 223 - AVAILABLE ON 3000/4000 PRODUCT FAMILIES WITH VOCATIONAL MODELS RDS, HS, MH AND TRV			STD
84B-012	ALLISON VOCATIONAL RATING FOR ON/OFF HIGHWAY APPLICATIONS AVAILABLE WITH ALL PRODUCT FAMILIES			N/C
84C-023	PRIMARY MODE GEARS, LOWEST GEAR 1, START GEAR 1, HIGHEST GEAR 6, AVAILABLE FOR 3000/4000 PRODUCT FAMILIES ONLY			STD
84D-023	SECONDARY MODE GEARS, LOWEST GEAR 1, START GEAR 1, HIGHEST GEAR 6, AVAILABLE FOR 3000/4000 PRODUCT FAMILIES ONLY			STD



Prepared for:
 Keith Jordan
 Nebraska Department of
 Transportation
 5001 S 14th Street
 P O Box 94759
 Lincoln, NE 68509
 Phone: 402-479-4323

Prepared by:
 Bill Collier
 TRUCK CENTER COMPANIES
 5701 ARBOR RD.
 LINCOLN, NE 68517
 Phone: 402-464-2444

Data Code	Description	Weight Front	Weight Rear	Retail Price
84E-000	PRIMARY SHIFT SCHEDULE RECOMMENDED BY DTNA AND ALLISON, THIS DEFINED BY ENGINE AND VOCATIONAL USAGE			STD
84F-000	SECONDARY SHIFT SCHEDULE RECOMMENDED BY DTNA AND ALLISON, THIS DEFINED BY ENGINE AND VOCATIONAL USAGE			STD
84G-000	PRIMARY SHIFT SPEED RECOMMENDED BY DTNA AND ALLISON, THIS DEFINED BY ENGINE AND VOCATIONAL USAGE			STD
84H-000	SECONDARY SHIFT SPEED RECOMMENDED BY DTNA AND ALLISON, THIS DEFINED BY ENGINE AND VOCATIONAL USAGE			STD
84L-000	LOAD BASED SHIFT SCHEDULE AND VEHICLE ACCELERATION CONTROL RECOMMENDED BY DTNA AND ALLISON, THIS DEFINED VOCATIONAL USAGE			STD
84N-000	NEUTRAL AT STOP - DISABLED, FUELSENSE - DISABLED			STD
84U-000	DRIVER SWITCH INPUT - DEFAULT - NO SWITCHES			STD
353-002	VEHICLE INTERFACE WIRING CONNECTOR WITHOUT BLUNT CUTS, AT FIREWALL			\$49.00
34C-001	ELECTRONIC TRANSMISSION CUSTOMER ACCESS CONNECTOR FIREWALL MOUNTED			\$23.00
362-035	CUSTOMER INSTALLED CHELSEA 277 SERIES PTO			N/C
363-001	PTO MOUNTING, LH SIDE OF MAIN TRANSMISSION			N/C
341-018	MAGNETIC PLUGS, ENGINE DRAIN, TRANSMISSION DRAIN, AXLE(S) FILL AND DRAIN			STD
345-003	PUSH BUTTON ELECTRONIC SHIFT CONTROL, DASH MOUNTED			STD
97G-004	TRANSMISSION PROGNOSTICS - ENABLED 2013			STD
370-011	WATER TO OIL TRANSMISSION COOLER, FRAME MOUNTED			STD
346-003	TRANSMISSION OIL CHECK AND FILL WITH ELECTRONIC OIL LEVEL CHECK			STD
35T-001	SYNTHETIC TRANSMISSION FLUID (TES-295 COMPLIANT)			STD

Front Axle and Equipment

400-1BB	DETROIT DA-F-20.0-5 20,000# FL1 71.0 KPI/3.74 DROP SINGLE FRONT AXLE	190		\$3,436.00
---------	--	-----	--	------------



Prepared for:
 Keith Jordan
 Nebraska Department of
 Transportation
 5001 S 14th Street
 P O Box 94759
 Lincoln, NE 68509
 Phone: 402-479-4323

Prepared by:
 Bill Collier
 TRUCK CENTER COMPANIES
 5701 ARBOR RD.
 LINCOLN, NE 68517
 Phone: 402-464-2444

Data Code	Description	Weight Front	Weight Rear	Retail Price
402-030	MERITOR 16.5X6 Q+ CAST SPIDER CAM FRONT BRAKES, DOUBLE ANCHOR, FABRICATED SHOES	10		N/C
403-002	NON-ASBESTOS FRONT BRAKE LINING			STD
419-023	CONMET CAST IRON FRONT BRAKE DRUMS			STD
427-001	FRONT BRAKE DUST SHIELDS	5		\$102.00
409-006	FRONT OIL SEALS			STD
408-001	VENTED FRONT HUB CAPS WITH WINDOW, CENTER AND SIDE PLUGS - OIL			STD
416-022	STANDARD SPINDLE NUTS FOR ALL AXLES			STD
405-002	MERITOR AUTOMATIC FRONT SLACK ADJUSTERS			STD
406-001	STANDARD KING PIN BUSHINGS			STD
536-055	TRW THP-60 POWER STEERING WITH RCH45 AUXILIARY GEAR	130		N/C
539-003	POWER STEERING PUMP			STD
534-003	4 QUART POWER STEERING RESERVOIR			N/C
533-001	OIL/AIR POWER STEERING COOLER			N/C
40T-002	SYNTHETIC 75W-90 FRONT AXLE LUBE			\$14.00
Front Suspension				
620-006	20,000# FLAT LEAF FRONT SUSPENSION	310		\$815.00
619-004	GRAPHITE BRONZE BUSHINGS WITH SEALS - FRONT SUSPENSION			N/C
410-001	FRONT SHOCK ABSORBERS			\$121.00
Rear Axle and Equipment				
420-1K3	MT-40-14X 40,000# R-SERIES TANDEM REAR AXLE		-40	\$608.00
421-433	4.33 REAR AXLE RATIO			N/C
424-003	IRON REAR AXLE CARRIER WITH OPTIONAL HEAVY DUTY AXLE HOUSING		40	\$98.00
386-075	MXL 18T MERITOR EXTENDED LUBE MAIN DRIVELINE WITH HALF ROUND YOKES	60	60	\$164.00
388-073	MXL 17T MERITOR EXTENDED LUBE INTERAXLE DRIVELINE WITH HALF ROUND YOKES			STD
452-006	DRIVER CONTROLLED TRACTION DIFFERENTIAL - BOTH TANDEM REAR AXLES		30	\$1,297.00
878-023	(1) INTERAXLE LOCK VALVE, (1) DRIVER CONTROLLED DIFFERENTIAL LOCK FORWARD-REAR AND REAR-REAR AXLE VALVE			N/C
87A-001	BLINKING LAMP WITH EACH INTERAXLE LOCK SWITCH, INTERAXLE UNLOCK DEFAULT WITH IGNITION OFF			STD



Prepared for:
 Keith Jordan
 Nebraska Department of
 Transportation
 5001 S 14th Street
 P O Box 94759
 Lincoln, NE 68509
 Phone: 402-479-4323

Prepared by:
 Bill Collier
 TRUCK CENTER COMPANIES
 5701 ARBOR RD.
 LINCOLN, NE 68517
 Phone: 402-464-2444

Data Code	Description	Weight Front	Weight Rear	Retail Price
87B-004	BLINKING LAMP WITH EACH MODE SWITCH, DIFFERENTIAL UNLOCK WITH IGNITION OFF, ACTIVE <5 MPH			N/C
423-020	MERITOR 16.5X7 Q+ CAST SPIDER CAM REAR BRAKES, DOUBLE ANCHOR, FABRICATED SHOES			STD
433-002	NON-ASBESTOS REAR BRAKE LINING			STD
434-011	BRAKE CAMS AND CHAMBERS ON FORWARD SIDE OF DRIVE AXLE(S)			N/C
451-023	CONMET CAST IRON REAR BRAKE DRUMS			STD
425-002	REAR BRAKE DUST SHIELDS		10	\$108.00
440-006	REAR OIL SEALS			STD
426-101	WABCO TRISTOP D LONGSTROKE 2-DRIVE AXLE SPRING PARKING CHAMBERS			STD
428-003	HALDEX AUTOMATIC REAR SLACK ADJUSTERS			\$110.00
41T-002	SYNTHETIC 75W-90 REAR AXLE LUBE			N/C
42T-001	STANDARD REAR AXLE BREATHER(S)			STD

Rear Suspension

622-1H2	HENDRICKSON PRIMAAX EX 46,000# REAR AIR SUSPENSION		450	\$5,902.00
621-125	HENDRICKSON PRIMAAX 10.00" RIDE HEIGHT			N/C
431-003	AXLE CLAMPING GROUP			N/C
624-009	54 INCH AXLE SPACING			N/C
888-047	MANUAL DUMP VALVE FOR AIR SUSPENSION WITHOUT GAUGE			\$103.00
87D-006	INDICATOR LIGHT FOR EACH REAR SUSPENSION CONTROL SWITCH			N/C
910-001	SINGLE AIR REAR SUSPENSION LEVELING VALVE			N/C
623-002	TRANSVERSE CONTROL RODS			N/C
439-005	REAR SHOCK ABSORBERS - TWO AXLES (TANDEM) (AIR RIDE SUSPENSION)			N/C

Brake System

490-100	WABCO 4S/4M ABS			STD
871-001	REINFORCED NYLON, FABRIC BRAID AND WIRE BRAID CHASSIS AIR LINES			STD
904-001	FIBER BRAID PARKING BRAKE HOSE			STD
412-001	STANDARD BRAKE SYSTEM VALVES			STD
46D-002	STANDARD AIR SYSTEM PRESSURE PROTECTION SYSTEM			STD
413-002	STD U.S. FRONT BRAKE VALVE			STD



Prepared for:
 Keith Jordan
 Nebraska Department of
 Transportation
 5001 S 14th Street
 P O Box 94759
 Lincoln, NE 68509
 Phone: 402-479-4323

Prepared by:
 Bill Collier
 TRUCK CENTER COMPANIES
 5701 ARBOR RD.
 LINCOLN, NE 68517
 Phone: 402-464-2444

Data Code	Description	Weight Front	Weight Rear	Retail Price
432-003	RELAY VALVE WITH 5-8 PSI CRACK PRESSURE, NO REAR PROPORTIONING VALVE			STD
480-088	WABCO SYSTEM SAVER HP WITH INTEGRAL AIR GOVERNOR AND HEATER			STD
483-004	WABCO OIL COALESCING FILTER FOR AIR DRYER			\$11.00
479-015	AIR DRYER FRAME MOUNTED			STD
460-001	STEEL AIR BRAKE RESERVOIRS			STD
607-001	CLEAR FRAME RAILS FROM BACK OF CAB TO FRONT REAR SUSPENSION BRACKET, BOTH RAILS OUTBOARD			\$63.00
477-004	PULL CABLES ON ALL AIR RESERVOIR(S)			\$3.00
Trailer Connections				
914-001	AIR CONNECTIONS TO END OF FRAME WITH GLAD HANDS FOR TRUCK AND NO DUST COVERS			N/C
296-010	PRIMARY CONNECTOR/RECEPTACLE WIRED FOR SEPARATE STOP/TURN, ABS CENTER PIN POWERED THROUGH IGNITION			N/C
297-001	SAE J560 7-WAY PRIMARY TRAILER CABLE RECEPTACLE MOUNTED END OF FRAME			N/C
335-004	UPGRADED CHASSIS MULTIPLEXING UNIT			STD
Wheelbase & Frame				
545-567	5675MM (223 INCH) WHEELBASE			N/C
546-102	7/16X3-9/16X11-1/8 INCH STEEL FRAME (11.11MMX282.6MM/0.437X11.13 INCH) 120KSI	530	110	\$1,006.00
547-034	PARTIAL INNER FRAME REINFORCEMENT AT FRONT SUSPENSION	180		\$832.00
548-803	BODY COMPANY INSTALLED ADDITIONAL FRONT FRAME REINFORCEMENT FOR SNOW PLOW			N/C
552-037	1775MM (70 INCH) REAR FRAME OVERHANG			N/C
55W-006	FRAME OVERHANG RANGE: 61 INCH TO 70 INCH			N/C
549-002	24 INCH INTEGRAL FRONT FRAME EXTENSION	140	-20	\$691.00
AC8-99D	CALC'D BACK OF CAB TO REAR SUSP C/L (CA) : 139.94 in			
AE8-99D	CALCULATED EFFECTIVE BACK OF CAB TO REAR SUSPENSION C/L (CA) : 136.94 in			
AE4-99D	CALC'D FRAME LENGTH - OVERALL : 344.99			
AM6-99D	CALC'D SPACE AVAILABLE FOR DECKPLATE : 139.54 in			
FSS-0LH	CALCULATED FRAME SPACE LH SIDE : 42.04 in			N/C



Prepared for:
 Keith Jordan
 Nebraska Department of
 Transportation
 5001 S 14th Street
 P O Box 94759
 Lincoln, NE 68509
 Phone: 402-479-4323

Prepared by:
 Bill Collier
 TRUCK CENTER COMPANIES
 5701 ARBOR RD.
 LINCOLN, NE 68517
 Phone: 402-464-2444

Data Code	Description	Weight Front	Weight Rear	Retail Price
FSS-0RH	CALCULATED FRAME SPACE RH SIDE : 188.73 in			N/C
553-001	SQUARE END OF FRAME			STD
550-001	FRONT CLOSING CROSSMEMBER			STD
559-001	STANDARD WEIGHT ENGINE CROSSMEMBER			STD
562-001	STANDARD MIDSHIP #1 CROSSMEMBER(S)			STD
572-001	STANDARD REARMOST CROSSMEMBER			STD
565-002	HEAVY DUTY SUSPENSION CROSSMEMBER		30	N/C
Chassis Equipment				
556-1AG	16.5 INCH PAINTED STEEL STRAIGHT BUMPER			STD
574-001	BUMPER MOUNTING FOR SINGLE LICENSE PLATE			STD
551-007	GRADE 8 THREADED HEX HEADED FRAME FASTENERS			STD
Fuel Tanks				
204-156	100 GALLON/378 LITER ALUMINUM FUEL TANK - LH	20		\$295.00
218-006	25 INCH DIAMETER FUEL TANK(S)			STD
215-007	PLAIN ALUMINUM/PAINTED STEEL FUEL/HYDRAULIC TANK(S) WITH POLISHED STAINLESS STEEL BANDS			\$334.00
212-007	FUEL TANK(S) FORWARD			STD
664-001	PLAIN STEP FINISH			STD
205-001	FUEL TANK CAP(S)			STD
122-1K4	DAVCO 487 FUEL/WATER SEPARATOR WITH ESOC AND 12 VOLT PREHEATER	15		\$890.00
216-020	EQUIFLO INBOARD FUEL SYSTEM			STD
11F-998	NO NATURAL GAS VEHICLE FUEL TANK VENT LINE/STACK			STD
202-016	HIGH TEMPERATURE REINFORCED NYLON FUEL LINE			STD
Tires				
093-0TB	MICHELIN XZY-3 425/65R22.5 20 PLY RADIAL FRONT TIRES	196		\$1,000.00
094-0GP	MICHELIN XDN2 11R22.5 16 PLY RADIAL REAR TIRES		160	\$8.00
510-0TB	MICHELIN XZY-3 425/65R22.5 20 PLY RADIAL SPARE TIRE		163	\$1,218.00
Hubs				



Prepared for:
 Keith Jordan
 Nebraska Department of
 Transportation
 5001 S 14th Street
 P O Box 94759
 Lincoln, NE 68509
 Phone: 402-479-4323

Prepared by:
 Bill Collier
 TRUCK CENTER COMPANIES
 5701 ARBOR RD.
 LINCOLN, NE 68517
 Phone: 402-464-2444

Data Code	Description	Weight Front	Weight Rear	Retail Price
418-060	CONMET PRESET PLUS PREMIUM IRON FRONT HUBS			STD
450-060	CONMET PRESET PLUS PREMIUM IRON REAR HUBS			STD
Wheels				
502-566	MAXION WHEELS 10035 22.5X12.25 10-HUB PILOT 4.75 INSET 5-HAND STEEL DISC FRONT WHEELS	102		\$402.00
505-524	MAXION WHEELS 90541 22.5X8.25 10-HUB PILOT 2-HAND STEEL DISC REAR WHEELS			(\$312.00)
511-566	MAXION WHEELS 10035 22.5X12.25 10-HUB PILOT 4.75 INSET 5-HAND STEEL DISC SPARE WHEEL		70	\$362.00
Cab Exterior				
829-1A2	114 INCH BBC FLAT ROOF ALUMINUM CONVENTIONAL CAB			STD
650-008	AIR CAB MOUNTING			STD
648-002	NONREMOVABLE BUGSCREEN MOUNTED BEHIND GRILLE			STD
667-001	FRONT FENDERS			STD
754-002	3-1/2 INCH FENDER EXTENSIONS	15		\$192.00
678-067	SAFETY YELLOW LH AND RH INTERIOR GRAB HANDLES AND LH AND RH EXTERIOR NON-SLIP GRAB HANDLES			\$80.00
646-041	STATIONARY BLACK GRILLE			STD
65X-004	BLACK HOOD MOUNTED AIR INTAKE GRILLE			STD
644-006	FIBERGLASS HOOD WITH ACCESS HATCHES	10		\$682.00
690-016	CAB FLOOR, TOE BOARD AND FIREWALL HEAT SHIELD	5		\$149.00
727-1AF	SINGLE 14 INCH ROUND HADLEY AIR HORN UNDER LH DECK			(\$23.00)
726-002	DUAL ELECTRIC HORNS			\$3.00
728-001	SINGLE HORN SHIELD			STD
657-1CV	DOOR LOCKS AND IGNITION SWITCH KEYED THE SAME WITH (4) KEYS			\$18.00
575-001	REAR LICENSE PLATE MOUNT END OF FRAME			STD
312-068	HALOGEN COMPOSITE HEADLAMPS WITH BLACK BEZELS			STD
302-001	(5) AMBER MARKER LIGHTS			STD
294-042	FREIGHTLINER LED FLANGE MOUNTED STOP/TAILO/TURN LIGHTS WITH SEPARATE INCANDESCENT BACKUP LIGHTS		5	\$107.00



Prepared for:
 Keith Jordan
 Nebraska Department of
 Transportation
 5001 S 14th Street
 P O Box 94759
 Lincoln, NE 68509
 Phone: 402-479-4323

Prepared by:
 Bill Collier
 TRUCK CENTER COMPANIES
 5701 ARBOR RD.
 LINCOLN, NE 68517
 Phone: 402-464-2444

Data Code	Description	Weight Front	Weight Rear	Retail Price
300-015	STANDARD FRONT TURN SIGNAL LAMPS			STD
744-1BC	DUAL WEST COAST BRIGHT FINISH HEATED MIRRORS WITH LH AND RH REMOTE			\$286.00
797-001	DOOR MOUNTED MIRRORS			STD
796-001	102 INCH EQUIPMENT WIDTH			STD
743-204	LH AND RH 8 INCH BRIGHT FINISH CONVEX MIRRORS MOUNTED UNDER PRIMARY MIRRORS			N/C
74B-1B4	RH AND LH 8 INCH HEATED STAINLESS STEEL FENDER MOUNTED CONVEX MIRRORS WITH TRIPOD BRACKETS	12		\$281.00
729-001	STANDARD SIDE/REAR REFLECTORS			STD
677-053	RH AFTERTREATMENT SYSTEM CAB ACCESS WITH STEEL SHIELDING			STD
768-043	63X14 INCH TINTED REAR WINDOW			STD
661-003	TINTED DOOR GLASS LH AND RH WITH TINTED NON-OPERATING WING WINDOWS			(\$117.00)
654-027	RH AND LH ELECTRIC POWERED WINDOWS, PASSENGER SWITCHES ON DOOR(S)	4		\$218.00
769-002	LOWER RH DOOR WINDOW WITH FRESNEL LENS	7		\$206.00
663-029	1-PIECE TINTED CURVED BONDED WINDSHIELD WITH HEATED WIPER BLADE PARK AREAS			\$653.00
659-007	8 LITER WINDSHIELD WASHER RESERVOIR, CAB MOUNTED, WITHOUT FLUID LEVEL INDICATOR			STD
Cab Interior				
707-1AK	OPAL GRAY VINYL INTERIOR			STD
706-013	MOLDED PLASTIC DOOR PANEL			STD
708-013	MOLDED PLASTIC DOOR PANEL			STD
772-006	BLACK MATS WITH SINGLE INSULATION			STD
785-004	DASH MOUNTED ASH TRAY(S) WITHOUT LIGHTER			STD
691-008	FORWARD ROOF MOUNTED CONSOLE WITH UPPER STORAGE COMPARTMENTS WITHOUT NETTING			STD
742-007	(2) CUP HOLDERS LH AND RH DASH			STD
680-007	GRAY/CHARCOAL WING DASH			STD
860-004	SMART SWITCH EXPANSION MODULE			\$196.00
700-002	HEATER, DEFROSTER AND AIR CONDITIONER			STD
701-001	STANDARD HVAC DUCTING			STD



Prepared for:
 Keith Jordan
 Nebraska Department of
 Transportation
 5001 S 14th Street
 P O Box 94759
 Lincoln, NE 68509
 Phone: 402-479-4323

Prepared by:
 Bill Collier
 TRUCK CENTER COMPANIES
 5701 ARBOR RD.
 LINCOLN, NE 68517
 Phone: 402-464-2444

Data Code	Description	Weight Front	Weight Rear	Retail Price
703-005	MAIN HVAC CONTROLS WITH RECIRCULATION SWITCH			STD
170-015	STANDARD HEATER PLUMBING			STD
130-033	DENSO HEAVY DUTY AIR CONDITIONER COMPRESSOR			STD
702-002	BINARY CONTROL, R-134A			STD
739-034	PREMIUM INSULATION			\$164.00
285-013	SOLID-STATE CIRCUIT PROTECTION AND FUSES			STD
280-007	12V NEGATIVE GROUND ELECTRICAL SYSTEM			STD
324-014	DOME LIGHT WITH 3-WAY SWITCH ACTIVATED BY LH AND RH DOORS			STD
655-005	LH AND RH ELECTRIC DOOR LOCKS			\$99.00
284-023	(1) 12 VOLT POWER SUPPLY IN DASH			STD
756-1D9	PREMIUM HIGH BACK AIR SUSPENSION DRIVER SEAT WITH 3 CHAMBER AIR LUMBAR, INTEGRATED CUSHION EXTENSION, FORWARD AND REAR CUSHION TILT, ADJUSTABLE SHOCK ABSORBER	70		\$414.00
760-1D9	PREMIUM HIGH BACK AIR SUSPENSION PASSENGER SEAT WITH 3 CHAMBER AIR LUMBAR, INTEGRATED CUSHION EXTENSION, FORWARD AND REAR CUSHION TILT, ADJUSTABLE SHOCK ABSORBER	60	20	\$451.00
711-004	LH AND RH INTEGRAL DOOR PANEL ARMRESTS			STD
758-017	GRAY CORDURA PLUS CLOTH DRIVER SEAT COVER			\$2.00
761-017	GRAY CORDURA PLUS CLOTH PASSENGER SEAT COVER			\$9.00
763-101	BLACK SEAT BELTS			STD
532-002	ADJUSTABLE TILT AND TELESCOPING STEERING COLUMN	10		\$478.00
540-015	4-SPOKE 18 INCH (450MM) STEERING WHEEL			STD
765-002	DRIVER AND PASSENGER INTERIOR SUN VISORS			STD

Instruments & Controls

732-004	GRAY DRIVER INSTRUMENT PANEL			STD
734-004	GRAY CENTER INSTRUMENT PANEL			STD
870-001	BLACK GAUGE BEZELS			STD
486-001	LOW AIR PRESSURE INDICATOR LIGHT AND AUDIBLE ALARM			STD
840-002	2 INCH PRIMARY AND SECONDARY AIR PRESSURE GAUGES			STD



Prepared for:
 Keith Jordan
 Nebraska Department of
 Transportation
 5001 S 14th Street
 P O Box 94759
 Lincoln, NE 68509
 Phone: 402-479-4323

Prepared by:
 Bill Collier
 TRUCK CENTER COMPANIES
 5701 ARBOR RD.
 LINCOLN, NE 68517
 Phone: 402-464-2444

Data Code	Description	Weight Front	Weight Rear	Retail Price
198-003	DASH MOUNTED AIR RESTRICTION INDICATOR WITH GRADUATIONS			\$40.00
721-001	97 DB BACKUP ALARM		3	\$47.00
149-017	ELECTRONIC CRUISE CONTROL WITH SWITCHES ON AUXILIARY GAUGE PANEL (B DASH PANEL)			STD
156-007	KEY OPERATED IGNITION SWITCH AND INTEGRAL START POSITION; 4 POSITION OFF/RUN/START/ACCESSORY			STD
811-042	ICU3S, 132X48 DISPLAY WITH DIAGNOSTICS, 28 LED WARNING LAMPS AND DATA LINKED			STD
160-038	HEAVY DUTY ONBOARD DIAGNOSTICS INTERFACE CONNECTOR LOCATED BELOW LH DASH			STD
844-001	2 INCH ELECTRIC FUEL GAUGE			STD
845-011	FUEL FILTER RESTRICTION INDICATOR			STD
148-085	EMISSIONS LIMITED IDLE ADJUST			STD
856-001	ELECTRICAL ENGINE COOLANT TEMPERATURE GAUGE			STD
864-001	2 INCH TRANSMISSION OIL TEMPERATURE GAUGE			STD
830-017	ENGINE AND TRIP HOUR METERS INTEGRAL WITHIN DRIVER DISPLAY			STD
372-051	CUSTOMER FURNISHED AND INSTALLED PTO CONTROLS			N/C
852-002	ELECTRIC ENGINE OIL PRESSURE GAUGE			STD
746-114	AM/FM/WB WORLD TUNER RADIO WITH AUXILIARY INPUT, J1939	10		\$290.00
747-001	DASH MOUNTED RADIO			N/C
750-002	(2) RADIO SPEAKERS IN CAB			N/C
753-001	AM/FM ANTENNA MOUNTED ON FORWARD LH ROOF			N/C
810-027	ELECTRONIC MPH SPEEDOMETER WITH SECONDARY KPH SCALE, WITHOUT ODOMETER			STD
817-008	STANDARD VEHICLE SPEED SENSOR WITH ADDITIONAL SIGNAL FOR CUSTOMER USE LOCATED BETWEEN DRIVER AND PASSENGER SEATS			\$25.00
812-001	ELECTRONIC 3000 RPM TACHOMETER			STD
813-1B4	VT-HU CONNECTIVITY PLATFORM HARDWARE			STD



Prepared for:
 Keith Jordan
 Nebraska Department of
 Transportation
 5001 S 14th Street
 P O Box 94759
 Lincoln, NE 68509
 Phone: 402-479-4323

Prepared by:
 Bill Collier
 TRUCK CENTER COMPANIES
 5701 ARBOR RD.
 LINCOLN, NE 68517
 Phone: 402-464-2444

Data Code	Description	Weight Front	Weight Rear	Retail Price
8D1-002	2 YEARS DETROIT CONNECT BASE PACKAGE (VIRTUAL TECHNICIAN, DETROIT CONNECT PORTAL ACCESS) FOR VT-HU CONNECTIVITY PLATFORM			STD
162-002	IGNITION SWITCH CONTROLLED ENGINE STOP			STD
81Y-001	PRE-TRIP LAMP INSPECTION, ALL OUTPUTS FLASH, WITH SMART SWITCH			\$12.00
482-001	BW TRACTOR PROTECTION VALVE			N/C
883-001	TRAILER HAND CONTROL BRAKE VALVE			N/C
836-015	DIGITAL VOLTAGE DISPLAY INTEGRAL WITH DRIVER DISPLAY			STD
660-008	SINGLE ELECTRIC WINDSHIELD WIPER MOTOR WITH DELAY			STD
304-039	MARKER LIGHT SWITCH INTEGRAL WITH HEADLIGHT SWITCH AND DUAL CONNECTORS AND SWITCH FOR CUSTOMER FURNISHED SNOW PLOW LIGHTS, LOW BEAMS OFF WITH HIGH BEAMS			\$214.00
882-004	TWO VALVE PARKING BRAKE SYSTEM WITH WARNING INDICATOR			N/C
299-013	SELF CANCELING TURN SIGNAL SWITCH WITH DIMMER, WASHER/WIPER AND HAZARD IN HANDLE			STD
298-039	INTEGRAL ELECTRONIC TURN SIGNAL FLASHER WITH HAZARD LAMPS OVERRIDING STOP LAMPS			STD
Design				
065-000	PAINT: ONE SOLID COLOR			STD
Color				
980-5E0	CAB COLOR A: L0135EB YELLOW ELITE BC			N/C
986-020	BLACK, HIGH SOLIDS POLYURETHANE CHASSIS PAINT			STD
962-972	POWDER WHITE (N0006EA) FRONT WHEELS/RIMS (PKWHT21, TKWHT21, W, TW)			STD
966-972	POWDER WHITE (N0006EA) REAR WHEELS/RIMS (PKWHT21, TKWHT21, W, TW)			STD
96F-972	POWDER WHITE (N0006EA) SPARE WHEEL/RIM (PKWHT21, TKWHT21, W, TW)			N/C
964-020	STANDARD BLACK BUMPER PAINT			STD
963-003	STANDARD E COAT/UNDERCOATING			STD
Certification / Compliance				
996-001	U.S. FMVSS CERTIFICATION, EXCEPT SALES CABS AND GLIDER KITS			STD



Prepared for:
 Keith Jordan
 Nebraska Department of
 Transportation
 5001 S 14th Street
 P O Box 94759
 Lincoln, NE 68509
 Phone: 402-479-4323

Prepared by:
 Bill Collier
 TRUCK CENTER COMPANIES
 5701 ARBOR RD.
 LINCOLN, NE 68517
 Phone: 402-464-2444

Data Code	Description	Weight Front	Weight Rear	Retail Price
Raw Performance Data				
AE4-99D	CALC'D FRAME LENGTH - OVERALL : 344.99			
AE8-99D	CALCULATED EFFECTIVE BACK OF CAB TO REAR SUSPENSION C/L (CA) : 136.94 in			
AM6-99D	CALC'D SPACE AVAILABLE FOR DECKPLATE : 139.54 in			
Sales Programs				
RAG-998	NO TARIFF CHARGE			N/C

TOTAL VEHICLE SUMMARY

Weight Summary				
	Weight Front	Weight Rear	Total Weight	
Factory Weight ⁺	10344 lbs	7692 lbs	18036 lbs	
Total Weight ⁺	10344 lbs	7692 lbs	18036 lbs	

ITEMS NOT INCLUDED IN ADJUSTED LIST PRICE

Other Factory Charges				
RD1-002	2 YEARS DETROIT CONNECT BASE PACKAGE (VIRTUAL TECHNICIAN, DETROIT CONNECT PORTAL ACCESS)			STD
P73-2FT	STANDARD DESTINATION CHARGE			\$2,100.00

(+) Weights shown are estimates only.

If weight is critical, contact Customer Application Engineering.

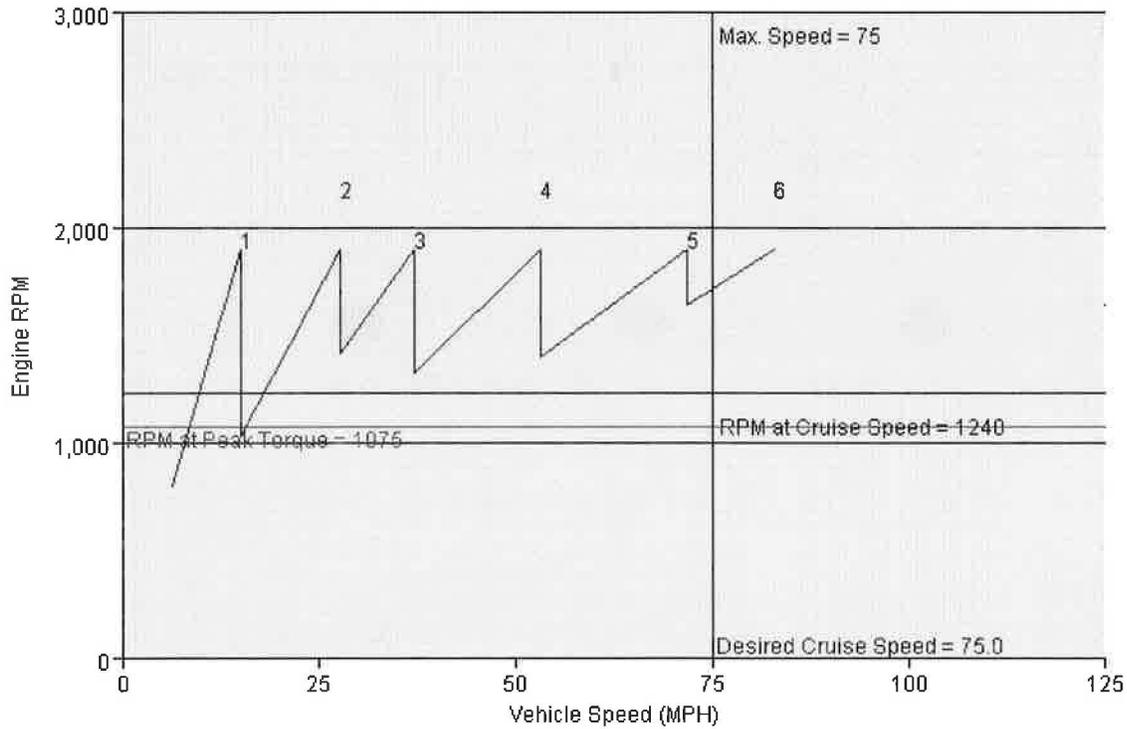
(**) Prices shown do not include taxes, fees, etc... "Net Equipment Selling Price" is located on the Quotation Details Proposal Report.



Prepared for:
 Keith Jordan
 Nebraska Department of
 Transportation
 5001 S 14th Street
 P O Box 94759
 Lincoln, NE 68509
 Phone: 402-479-4323

Prepared by:
 Bill Collier
 TRUCK CENTER COMPANIES
 5701 ARBOR RD.
 LINCOLN, NE 68517
 Phone: 402-464-2444

SHIFT CHART



VEHICLE SPECIFICATIONS SUMMARY - SHIFT CHART

Model.....114SD
 Cab Size (829).....114 INCH BBC FLAT ROOF ALUMINUM CONVENTIONAL CAB
 Desired Cruise Speed (mph).....75.0
 Engine (101).....DETROIT DD13 12.8L 450 HP @ 1625 RPM, 1900 GOV RPM, 1650 LB/FT @ 975 RPM
 RPM at Peak Torque.....1075
 Governed RPM.....1900
 Transmission (342).....ALLISON 4000 RDS AUTOMATIC TRANSMISSION WITH PTO PROVISION



Prepared for:
 Keith Jordan
 Nebraska Department of
 Transportation
 5001 S 14th Street
 P O Box 94759
 Lincoln, NE 68509
 Phone: 402-479-4323

Prepared by:
 Bill Collier
 TRUCK CENTER COMPANIES
 5701 ARBOR RD.
 LINCOLN, NE 68517
 Phone: 402-464-2444

Gear Ratio: LL N/A
 Gear Ratio: L N/A
 Gear Ratio: 1 3.51
 Gear Ratio: 2 1.91
 Gear Ratio: 3 1.43
 Gear Ratio: 4 1
 Gear Ratio: 5 0.74
 Gear Ratio: 6 0.64
 Gear Ratio: 7 N/A
 Gear Ratio: 8 N/A
 Gear Ratio: 9 N/A
 Gear Ratio: 10 N/A
 Gear Ratio: 11 N/A
 Gear Ratio: 12 N/A
 Gear Ratio: 13 N/A
 Gear Ratio: 14 N/A
 Gear Ratio: 15 N/A
 Gear Ratio: 16 N/A
 Gear Ratio: 17 N/A
 Gear Ratio: 18 N/A
 Auxiliary Transmission (352) NO AUXILIARY TRANSMISSION
 Low Gear Ratio N/A
 High Gear Ratio N/A
 Transfer Case (373) NO TRANSFER CASE
 Low Gear Ratio N/A
 High Gear Ratio N/A
 Rear Axle (420) MT-40-14X 40,000# R-SERIES TANDEM REAR AXLE
 Number of Speeds 1
 Rear Axle Gear Ratio(s) 4.33 REAR AXLE RATIO
 Rear Tires (094) MICHELIN XDN2 11R22.5 16 PLY RADIAL REAR TIRES
 Revolutions per Mile 496

TABLE SUMMARY - SHIFT CHART

Transmission Gear	Transmission Gear Ratio	Rear Axle Ratio	Overall Gear Ratio	Percent Split	RPM After Shift	MPH at Peak Torque RPM	MPH at Governed
1	3.51	4.33	15.20	N/A	800	8.6	15.1
2	1.91	4.33	8.27	83.8	1034	15.7	27.8
3	1.43	4.33	6.19	33.6	1423	21.0	37.1
4	1.00	4.33	4.33	43.0	1329	30.0	53.1
5	0.74	4.33	3.20	35.1	1406	40.6	71.7
6	0.64	4.33	2.77	15.6	1643	46.9	82.9



Prepared for:
Keith Jordan
Nebraska Department of
Transportation
5001 S 14th Street
P O Box 94759
Lincoln, NE 68509
Phone: 402-479-4323

Prepared by:
Bill Collier
TRUCK CENTER COMPANIES
5701 ARBOR RD.
LINCOLN, NE 68517
Phone: 402-464-2444

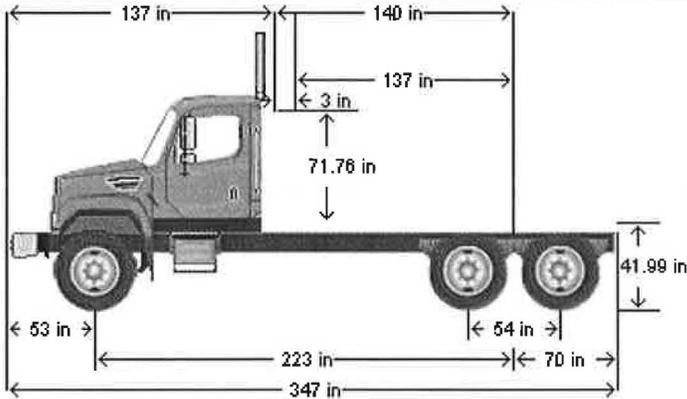
Performance calculations are estimates only. If performance calculations are critical, please contact Customer Application Engineering.



Prepared for:
 Keith Jordan
 Nebraska Department of
 Transportation
 5001 S 14th Street
 P O Box 94759
 Lincoln, NE 68509
 Phone: 402-479-4323

Prepared by:
 Bill Collier
 TRUCK CENTER COMPANIES
 5701 ARBOR RD.
 LINCOLN, NE 68517
 Phone: 402-464-2444

D I M E N S I O N S



VEHICLE SPECIFICATIONS SUMMARY - DIMENSIONS

Model	114SD
Wheelbase (545)	5675MM (223 INCH) WHEELBASE
Rear Frame Overhang (552)	1775MM (70 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)	114 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



Prepared for:
 Keith Jordan
 Nebraska Department of
 Transportation
 5001 S 14th Street
 P O Box 94759
 Lincoln, NE 68509
 Phone: 402-479-4323

Prepared by:
 Bill Collier
 TRUCK CENTER COMPANIES
 5701 ARBOR RD.
 LINCOLN, NE 68517
 Phone: 402-464-2444

Dimensions	Inches
Bumper to Back of Cab (BBC)	137.0
Bumper to Centerline of Front Axle (BA)	53.5
Min. Cab to Body Clearance (CB)	3.0
Back of Cab to Centerline of Rear Axle(s) (CA)	139.9
Effective Back of Cab to Centerline of Rear Axle(s) (Effective CA)	136.9
Back of Cab Protrusions (Exhaust/Intake) (CP)	3.0
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	209.8
Cab Height (CH)	71.8
Wheelbase (WB)	223.4
Frame Overhang (OH)	70.0
Overall Length (OAL)	346.8
Rear Axle Spacing	54.0
Unladen Frame Height at Centerline of Rear Axle	42.0

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

Prepared for:
 Keith Jordan
 Nebraska Department of
 Transportation
 5001 S 14th Street
 P O Box 94759
 Lincoln, NE 68509
 Phone: 402-479-4323

Prepared by:
 Bill Collier
 TRUCK CENTER COMPANIES
 5701 ARBOR RD.
 LINCOLN, NE 68517
 Phone: 402-464-2444

G V W R

VEHICLE SPECIFICATIONS SUMMARY - GVWR

Model..... 114SD
 Cab Size (829)..... 114 INCH BBC FLAT ROOF ALUMINUM CONVENTIONAL CAB
 Expected Front Axle(s) Load (lbs)..... 20000.0
 Expected Pusher Axle(s) Load (lbs)..... 0.0
 Expected Rear Axle(s) Load (lbs)..... 40000.0
 Expected Tag Axle(s) Load (lbs)..... 0.0
 Expected GVW (lbs)..... 60000
 Expected GCW (lbs)..... 80000.0
 Front Axle (400)..... DETROIT DA-F-20.0-5 20,000# FL1 71.0 KPI/3.74 DROP SINGLE FRONT AXLE
 Front Suspension (620)..... 20,000# FLAT LEAF FRONT SUSPENSION
 Front Hubs (418)..... CONMET PRESET PLUS PREMIUM IRON FRONT HUBS
 Front Disc Wheels (502)MAXION WHEELS 10035 22.5X12.25 10-HUB PILOT 4.75 INSET 5-HAND STEEL DISC FRONT WHEELS
 Front Tires (093)..... MICHELIN XZY-3 425/65R22.5 20 PLY RADIAL FRONT TIRES
 Front Brakes (402)..... MERITOR 16.5X6 Q+ CAST SPIDER CAM FRONT BRAKES, DOUBLE ANCHOR, FABRICATED SHOES
 Steering Gear (536)..... TRW THP-60 POWER STEERING WITH RCH45 AUXILIARY GEAR
 Rear Axle (420)..... MT-40-14X 40,000# R-SERIES TANDEM REAR AXLE
 Rear Suspension (622)..... HENDRICKSON PRIMAAX EX 46,000# REAR AIR SUSPENSION
 Rear Hubs (450)..... CONMET PRESET PLUS PREMIUM IRON REAR HUBS
 Rear Disc Wheels (505)..... MAXION WHEELS 90541 22.5X8.25 10-HUB PILOT 2-HAND STEEL DISC REAR WHEELS
 Rear Tires (094)..... MICHELIN XDN2 11R22.5 16 PLY RADIAL REAR TIRES
 Rear Brakes (423)..... MERITOR 16.5X7 Q+ CAST SPIDER CAM REAR BRAKES, DOUBLE ANCHOR, FABRICATED SHOES
 Pusher / Tag Axle (443)..... NO PUSHER OR TAG AXLE
 Pusher / Tag Suspension (626)..... NO PUSHER OR TAG SUSPENSION
 Pusher / Tag Hubs (449)..... NO PUSHER OR TAG HUBS
 Pusher/Tag Disc Wheels (509)..... NO PUSHER/TAG DISC WHEELS
 Pusher / Tag Tires (095)..... NO PUSHER/TAG TIRES
 Pusher / Tag Brakes (456)..... NO PUSHER/TAG BRAKES

TABLE SUMMARY - GVWR



Prepared for:
 Keith Jordan
 Nebraska Department of
 Transportation
 5001 S 14th Street
 P O Box 94759
 Lincoln, NE 68509
 Phone: 402-479-4323

Prepared by:
 Bill Collier
 TRUCK CENTER COMPANIES
 5701 ARBOR RD.
 LINCOLN, NE 68517
 Phone: 402-464-2444

	Front	Rear 1	Rear 2
Axle Component Weight Ratings			
Axles	20000	20000	20000
Suspension	20000	23000	23000
Hubs	23000	26000	26000
Brakes	20000	21000	21000
Wheels	22800	29600	29600
Tires	22800	24020	24020
Power Steering	22000	N/A	N/A
GAWR (per axle)	20000	20000	20000
GAWR (per axle system)	20000		40000
Expected load (per axle system)	20000		40000
Vehicle GVWR Summary			
Calculated GVWR	60000		
Expected GVWR	60000		
All weights displayed in pounds			

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



Prepared for:
 Keith Jordan
 Nebraska Department of
 Transportation
 5001 S 14th Street
 P O Box 94759
 Lincoln, NE 68509
 Phone: 402-479-4323

Prepared by:
 Bill Collier
 TRUCK CENTER COMPANIES
 5701 ARBOR RD.
 LINCOLN, NE 68517
 Phone: 402-464-2444

FRAME RBM

VEHICLE SPECIFICATIONS SUMMARY - FRAME RBM

Wheelbase (545) 5675MM (223 INCH) WHEELBASE
 Frame Rails (546) 7/16X3-9/16X11-1/8 INCH STEEL FRAME (11.11MMX282.6MM/0.437X11.13 INCH) 120KSI(546)
 Yield Strength (psi) 120000
 Section Modulus (per rail) (cu in).....21.6
 RBM (per rail) (lbf-in).....2592000
 Inner Frame Reinforcement (547) PARTIAL INNER FRAME REINFORCEMENT AT FRONT SUSPENSION
 Outer Frame Reinforcement (548) ..BODY COMPANY INSTALLED ADDITIONAL FRONT FRAME REINFORCEMENT FOR SNOW PLOW

TABLE SUMMARY - FRAME RBM

Item	Description / Value
Wheelbase	5675MM (223 INCH) WHEELBASE
Frame	7/16X3-9/16X11-1/8 INCH STEEL FRAME (11.11MMX282.6MM/0.437X11.13 INCH) 120KSI
Inner Frame Reinforcement:	PARTIAL INNER FRAME REINFORCEMENT AT FRONT SUSPENSION
Outer Frame Reinforcement:	BODY COMPANY INSTALLED ADDITIONAL FRONT FRAME REINFORCEMENT FOR SNOW PLOW
Yield Strength (psi)	120000
Section Modulus - per rail (cu. in.)	21.60
Frame RBM - per rail (lbf-in)	2592000

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





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
2019 MODEL YEAR
CERTIFICATE OF CONFORMITY
WITH THE CLEAN AIR ACT

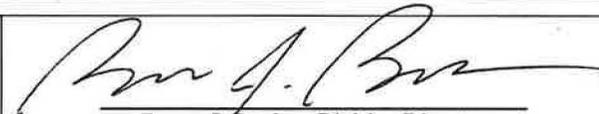
OFFICE OF TRANSPORTATION
AND AIR QUALITY
ANN ARBOR, MICHIGAN 48105

Certificate Issued To: **Detroit Diesel Corporation**
(U.S. Manufacturer or Importer)

Certificate Number: **KDDXH12.8FED-002**

Effective Date:
11/16/2018

Expiration Date:
12/31/2019


Byron J. Bunker, Division Director
Compliance Division

Issue Date:
11/16/2018

Revision Date:
N/A

Model Year: 2019

Manufacturer Type: Original Engine Manufacturer

Engine Family: KDDXH12.8FED

Intended Service Class: Heavy Heavy-Duty Diesel

Fuel Type: Diesel

Intended Engine Application: Tractor and Vocational

Primary Test Configuration Transient Duty Cycle:

CO2 FCL value (g/hp-hr): 512

CO2 FEL value (g/hp-hr): 527

N2O FEL value (g/hp-hr): 0.10

CH4 FEL value (g/hp-hr): 0.10

Primary Test Configuration Steady-State Duty Cycle:

CO2 FCL value (g/hp-hr): 455

CO2 FEL value (g/hp-hr): 469

Pursuant to Section 206 of the Clean Air Act (42 U.S.C. section 7525), 40 CFR Parts 86 and 1036, and subject to the terms and conditions prescribed in those provisions, this certificate of conformity is hereby issued with respect to the test engines which represent the engine family, and is subject to the terms and conditions prescribed in those provisions.

This certificate of conformity covers only those new motor vehicle engines which conform in all material respects to the design specifications that applied to those engines described in the documentation required by 40 CFR Parts 86 and 1036 and which are produced during the model year stated on this certificate of the said manufacturer, as defined in 40 CFR Parts 86 and 1036.

This certificate of conformity is conditional upon compliance of said manufacturer with the averaging, banking and trading provisions of 40 CFR Parts 86 and 1036. Failure to comply with these provisions may render this certificate void *ab initio*.

It is a term of this certificate that the manufacturer shall consent to all inspections described in 40 CFR Parts 86 and 1068 and authorized in a warrant or court order. Failure to comply with the requirements of such a warrant or court order may lead to revocation or suspension of this certificate for reasons specified in 40 CFR Parts 86 and 1036. It is also a term of this certificate that this certificate may be revoked or suspended or rendered void *ab initio* for other reasons specified in 40 CFR Parts 86 and 1036.

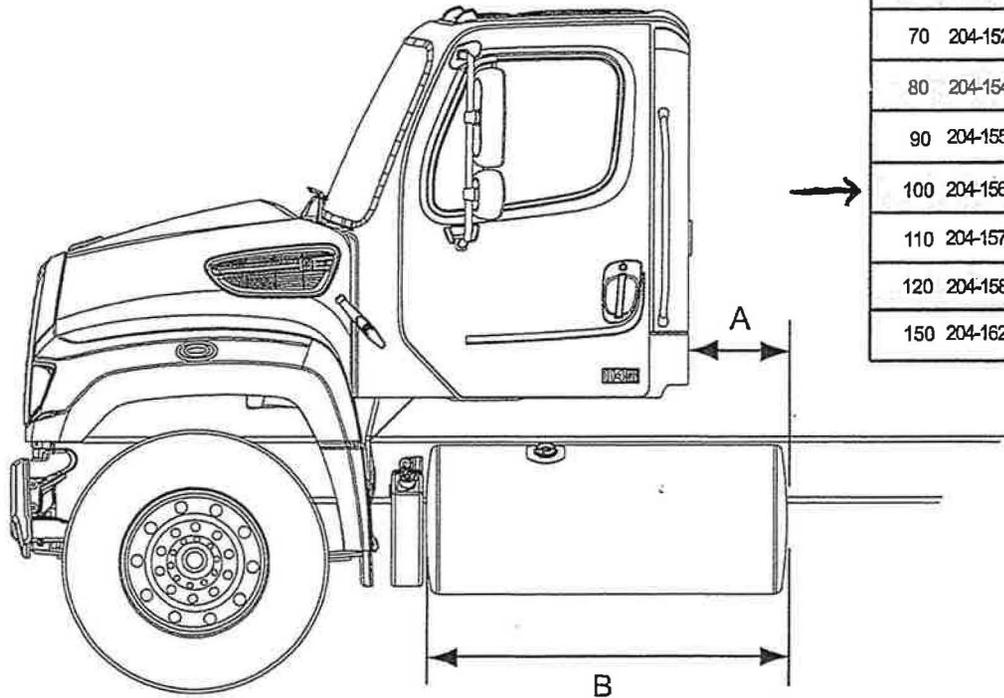
This certificate does not cover engines sold, offered for sale, or introduced, or delivered for introduction into commerce in the U.S. prior to the effective date of the certificate.

Freightliner 108 / 114 SD

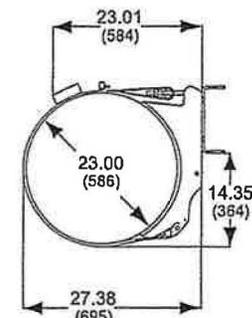
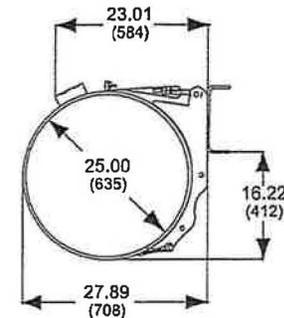
Cab and Chassis Vocational Reference Guide

Fuel Tanks

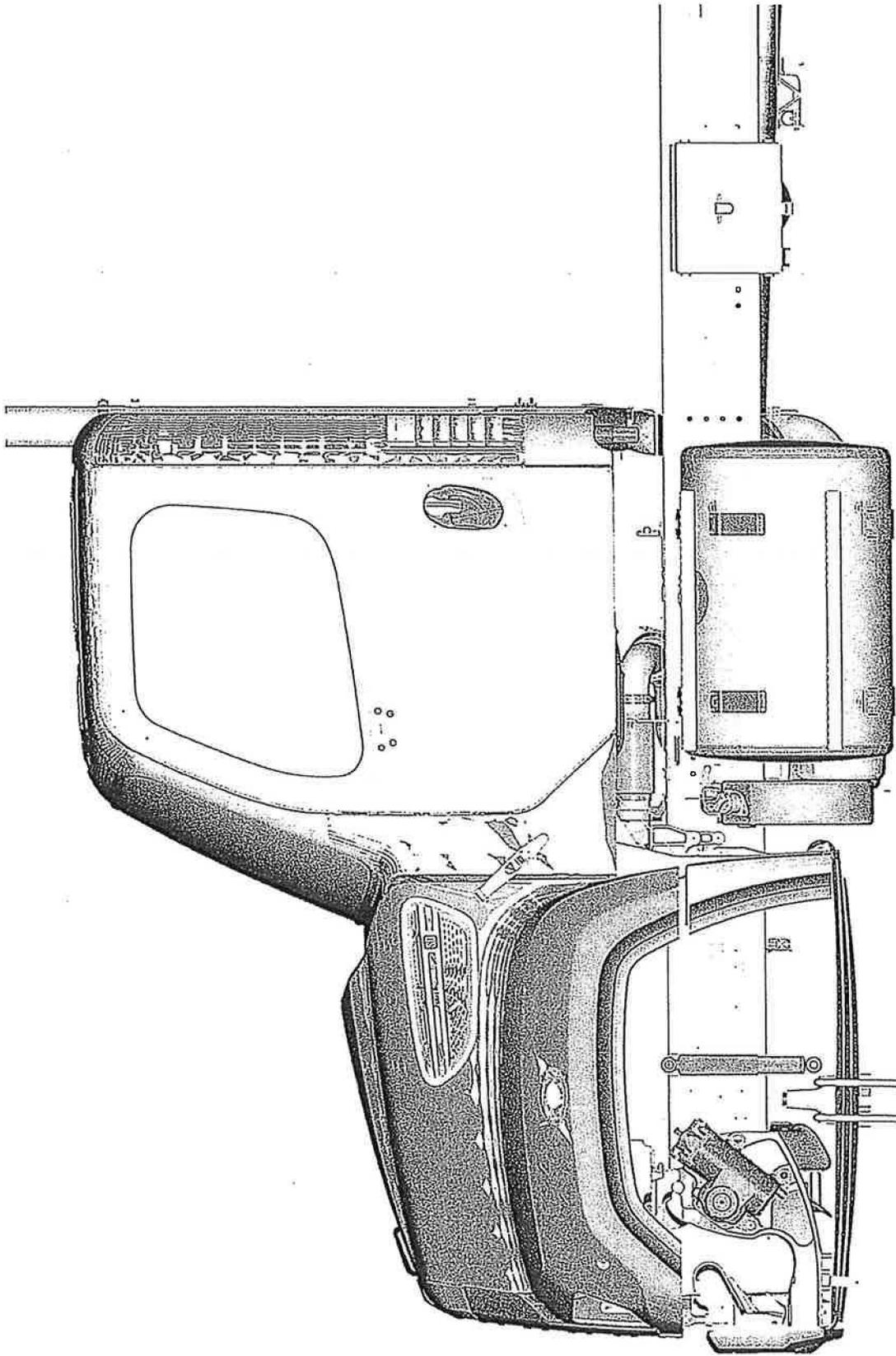
114SD SFA DEF and 25" / 23" Cylindrical Fuel Tanks 218-006 25 Inch Diameter Fuel Tank or 218-001 23 Inch Diameter Fuel Tank



Fuel Tank Size	A 25 Inch				25"	A 23 Inch			23"
	6 DEF	13 DEF	23 DEF	B		6 DEF	13 DEF	23 DEF	
50 204-150	N/A	N/A	N/A	N/A	-13.2 (-335)	-8.4 (-213)	-2.5 (-64)	29 (737)	
60 204-151	-12.6 (-320)	-7.9 (-201)	-2 (-51)	30 (761)	-7.9 (-201)	-2.4 (-61)	3.5 (89)	35 (889)	
70 204-152	-8.1 (-206)	-3.4 (-86)	2.5 (64)	34.5 (83)	-1.9 (-48)	3.6 (91)	9.5 (241)	41 (1041)	
80 204-154	-3.1 (-79)	1.6 (41)	7.5 (191)	39.5 (1002)	3.6 (91)	9.1 (231)	15 (381)	46.5 (1181)	
90 204-155	1.4 (36)	6.1 (155)	12 (305)	44 (1117)	9.1 (231)	14.6 (371)	22.5 (572)	52 (1321)	
100 204-156	5.9 (150)	10.6 (269)	16.5 (419)	48.5 (1231)	14.6 (371)	20.1 (511)	26 (660)	57.5 (1460)	
110 204-157	N/A	12.6 (320)	21.5 (546)	53.5 (1358)	N/A	26.1 (663)	32 (813)	63.5 (1613)	
120 204-158	N/A	20.9 (531)	26 (660)	58 (1473)	N/A	31.6 (803)	37.5 (953)	69 (1753)	
150 204-162	N/A	34.1 (866)	40 (1016)	72 (1828)	N/A	48.6 (1234)	54.5 (1384)	86 (2184)	



* 6 gallon DEF shown, 13 and 23 similar, see chart.



Freightliner (FTL)



Run Smart™

Freightliner SD Vocational

Applicable Models:	108SD/114SD
SD Vocational Coverage is only available for vehicles ordered with the following engines:	Cummins B, C, or L
SD Vocational Coverage is not available for vehicles in these vocations:	Logging, Mining, Oil Field
Category Determinants	
Road Surface — most severe in-transit between sites	<30% off-highway rough, maintained concrete/asphalt; maintained gravel/crushed rock; maintained dirt or soft soil (Class C or D roads) ¹
GCW	92,000 lb/41 730 kg or less
Axles and Their Manufacturer's GVW Rating	
2-axle unit	46,000 lb/20 865 kg or less
3-axle unit	66,000 lb/29 937 kg or less
4-axle unit	N/A
5-axle unit	N/A

¹Class C roads have a natural surface and may be either constructed or established over time by repeated passage of vehicles. The natural surface may be dirt, sand, or rock. A minimal amount of maintenance, if any at all, is limited primarily to spot surface grading to allow vehicle passage within the original road corridor. Class D roads are primitive roads that were not constructed but have been established over time by the passage of motor vehicles. These roads receive no maintenance or grading.

Coverage ²		
Description	Time ³	Distance ³
Basic Vehicle	2 Years	Unlimited
Battery	1 Year	100,000 mi/161 000 km
Brightwork	6 Months	Unlimited
Cab Corrosion/Perforation	5 Years	Unlimited
Cab Structure	5 Years	Unlimited
Corrosion	6 Months	Unlimited
Crossmembers	5 Years	Unlimited
Diesel Emission 2010 ⁴	5 Years	100,000 mi/161 000 km
Frame Rails	5 Years	Unlimited
GHG14 ⁵ (Medium Heavy Duty to Heavy Heavy Duty Trucks)	5 Years	100,000 mi/161 000 km
GHG14 ⁵ (Medium Heavy Duty to Heavy Heavy Duty Tractors)	5 Years	100,000 mi/161 000 km
GHG14 ⁵ Tire	2 Years	24,000 mi/38 400 km
Paint	1 Year	100,000 mi/161 000 km
Paint, Chassis	6 Months	Unlimited
Front Axle ⁶	2 Years	Unlimited
Rear Axle	2 Years	Unlimited
Transfer Case	2 Years	Unlimited
Transmission	2 Years	Unlimited
Detroit Front Axle ⁶ (File Direct)		
Pre-Model Year 2011 ⁷	2 Years	Unlimited
Post-Model Year 2011 ⁸	3 Years	300,000 mi/483 000 km
Detroit Rear Axle (File Direct)		
Pre-Model Year 2011 ⁷	2 Years	Unlimited

Warranty Statement & Warranty Coverage Descriptions follow on page three of this document.

The information provided in this document is for general information only and is not offered as customer's warranty.

Page 1 of 9

This coverage may be superseded without notification.

Effective: 8/14/2014

Copyright © Daimler Trucks North America LLC. All rights reserved. Daimler Trucks North America LLC is a Daimler company.

Post-Model Year 2011⁸	3 Years	300,000 mi/483 000 km
---	----------------	------------------------------

¹Coverage may vary; check vehicle's actual warranty coverage online via OWL's *Coverage Info/Check Coverage* screen.

³Time or distance, whichever comes first

⁴Applies to vehicles equipped with EPA 2010 compliant diesel engines.

⁵Applies to models 2013 and later domiciled in the United States, check actual warranty online via OWL's *Coverage Info/Check Coverage* screen for coverage listed as "GHG14...".

⁶Front Axle coverage is also applicable to gliders.

⁷Pre-Model Year 2011 Detroit Axle: Warranty coverage is determined by Gross Combination Weight Rating, road surface, and vocation.

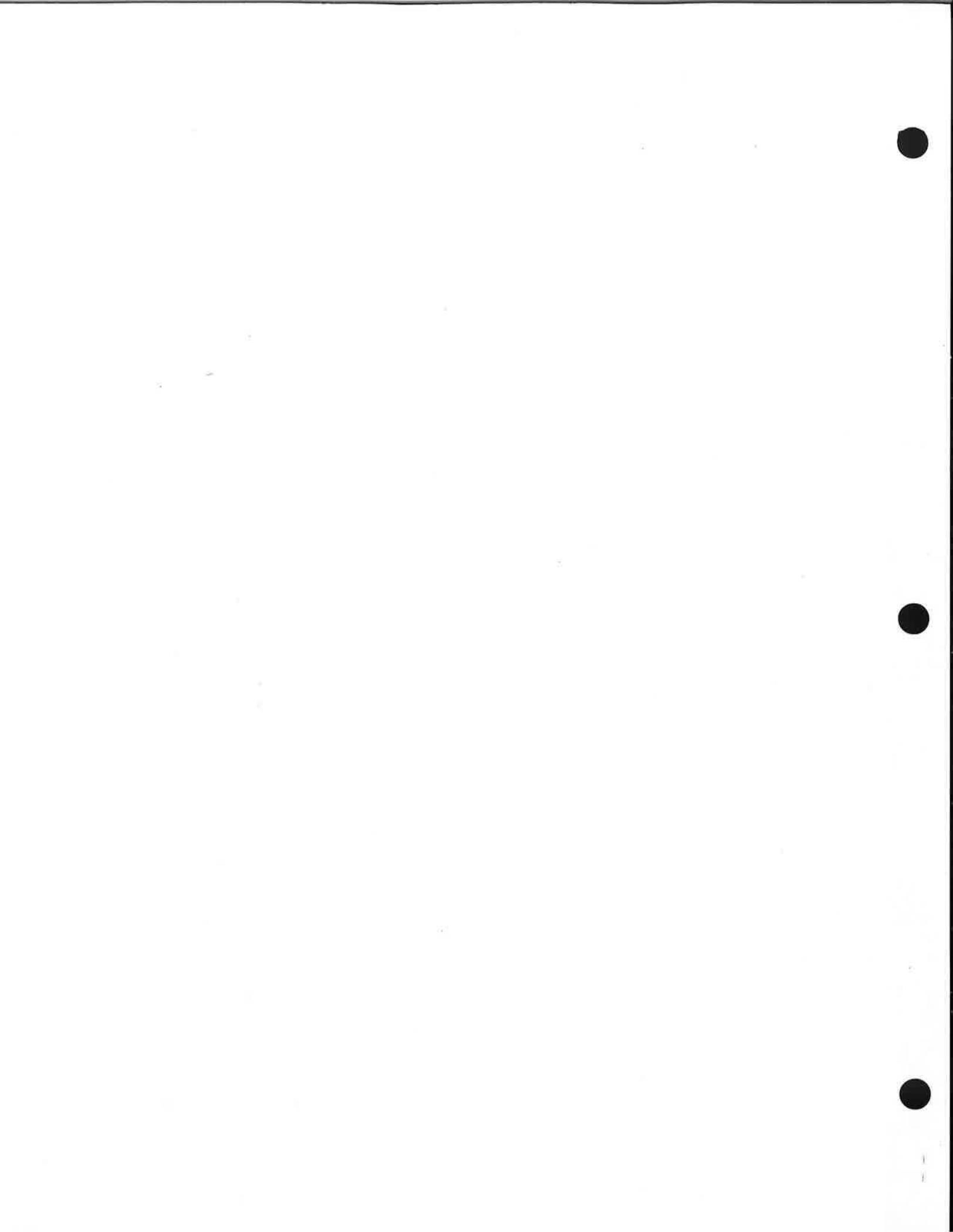
Please see www.ddcsn.com for specific coverage details.

⁸Heavy Duty – General Service: Warranty coverage is determined by Gross Combination Weight Rating, road surface, and vocation. Please see www.ddcsn.com for specific coverage details.

Warranty Statement & Warranty Coverage Descriptions follow on page three of this document.

The information provided in this document is for general information only and is not offered as customer's warranty.

This coverage may be superseded without notification.





CELEBRATING 60 YEARS 1958-2018

1051 West 7th Street
Monroe, WI 53566
Toll: 800-356-8134
Local: 608-328-8127
www.monroetruck.com



January 29, 2019
REVISION #1

Truck Center Companies
Attention: Bill Collier

State of Nebraska DOT
Solicitation No. 5992 OF

Monroe Truck Equipment to furnish and install all required equipment to meet or exceed the specifications. Price based on chassis dropped shipped to Monroe, WI. and delivered to dealership.

Line 1 **\$105,984 ea.**
Base unit to include Monroe 14' 201SS RDS Body with Hoist & front conveyor, 201SS cabguard with integral oil tank, plow hitch, pintle hook mounting, Weatherguard toolbox, Shurco Tarp system, Force America 6100 spreader control system with Monroe I-grip proportional joystick, front engine driven loadsense hydraulics, Zone Defense Camera System with 7" color monitor.

NOTE*****

Price includes PREWET system less tanks shipped to Viking for installation on Tow Plow, all required hydraulics and controls to operate Tow Plow, freight to deliver Tow Plow with Chassis to dealer. The price **DOES NOT** include freight for Tow Plow to Monroe, WI, or Tow Plow price.

Line 2 **\$105,984 ea.**
Same as Line 1

Line 15 **\$15,360 ea.**
Henke V-Plow with V-Plow Quick Hitch

Line 16 **\$3,112 ea.**
V-Plow Quick Attach Hitch without Plow

Line 17 **\$10,410 ea.**
Monroe 11' Double Function Patrol Wing

Line 18 **\$14,782 ea.**
Monroe 11' Right Hand Benching Wing, 48"



GLOBAL TRUCK EQUIPMENT SOLUTIONS
Manufacture & Install Snow & Ice Control Equipment &
Truck Bodies - Dump, Service, Platform, Towing & Stake
Truck Equipment • Modifications • Fire Apparatus





CELEBRATING 60 YEARS 1958-2018



1051 West 7th Street
Monroe, WI 53566
Toll: 800-356-8134
Local: 608-328-8127
www.monroetruck.com

Line 19 \$16,222 ea.
Monroe 11' Right Hand Benching Wing, 62"

Line 20 \$18,126 ea.
Monroe 11' Right Hand Benching Wing, 80"

Line 21 \$4,647 ea.
Monroe Prewet system, Dual 120 gallon tanks, flow meter and fittings

Line 22 \$7,289 ea.
Monroe 8' Right Hand Mid-Mount Wing

Line 23 \$7,546 ea.
Monroe 8' Left Hand Mid-Mount Wing

Line 24 \$3,500 ea.
Force America 3-Stick Ultra in lieu of Monroe I-Grip controller

Line 25 \$5,457 ea.
Add Tow Plow Prewet and Hydraulics

Line 27 \$800 ea.
Chassis Hydraulics for Bi-Directional Tow Plow

Line 28 \$5,457 ea.
Add Bi-Directional Tow Plow Prewet and Hydraulics

Line 30 \$740 ea.
Plow Balance Valve



GLOBAL TRUCK EQUIPMENT SOLUTIONS
Manufacture & Install Snow & Ice Control Equipment &
Truck Bodies - Dump, Service, Platform, Towing & Stake
Truck Equipment • Modifications • Fire Apparatus





CELEBRATING 60 YEARS 1958-2018



1051 West 7th Street
Monroe, WI 53566
Toll: 800-356-8134
Local: 608-328-8127
www.monroetruck.com

OPTIONS

Option \$1,309 ea.
Monroe Para-Glide Wing - WILL NOT work with Benching Wings

Option \$1,175 ea.
Wing Side Air Bags for Front Wing Application

Option \$783 ea.
Heated 8" Convex Mirrors

Option \$5,360 ea.
Whelen Light Package, Complete

Thanks

Denny Wood
Monroe Truck Equipment, Inc.
608-329-8358
dwood@monroetruck.com



GLOBAL TRUCK EQUIPMENT SOLUTIONS
Manufacture & Install Snow & Ice Control Equipment &
Truck Bodies - Dump, Service, Platform, Towing & Stake
Truck Equipment • Modifications • Fire Apparatus



MONROE
TRUCK EQUIPMENT



POWERED
BY
FORCE
ANALYTICS



I-Grip 6100

The Complete In-Cab Integration System

The Monroe I-Grip control powered by the Force SSC6100 CAN Bus Spreader Control System provides the latest in integrated Hydraulic function controls along with Spreader and Liquid Controls.

I-Grip Control

The Complete In-Cab Integration System

The I-Grip™ incorporates today's technology into a proportional single Joystick which provides an industry-leading approach to hydraulic function control.

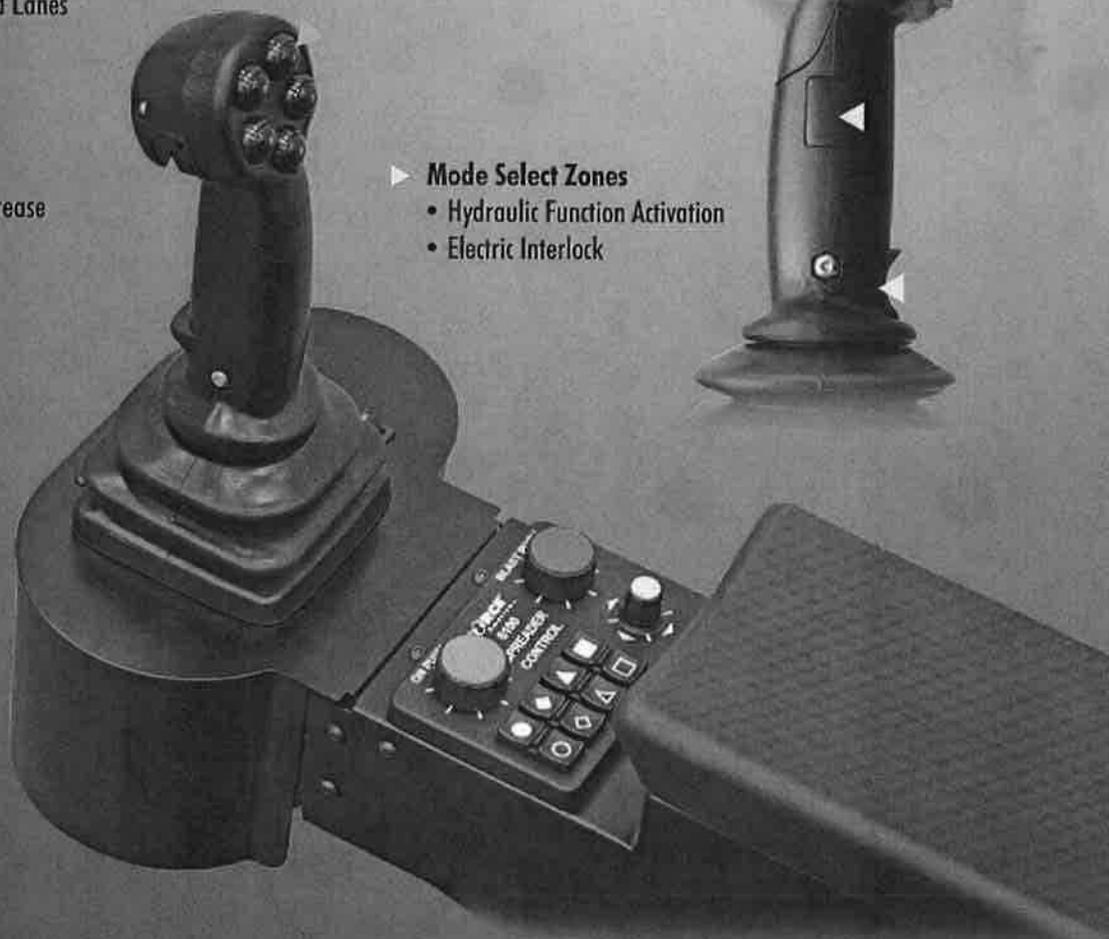
The one point-of-contact and one point-of-control design provides the highest degree of operator comfort and system flexibility.

- ▶ **Function Controls with LED Backlit Face**
 - 3-Axis Hydraulic Proportional Control Functions
 - Toggle Operating Modes
 - Select Liquid Lanes

- ▶ **Spreader Controls**
 - Spinner Increase/Decrease
 - Blast On/Off

- ▶ **Spreader Controls**
 - Standby
 - Rate Increase/Decrease

- ▶ **Mode Select Zones**
 - Hydraulic Function Activation
 - Electric Interlock



- ▶ **Full Proportional Control**
- ▶ **Contactless Mode Selection**
- ▶ **Hi-Flex Cabling for Long-Life, Seat-Mounted Operation**

MINNIE
TRUCK EQUIPMENT



POWERED
BY
HYDRA-TECH

SSC6100

CAN Bus Spreader Control System

► Remotely Mounted in Clear View for Operator

► 7" Diagonal Color TFT Wide-Screen Display

► Simultaneous Display of Key Activities:

- Granular Rate Set-Point vs. Actual
- Pre-Wet Liquid Set-Point vs. Actual
- Liquid Anti-Icing Set-Point vs. Actual

► Selectable On-Screen Data Gauges:

- Road/Air Temperature
- Current Material Name
- Vehicle Speed
- Spread Width
- Gate Setting



**Superior
Operator
Interface!**

► Spreader Control

- Two Continuous Rotation Encoders for Granular & Spinner
- Two Integrated Push-Buttons for Blast & Standby
- Multifunction Menu Navigation Control
- Adjustable LED Backlighting
- Color-Coded Knobs & Soft Keys Simplify Operation
Accelerates Training for New Drivers
- Industry-Leading Safety... Pushing ESTOP Button Immediately
Removes Power from Actuators to Halt Hydraulic Function Movement



**ESTOP
Safety Button**

► CAN Bus Central Processing Module

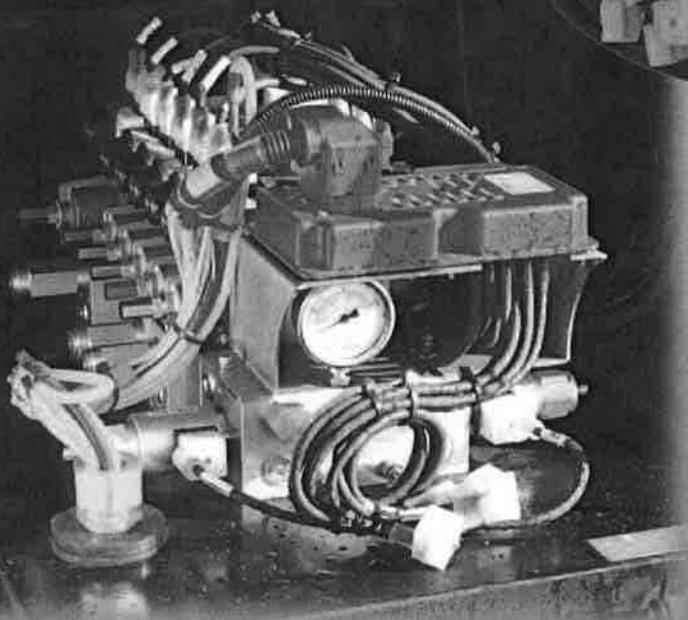
- Connects the Operator Interface, LCD Color Display & Valve Control Module into One Multi-Tasking, Information & Control System
- On-Board Diagnostics Provide Real-Time Status of Sensors, Outputs and System Communications
- USB Port for High-Speed CAL File Transfer and Firmware Upgrades – No PC Required



MONROE
TRUCK EQUIPMENT

**POWERED
BY**
EPCOR

Valve Control Module



The Valve Control Module was developed on the robust CAN Bus communication protocol to eliminate bulky wire harnesses.

Constructed to meet harsh environmental standards and pre-installed on the valve assembly; making it the perfect companion for the Force America family of valves.

- ▶ Potted Module & Connectors Seal Out Water & Protect Against Vibration
- ▶ CAN Bus Interface to Controller Reduces Wiring Through Cab Floor
- ▶ Feedback Inputs for Sensors
- ▶ Warning Sensor Inputs
- ▶ Proportional/Non-Proportional Operation
- ▶ CAN Bus Output Connector to Additional Modules
- ▶ On-Board Diagnostics which Provide Real-Time Status of Sensors, Outputs & System Communications



POWERED
BY



800.356.8134

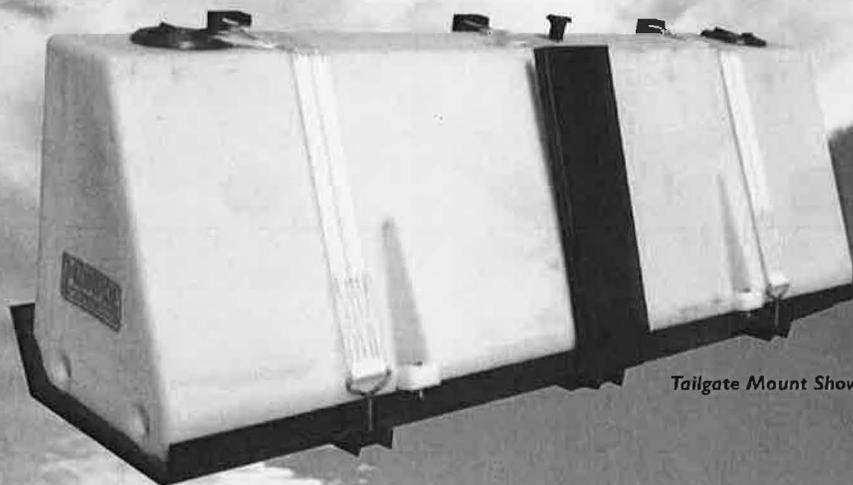
www.monroetruck.com

Monroe Truck Equipment
1051 W. 7th Street
Monroe, WI 53566



LDS-455 Hydraulic Liquid Dispensing System

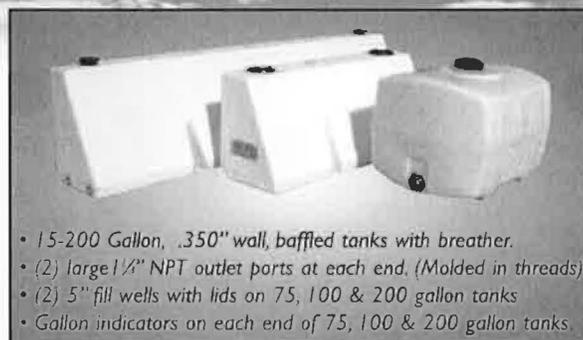
VISIT US ONLINE AT
www.monroetruck.com



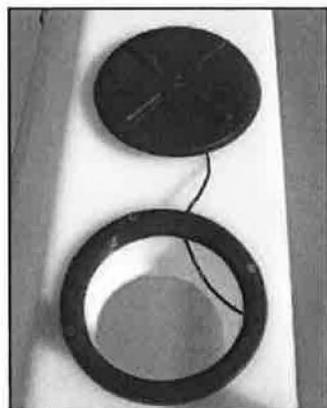
Tailgate Mount Shown

Standard System Includes:

- NEMA Weather-tite Fiberglass Pump Enclosure with Hydraulic, 7GPM pump assembly (Optional 4GPM)
- Glass Filled Polypropylene Plumbing Components
- Black EPDM Hose, 150PSI
- 5PSI In-Line Check Valve for Nozzles
- 2 Nozzle w/ Brass Tips and Caps
- In Cab Controller with Backlit On/Off System Switch
- Low Pressure Switch with Indicator Light
- Weather Pack Connections on Harnessing
- Tank Mounting Kits for V-box, Tailgate or Chassis Applications (Fits up to 9" radius dump bodies)
- Powder Coated Mild Steel Mounting Bracketry (Optional Stainless Steel)



- 15-200 Gallon, .350" wall, baffled tanks with breather.
- (2) large 1 1/2" NPT outlet ports at each end. (Molded in threads)
- (2) 5" fill wells with lids on 75, 100 & 200 gallon tanks
- Gallon indicators on each end of 75, 100 & 200 gallon tanks.



Tethered 5" lid and sash guard,
standard on 75 & 100 gallon tanks.



Manufactured by:

Monroe Snow & Ice Control

A Division of Monroe Truck Equipment

1051 W. 7th Street, Monroe, Wisconsin 53566

800-880-0109 • Fax 608-328-8390 • Website: www.monroetruck.com

Distributed by:



PLOW HITCHES

Heavy Duty Truck and Plow
Portion Hitches



Other Product Offerings:
Wings • Plows
Tailgate Spreaders
Liquid Systems • Scrapers
V-Box Spreaders

www.monroetruck.com

Pin Type Hitch



MC5000

- Low Profile Design
- Available in 21", 30.5" & 33.5" Centers
- Non-Tilt
- Telescopic Lift Arm



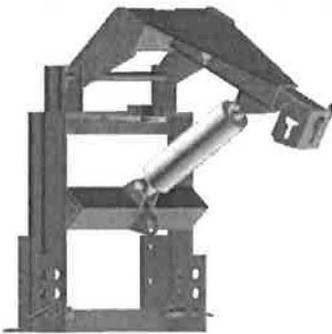
MC201

- High Profile Design
- Available in 30.5" & 33.5" Centers
- Tilting with Lever Release for Locking
- Telescopic Lift Arm



MC8002

- High Profile Design
- Available in 21", 30.5" & 33.5" Centers
- Tilting
- Telescopic Lift Arm



00011210 MC5000-FFLA

- Low Profile Design
- Available in 30.5" Centers
- Non-Tilt
- Telescopic w/Fold Flat Lift Arm



00031835 26B

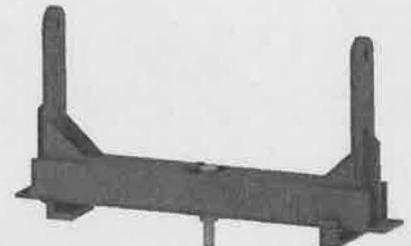
Plow Portion Hitches



Pin Style Swivel Hitch Also Available In 21", 30.5" and 33.5" Center



MC801 Field Conversion Kit to Convert Pin Style to Loop Style Hitch



Pin Hitch for 26B Style Hitch



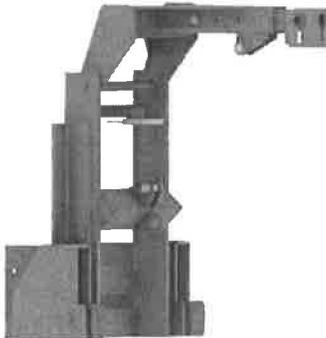
- MC7082**
- High Profile
 - Positive 2 point Latch System
 - 30.5" Centers
 - Manual Tilt
 - Telescopic Lift Arm



- MC7083**
- High Profile
 - Positive 2 point Latch System
 - 30.5" Centers
 - Non Tilt
 - Telescopic Lift Arm



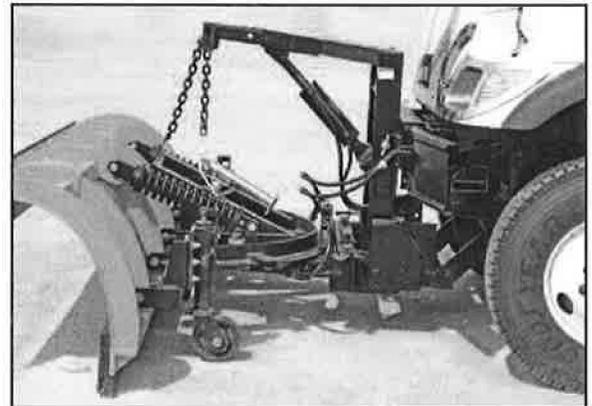
- 00015137 MC7000**
- Low Profile
 - Positive 2 point Latch System
 - 30.5" Centers
 - Non Tilt
 - Telescopic Lift Arm



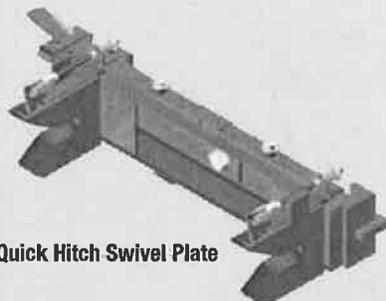
- 00054392 MC7090**
- Low Profile
 - Positive 2 point Latch System
 - 30.5" Centers
 - Non Tilt
 - Telescopic w/Fold Flat Lift Arm



- 00102712 MC7092**
- Low Profile
 - Positive 2 point Latch System
 - 30.5" Centers
 - Manual Tilt
 - Telescopic Lift Arm



Plow Portion Hitches



MC6000 Quick Hitch Swivel Plate

Loop Style Hitches



MC2080 Pin Loop
- Low Profile
- Non Tilt
- Telescopic w/Fold Flat Lift Arm



QCP/FFLA
- Low Profile
- Non Tilt
- Telescopic w/Fold Flat Lift Arm



MC2075
- Low Profile
- Non Tilt
- Telescopic Lift Arm

Plow Portion Hitches



QCP Loop Weld On Style



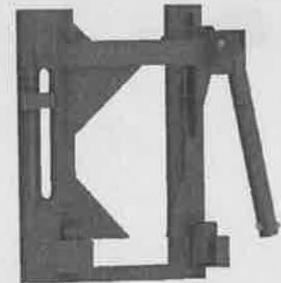
QCP Loop Weld On Style Swivel Plate

Husting Hitches



Husting Hitch
- Available in 29" & 34" Wide

Plow Portion Hitches



Husting Hitch Plow Portion

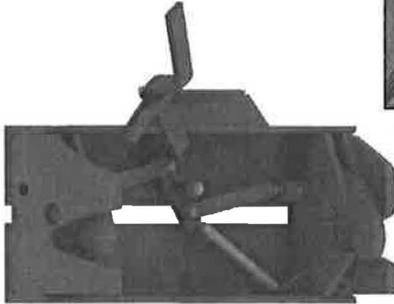
00043300 Roller Kit

Quick Link Hitches

Plow Portion Hitches



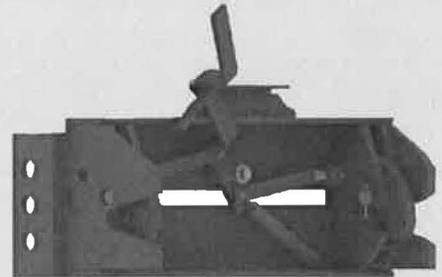
- PF91-QL1/FFLA/Tilt**
- Low Profile
 - Tilt
 - Telescopic w/Fold Flat Lift Arm



- PF91-QL1/FFLA 00052633**
- Low Profile
 - Non-Tilt
 - Telescopic w/Fold Flat Lift Arm



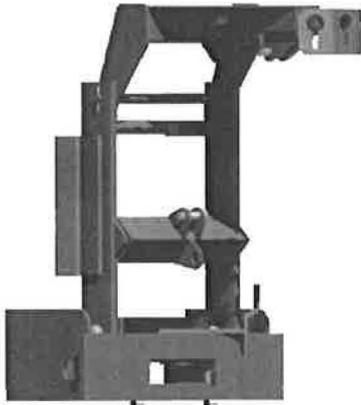
Quick Link Swivel Plate Hitch



00059247 Field Conversion Kit

Tor-Lock/Arrowhead Hitches

Plow Portion Hitches

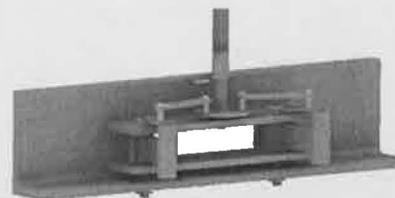


- Tor-Lock or Arrowhead**
- Low Profile
 - Non-Tilt
 - Telescopic w/Fold Flat Lift Arm
 - Integral Arrowhead Receiver



Oscillating Plow Portion Tor-Lock/Arrowhead Hitch

NOTE: Available in Weld On Plow Portion without Swivel Plate



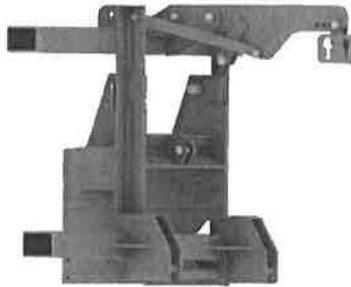
MC9001 Field Conversion Kit



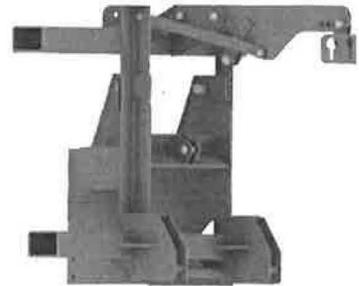
Custom Hitches



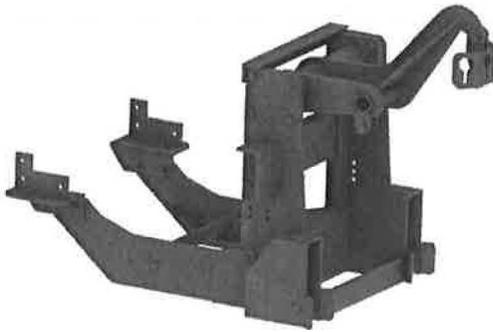
00016541 Power Tilt



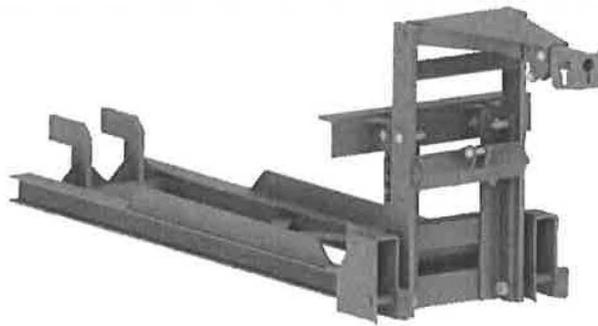
00029185 Power Tilt Quick Hitch with Wing Cross Tubes



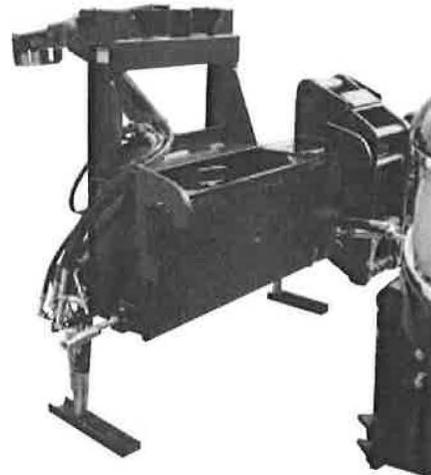
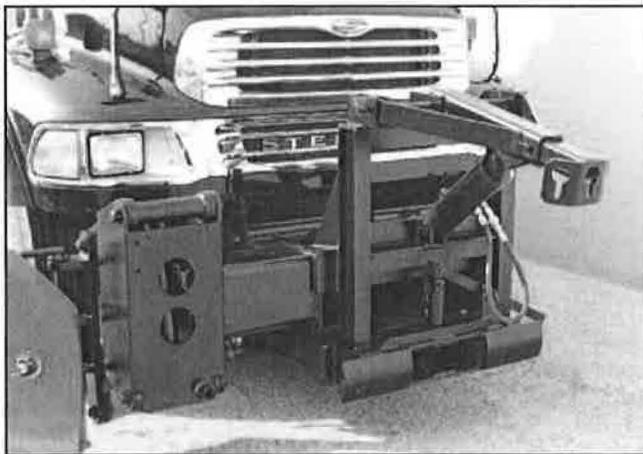
Flat Plate Hitch



00039044 MTA8000-Q



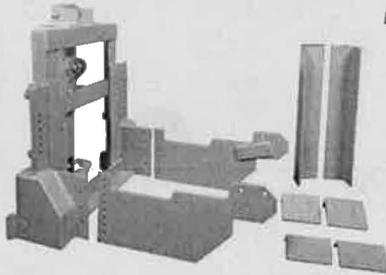
00091753 UBA Quick Hitch



Hitch Options

Side Plates

SPU
1/2" Universal
Side Plates



Hitch is not included with
the side plates.



SPU-E
1/2" Universal
Side Plates for
Chassis with Frame
Extensions

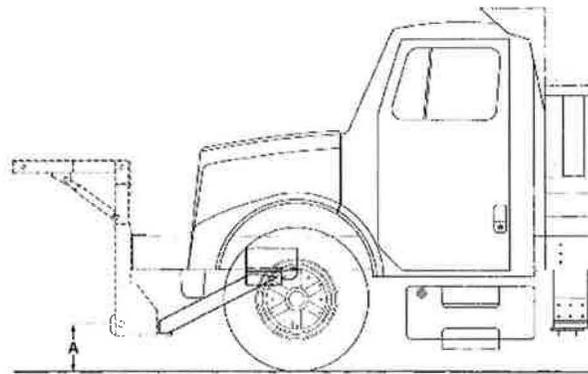
Note: Some modifications may be required for hitch installation.

Product updates and specifications are subject to change without notice.

Thrust Arm Kits



MC50
Thrust Arm
Mounting Kit



A=Push height of plow

HENKE

Henke Manufacturing Corporation

Distributed By:

Made in the USA
For Over 80 Years



V9.5 Model



V10 Model

Henke V 9.5 - V 10 Fixed Position Vee Plows

Product Features:

- Available in 2 Models V 9.5 or V 10
- V 9.5 Dimensions: Nose Height 40" - Rear Height 68" - 2200 lbs
- V 10 Dimensions: Nose Height 52" - Rear Height 86" - 3500 lbs
- Moldboard Components Manufactured from 3/16" High-Tensile Steel



- Heavy Duty Screw Adjustable Running Gear Assemblies
- Motor Grader, Wheel Loader, or Truck Applications
- Designed to Accept a Variety of Couplers and Pin Hitches



Built Tough – Built to Last!

3070 Wilson • Leavenworth, KS 66048 • (913) 682-9000 • Fax (913) 682-0300 • www.henkemfg.com

Form #0104V9.5-10



Double Function Wing



The Monroe Double Function Patrol Wing is a multi-function wing that is capable of patrolling snow to widen shoulders or perform limited benching capabilities. The Double Function Wing is operated by hydraulic cylinders for positive activation of the wing. The operator has the ability to independently control the toe or heel of the wing. Another feature is the built in mechanical float to allow the wing to follow the contour of the plowing surface. The mounting of this wing usually requires no modification to the exhaust system, no additional cab to body spacing, no drivetrain interference and a rear mount that is located above the frame for an unobstructed ground to frame clearance. A Monroe Wing will increase your plow clearing capacity, increase operator efficiency, and reduce equipment road mile usage.

Two 4-way (double acting) valves are required to operate this unit • All moldboards are shotblasted and powder coated Urethane Orange

- All Hydraulically Operated- No Cables
- Single Adjustable Spring Cushioned Push Arm with Safety Shear Pin on 8' and 9' Wings. Double Push Arms on 10', 11' and 12' Wings
- Rugged Moldboard Construction
- 100% Welded Moldboard
- One Piece 1/2" Moldboard Reinforcement Ribs
- Rear Push Frame Mounted Above Frame for Increased Ground to Frame Clearance
- No Additional Cab to Body Spacing Required for Rear Push Arm Frame
- Free Float to Follow Contour of Road or Shoulder

Specifications

	DFPW-8	DFPW-9	DFPW-10	DFPW-11	DFPW-12
Overall Moldboard Length	104"	116"	128"	140"	152"
Cutting Edge Length	8'	9'	10'	11'	12'
Height of Moldboard at Nose	29"	29"	29"	29"	29"
Height of Moldboard at Heel	39"	39"	39"	39"	39"
Moldboard Thickness	3/16"	3/16"	3/16"	3/16"	3/16"
Single Pusharm - Adjustable 4 Positions	STD	STD			
Double Pusharms	OPT	OPT	OPT	OPT	OPT
Inboard Slide Cylinder	3"ID x 24"	3"ID x 24"	3"ID x 24"	3"ID x 24"	3"ID x 24"
Outboard Lift Cylinder	4"ID x 21.75"	4"ID x 21.75"	3"ID x 15"	3"ID x 15"	3"ID x 15"
Weight of Complete Wing Assembly	1620	1690	1870	1985	2050
Weight of Moldboard	700	770	840	720	785
Clearing Width With 90° Push Arm Angle	58"	65"	72"	79"	87"

Available Options

Two Piece Torsion Trip Edge
Carbide Cutting Edge
Curb Guard
Power or Manual Slide Front Post
Full Trip Moldboard

Power Heel Slide
Power and Manual Tilt Front Hitches
Dual Pusharms
Moldboard Wear Shoe
Decell Cylinder

Custom Cheekplate Hitches
Left Side or Dual Mount
Special Paint
Power Slide Push Arm

Manufactured by:

Monroe Snow & Ice Control

1051 W. 7th Street • Monroe, WI 53566

800-880-0109 • 608-329-8105

608-328-8390 Fax

Web: www.monroetruck.com

E-mail: snowandicecontrol@monroetruck.com

Distributed by:



Monroe Junior Wing

VISIT US ONLINE AT
www.monroetruck.com



Standard Specifications

- 27" Intake Height and 28" Discharge Height on Moldboard
- Two Double-Acting Cylinders for Direct Lift of Toe and Heel
- Direct-Lift Front Wing Post
- Wing Requires Two 4-Way Valves with 2100 PSI Relief for Heel Raise to Operate (Not included)
- Wing Provided with Under Frame Cross Tube Mounting and Hardware
- Moldboard is Shotblasted and Powder Coat Painted Orange
- Mounting Hardware Powder Coat Painted Black
- 10 Gauge Moldboard
- 3/8" One Piece, Tapered, Flame Cut Rib

Options

- Right, Left or Dual Mount
- Front, Mid or Rear Mount
- Cast Iron Moldboard Shoe
- Wrap Around Curb Guard
- Carbide Cutting Edge
- Two Piece Torsion Spring Trip Cutting Edge
- Full Moldboard Trip
- Decell Heel Cylinder
- Available with Heavy Duty Patrol Wing Moldboard



Shown with Full Trip Option



Para-Glide WING POST

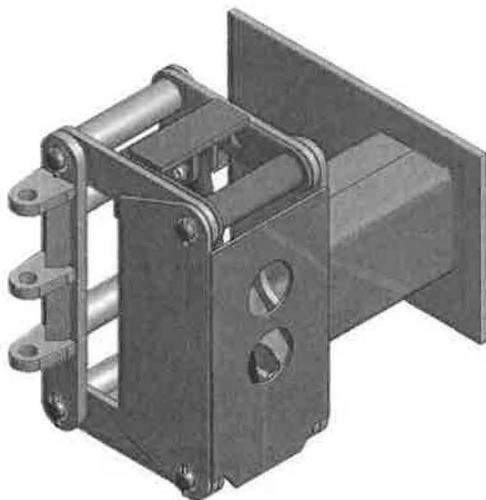
by Monroe Snow & Ice Control

The Monroe Para-Glide Double Function Patrol Wing is a multi-function wing that is capable of patrolling snow to widen shoulders or perform limited benching. The Para-Glide Double Function Wing is operated by hydraulic cylinders for positive activation of the wing. The operator has the ability to independently control the toe or heel of the wing. Another feature is the built in mechanical float to allow the wing to follow the contour of the plowing surface. The mounting of this wing usually requires no modification to the exhaust system, no additional cab to body spacing, no drivetrain interference and a rear mount that is located above the frame for an unobstructed ground to frame clearance. A Monroe Para-Glide Wing will increase your plow clearing capacity, increase operator efficiency, and reduce equipment road mile usage.

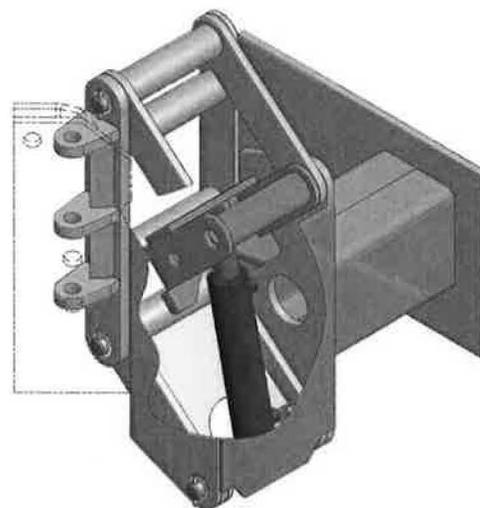
Two 4-way (double acting) valves are required • All moldboards are shotblasted and powder coated Urethane Orange

Features

- NEW and Improved Free Flotation Reduces Road Shock and Vibration to the Vehicle
- Longer Service Life and Fewer Repairs with Increased Safety.
- Faster Cycle Times
- Trailing Link Design
- 14" Full Float with 18" of Lift
- All Hydraulically Operated- No Cables
- Heavy Duty Construction with High Tensile Steels being Used to Reduce Weight of Assembly and Increase Durability
- 100% Welded Moldboard
- One Piece 1/2" Moldboard Reinforcement Ribs
- Rear Push Frame Mounted Above Frame for Increased Ground to Frame Clearance
- Single Adjustable Spring Cushioned Push Arm with Safety Shear Pin on 8' and 9' Wings. Double Push Arms on 10', 11' and 12' Wings
- No Additional Cab to Body Spacing Required for Rear Push Arm Frame



Para-Glide Wing Post in Resting Position.



Para-Glide Wing Post in Full Float Position.

Specifications

Specifications subject to change without notice.

	DFPW-8	DFPW-9	DFPW-10	DFPW-11	DFPW-12
Overall Moldboard Length	104"	116"	128"	140"	152"
Cutting Edge Length	8'	9'	10'	11'	12'
Height of Moldboard at Nose	29"	29"	29"	29"	29"
Height of Moldboard at Heel	39"	39"	39"	39"	39"
Moldboard Thickness	3/16"	3/16"	3/16"	3/16"	3/16"
Single Pusharm - Adjustable 4 Positions	OPT	OPT	OPT	OPT	OPT
Double Pusharms	OPT	OPT	OPT	OPT	OPT
Slide Cylinder	3x10	3x10	3x10	3x10	3x10
Lift Cylinder	4"ID x 21.75"	4"ID x 21.75"	3"ID x 15"	3"ID x 15"	3"ID x 15"
Weight of Complete Wing Assembly	1620	1690	1870	1985	2050
Weight of Moldboard	700	770	840	720	785
Clearing Width With 90° Push Arm Angle	58"	65"	72"	79"	87"



Shown with optional square pusharm.



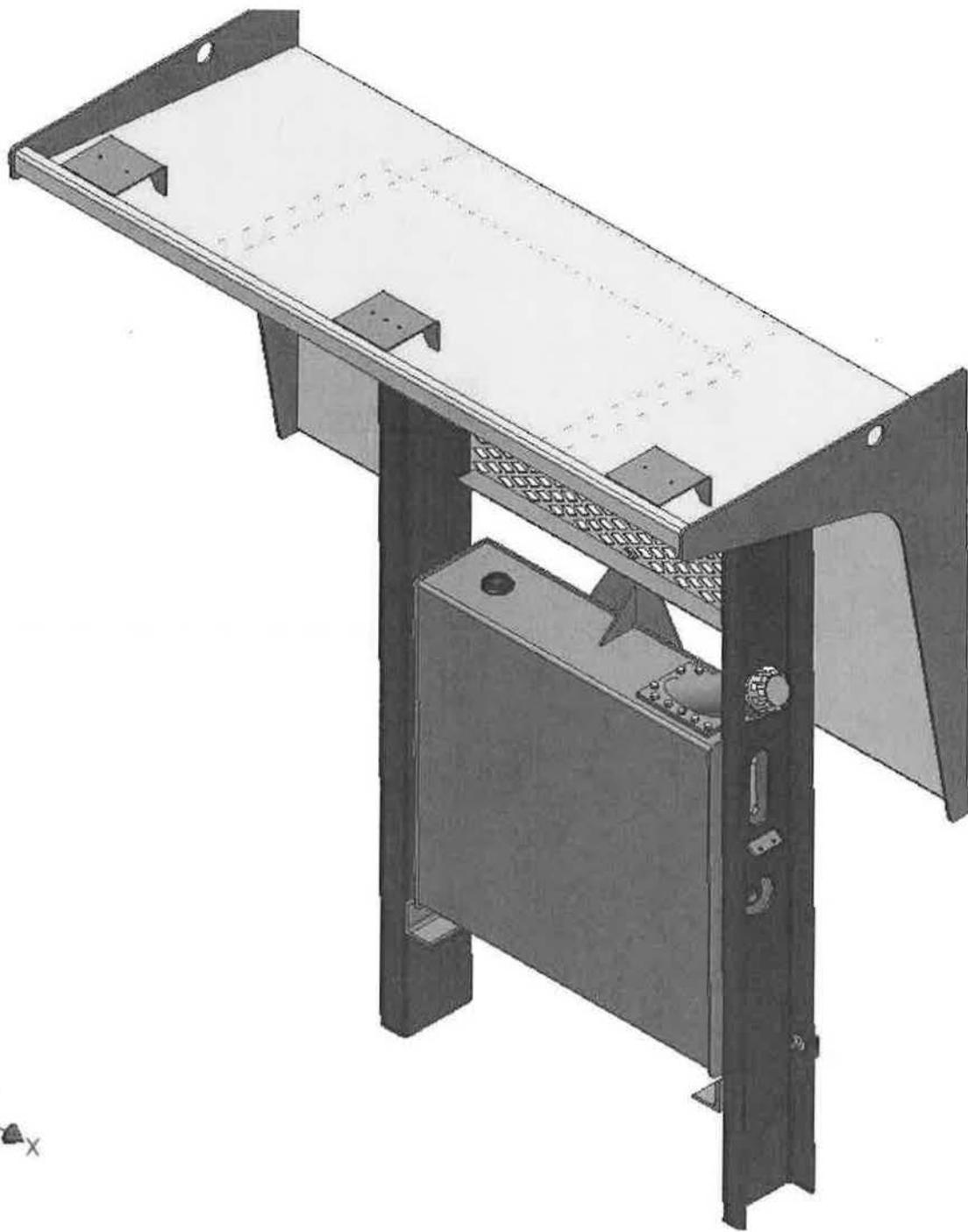
Options

Two Piece Torsion Trip Edge
 Carbide Cutting Edge
 Curb Guard
 Full Trip Moldboard
 Dual Pusharms
 Moldboard Wear Shoe(s)

Decell Cylinder
 Left Side or Dual Mount
 Special Paint
 Power Slide Push Arm
 Mid or Rear Mount

Manufactured by:
Monroe Snow & Ice Control
 1051 W. 7th Street • Monroe, WI 53566
 800-880-0109 • 608-329-8105
 608-328-8390 Fax
 Web: www.monroetruck.com
 E-mail: snowandicecontrol@monroetruck.com

Distributed by:





1051 W. 7th Street
Monroe, WI 53566
608-328-8127 • 800-356-8134

Truck Equipment Installation & Modifications Limited Warranty

Monroe Truck Equipment Limited Warranty

All components and products manufactured and installed by Monroe Truck Equipment (MTE) are warranted to be free from defects in material and workmanship for either (1) year from the date of purchase or (1) year from the date that the vehicle was put in service by its original operator, or 12,000 miles whichever occurs first.

All MTE workmanship, whether installation of MTE products or purchased components, fabrication, or repair, is covered for the same 12 month/12,000 mile warranty.

This limited warranty is the sole and exclusive remedy for defective product manufactured and/or installed by MTE.

This limited warranty covers only components manufactured by MTE. Except for installation workmanship, this limited warranty does not pertain to components manufactured by non-MTE suppliers and purchased by MTE, regardless of whether these components were selected or recommended by MTE.

Purchased Materials and Components Warranty

MTE sells and installs many components manufactured by and purchased from other suppliers. These components are covered by the warranty policies of the individual suppliers. MTE will, as a service to the buyer, pass on any warranties received from the manufacturer of these components and will process warranty claims related to supplier products. Unless the end user chooses to work directly with a non-MTE component supplier, MTE shall act as intermediate between the end user and the component supplier.

Non-MTE supplier policies typically differ from the MTE limited warranty. MTE has no control over the warranty policies of other suppliers and shall not deviate from a supplier's warranty without express written permission from that supplier.

Any and all claims concerning non-MTE components must be forwarded to MTE within 10 days of the discovered defect. All documentation of said claims must be accompanied with the identification number of the vehicle and/or a copy of the invoice. MTE has, at their option, a choice of whether to repair or replace the defective part at a MTE repair center or a location approved by MTE unless otherwise specified by the manufacturer.

Peripheral, Incidental, and Consequential Damages and Claims

The MTE limited warranty does not apply to damage and failure resulting from misuse, abuse, neglect, accident, improper customer/distributor installation, lack of maintenance, or acts of God. Any modifications by the buyer or any third party, without the prior written consent of MTE, may void this warranty. Operating conditions, or applications not made known to or contemplated by MTE at the time of delivery to the buyer may also void this warranty. Damages resulting from any other abnormal operation will not be covered by this warranty.

Normal maintenance, wear, and consumable items such as oils, coolants, fluids, tires, belts, hoses, filters, air cleaners, and light bulbs supplied in connection with goods or services provided by MTE are not covered under this warranty.

MTE will not reimburse for lost time, business, or business opportunity, or for any loss of use related to warranty claims. MTE will not provide or pay for the use of a rental vehicle, equipment, or tools while warranty work is performed. MTE will not reimburse for equipment or tools that are damaged, lost, or missing in conjunction with a warranty claim.

Warranty Repairs Performed by MTE or Authorized Agents

Whenever possible and feasible, warranty repairs shall be performed at an MTE facility or at an authorized distributor or dealer. In some instances, an MTE Field Service representative may repair the vehicle at the owner's selected location.

MTE may, at its discretion, pick up and return the vehicle to the owner's location or may request that the owner deliver the vehicle to the repair site. MTE is not responsible for and will not reimburse for mileage, fuel, and wear incurred in the process of driving the vehicle to a repair site, road testing, or delivery to the end user location, nor for lost time incurred by an owner delivering and picking up a vehicle.

Warranty Repairs Performed by Non-MTE Entities

In certain circumstances, MTE may authorize the vehicle owner, a dealer, a distributor, or another third party to perform warranty repairs. MTE will then reimburse the entity performing the work for components used and for labor to perform the repairs. Any such decision will be based on type of repair, distance to the nearest approved MTE repair site, and urgency of the repair.

Except for emergencies, MTE must grant authorization and permission before a non-MTE entity begins repair or replacement of components. Warranty claims for unauthorized and unsubstantiated work may be denied.

If MTE authorizes the buyer or a third party to repair or replace the defective parts instead of MTE doing such work itself, the buyer shall be invoiced for the replacement parts. Credit will be given pending the return of the defective parts and warranty issued by manufacturer. Authorized warranty work not performed by MTE will be at the rate of \$43.50/hr, and invoices for authorized work will be paid net 30. In the event that MTE and the second party cannot come to an agreement, a binding third party arbitrator will be chosen with the mutual consent of both parties.

Electrical and hydraulic components are not to be disassembled without the express written consent of MTE. All defective parts returned must be accompanied by the manufacturers' model, serial number, and date of installation. Any parts returned for warranty must be returned with freight prepaid.



**1051 W. 7th Street
Monroe, WI 53566
608-328-8127 • 800-356-8134**

How to Obtain Warranty Service from Monroe Truck Equipment

Making an Appointment for Warranty Service at an MTE Facility or Authorized Repair Site

1. Obtain the following information:
 - Vehicle Identification Number (VIN)
 - Type, model, and serial number of component or product requiring service
 - Number of original MTE Sales Order if available
 - Name of dealer that vehicle was purchased from if known
 - Date of purchase/in-service date if known
 - Detailed description of the problem
2. Call the MTE location where your truck was built. The build location will be marked on the yellow certification label in or near the driver's door jamb.
 - Monroe, Wisconsin: 1-608-329-8437 (Warranty Dept.) or 1-800-356-8134 (ask for Warranty Dept.)
 - Flint, Michigan: 1-877-233-2030 (ask for Warranty Dept.)
 - De Pere, Wisconsin: 1-800-848-5400 (ask for Service Dept.)
 - Marshfield, Wisconsin: 1-800-882-1900 (ask for Service Dept.)
 - Joliet, Illinois: 1-800-892-7052 (ask for Service Dept.)
 - Galion, Ohio: 1-419-777-7120 (ask for Service Dept.)
 - Louisville, Kentucky: 1-502-426-0990 (ask for Service Dept.)
3. Discuss the problem with the Warranty representative to determine resolution and repair schedule.

Please let the Warranty representative know if your vehicle was sold with an extended or other non-standard warranty policy!

Requesting Authorization to Perform Warranty Work or Payment for Work Performed

1. Obtain the following information:
 - All of the information requested in item #1 above, plus:
 - Documented photographs for any physical damage. (paint, dents, etc.)
 - Inspection notes by MTE personnel or a third party representing MTE if necessary.
2. Call the MTE location where your truck was built. The build location will be marked on the yellow certification label in or near the driver's door jamb. See the location list in item #2 above.
3. Discuss the problem with the Warranty representative to determine coverage and repair method.
4. The representative will grant permission to perform repairs if approved.
5. The representative will issue a Returned Goods Authorization (RGA) number.
6. Defective parts must be returned freight prepaid to MTE within ten days.
7. If the affected component was purchased from a non-MTE supplier, please allow extra time for MTE to contact and work with the supplier.

Monroe Truck Equipment reserves the right to deny any warranty if the procedures detailed above are not followed. Proper documentation, including photos, must be provided in order for MTE to validate and approve any claim submitted after repairs are done.



MTE Powder Coat Paint Warranty

Monroe Truck Equipment (MTE) Limited Warranty Coverage

- **Powder-coat paint finish** on Snow & Ice products, MTE production parts, and customer parts is warranted against **adhesion failure**, cracking, checking, peeling, delamination, and more than 10% loss of gloss **or color** for 1 year.
- **Powder-coat paint finish** on selected MTE Manufactured bodies is warranted against **adhesion failure**, cracking, checking, peeling, and delamination for 3 years or 36,000 miles. No more than 10% loss of gloss **or color** for 1 year. See warranty document for specific products.

Eligibility for Warranty Coverage

- Warranty period commences from the in-service date for Snow & Ice products, MTE Manufactured bodies, and MTE production parts.
- Warranty period commences from the invoice date for customer parts.
- Original owners of S & I products and Manufactured bodies must complete and submit the Warranty Registration Card within thirty (30) days of purchase.
- The product must be used for its intended purpose.
- The product must be maintained and serviced according to the guidelines in any supplied owner's manual.

Exclusions

- This warranty applies only to powder coat paint applied by MTE at Monroe, Wisconsin.
- This warranty does not apply to powder coat paint applied to customer parts unless MTE has approved the material(s) of construction and has performed all required surface preparation steps.
- Warranty does not apply to any product that has been altered, abused, or misused.
- Warranty does not apply to products and bodies sold and used outside the United States and Canada.
- Painted surfaces must not be subjected to highly corrosive chemicals.
- Rust and perforation resulting from damage related to collisions, accidents, scratches, impacts, or normal and intended use of the product are not covered.
- Restoration of lettering, signs, and custom paint applications is not covered at any time if paint repairs are required.
- This warranty is not transferable.

Warranty Repairs

During warranty repairs to powder-coat paint, MTE will strive to restore the original paint coating. **Where paint has suffered complete adhesion failure, a part or body may be processed to remove all existing powder coat and new powder coat applied. Where deemed most practical, a small part may be replaced with a new powder-coated part.**

Repairs involving reapplication of powder coat paint shall be performed only at the MTE facility in Monroe, Wisconsin.

Where the original powder coat can not be effectively removed for repair **or a defect is cosmetic only, and the surface adhesion of the existing powder coat is good**, MTE retains the right to repair a powder-coat painted surface using a wet-coat paint process. **The underlying powder-coat paint will remain as a base for the wet coat.** Wet-coat repairs to powder coat paint may be performed at any MTE facility or at an approved automotive body repair shop.

Peripheral, Incidental, and Consequential Damages and Claims

The MTE limited warranty does not apply to damage and failure resulting from misuse, abuse, neglect, accident, improper customer/distributor installation, lack of maintenance, or acts of God. Any modifications by the buyer or any third party, without the prior written consent of MTE, may void this warranty. Operating conditions or applications not made known to or contemplated by MTE at the time of delivery to the buyer may also void this warranty. Damages resulting from any other abnormal operation will not be covered by this warranty.

Normal wear, reaction to corrosive operating environment, and premature failure due to poor maintenance are not covered under this warranty.

MTE will not reimburse for lost time, business, or business opportunity, or for any loss of use related to warranty claims. MTE will not provide or pay for the use of a rental vehicle, equipment, or tools while warranty work is performed. MTE will not reimburse for equipment or tools that are damaged, lost, or missing in conjunction with a warranty claim. MTE is not responsible for and will not reimburse for mileage, fuel, and wear incurred in the process of driving the vehicle to a repair site or delivery to the end user location, nor for lost time incurred by an owner delivering and picking up a vehicle.

This limited warranty is the sole and exclusive remedy for defective products manufactured and/or installed by MTE.

Policy revision/effective date: 05/07/08

Powder Coat Finish



- The ability to withstand high levels of corrosion protection to salt, chemicals, humidity, scratching and impact, far surpassing conventional paint top coats
- Resists fading from U.V. rays
- Environmental green process
- Excellent adhesion
- High degree of scuff, chip or scratch resistance

"We use our trucks and equipment in a high chemical and high abrasive environment. Powder coating is the best route for several reasons. The main reason for us is the appearance because we like to have the image of always having superior and functional equipment. For this reason a powder coat finish is the best option for us on our salt spreaders. We also have had great results from the powder coat finish on our Snow Bully Snow Pushers. We own over 20 Of them and we have never had to repaint a single one. Some of the v-boxes we have are 10 years old and have had heavy usage. They also have never been repainted. Only minor touch ups due to either driver or loader error. We will never use any type of equipment that does not have a powder coat finish. That is one of the reasons we use Monroe Snow & Ice Control Products exclusively!"

- Trevor Biebrach, Director of Operations, Snow Systems Incorporated



- Environmentally SAFE Process
- Emits NO VOC's
- Contains NO Heavy Metals
- NO Solvents Disposal

**MTE Achieving
Exceptional Quality Finishes,
Our Customers Demand**



MTE's Engineering Research & Development Team

- 6 Design Engineers and 4 Designer Draftsmen
- Design Software: AutoCad, Inventory, Design Space
Finite Element Analysis Software for Stress Analysis
- Dedicated R&D Area and Technicians

Distributed By:

Manufactured By:

Monroe Snow & Ice Control

A Division of Monroe Truck Equipment
1051 W. 7th Street, Monroe, WI 53566
PH: 800-880-0109 • FX: 608-328-8390
www.monroetruck.com



MTE Powder Coat Questions and Answers

QUESTION: How many custom colors do you offer?

Answer: The number of colors available is unlimited when a liquid paint code is supplied to MTE. These custom colors require a minimum purchase of 50lbs of powder material.

QUESTION: If I have a special custom color which is metallic, what options do I have for powder coating?

Answer: The original base powder coat may be used as a base primer. The body could be completely recoated with a liquid metallic top coat which would still give you all benefits of using only powder.

QUESTION: How does powder coat compare to wet spray?

Answer: On average, with a standard industrial coating, powder coat will be two to three times stronger. If a very high quality urethane with a good primer base is used, performance is about the same.

QUESTION: What are my options, if my powder coated body is damaged and needs to be repainted?

Answer: A powder coated body would be treated for panel/spot repair using the same process and methods as a liquid painted body. A powdered top coat can be sanded/primed and spot blended with any high quality liquid paint.

Customer Testimonials

"We use our trucks and equipment in a high chemical and high abrasive environment. Powder coating is the best route for several reasons. The main reason for us is the appearance because we like to have the image of always having superior and functional equipment. For this reason a powder coat finish is the best option for us on our salt spreaders. We also have had great results from the powder coat finish on our Snow Bully Snow Pushers. We own over 20 of them and we have never had to repaint a single one. Some of the v-boxes we have are 10 years old and have had heavy usage. They also have never been repainted. Only minor touch ups due to either driver or loader error. We will never use any type of equipment that does not have a powder coat finish. That is one of the reasons we use Monroe Snow & Ice Control Products exclusively!"

- Trevor Blebrach, Director of Operations, Snow Systems Incorporated



SCRAPERS • PLOWS • SPREADERS • HITCHES • WINGS • SPINNERS

DUMP BODIES (LARGE AND SMALL) • PLATFORM BODIES • UTILITY BODIES

BUMPERS • SNOW & ICE COMPONENTS • SUB-FRAMES • TRUCK FRAMES

MOTOR CYCLE FRAMES • ATV FRAMES • TRAILERS • OIL TANKS

ROLL BARS • ROPS BODIES • LADDER RACKS • CHIPPER CAPS

TOWING BODIES • VAN BODY COMPONENTS

SCRAPERS • PLOWS • SPREADERS • HITCHES • WINGS • SPINNERS

DUMP BODIES (LARGE AND SMALL) • PLATFORM BODIES • UTILITY BODIES

BUMPERS • SNOW & ICE COMPONENTS • SUB-FRAMES • TRUCK FRAMES

MOTOR CYCLE FRAMES • ATV FRAMES • TRAILERS • OIL TANKS

ROLL BARS • ROPS BODIES • LADDER RACKS • CHIPPER CAPS

TOWING BODIES • VAN BODY COMPONENTS

SCRAPERS • PLOWS • SPREADERS • HITCHES • WINGS • SPINNERS

DUMP BODIES (LARGE AND SMALL) • PLATFORM BODIES • UTILITY BODIES

BUMPERS • SNOW & ICE COMPONENTS • SUB-FRAMES • TRUCK FRAMES

MOTOR CYCLE FRAMES • ATV FRAMES • TRAILERS • OIL TANKS

ROLL BARS • ROPS BODIES • LADDER RACKS • CHIPPER CAPS

TOWING BODIES • VAN BODY COMPONENTS

SCRAPERS • PLOWS • SPREADERS • HITCHES • WINGS • SPINNERS

DUMP BODIES (LARGE AND SMALL) • PLATFORM BODIES • UTILITY BODIES

BUMPERS • SNOW & ICE COMPONENTS • SUB-FRAMES • TRUCK FRAMES

MOTOR CYCLE FRAMES • ATV FRAMES • TRAILERS • OIL TANKS

ROLL BARS • ROPS BODIES • LADDER RACKS • CHIPPER CAPS

TOWING BODIES • VAN BODY COMPONENTS

SCRAPERS • PLOWS • SPREADERS • HITCHES • WINGS • SPINNERS

DUMP BODIES (LARGE AND SMALL) • PLATFORM BODIES • UTILITY BODIES

BUMPERS • SNOW & ICE COMPONENTS • SUB-FRAMES • TRUCK FRAMES

MOTOR CYCLE FRAMES • ATV FRAMES • TRAILERS • OIL TANKS

ROLL BARS • ROPS BODIES • LADDER RACKS • CHIPPER CAPS

TOWING BODIES • VAN BODY COMPONENTS

SCRAPERS • PLOWS • SPREADERS • HITCHES • WINGS • SPINNERS

DUMP BODIES (LARGE AND SMALL) • PLATFORM BODIES • UTILITY BODIES

BUMPERS • SNOW & ICE COMPONENTS • SUB-FRAMES • TRUCK FRAMES

MOTOR CYCLE FRAMES • ATV FRAMES • TRAILERS • OIL TANKS

ROLL BARS • ROPS BODIES • LADDER RACKS • CHIPPER CAPS

TOWING BODIES • VAN BODY COMPONENTS

SCRAPERS • PLOWS • SPREADERS • HITCHES • WINGS • SPINNERS

DUMP BODIES (LARGE AND SMALL) • PLATFORM BODIES • UTILITY BODIES

BUMPERS • SNOW & ICE COMPONENTS • SUB-FRAMES • TRUCK FRAMES

MOTOR CYCLE FRAMES • ATV FRAMES • TRAILERS • OIL TANKS

ROLL BARS • ROPS BODIES • LADDER RACKS • CHIPPER CAPS

TOWING BODIES • VAN BODY COMPONENTS

SCRAPERS • PLOWS • SPREADERS • HITCHES • WINGS • SPINNERS

DUMP BODIES (LARGE AND SMALL) • PLATFORM BODIES • UTILITY BODIES

BUMPERS • SNOW & ICE COMPONENTS • SUB-FRAMES • TRUCK FRAMES

MOTOR CYCLE FRAMES • ATV FRAMES • TRAILERS • OIL TANKS

ROLL BARS • ROPS BODIES • LADDER RACKS • CHIPPER CAPS



**MTE Achieving
Exceptional Quality Finishes,
Our Customers Demand**



POWDER COAT



- Environmental
- Economical
- Durable



Monroe Truck Equipment
1051 W. 7th Street, Monroe, WI 53566
PH: 800-356-8134
www.monroetruck.com

Celebrating 50 Years!



MTE Powder Coating with Leading-Edge Technology Since 1997

Powder Coating: is a unique process of coating a surface on which powder material is applied using an electrostatic or compressed air method. The applied powder is then heated (cured) in an oven to it's melting point, after which it flows to form a smooth film, that dries to a firm, durable finish of superior consistency and uniformity. The finish free of chips, runs or bubbles, is extremely resistant to scratches, cracking, peeling, UV rays and rust.

Advantages:

- The ability to withstand high levels of corrosion due to salt, chemicals, humidity, scratching and impact, far surpassing conventional paint top coats.
- Resists fading from U.V. rays
- Environmentally green process, free of harmful VOC air pollution
- Excellent adhesion
- High degree of scuff, chip and scratch resistance



The entire powder coating process involves several steps:

- The product is cleaned using an abrasive blasting or a chemical cleaning process to insure the substrate is free of any oils, dirt, rust, mill scale, etc.
- The product is treated with a pre-treatment chemical or conversion coating, usually phosphate or zinc based, to further protect it and improve the surface for powder adherence.
- The product is rinsed thoroughly and dried completely.
- It is very important that the right coating is chosen for your application and end use of the item.
- The product is powder coated with an electrostatic gun in a powder coat booth.



Environmental Benefits

- Environmentally SAFE Process
- Emits NO VOC's (volatile organic compounds)
- Contains NO Heavy Metals
- NO Solvent Disposal
- Overspray can be Reclaimed



Effectiveness:

- Exceeds 1000 hours of salt spray resistance.
- 3X Stronger than industrial grade liquid in same environment*

*Based on Tests performed by Monroe Truck Equipment.

Powder Coated Products

- Scrapers
- Plows
- Spreaders
- Hitches
- Wings
- Spinners
- Dump Bodies (Large & Small)
- Platform Bodies
- Utility Bodies
- Tailgate Spreaders
- Bumpers
- Snow & Ice Components
- Sub-Frames
- Truck Frames
- Car Frames
- Motor Cycle Frames
- ATV Frames
- Oil Tanks
- Roll Bars
- Rims
- Railings
- Ladder Racks
- Chipper Caps
- Van Body Components
- Tool Boxes
- Towing Bodies
- Hitch Carriers



MTE Offers Manual or Batch Powder Coat Systems

Manual Capacity:

- Washer: 56"H x 96"W x 192"L
- Shot Blaster: 45"H x 60" W x 168"L
- Weight Limit: 3500lbs.

Wash System - 5 Stage Washer with RO Water



BLAST



WASH



PAINT



CURE

Max Temperature: up to 430°

Batch Booth Capacity:

- Length: 228"
- Width: 108"
- Height: 96"

Wash System - Steam Generated Pressure Wash System with RO Water

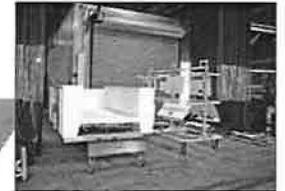
WASH



PAINT



CURE



Max Temperature: up to 430°

Available Powder Coat Color Spectrum

- MTE has a wide variety of stock colors on hand.
- MTE can have a custom matched color in 7-10 days.
- MTE works with the industry's top manufacturers to develop powder paints that rival liquid paint appearance, and provide better corrosion and U.V. resistance.





22956 Hwy 61
 PO Box 295
 Morley, MO 63767
 Phone: 573-262-3545
 Fax: 573-262-3369

Quote

Quote #	Date
164970	01/25/19

Customer

Ship To
TRUCK CENTER COMPANIES Bill Collier

Customer PO	Terms	Sales Rep	Lead Time	Ship Via	FOB	VIN
	DUE ON RECEIPT	DARYL	01/25/19		MORLEY, MO	

Item	Description	Ordered	UOM	Price Per	Total Price
SALES	Viking TP26 Right Hand Tow Plow per Nebraska DOT Contract with Stainless Steel Spreader	1.00	EA	0.00	0.00
TP260002	Viking TP26, 26' Tow Plow with swivel tongue, (1) 12' moldboard and (1) 14', base angles drilled for carbide edges (no cutting edges included), 10 gauge steel with 1/4" poly overlay moldboards. Dual Arvin Meritor 18,000 LB steer axles with connecting linkage. ABS brakes and fenders. Federal safety lights and reflectors, rear stop/turn/tail and marker lights which remains perpendicular to the travel lane and two pedestals for customer supplied warning lights. ICC bumper, tow loop to match Premier 100NS hook. Trailer painted Special paint # Nebraska DOT Yellow Parts and instruction manuals included.	1.00	EA	120,680.00	120,680.00
TP260060	Goodyear tires in lieu of std.	1.00	EA	0.00	0.00
TP260110	325 gallon poly tank mounted to TP26 Tow Plow. For spreader pre-wet. No plumbing or delivery equipment included	1.00	EA	0.00	0.00
20103042	Small pre-wet tank riser weldment	2.00	EA	0.00	0.00
TP260135	Tow plow spreader hose kit plumbed trailer tongue bulkhead	1.00	EA	0.00	0.00
44139001	Tow Plow portion of Stucchi high pressure disconnects	1.00	EA	0.00	0.00
TP260300	Whelen 360 degree LED warning light beacon	1.00	EA	0.00	0.00
TP260308	Whelen high visibility light package	1.00	EA	0.00	0.00
TP260320	TP Moldboard light	1.00	EA	0.00	0.00
46636877	TP262100 - Install Monroe supplied pre wet for Tow Plow spreader	1.00	EA	0.00	0.00
TP260127	304 Stainless steel spreader - Tow Plow mounted with 7.8 cubic yard capacity, 24" wide conveyer	1.00	EA	0.00	0.00



22956 Hwy 61
 PO Box 295
 Morley, MO 63767
 Phone: 573-262-3545
 Fax: 573-262-3369

Quote

Quote #	Date
164970	01/25/19

Customer

Ship To
TRUCK CENTER COMPANIES Bill Collier

Customer PO	Terms	Sales Rep	Lead Time	Ship Via	FOB	VIN
	DUE ON RECEIPT	DARYL	01/25/19		MORLEY, MO	

Item	Description	Ordered	UOM	Price Per	Total Price
	with 50:1 gearbox, front discharge spinner, poly spinner disc and front discharge				
TP260250	Conveyor motor sensor	1.00	EA	0.00	0.00
TP260140	Shurco side roll manual load cover for Tow Plow spreader	1.00	EA	0.00	0.00
TP260201	Delivery to Monroe, WI (474 miles)	1.00	EA	0.00	0.00

Prepared By: Lauren
 Memo: NEBRASKA DOT 2019 TOW PLOW BID - RH QUOTE

Sub-Total	120,680.00
Shipping	0.000
Discount	0.00
Taxes	0.00
Total	120,680.00

Customer must fill out the information below before the order can be processed.

Accepted by: _____ Date: _____ P.O.#: _____

*Quoted price does not include any applicable taxes.
 *Terms are Due Upon Receipt unless prior credit
 *Terms for established accounts, NET 30 days
 *Please note if chassis is furnished, it is as a convenience and terms are Net Due on Receipt of Chassis



22956 Hwy 61
 PO Box 295
 Morley, MO 63767
 Phone: 573-262-3545
 Fax: 573-262-3369

Quote

Quote #	Date
164971	01/25/19

Customer

Ship To
TRUCK CENTER COMPANIES Bill Collier

Customer PO	Terms	Sales Rep	Lead Time	Ship Via	FOB	VIN
	DUE ON RECEIPT	DARYL	01/25/19		MORLEY, MO	

Item	Description	Ordered	UOM	Price Per	Total Price
SALES	Viking BDTP26 Bi-Directional Tow Plow per Nebraska DOT Contract with Stainless Steel Spreader	1.00	EA	0.00	0.00
TP260011	Viking TP26, Bi-Directional Tow Plow with the ability to plow right or left, (2) 12' moldboards (right hand and left hand) and (2) 14' moldboards (right hand and left hand), base angles drilled for carbide edges (no cutting edges included), 10 gauge steel with 1/4" poly overlay moldboards. Dual Arvin Meritor 18,000 LB steer axles with connecting linkage. In cab control for deployment shift. ABS brakes and fenders. Federal safety lights and reflectors, rear stop/turn/tail and marker lights which remains perpendicular to the travel lane and high visibility lighting package. ICC bumper, tow loop to match Premier 100NS hook. Special Paint# Nebraska DOT Yellow Parts and instruction manuals included.	1.00	EA	155,110.00	155,110.00
TP260060	Goodyear tires in lieu of std.	1.00	EA	0.00	0.00
TP260110	325 gallon poly tank mounted to TP26 Tow Plow. For spreader pre-wet. No plumbing or delivery equipment included	1.00	EA	0.00	0.00
20103042	Small pre-wet tank riser weldment	2.00	EA	0.00	0.00
TP260135	Tow plow spreader hose kit plumbed trailer tongue bulkhead	1.00	EA	0.00	0.00
44139001	Tow Plow portion of Stucchi high pressure disconnects	1.00	EA	0.00	0.00
TP260300	Whelen 360 degree LED warning light beacon	1.00	EA	0.00	0.00
TP260308	Whelen high visibility light package	1.00	EA	0.00	0.00
TP260320	TP Moldboard light	1.00	EA	0.00	0.00
46636877	TP262100 - Install Monroe supplied pre wet for Tow Plow spreader	1.00	EA	0.00	0.00



22956 Hwy 61
 PO Box 295
 Morley, MO 63767
 Phone: 573-262-3545
 Fax: 573-262-3369

Quote

Quote #	Date
164971	01/25/19

Customer

Ship To
TRUCK CENTER COMPANIES Bill Collier

Customer PO	Terms	Sales Rep	Lead Time	Ship Via	FOB	VIN
	DUE ON RECEIPT	DARYL	01/25/19		MORLEY, MO	

Item	Description	Ordered	UOM	Price Per	Total Price
TP260127	304 Stainless steel spreader - Tow Plow mounted with 7.8 cubic yard capacity, 24" wide conveyor with 50:1 gearbox, front discharge spinner, poly spinner disc and front discharge	1.00	EA	0.00	0.00
TP260250	Conveyor motor sensor	1.00	EA	0.00	0.00
TP260140	Shurco side roll manual load cover for Tow Plow spreader	1.00	EA	0.00	0.00
TP260201	Delivery to Monroe, WI (474 miles)	1.00	EA	0.00	0.00

Prepared By: Lauren
 Memo: NEBRASKA DOT 2019 TOW PLOW BID - BIDI QUOTE

Sub-Total	155,110.00
Shipping	0.000
Discount	0.00
Taxes	0.00
Total	155,110.00

Customer must fill out the information below before the order can be processed.

Accepted by: _____ Date: _____ P.O.#: _____

*Quoted price does not include any applicable taxes.

*Terms are Due Upon Receipt unless prior credit

*Terms for established accounts, NET 30 days

*Please note if chassis is furnished, it is as a convenience and terms are Net Due on Receipt of Chassis

FREIGHTLINER

WORK SMART

114SD

VOCATIONAL SEVERE DUTY





114SD

WORKING HARDER JUST GOT A LOT SMARTER.

The Freightliner Trucks 114SD is built for severe duty: packed with power and ready for work. For starters, the Detroit™ DD13® engine with BlueTec® emissions technology comes standard and offers 350 HP and 1,350 lb-ft of torque. Cummins ISL and ISL G engines also are available as options. The 114SD has optimized mid-chassis packaging and a strategically-mounted

aftertreatment system. The chassis layout simplifies upfitting for truck equipment manufacturers. And Freightliner's proprietary SmartPlex™ Electrical System provides unmatched flexibility when configuring a truck to suit specific body installations. The 114SD also offers an incredible combination of durability and comfort. It's been through rigorous testing to ensure that it delivers performance and reliability in the most demanding situations. And the automotive-style interior is designed to keep operators safe and productive. Put simply, the 114SD sets the new standard for engineered performance and efficiency.



Set-Back Axle

48"



Set-Forward Axle

31"*

* 29.5" optional

Available axle configurations:

- 114" BBC Set-Forward Axle
- 114" BBC Set-Back Axle

Available cab configurations:

- Day Cab
- Extended Cab
- Crew Cab (Set-Back Axle Only)



1140



Detroit DD13 Engine



Cummins ISL G Engine

- Detroit DD13 engine standard, optional Cummins ISL and ISL G

ENGINES		
	HP	LB-FT TORQUE
Detroit DD13	350 - 470	1250 - 1650
Cummins ISL	up to 380	1250
Cummins Westport ISL G (natural gas)	up to 320	1000

TRANSMISSIONS	
Eaton Fuller Manual	
Eaton Fuller Automated with optional UltraShift® Plus and Cobra shifter	
Allison Automatic with optional output retarder	

AXLES	
Steer	22,000 lbs
Single Drive	38,000 lbs
Tandem Drive	58,000 lbs
Tridrive	69,000 lbs

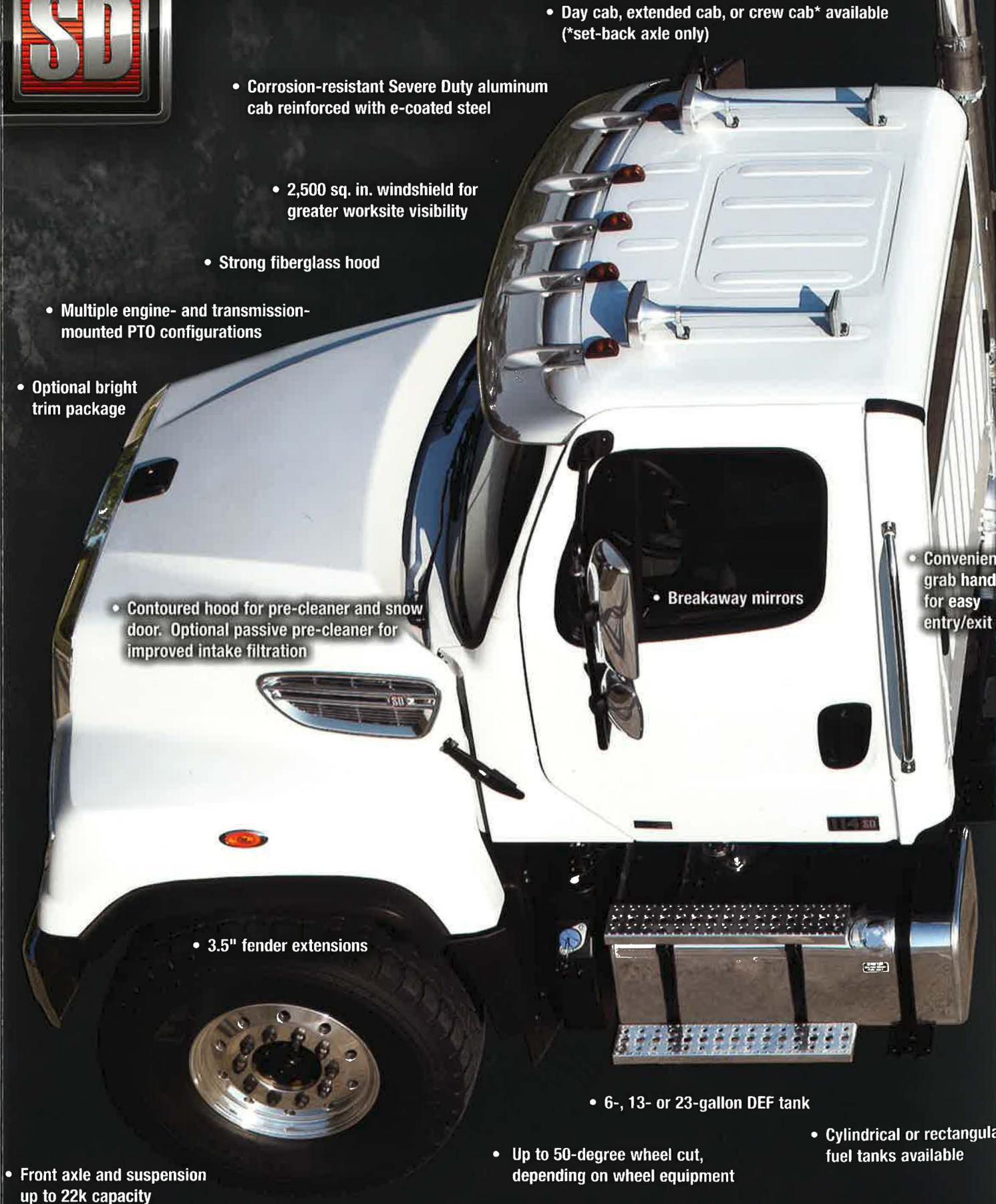
- Radiator-mounted grille
- Halogen composite headlights
- LED turn signals
- Hood-mounted splashguard
- Fixed or removable front tow devices
- Optional bridge formula bumper



Tilt hood with radiator-mounted stationary grille for easy engine access.



12" or 24" front frame extensions are available.



- Day cab, extended cab, or crew cab* available (*set-back axle only)

- Corrosion-resistant Severe Duty aluminum cab reinforced with e-coated steel

- 2,500 sq. in. windshield for greater worksite visibility

- Strong fiberglass hood

- Multiple engine- and transmission-mounted PTO configurations

- Optional bright trim package

- Contoured hood for pre-cleaner and snow door. Optional passive pre-cleaner for improved intake filtration

- Breakaway mirrors

- Convenient grab hand for easy entry/exit

- 3.5" fender extensions

- 6-, 13- or 23-gallon DEF tank

- Cylindrical or rectangular fuel tanks available

- Front axle and suspension up to 22k capacity

- Up to 50-degree wheel cut, depending on wheel equipment



65-degree door opening for easy entry and exit.



Superior wheel cut for outstanding maneuverability.

- Multiple exhaust aftertreatment options and pipe routing
- Air-suspended cab
- Mid-back driver and passenger seats available
- A variety of Eaton or Allison transmission options
- Wide cab for easy installation of control tower

- Custom frame pre-punching available for easy body and accessory upfit

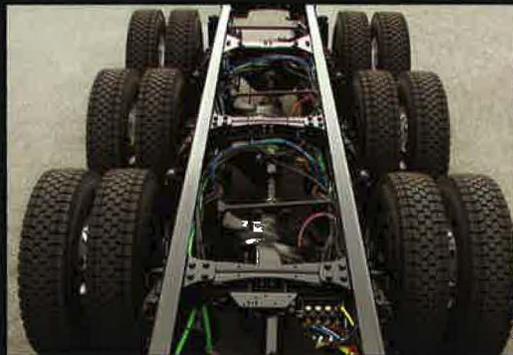


- Clear back-of-cab packaging
- 3 under-cab-mounted batteries available

- Reinforced wing snow plow cross-member available

- A wide range of rear suspensions with optimized ratings

- Cement mixer transition plates available



Tridem rear axles.



114SD standard wing dash.



Ergonomically-designed driver's area features an automotive-style dash, easy-to-read LED-backlit gauges and controls within easy reach.

FRAME RAILS

Standard Single-Channel Frame Rails	11/32" thick x 10-3/16" @ 1.81 million RBM
Optional Single-Channel Frame Rails	1/2" thick x 11-7/8" @ 3.2 million RBM

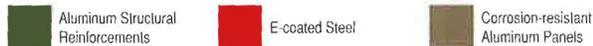
**double-channel rails available up to 4.4 million RBM*



WORK SMART

WHERE TOUGHNESS MEETS EFFICIENCY.

We've applied sophisticated engineering to the structural elements of our work trucks. First, our cabs are lightweight, yet extremely tough. Corrosion-resistant aluminum is reinforced with e-coated steel and assembled to precise manufacturing tolerances with Henrob rivets and welded construction. This process produces a durable and safe cab that meets stringent A-pillar impact, rollover and back wall impact tests. Plus, the vocational chassis includes a robust backbone with a complete offering of single- and double-channel frame rails. The result is a tensile strength of up to 120,000 psi and an RBM ratio up to 4.4 million inch-pounds per rail. This means the 114SD can handle whatever job is thrown at it, day after day, year after year.



- Corrugated floor, roof and back-of-cab panels for added strength
- Meets Swedish A-pillar test standards and SAE J2422 roof strength requirements
- Available in day cab, extended cab or 4-door crew cab configurations
- 2,500 square-inch one-piece windshield for outstanding job site visibility
- Wide door openings with low step-in height for safe entry and exit
- Steel firewall for solid mounting of dash panel and driver controls



Components, systems and entire vehicles are subjected to an array of virtual and physical tests to ensure our trucks deliver the expected function, performance and reliability.



STANDARD FEATURES

- 114" BBC steel-reinforced aluminum day cab
- Set-forward front axle position @ 31"
- Strong, durable cab and hood
- Radiator-mounted mold-in color front grille with signature styling
- Front grille, headlight bezels, engine air intake grille, bumper and primary mirrors trimmed in black
- Halogen composite headlights
- Air rear cab mounts
- Ergonomic wing dash
- 63" x 14" rear window
- Up to 50-degree wheel cut, depending on wheel equipment
- Detroit DD13 engine with 350 HP, 1350 lb-ft torque
- Eaton® Fuller® 10-speed manual transmission
- Front axle rated at 12,000 lbs
- Rear axle rated at 40,000 lbs
- 60-gallon cylindrical fuel tank



OPTIONAL FEATURES

- Bright-accented front grille with chromed grille surround, headlight bezels and engine air intake grille
- Engine air intake pre-cleaner
- Integral front frame extensions in 12" and 24" lengths for front bumper stabilizer install
- Large selection of wheelbases with frames and frame reinforcements to meet severe duty needs
- Front engine, rear engine and transmission power take-offs
- Three batteries mounted under cab with clear back-of-cab packaging
- Range of cylindrical and rectangular aluminum fuel tanks
- Steer axles from 12,000 to 22,000 lbs
- Single drive axles from 21,000 to 38,000 lbs rating
- Tandem drive axles from 40,000 to 58,000 lbs rating
- Multiple clear frame specifications for outrigger installation
- Tridem drive axle set rated at 69,000 lbs
- Pusher and tag axles rated from 8,000 to 22,000 lbs, available in single or dual configurations
- A wide range of Eaton® and Allison® transmissions
- Freightliner AirLiner® and TufTrac® rear suspensions
- Hendrickson® and Chalmers® rear suspensions
- Expanded dash instrumentation, switches and controls to meet almost any vocational application
- Detroit DD13 engine with up to 470 HP, 1650 lb-ft torque
- Cummins ISL engine with up to 380 HP, 1300 lb-ft torque
- Cummins Westport ISL G (natural gas) engine with up to 320 HP, 1000 lb-ft torque
- Removable and frame-mounted front tow devices
- Grab handles with rubber inserts
- 3.2 million RBM single frame rail



SPECIALIZED OPTIONS

- Bridge formula bumpers for 29.5" front axle position
- Mixer body transition plates
- Set-back front axle position @ 48"
- Switch/harness pre-wire for lights (multiple configurations)
- Fresh air intake snow shield
- Snow plow crossmember for wing plow support
- Extreme climate thermal cab insulation
- Carbon fiber-reinforced aluminum type 3 compressed natural gas (CNG) fuel tanks with approximate range of 400 miles, depending on application
- 4.4 million RBM multi-channel frame rails



FREIGHTLINERTRUCKS.COM/WORKSMART



Competitive financing available through Daimler Truck Financial. For the Freightliner Trucks dealer nearest you, call 1-800-FTL-HELP. www.freightlinertrucks.com. 20M, 7/13, FTL/MC-B-1290. Specifications are subject to change without notice. Freightliner Trucks is registered to ISO 9001:2008 and ISO 14001:2004. Copyright © 2013, Daimler Trucks North America LLC. All rights reserved. Freightliner Trucks is a division of Daimler Trucks North America LLC, a Daimler company.

FREIGHTLINER

WORK SMART

114SD

VOCATIONAL SEVERE DUTY





114 SD

WORKING HARDER JUST GOT A LOT SMARTER.

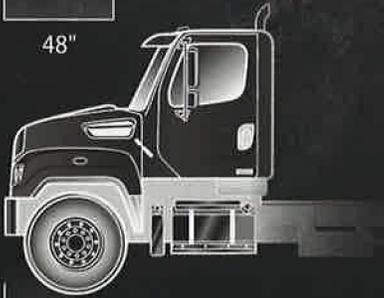
The Freightliner Trucks 114SD is built for severe duty: packed with power and ready for work. For starters, the Detroit™ DD13® engine with BlueTec® emissions technology comes standard and offers 350 HP and 1,350 lb-ft of torque. Cummins ISL and ISL G engines also are available as options. The 114SD has optimized mid-chassis packaging and a strategically-mounted

aftertreatment system. The chassis layout simplifies upfitting for truck equipment manufacturers. And Freightliner's proprietary SmartPlex™ Electrical System provides unmatched flexibility when configuring a truck to suit specific body installations. The 114SD also offers an incredible combination of durability and comfort. It's been through rigorous testing to ensure that it delivers performance and reliability in the most demanding situations. And the automotive-style interior is designed to keep operators safe and productive. Put simply, the 114SD sets the new standard for engineered performance and efficiency.



Set-Back Axle

48"



Set-Forward Axle

31"*

* 29.5" optional

Available axle configurations:

- 114" BBC Set-Forward Axle
- 114" BBC Set-Back Axle

Available cab configurations:

- Day Cab
- Extended Cab
- Crew Cab (Set-Back Axle Only)



