

Ocean County Board of Commissioners

OFFICE OF THE
OCEAN COUNTY COMMISSIONERS

Director Gary Quinn
Deputy Director Gerry P. Little
Commissioner Virginia E. Haines
Commissioner John P. Kelly
Commissioner Joseph H. Vicari

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Toms River, New Jersey
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Board Meeting Agenda

Date: November 17, 2021 - 4:00 PM
Location: Administration Building
Room 119
101 Hooper Avenue
Toms River, NJ 08754

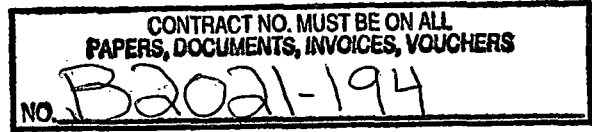
Agenda: Awarding a Contract for the furnishing and delivery of MOTOR VEHICLES: TRIAXLE DUMP AND TRACTOR TRUCKS to Robert H. Hoover and Sons, Inc., the sole qualified bidder. (B2021-194)

Official Resolution#	2021001590						
Meeting Date	11/17/2021						
Introduced Date	11/17/2021						
Adopted Date	11/17/2021						
Agenda Item	k-6						
CAF #							
Purchase Req. #	B2021-194						
Result	Adopted						
COUNTY COMMISSIONER	PRES.	ABS.	MOVE	SEC	AYE	NAY	ABST.
Quinn	<				<		
Little	<				<		
Haines	<		<		<		
Kelly	<				<		
Vicari	<			<	<		

I HEREBY CERTIFY THAT THIS DOCUMENT IS A TRUE, COMPLETE AND ACCURATE COPY OF THIS RESOLUTION, ADOPTED BY OCEAN COUNTY BOARD OF COMMISSIONERS, NJ AT THE MEETING REFERENCED THEREON

Michelle I. Gunther

Clerk Of The Board



RESOLUTION

November 17, 2021

WHEREAS, on October 26, 2021, pursuant to legal advertisements therefor, sealed bids were received for the furnishing and delivery of MOTOR VEHICLES: TRIAXLE DUMP AND TRACTOR TRUCKS for the County of Ocean; and

WHEREAS, at the advertised time, one response was received from the following bidder:

Name of Bidder

Robert H. Hoover and Sons, Inc.

Address of Bidder

149 Gold Mine Road
Flanders, NJ 07836
(973) 347-4210

; and

WHEREAS, after the receipt and examination of same, the County Purchasing Agent has now recommended to this Board that the sole qualified bid, according to specifications, namely that of, ROBERT H. HOOVER AND SONS, INC. be accepted.

NOW, THEREFORE, BE IT RESOLVED by the BOARD OF COMMISSIONERS of the COUNTY OF OCEAN, STATE OF NEW JERSEY, as follows:

1. The Director and Clerk of this Board are hereby authorized and directed to enter into a contract accepting the bid for the furnishing and delivery of Motor Vehicles: Triaxle Dump and Tractor Trucks, for the County of Ocean, for the contract period from date of award through November 16, 2022, a period of one (1) year or until delivery is complete unless otherwise stated. The County reserves the right to extend the term of the contract pursuant to N.J.S.A. 40A:11-15, as follows:

ROBERT H. HOOVER & SONS, INC. for nineteen (19) items, to wit:

ITEMS NO. 1, 1a, 1b, 1c, 1d, 1e, 1f, 1g, 1h, 1i, 1j, 1k, 2, 2a, 2b, 2c, 2d, 2e and 2f.

For a Total Lump Sum Award Item 1 (Items 1 - 1k) of \$4,043,734.00.

For a Total Lump Sum Award Item 2 (Items 2 - 2f) of \$2,366,236.70.

This vendor has extended this contract to County Cooperative Contract System Participants.

2. Payments for the equipment to be acquired by this contract shall be made upon the approval of vouchers submitted by the successful bidders in accordance with the requirements of the Board of Commissioners and subject to the Board of Commissioners customary procedures. Delivery shall be made upon receipt of a Purchase Order issued by the Ocean County Department of Purchase, upon which delivery locations and needed quantities shall be indicated.

3. Funds for the equipment shall be available within the following funding Sources: Roads, Solid Waste Management and Vehicle Services O.E.

4. The contract number must be placed on all papers, documents, invoices and vouchers pertaining to said contract, the number being B2021-194.

5. BE IT FURTHER RESOLVED that certified copies of this Resolution shall be made available to the County Auditor, County Department of Purchasing, Department of Finance, Roads, Solid Waste Management, Vehicle Services and Robert H. Hoover and Sons Inc., the successful bidder.

PROPOSAL DOCUMENT REPORT

Bid No. TBD

MOTOR VEHICLES: TRIAXLE DUMP AND TRACTOR TRUCKS

PRICE TABLES

ITEM #1 - MODEL YEAR 2023 WESTERN STAR 49X SF SPECIALIZED DUMP TRUCK WITH PLOW AND SPREADER, AS SPECIFIED, OR EQUAL

Line Item	Description	Qty.	Max. Qty.	Unit of Measure	Unit Cost	Total	Comments
1	Model Year 2023 Western Star 49X SF Specialized Dump Truck with Plow and Spreader, As Specified, or Equal	1	10	EA	\$318,533.00	\$3,185,330.00	
OPTIONS							
1a	Heavy Duty Heated Crossmemberless Stainless Steel Dump Body Under Options, As Specified	1	10	EA	\$3,920.00	\$39,200.00	
1b	Freedom 2.2 Spreader Control in Lieu of Manual Specification, As Specified	1	10	EA	\$2,812.50	\$28,125.00	
1c	Central Hydraulic System (Electric Proportional Plow/Granular Controls Specifications) In Lieu of Manual Controls, As Specified	1	10	EA	\$45,920.00	\$459,200.00	
1d	Paint for Dump Body, As Specified	1	10	EA	\$3,360.00	\$33,600.00	
1e	Road Department Paint Color Scheme, As Specified	1	10	EA	\$1,426.00	\$14,260.00	
1f	Spreader Leg Stands, As Specified	1	10	EA	\$4,440.80	\$44,408.00	
1g	One-Way Plow with QCP, As Specified	1	10	EA	\$12,596.00	\$125,960.00	
1h	Diagnostic Tools/Test Equipment, As Specified	1	3	EA	\$20,417.00	\$61,251.00	
1i	Two-Way Radio Power and Wiring Requirements for New Vehicles, As Specified	1	10	EA	\$500.00	\$5,000.00	
1j	Installation of County-Supplied Two-Way Radio and Accessories, As Specified	1	10	EA	\$740.00	\$7,400.00	
1k	Technical Support, As Specified	1	80	HOUR	\$500.00	\$40,000.00	
TOTAL						\$4,043,734.00	

PROPOSAL DOCUMENT REPORT

Bid No. TBD

MOTOR VEHICLES: TRIAXLE DUMP AND TRACTOR TRUCKS

ITEM #2 - MODEL YEAR 2023, OR NEWER, SPECIALIZED WESTERN STAR 49X TRACTOR, AS SPECIFIED, OR EQUAL

Line Item	Description	Qty.	Max. Qty.	Unit of Measure	Unit Cost	Total	Comments
✓ 2	Model Year 2023, or Newer, Specialized Western Star 49X Tractor, As Specified, or Equal	1	10	EA	\$187,046.00	\$1,870,460.00	
OPTIONS							
✓ 2a	Road Department Options (Shall Consist of All Items Listed), As Specified, or Equal	1	10	EA	\$18,982.98	\$189,829.80	
✓ 2b	Solid Waste Options (Shall Consist of All Items Listed), As Specified, or Equal	1	10	EA	\$14,229.59	\$142,295.90	
✓ 2c	Diagnostic Tools/Test Equipment, As Specified	1	3	SET	\$20,417.00	\$61,251.00	
✓ 2d	Two-Way Radio Power and Wiring Requirements for New Vehicles, As Specified	1	10	EA	\$500.00	\$5,000.00	
✓ 2e	Installation of County-Supplied Two-Way Radio and Accessories, As Specified	1	10	EA	\$740.00	\$7,400.00	
✓ 2f	Technical Support, As Specified	1	180	HOUR	\$500.00	\$90,000.00	
TOTAL						\$2,366,236.70	

ITEM # 1 – MODEL YEAR 2023 WESTERN STAR 49X SF SPECIALIZED DUMP TRUCK WITH PLOW AND SPREADER, AS SPECIFIED OR EQUAL

Res. Pg. 6-6

Manufacturer/Model: Western Star 49X SF

Engine: Cummins X15

Transmission: Allison 4700 RDS

Warranty: 1 Year and Extended Warranty Per Specs

Delivery, A.R.O.: 300 Days

COMPLIANCE
YES **NO**

GENERAL

2023 WESTERN STAR 49X SF

Set forward axle

Lh primary steering location

DIMENSIONS

Front axle 20,000 lbs.

Pusher axle 20,000 lbs.

Rear axle 52,000 lbs.

Registered gvwr 80,000 lbs.; cg tags

ENGINE

Cummins x15 performance series 14.9l, 912 cid minimum 500v hp @ 1900rpm.

Gov 2000 rpm, and 1850 lb.-ft. Torque @ 1150rpm.

Must be in line 6 cylinder of wet sleeve design utilizing hardened Cylinder liners, and electronics for simple service and diagnosis as needed.

Minimum displacement shall be 14.9 liters.

Engine must comply with latest federal mandate for diesel emissions. Should an Alternate power plant be offered the bidder must provide, all necessary technical data to show proof of equality including Maintenance schedules.

ENGINE EQUIPMENT

Engine must have latest 50 state clean idle diesel emission certification

Oil check and fill: engine mounted
 Introduced on: November 17, 2021
 Adopted on: November 17, 2021
 Official Resolution#: 2021001590

ITEM # 1 – MODEL YEAR 2023 WESTERN STAR 49X SF SPECIALIZED DUMP TRUCK WITH PLOW AND SPREADER, AS SPECIFIED OR EQUAL (CONT'D)

Res Reg 6-7

	<u>COMPLIANCE</u>	
	<u>YES</u>	<u>NO</u>
ENGINE EQUIPMENT (Cont'd)		
Air intake: under hood mounted air intake with precleaner integrated into hood with inside/outside air snow door	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Alternator: 200 amp 28 si with remote battery volt sense	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Batteries: (4) 12-volt gnb maintenance-free 4000 CCA	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Battery box: frame-mounted stack battery box LH or RH side back of cab	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Positive load disconnect control switch mounted under dash or floor	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Remote jump start studs mounted on frame next to starter	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Silicone heater/radiator hoses where possible	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Compressor: Cummins 18.7 CFM with internal safety valve	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Engine protection: electronic engine-integral warning system with shut down function	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Engine brake: Cummins intebroke compression brake with on off switch and low, med and high retardation switch	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Exhaust: single right-hand under cab ATD with bright finish upper 11' vertical stack cab mounted	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2-piece fan shroud and rear rock guard	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Exhaust shield: stainless steel	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Fan drive: electronically controlled variable speed automatic control with dash switch and light	<input checked="" type="checkbox"/>	<input type="checkbox"/>
13 gallon diesel exhaust fluid tank	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Non-polished aluminum cover for def tank	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Oil filter: full-flow	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Fuel filter/water separator: Detroit engine mounted with water in fuel Indicator	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Radiator: 1400 square inch service assembly bolted to engine	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Introduced on: November 17, 2021
 Replaces: 1400 square inch service assembly
 Official Resolution#: 2021001590

ITEM # 1 – MODEL YEAR 2023 WESTERN STAR 49X SF SPECIALIZED DUMP TRUCK WITH PLOW AND SPREADER, AS SPECIFIED OR EQUAL (CONT'D)

	<u>COMPLIANCE</u>	
	<u>YES</u>	<u>NO</u>
ENGINE EQUIPMENT (Cont'd)		
Heavy-duty coolant: -34 oat extended life	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Coolant hoses: silicone where possible	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Hose clamps: constant tension for coolant hoses and air intake system	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Engine heater: Philips 1500w/115v	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Chrome heater receptacle: mounted under driver's door	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Cast iron front and rear engine supports	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Starter: Delco 12v 39 MT+ HD OCP	<input checked="" type="checkbox"/>	<input type="checkbox"/>
TRANSMISSION AND EQUIPMENT		
Allison RDS 4700 automatic transmission with PTO provision	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<hr/>		
Programming for 70 mph output speed	<input checked="" type="checkbox"/>	<input type="checkbox"/>
S1 performance primary shift schedule	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1800 rpm primary mode shift speed	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Disable-load based shift schedule	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Transmission prognostics-enabled	<input checked="" type="checkbox"/>	<input type="checkbox"/>
PTO mounting LH & RH side of main transmission	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Water to oil transmission cooler	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Magnetic plugs, engine drain	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Transmission drain, axle(s) fill & drain	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Dash mounted push button shift control	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Synthetic transmission fluid	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Transmission oil check and filter with electronic oil level check	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Adopted on: November 17, 2021
 Official Resolution#: 2021001590

ITEM # 1 – MODEL YEAR 2023 WESTERN STAR 49X SF SPECIALIZED DUMP TRUCK WITH PLOW AND SPREADER, AS SPECIFIED OR EQUAL (CONT'D)

	<u>COMPLIANCE</u>	
	<u>YES</u>	<u>NO</u>
FRONT AXLE AND SUSPENSION		
Meritor 20000# front axle	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Meritor 16.5 x 6 q+ high capacity cast spider cam front brakes	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Brakes, double anchor, fabricated shoe	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Non-asbestos front brake lining severe service	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Conmet cast iron front brake drums	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Front brake dust shields	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Front oil seals	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Seals	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<hr/>		
Stemco aluminum vented front hub caps	<input checked="" type="checkbox"/>	<input type="checkbox"/>
With window and center+side plugs – oil	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Synthetic 75w-90 front axle lube	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Haldex automatic front slack adjusters with stainless steel clevis pins	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Bendix high capacity 20-23k power steering with rh auxiliary gear	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Power steering pump oil air cooler	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4 quart power steering see thru reservoir	<input checked="" type="checkbox"/>	<input type="checkbox"/>
23,000# flat leaf front suspension	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Threaded spring pins and bushings	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Front shock absorbers	<input checked="" type="checkbox"/>	<input type="checkbox"/>
REAR AXLE AND SUSPENSION		
Meritor rt-52-185 52000# tandem rear axle	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Introduced on: November 17, 2021 Adopted on: November 17, 2021 Factory installed Watson/Chester sl-2065 Tru-Track 20000# air lift Official Resolution#: 2021001590	<input checked="" type="checkbox"/>	<input type="checkbox"/>

ITEM # 1 – MODEL YEAR 2023 WESTERN STAR 49X SF SPECIALIZED DUMP TRUCK WITH PLOW AND SPREADER, AS SPECIFIED OR EQUAL (CONT'D)

	<u>COMPLIANCE</u>	
	<u>YES</u>	<u>NO</u>
REAR AXLE AND SUSPENSION (Cont'd)		
Steerable pusher suspension with 16.5x6" brakes, dust shields and FL 1 Watson/chalin 20000# axle	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Pusher axle controls in cab, up/down valve, gauge and air pressure regulator	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Reverse lift axle warning with last state retention	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Air piping for liftable pusher axle controls mounted inside cab	<input checked="" type="checkbox"/>	<input type="checkbox"/>
52" pusher axle spacing	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Iron rear axle carrier housing	<input checked="" type="checkbox"/>	<input type="checkbox"/>
SPL250HD XL Dana Spicer main driveline w/half round yokes	<input checked="" type="checkbox"/>	<input type="checkbox"/>
SPL170 XL Dana Spicer interaxle driveline w/half round yokes	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Driver control differential lockout rear/rear with indicator light for traction device	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Synthetic 75W-90W all axles	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Meritor 16.5x7" P cam double anchor cast shoes	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Non-asbestos rear brake lining	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Webb cast iron rear brake drums	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Rear brake dust shields	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Haldex automatic rear slack adjusters with stainless steel clevis pins	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Rear oil seals	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Bendix eversure longstroke 2-drive axle spring	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Forward of axle mounted parking chambers	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Standard spindle nuts for all axles	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Introduced on: November 17, 2021 Adapted to 2000# inverted leaf rear suspension Official Resolution#: 2021001590	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Standard ride height YES NO

ITEM # 1 – MODEL YEAR 2023 WESTERN STAR 49X SF SPECIALIZED DUMP TRUCK WITH PLOW AND SPREADER, AS SPECIFIED OR EQUAL (CONT'D)

	<u>COMPLIANCE</u>	
	<u>YES</u>	<u>NO</u>
REAR AXLE AND SUSPENSION (Cont'd)		
56" axle spacing	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Fore/aft and transverse control rods	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Rear shock absorbers – one axle	<input checked="" type="checkbox"/>	<input type="checkbox"/>
BRAKE SYSTEM EQUIPMENT		
Wabco 4S/4M ABS without traction control	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Reinforced nylon, fabric braid & wirebraid chassis air lines	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Bendix brake valves where possible	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Relay valve with 5.5 psi crack pressure	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Air connections to end of frame with glad hands	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Bw ad-9si brake line air dryer w/heather	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Air dryer frame mounted RH under cab	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Aluminum air brake reservoirs	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Cab blow out kit with air hose and nozzle	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Pull cables on all air reservoirs	<input checked="" type="checkbox"/>	<input type="checkbox"/>
FRAME AND WHEELBASE		
242" wheelbase with 150" c/t usable	<input checked="" type="checkbox"/>	<input type="checkbox"/>
.59 x 3.5 x 12.4 steel frame with .236" inner c-channel reinforcement	<input checked="" type="checkbox"/>	<input type="checkbox"/>
120 KSI 40.42 SM, 4,849,851 RBM	<input checked="" type="checkbox"/>	<input type="checkbox"/>
58 in. Overhang	<input checked="" type="checkbox"/>	<input type="checkbox"/>
24" integral front frame extension	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Underslung crossmember	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Adopted on: November 17, 2021
 Official Resolution#: 2021001590

Square end of frame

Res-Pg:k-6-12

ITEM # 1 – MODEL YEAR 2023 WESTERN STAR 49X SF SPECIALIZED DUMP TRUCK WITH PLOW AND SPREADER, AS SPECIFIED OR EQUAL (CONT'D)

	<u>COMPLIANCE</u>	
	<u>YES</u>	<u>NO</u>
FRAME AND WHEELBASE (Cont'd)		
Heavy duty ductile iron engine crossmember	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Heavy duty steel rear closing crossmember	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Heavy duty steel construction back of transmission crossmember	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Heavy duty steel bolted construction bolted midship #1 crossmember	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Heavy duty steel bolted construction rear suspension forward crossmember	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Heavy duty steel bolted construction rear mounted suspension crossmember	<input checked="" type="checkbox"/>	<input type="checkbox"/>
CHASSIS EQUIPMENT/TRAILER CONNECTIONS		
7-way trailer plug end of frame	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<hr/>		
3/8" severe duty steel bumper or custom bumper for hitch mounting	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Phosphate-coated class 10.9 fine thread hex chassis fasteners	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Exterior harnesses wrapped in abrasion tape, secondary covering and connector protection	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Air piping and electrical independently clipped to frame	<input checked="" type="checkbox"/>	<input type="checkbox"/>
FUEL TANKS AND EQUIPMENT		
Single 70 gallon aluminum, minimum	<input checked="" type="checkbox"/>	<input type="checkbox"/>
LH fuel tank mounted forward	<input checked="" type="checkbox"/>	<input type="checkbox"/>
25" diameter fuel tank(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Aluminum fuel tank bracket(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Plain aluminum fuel tank with polished stainless bands	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Alliance fuel/water separator with heated bowl	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Equiflo inboard fuel system	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Introduced on: November 17, 2021
 Adopted on: November 17, 2021
 Official Resolution#: 2021001590

High temperature reinforced nylon fuel hose

Res-Pg:k-6-13

No fuel cooler

ITEM # 1 – MODEL YEAR 2023 WESTERN STAR 49X SF SPECIALIZED DUMP TRUCK WITH PLOW AND SPREADER, AS SPECIFIED OR EQUAL (CONT'D)

COMPLIANCE
YES **NO**

FUEL TANKS AND EQUIPMENT (Cont'd)

In tank fuel level sender

FRONT TIRES, HUBS AND WHEELS

Michelin XZY-3 425/65R22.5 20 PLY

Conmet iron front hubs

Accuride 29807 4.75 inset 5 hand hd 22.5x12.25 10-hub pilot steel disc front wheels

REAR DRIVE & PUSHER TIRES, HUBS, & WHEELS

Michlein xds2 11r 24.5 16 ply rear drive axle tires

Webb iron rear hubs

Accuride 28827 2 hand 24.5x8 .25 10-hub pilot steel

Steel disc rear wheels

Michelin XZY-3 425/65R22.5 20 ply pusher tires (2)

Accuride 29807 - 22.5 x 12.25" 4.75" inset 5 hand 10 hub pilot pusher wheels

Nylon wheel guards front and rear all interfaces

Wheel-Check High Visibility Green Loose Wheel Nut Indicator On All Wheels

CAB EXTERIOR

Lower Right Hand Door Window with Fresnel Lens

121" BBC conventional steel reinforced aluminum cab

Galvanized E coated sealed steel door construction

Forged steel door hinges with steel reinforced "a" pillar

Triple door seal system

Introduced on: November 17, 2021
Adopted on: November 17, 2021
Official Resolution#: 2021001590

Non-removable bug screen

Res-Pg:k-6-14

Front cab mounts outboard of frame for stability or when taking off and applying torque from engine

ITEM # 1 – MODEL YEAR 2023 WESTERN STAR 49X SF SPECIALIZED DUMP TRUCK WITH PLOW AND SPREADER, AS SPECIFIED OR EQUAL (CONT'D)

COMPLIANCE
YES **NO**

CAB EXTERIOR (Cont'd)

Bolt on molded fender extensions

LH/RH exterior grabhandles with rubber insert and RH interior grab handle MTB to reinforced 'A' post

Stainless steel radiator mounted grille

Stainless steel radiator shell/hood bezel with tilt hood handle

Molded resin hood with isolated hood suspension mounting system

Hood opening strut assist with safety lock

Two (2) Hadley sd-978 26" rect air horns

Single electric horn

Horn shields

All locks keyed the same; must have six (6) keys

Dual stage LED headlights with heated light system

Aerodynamic LED marker lights in stainless steel visor

Individual LED stop/tail/turn/backup lights flush mounted end of frame

Led rear facing turn signal lamps in convex mirror lens in addition to standard front turn signal lamps

Dual C bar mirror system bright finish c-bar, heated mirrors, dual remote, turn signal, stainless steel back cover with integral convex

Door mounted mirrors with control switches on door panels

102" equipment width

Introduced on: November 17, 2021
Adopted on: November 17, 2021
Official Resolution#: 2021001590

LH/RH heated hood mounted side view mirrors, black finish

Res-Pg:k-6-15

Stainless steel exterior sun visor

3 piece solar tinted impact resistant polycarbonate rear window configuration (1) 31 x 20" (2) 9 x 20"

ITEM # 1 – MODEL YEAR 2023 WESTERN STAR 49X SF SPECIALIZED DUMP TRUCK WITH PLOW AND SPREADER, AS SPECIFIED OR EQUAL (CONT'D)

COMPLIANCE
YES **NO**

CAB EXTERIOR (Cont'd)

Tinted door glass LH & RH tinted

Electric door window regulators

1 piece tinted roped in seal mounted full grid heated windshield

2 gallon windshield washer reservoir with fluid level indicator

CAB INTERIOR

Gray vinyl premium interior

Black mats with double insulation

12 volt power supply in dash

Dash mounted ash tray & lighter

Forward roof mounted console

Map pockets, left and right doors

Cab Coat hook(s)

Wraparound wing dash with six digital gauges in driver command center and up to 13 gauges on the dash

5 lb. Fire extinguisher mounted

Heater, defroster and air conditioner

Main HVAC with constant temp control and cosmetic cover main fresh air inlet with fresh air filter

Standard heater plumbing with ball shut off valves at supply lines

Introduced on: November 17, 2021
Adopted on: November 17, 2021
Official Resolution#: 2021001590

Radiator MTD A/C condenser	<input checked="" type="checkbox"/>	<input type="checkbox"/>
R-134A refrigerant	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Cab insulation w/additional noise/thermal treatment front & back walls	<input checked="" type="checkbox"/>	<input type="checkbox"/>

ITEM # 1 – MODEL YEAR 2023 WESTERN STAR 49X SF SPECIALIZED DUMP TRUCK WITH PLOW AND SPREADER, AS SPECIFIED OR EQUAL (CONT'D)

COMPLIANCE
YES **NO**

CAB INTERIOR (Cont'd)

Centralized logic controllers in main dash electrical panels, houses VPDM onboard ECU and TEM programmable modules	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Multiplexed electrical system	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Color-coded and laser-etched wiring	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Premium LED cab lighting	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Cab door latches with electric door locks	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Triangular reflectors without flares	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Elite high back air suspension driver and passenger seats with 3 Chamber air lumbar support, integrated cushion extension, forward and rear cushion tilt, with heat and adjustable shock absorber inboard and outboard driver and passenger arm rests	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Gray vinyl driver and passenger seat cover	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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3-point driver & passenger seat belts including seatbelt retractor	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Adjustable tilt and telescoping steering column	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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450mm (18") black steering wheel with multifunction integrated controls	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Driver/passenger interior sun visors	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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INSTRUMENT PANELS AND CONTROLS

Wrap around dash that allows up to 13 gauges and driver command center with up to six (6) digital gauges	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Panel with teak color surround w/round gauges	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Teak color center access instrument panel	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Introduced on: November 17, 2021
 Adopted on: November 17, 2021
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Low air pressure light and buzzer

Res-Pg:k-6-17

Primary & secondary air pressure gauges

Intake mounted air restriction gauge

87 db to 112 db self-adjusting backup alarm

ITEM # 1 – MODEL YEAR 2023 WESTERN STAR 49X SF SPECIALIZED DUMP TRUCK WITH PLOW AND SPREADER, AS SPECIFIED OR EQUAL (CONT'D)

COMPLIANCE
YES **NO**

INSTRUMENT PANELS AND CONTROLS (Cont'd)

Cruise control-electronic, controls on steering wheel

Electronic mph speedometer and 2500 rpm tachometer

Key operated ignition switch & integral

Start position, four (4) position off/run/start

Headlights on with wipers with daytime running lights

Auxiliary PDM for TEM use

Electric fuel gauge

Electrical engine coolant temp gauge

Transmission oil temperature gauge

Engine and trip hour meters integral within driver display

Engine oil pressure gauge

AM/FM WB world tuner cd stereo radio with Bluetooth, iPod interface

USB and auxiliary inputs, J1939

Two (2) radio speakers (cab only)

Headliner multi-band antenna AM/FM/Weatherband, Wi-Fi/Bluetooth, GNSS/GPS

Electronic outside temperature sensor display in driver message center

PDO switch and four (4) dash mounted aux. switches WTH indicator lights

Engine, trip and PTO hour meter within driver display

Res-Pg:k-6-18

Hand control valve

Voltmeter

Rotary headlamp switch, marker lights/headlights switch with pull out for optional road lamps

ITEM # 1 – MODEL YEAR 2023 WESTERN STAR 49X SF SPECIALIZED DUMP TRUCK WITH PLOW AND SPREADER, AS SPECIFIED OR EQUAL (CONT'D)

COMPLIANCE
YES **NO**

INSTRUMENT PANELS AND CONTROLS (Cont'd)

Wiring and switch for customer furnished snow plow lamps with dual connections at bumper

Switch indicator light and 10' of wire on chassis LH back of cab for customer furnished utility lights

Two (2) valve parking brake system

Self-cancelling turn signal switch with integral head lamp dimmer headlamp flash, wash wipe intermittent

Heavy duty electronic flasher

PAINT/FINISH

Rail black high solids

Paint shall be base coat clear coat. Colors shall come from standard color chart or Ocean County Road Department Color Scheme as found in options

Chassis frame: Polyurethane

Wheels/Rims:

Rear/pusher wheel color: vendor powder black

Front wheel color: Vendor powder black

UNDERCOATING

Entire truck chassis, underside of cab and underside of body to be coated with Tectyl 2423 haps free black, which is a low VOC, high solids, emulsion corrosion Preventive coating, or equal

WARRANTY

Basic vehicle - 1 year, 50,000 miles

Adopted on: November 17, 2021
Official Resolution#: 2021001590

Battery - 1 year, 50,000 miles

Res-Pg:k-6-19

Brightwork – 6 months, unlimited

Cab corrosion/perforation – 5 years, unlimited

Cab structure – 1 year, 100,000 miles

ITEM # 1 – MODEL YEAR 2023 WESTERN STAR 49X SF SPECIALIZED DUMP TRUCK WITH PLOW AND SPREADER, AS SPECIFIED OR EQUAL (CONT'D)

COMPLIANCE
YES **NO**

WARRANTY (Cont'd)

Corrosion – 6 months, unlimited

Crossmembers – 3 years, 300,000 miles

Diesel Emission 2010 – 5 years, 100,000 miles

Greenhouse Gas 14/17 (medium heavy duty to heavy heavy duty trucks/tractors) – 5 years, 100,000 miles

Greenhouse Gas 14/17 tire (file direct) – 2 years, 24,000 miles

Frame rails – 3 years, 300,000

Front/steer axle: Detroit – 1 year, unlimited

Front/steer axle: non-Detroit – 1 year, 100,000 miles

Paint – 1 year, 50,000 miles

Paint, chassis – 6 months, unlimited

Rear axle: Detroit – 1 year, unlimited

Rear axle: non-Detroit – 1 year, 100,000 miles

Towing – 5 years, unlimited miles

Cummins 5 year 100,000 mile engine and ATS warranty

Cummins protection plan i:

- Internal components, major engine systems and major components
- Registered parts and labor

Covers the following, including mounting hardware and gaskets: cylinder head assembly, Crankshaft block assembly, Rocker level assembly, ECM, piston, rings

Introduced on: November 17, 2021
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and liners; lube oil cooler assembly, front gear cover, oil pan, connecting rod assembly, front gear cover, oil pan, connectingrod assembly, Lube pump assembly, camshaft and bushings; cam follower assemblies, crank shaft assemblies, EGR cooler, valve and mixer; Fuel injectors (excluding aftertreatment injector), turbo, water pump, fuel pump, air compressor, select engine sensors and flywheel.

Allison 7 year unlimited miles transmission warranty

ITEM # 1 – MODEL YEAR 2023 WESTERN STAR 49X SF SPECIALIZED DUMP TRUCK WITH PLOW AND SPREADER, AS SPECIFIED OR EQUAL (CONT'D)

COMPLIANCE

YES **NO**

SPECIFICATIONS FOR BRANDON HEAVY DUTY HEATED CROSSMEMBERLESS STAINLESS STEEL DUMP BODY

Model #SSHD176066 304 acid wash, or equal

GENERAL

Floor 1/4" 450 Brinell

Front 3/16" Stainless Steel 304

Sides 3/16" Stainless Steel 304

Tailgate 3/16" stainless steel 304

Long sills 3/16" 250 Brinell steel

Outside body width – 96"

Hoist attachment – front mount

Front design – 12" hoist recessed 90° corners

Front height including longsills – 72"

Longsills shape – formed 10"

34" longsills outside width

27" longsills inside width

Sandblasts and primer – glass bead blasting

Underbody to be painted chassis black

Introduced on: November 17, 2021
 One (1) inch ring top of tailgate
 Official Resolution#: 2021001590

CABSHIELD

- Cabshield type – traditional
- Cabshield length – 24”
- Cabshield width – 90” cabshield height – to be determined to match chassis height
- Light holes configuration – 4 oval lights holes

ITEM # 1 – MODEL YEAR 2023 WESTERN STAR 49X SF SPECIALIZED DUMP TRUCK WITH PLOW AND SPREADER, AS SPECIFIED OR EQUAL (CONT'D)

COMPLIANCE
YES NO

SPECIFICATIONS FOR BRANDON HEAVY DUTY HEATED CROSSMEMBERLESS STAINLESS STEEL DUMP BODY (Cont'd)

CABSHIELD (Cont'd)

- Cabshield installation

SIDE

- Side shape – formed side
- Top rail section – formed
- 6” board pocket and intermediate bracket
- Double walking rail; stainless steel
- 3/8” stainless steel upper tarp rail

REAR

- Double acting tailgate (lays flat or dumps through)
- Lock positioning – end point latch system
- Bolster shape – standard flat rear bolster
- Tailgate angle- straight
- Locking system – air cylinder size 2.5”; push/pull air controls
- Tailgate panel – Two (2) panels

HOIST

- Introduced on: November 17, 2021
- Adopted on: November 17, 2021
- Official Resolution#: 2021001590

Mailhot cs 160-634 da or equal

ACCESSORIES TO BE INCLUDED

- One (1) Complete Set of Filters For Cab/Chassis, Drive Train And Upfit
- 5 Gallons of Recommended-Use Hydraulic Fluid
- One (1) spare front tire and wheel and one (1) spare rear wheel and tire

INSTALLATION PARTS

- 40 ton cradle

ITEM # 1 – MODEL YEAR 2023 WESTERN STAR 49X SF SPECIALIZED DUMP TRUCK WITH PLOW AND SPREADER, AS SPECIFIED OR EQUAL (CONT'D)

COMPLIANCE
YES **NO**

SPECIFICATIONS FOR BRANDON HEAVY DUTY HEATED CROSSMEMBERLESS STAINLESS STEEL DUMP BODY (Cont'd)

INSTALLATION PARTS (Cont'd)

- 40 ton hoist bracket
- 40-50 ton upper cylinder blocks (2)

MISCELLANEOUS

- One (1) oval stop/tail/turn light in each rear corner post
- Wiring for standard dump body lights enclosed in a sealed waterproof Wiring harness (split loom **NOT ACCEPTABLE**)
- One (1) set stainless steel stone guards – mounted on frame
- Body and hoist shall come complete with manufacturer's safety decals And operating instructions
- Body and hoist warranted to be free from defects in material and workmanship under normal use and service for a period of five (5) years
- One (1) stainless steel grab handle
- 3M reflective tape on both sides of body and on 9-panel tailgate
- Two (2) shovel holders – one front, one rear

ACCESSORIES TO BE INCLUDED

- Safety lighting – six (6) oval led amber strobe lights with amber lenses
- Introduced on: November 17, 2021
- Adopted on: November 17, 2021
- Two (2) recessed interior post, two (2) at sides of cabshield and two (2) in front

of cab shield	<input checked="" type="checkbox"/>	<input type="checkbox"/>
All body lights shall be LED and Heated	<input checked="" type="checkbox"/>	<input type="checkbox"/>
One (1) set of Meyer Saber heated and LED plow lights mounted on hood of chassis With stainless steel mounts. Location to be determined by county at time of build	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Two (2) forward facing Whelen strobe lights mounted on snow plow lights bracket to be powered by its own switch, part # RSA03ZCR	<input checked="" type="checkbox"/>	<input type="checkbox"/>

ITEM # 1 – MODEL YEAR 2023 WESTERN STAR 49X SF SPECIALIZED DUMP TRUCK WITH PLOW AND SPREADER, AS SPECIFIED OR EQUAL (CONT'D)

COMPLIANCE
YES **NO**

SPECIFICATIONS FOR BRANDON HEAVY DUTY HEATED CROSSMEMBERLESS STAINLESS STEEL DUMP BODY (Cont'd)

ACCESSORIES TO BE INCLUDED

Four (4) step double fold stainless steel folding ladder with grab handle; stainless Steps above ladder on outside and inside of body with stainless steel steps on side Of body	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2" x 6" oak wood side boards	<input checked="" type="checkbox"/>	<input type="checkbox"/>

SPECIFICATIONS FOR PIONEER MODEL EDD 1500A-A TARP, OR EQUAL

Side mount – steel framework	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Roller assembly – telescopic 3 piece	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Left roller tube – 2.140" OD X 2" ID 6105-T6 aluminum extrusion with bushing and stainless steel roll pin to accept motor shaft	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Right roller tube – 2.140" OD X 2" ID 6105-T6 aluminum extrusion with bushing. 1" OD 6061-T6 aluminum shaft and stainless steel oil pin	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Center section – 1.960" OD X 1.820" ID 6105-T6 aluminum extrusion	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Bearing plates – ¼" H.R.S	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Bearings – flange mounted sealed ball bearings	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Roll mounting angles - 1 ½" x 2 x ¼" steel angle	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Direct drive gearmotor: mounted directly to left side roller. Worm and wheel Configuration. Permanently lubricated, sealed gearbox. 90 to 1 ratio. Output shaft Is supported by ball bearings on both ends. Output shaft is directly coupled to left side roller. Electric motor is .85 horsepower. Aluminum gearbox housing. Motor is thermally protected

By automatic resetting circuit breaker.

PIVOT ARM: FRAMEWORK

Pivot arms: 1 5/8" OD X 11 gauge aluminum tubing; 2 piece construction

Rear section: 1 5/8" OD X 11 gauge aluminum tubing

Bows: 1 5/16" OD X 11 gauge aluminum tubing

Arm mounting brackets: steel weldment

ITEM # 1 – MODEL YEAR 2023 WESTERN STAR 49X SF SPECIALIZED DUMP TRUCK WITH PLOW AND SPREADER, AS SPECIFIED OR EQUAL (CONT'D)

COMPLIANCE
YES **NO**

SPECIFICATIONS FOR PIONEER MODEL EDD 1500A-A TARP, OR EQUAL (Cont'd)

PIVOT ARM: FRAMEWORK (Cont'd)

Base plate: 1/4" H.R.S

Mounting hub: 4" OD steel tube

Spring: reverse wound torsion spring – 1/2" diameter wire

Wire PER ASTM A229 Class I

SPECIFICATIONS FOR CENTRAL HYDRAULIC MANUAL SYSTEM – STAINLESS ENCLOSURE

FABRIC

Asphalt tarp

CONSTRUCTION

Seamless front to rear rectangular in shape, 85" wide, grommets on front
And sides, pocket at rear

WIRING AND ELECTRICAL

All wire shall be 8 gauge stranded cable. All connectors are ring type, high
Amperage self-centering rotary switch (momentary on – of – momentary on),
Thermal reset circuit breaker (auto reset)

PTO

PTO shall be of a hot shift design driven off the Allison automatic transmission.
PTO shall have a direct mount rotatable pump flange. There shall be a console
Mounted rocker switch to engage and disengage the PTO. Must be Chelsea.

HYDRAULIC PUMP WITH PTO

Shall be on an open circuit axial piston design with adjustable compensator.

Introduced on: November 17, 2021

Adopted on: November 17, 2021
Official Resolution#: 2021001590
Dump operating pressure must adjust to the actual load pressure plus a pressure

- Differential required for the controlled action.
- When the system is not demanding power, the load sense control will operate in an energy-saving stand-by mode.
- Minimum pump displacement is 80cc/ 4.9 cubic inches, delivering 42 GPM at 2,000 rpm.
- Pump minimum displacement shall be 90 cubic centimeters continuously rate at 350 bar (5,000 psi). Standby pressure shall be 350 psi.

ITEM # 1 – MODEL YEAR 2023 WESTERN STAR 49X SF SPECIALIZED DUMP TRUCK WITH PLOW AND SPREADER, AS SPECIFIED OR EQUAL (CONT'D)

COMPLIANCE
YES **NO**

SPECIFICATIONS FOR CENTRAL HYDRAULIC MANUAL SYSTEM – STAINLESS ENCLOSURE (Cont'd)

HYDRAULIC PUMP WITH PTO

- Mounting is an SAE C 4-bolt flange
- Shaft is 1.25" diameter, 14 tooth splined

Rpm is rated to 2300 (continuous) with pressure and flow compensator control

Rear ported, flange mounted suction port shall meet the following requirements:

- Suction port minimum 2.5"
- Must use (4) m8 x 16-8.8 mounting bolts

The rear SAE ported pressure port shall meet the following requirements:

- Pressure port minimum 1" sae-16 O-ring boss

MOUNT

Pump must mount directly to a PTO on ALLISON 4500 series transmissions without requiring bent axis or external mounting hardware.

Pump must offer mounting flanges N SAE and ISO configurations, and ports are offered in SAE and ISO tube and flange versions.

Side or end-ported models must be available to facilitate plumbing and help fit the pump to your space.

Multiple drain ports allow many mounting orientations - must be standard.

PUMP

The hydraulic system must include a low oil shutdown with momentary override. The system shall disengage the PTO is a low oil scenario should occur. The operator will have the ability to temporarily override the shutdown to park all hydraulic

Implementations for tractor

CONTROL VALVE GRENSON VALVE WITH PRIORITY FLOW INLET

- Central hydraulic valve system shall be a mobile design to withstand exposure to Deicing chemicals and severe weather conditions
- System shall provide hydraulic fluid to operate the dump body hoist, front plow, And granular spreader system
- Hydraulic system can run all hydraulic functions simultaneously without Inhibiting the action of the others

ITEM # 1 – MODEL YEAR 2023 WESTERN STAR 49X SF SPECIALIZED DUMP TRUCK WITH PLOW AND SPREADER, AS SPECIFIED OR EQUAL (CONT'D)

COMPLIANCE
YES NO

SPECIFICATIONS FOR CENTRAL HYDRAULIC MANUAL SYSTEM – STAINLESS ENCLOSURE (Cont'd)

CONTROL VALVE GRENSON VALVE WITH PRIORITY FLOW INLET (Cont'd)

- Valve sections shall be of cast iron, horizontally stackable, and Serviceable without disassembly

- Directional control valves shall be pre-compensated, proportional, And load independent
- Valve system shall be closed center for variable displacement pump
- Valve sections must be adjustable for pressure up to 5,500 psi and flow ratings up to 40 GPM.
- Each valve must be laminar flow design for minimal pressure drop. Where Required, each section must be able to limit the operating speed for the implement.
- Each section must be manually activated with manual push/pull cables
- There shall be a main pressure relieve set at 2,400 psi to protect against System over-pressurization
- Hoist section must be a PVG 100, 40 GPM 4-way section for double Acting hoist
- Plow lift and angle sections are also 4-way for double acting cylinders With crossover relief

Spreader section shall have detent on one side of valve and self-centering on reverse

Note: Please Refer To the 'Modular Granular and Liquid Valve' Section Of Option 1B. Freedom 2.2 Spreader Control In Lieu Of Manual Specifications.

All hydraulic hoses must be bulkhead mounted with metal tube style connectors. all tubes shall be labeled with the hydraulic operation

Manufacturer must be authorized to perform warranty repairs and periodic Maintenance on hydraulic valve sections

SPREADER CONTROL

Spreader control shall be a dual knob valve with on/off handle.

ITEM # 1 – MODEL YEAR 2023 WESTERN STAR 49X SF SPECIALIZED DUMP TRUCK WITH PLOW AND SPREADER, AS SPECIFIED OR EQUAL (CONT'D)

COMPLIANCE
YES **NO**

SPECIFICATIONS FOR CENTRAL HYDRAULIC MANUAL SYSTEM – STAINLESS ENCLOSURE (Cont'd)

SPREADER CONTROL (Cont'd)

Shall have individual flow adjustment knobs for the spinner and auger.

Shall include a relief cartridge to protect the motors in the event of a material jam

Valve shall feature spinner priority to reduce material pile up from the auger at low flow conditions

CABLE CONTROLS

Control valve shall be shifted via sealed cable assemblies

Cable assembly shall feature a polyethylene conduit with armor over braid and Teflon liner

Cable assembly shall be rated for a minimum of 100 lbs of pull and 80 lbs of push

Cables shall be attached to the hydraulic valve with clevis pin and locking clips

Cable to be attached to an in cab handle. Handle will be mounted in a location Convenient to the operator. The handle shall feature cast base construction with steel Internal parts and be rated for 80 lbs. Of output force. A knob with identification Label will be attached to the end of the handle

RESERVOIR/VALVE ENCLOSURE

Reservoir must be constructed of 10 gauge stainless steel. Reservoir/valve enclosure Shall be 40 gallon capacity with an integrated covered mounting area for the valve.

All plumbing for the hydraulic valve inside the enclosure shall be SAE rated stainless Steel tubing and terminate on the front of the reservoir with JIC bulkhead connectors.

The spreader cap shall be mounted to an inspection lid. Inspection lid shall also provide

For an in tank mounted return line filter. The filter assembly shall incorporate a 10 Micron 50 GPM filter element with a 25 psi bypass. The reservoir will include a Twist off filler/breather assembly with 40 micron vent filter and a fill screen. Reservoir Shall be complete with a sight temperature gauge and a magnetic drain plug. Suction Port will allow for installation of a 2" NPT 50 GPM suction screen. Suction screen shall Have a 3 to 5 psi bypass spring. A 2" full flow ball valve shall be installed in the suction Line. Removing of a lid to access the filter and breather cap is **NOT ACCEPTABLE**.
The reservoir shall have a float switch to control PTO operation in the event of low oil.

ITEM # 1 – MODEL YEAR 2023 WESTERN STAR 49X SF SPECIALIZED DUMP TRUCK WITH PLOW AND SPREADER, AS SPECIFIED OR EQUAL (CONT'D)

COMPLIANCE
YES **NO**

WARRANTY FOR A CERTIFIED CENTRAL HYDRAULIC SECTIONAL VALVE GROUP FOR PLOW, AUGER AND SPINNER

Warranty coverage runs for a period of one year from the date of Initial installation (or 13 months from day of shipment from certified Cirus control systems), or whichever occurs first.

WARRANTY FOR BUMPER-TO-FRAME PLOW HITCH (SPH-A0000152)

One year from date of delivery

SPECIFICATIONS FOR V-BOX SPREADER

GENERAL

147 series v-box hopper style salt and sand spreader. Spreader shall be capable Of hauling and spreading free flowing granular materials. Unit shall consist of a 304 stainless steel body, rear discharge conveyor, spinner disk, power drive and All components necessary to make a complete operating unit. Unit shall be Manufactured in the usa by an iso 9001:2008 certified company.
Specifications on the unit must accompany the bid.

BODY REQUIREMENTS

14 yard capacity

Inside length of hopper shall be 15' at top and 12' at bottom

Inside top width shall be 84"

Side slope to be 45° minimum

Front panel slopes shall be a minimum of 18°

Hopper seams shall be continuous welded on inside

Introduced on: November 17, 2021
Adopted on: November 17, 2021
Side, End and side supports shall be 10 gauge 304 stainless steel

Top edge of hopper is formed "J" channel 2" x 1 1/2"	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Auger trough shall be 10 gauge 304 stainless steel	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Longsills shall be 10 gauge 304 stainless steel	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Cross sills shall be formed 7 gauge 304 stainless steel welded to side supports	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Lift hooks on each corner are 5/8" stainless steel round bar	<input checked="" type="checkbox"/>	<input type="checkbox"/>

ITEM # 1 – MODEL YEAR 2023 WESTERN STAR 49X SF SPECIALIZED DUMP TRUCK WITH PLOW AND SPREADER, AS SPECIFIED OR EQUAL (CONT'D)

	<u>COMPLIANCE</u>	
	<u>YES</u>	<u>NO</u>
SPECIFICATIONS FOR V-BOX SPREADER (Cont'd)		
BODY REQUIREMENTS (Cont'd)		
All hardware is stainless steel	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3/8" rod on 3/8" rod top grate screens with anti-freeze hinges are required equipment		
With auger conveyor v-box units	<input checked="" type="checkbox"/>	<input type="checkbox"/>

AUGER REQUIREMENTS

Twin 7" diameter hard faced variable pitch augers	<input checked="" type="checkbox"/>	<input type="checkbox"/>
64 cir direct drive hydraulic motor	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Motor is directly coupled to end of auger shafts	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Auger shafts connect at front with a 2" 4 bolt flange bearing	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Rear auger drive has no motor guard bolted to rear	<input checked="" type="checkbox"/>	<input type="checkbox"/>
One (1) led spreader light mounted to spreader box	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Four (4) 6" oval amber strobe lights with amber lenses mounted in stainless steel tissue box	<input checked="" type="checkbox"/>	<input type="checkbox"/>

SPINNER CHUTE ASSEMBLY

10 gauge 304 stainless steel	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Four (4) position telescopic adjustment	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Four (4) bottom spinner deflectors shall be overlapping to prevent loss of granular material when the deflectors are raised.	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Introduced on: November 17, 2021
 Adopted on: November 17, 2021
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MOTOR VEHICLES: TRIAXLE DUMP AND TRACTOR TRUCKS

- Front deflector shall be fixed.
- Bottom overlapping spinner deflectors shall have four (4) positions of rod and pin adjustment without tools. Chain adjustable deflectors are **NOT ACCEPTABLE**.
- Poly 20" diameter spinner disc shall have replaceable machined hub
- Spinner hydraulic motor shall mount directly on bottom of spinner disc

PAINT

- All metal surfaces shall be high pressure cleaned with a phosphate solution to Remove slag, splatter, oxide, and oil residue.

ITEM # 1 – MODEL YEAR 2023 WESTERN STAR 49X SF SPECIALIZED DUMP TRUCK WITH PLOW AND SPREADER, AS SPECIFIED OR EQUAL (CONT'D)

COMPLIANCE
YES NO

SPECIFICATIONS FOR V-BOX SPREADER (Cont'd)

PAINT (Cont'd)

- Non-stainless steel parts shall be painted or powder coated black
- 304 stainless steel components unpainted

TAILGATE LOCK KIT

- Main latch bar shall be 3" x 4.1 lb structural channel 84" wide
- Two (2) 3" x 4.1 lb x 8" structural channel with two (2) 1/2" x 1 1/2" mounting hole shall be welded to main channel to bolt on spreader
- Two (2) 1 1/4" x 7" round stock tailgate latches to be welded to main channel

TIE DOWN KIT

- Shall consist of four (4) chain style tie down assemblies
- Chains shall be grade 30 3/8" x 29 links
- Top plate shall be 1/4" x 4 triple broke a1011 powder coated steel With banjo eye to accept 3/8" chain
- Tie down bracket shall be 1/4" x 4" x triple broke a1011 powder coated steel With 3/8" double link clevis to attach chain
- 3/4" zinc plated turnbuckle to have grease fitting
- 1/4" turnbuckle shall have 1/2" – 13 nut welded to center to secure turnbuckle

Introduced on: November 17, 2021
 Adopted on: November 17, 2021
WARRANTY FOR 145-20 SERIES V-BOX SPREADER - 304 STAINLESS STEEL CONSTRUCTION
 All parts of the product shall be free from defects in material and workmanship for a

period of one (1) year

SPECIFICATIONS FOR STEEL MOLDBOARD TUBE TABLE REVERSING FULL PLOW MOLDBOARD SPECIFICATIONS

42" H x 11' L

10 gauge carbon steel smooth rolled profile providing ultra-smooth Surface for snow deflection

Overhang from cutting edge to have minimum 12" overhang with 10° attack angle

ITEM # 1 – MODEL YEAR 2023 WESTERN STAR 49X SF SPECIALIZED DUMP TRUCK WITH PLOW AND SPREADER, AS SPECIFIED OR EQUAL (CONT'D)

COMPLIANCE
YES **NO**

SPECIFICATIONS FOR STEEL MOLDBOARD TUBE TABLE REVERSING FULL PLOW (Cont'd) MOLDBOARD SPECIFICATIONS (Cont'd)

Top of moldboard shall be reinforced by 2 1/2" x 2 1/2" x 3/8" angle iron. Bottom of Moldboard is reinforced by 4 x 4 x 3/4" angle iron and is drilled to accommodate Aashto standards.

Ribs are reinforced with 2 x 2 x 3/8 angle as well as the upper and lower Reinforcement angels.

Ribs are 5" at the trip edge and 3" tall at the top edge by 1/2" wide

Ribs are spaced to match support arm locations as well as provide adequate Support of the moldboard

A total of 12 ribs shall be used per moldboard assembly

Three (3) sets of double ribs and six (6) single ribs

Each rib shall have a 1/2" relief at the corners where they attach to the reinforcement Angles. This will allow water to drain off the back of the moldboard during storage

At the bottom of each rib there shall be three (3) 1 5/16" holes spaced at 1 7/8" Center to center to allow for semi-circle height adjustments

Two (2) sets of double ribs shall have three (3) 1 5/16" holes spaced at 2 1/4" center to Center to allow for attack angle adjustment

Weldments on the moldboard shall be continuous

Outer ribs of moldboard will be drilled for marker installation

Introduced on: November 17, 2021
Adopted on: November 17, 2021
Official Resolution#: 2021001590

TRIP MECHANISM CONSTRUCTION

- Plow shall be full trip design consisting of two (2) coil springs
- Springs are 3/4" wire with a coil od of 5 9/16" consisting of 16 full coils
- Bottom angle is reinforced by eleven (11) 1/2" thick gussets spaced evenly to avoid Interference with cutting edge attachment hardware
- Cutting edge shall be 6" x 5/8" x 11' long and shall be drilled to AASHTO standards
- Cutting edge shall be secured using 5/8" grade 8 carriage bolts

ITEM # 1 – MODEL YEAR 2023 WESTERN STAR 49X SF SPECIALIZED DUMP TRUCK WITH PLOW AND SPREADER, AS SPECIFIED OR EQUAL (CONT'D)

COMPLIANCE
YES **NO**

SPECIFICATIONS FOR STEEL MOLDBOARD TUBE TABLE REVERSING FULL PLOW (Cont'd)

PUSH FRAME

- Designed to hydraulically reverse the moldboard in an arc at any angle from 35° left to 35° right from a centered position
- Shall be constructed of 1/2" plate

- Supported above and below the semi-circle with 2 x4 x 3/16" tubing

- Shall be drilled to accept 1 1/2" bolt at the semi-circle connection. At this connection Welded to the push frame is the female portion of the socket connection. This connection Distributes the pushing load directly from the push frame to the semi-circle and moldboard Relieving stress on the bolted connection. The female socket connection is made from 1" Plate steel and is contoured to match the male portion on the semi-circle

- Rear of push frame shall be drilled to accept a removable QCP adapter. Three (3) sets of 1 3/16" holes shall be drilled on 2" centers to allow for installation on a variety of Trucks and hitches

- Two holes shall be located at the top and bottom push frame plates drilled to accept 1 1/2" bolts for hydraulic cylinder attachment

- All welds are to be continuously welded. **NO EXCEPTIONS**

SEMI-CIRCLE CONSTRUCTION

- Semi-circle shall be constructed from 5" x 5" x 3/16" tubing. The main tube, Or push beam, is 5" x 5" x 5/16" at 120 inches long spanning the entire width Of the moldboard. This tube is constructed from one continuous piece

- There two stops placed appropriately to prevent the plow from turning Past 35° left or right

Adopted on: November 17, 2021
Adopted on: November 17, 2021
Official Resolution#: 2021001590

Crank style jackleg (part #0091215) to be mounted on backside of semi-circle

Hydraulic cylinder mounting points are 1/2" plates welded to the top and bottom of the semi-circle. Plates shall be drilled to accept 1 1/2" bolts for hydraulic Cylinder attachment. These plates also serve as locators for support arm shackles And gussets to provide additional support from the "push beam" to the rest of The semi-circle.

ITEM # 1 – MODEL YEAR 2023 WESTERN STAR 49X SF SPECIALIZED DUMP TRUCK WITH PLOW AND SPREADER, AS SPECIFIED OR EQUAL (CONT'D)

COMPLIANCE
YES **NO**

SPECIFICATIONS FOR STEEL MOLDBOARD TUBE TABLE REVERSING FULL PLOW (Cont'd)

SEMI-CIRCLE CONSTRUCTION (Cont'd)

In the center of the semi-circle a hole shall be drilled to accept the 1 1/2" grade 8 bolt That acts as the pivot point for the push frame. Also, at this point above and below The semi-circle is the male portion of the socket that relieves stress from the bolted Connection. This is made from 1" plate steel and is contoured to match the female Portion of the push frame.

Tabs shall be welded on the push frame to accept 1/2" screw type chain shackles. These tabs shall be made from 1/2" plate steel 5 1/4" long and 2 1/2" wide. They are welded to the backside of the 5" tubular push beam to increase the Weld surface area at 55° from the bottom of the semi-circle to match the chain Angel going to the lift arm on the hitch

There are seven set of 3/4" thick moldboard mounting ears installed along the Push beam for attachment of the moldboard. Moldboard shall pivot at these points On 1 1/4" diameter rivet pins with a washer and cotter pin on the opposite Side of the rivet head.

Four (4) sets of the moldboard mounting ears (two outer on either side of the push beam) Shall have an inside spacing of 3/4" to accept a single 1/2" moldboard rib. Three (3) sets of moldboard mounting ears (the center sets) shall have an outside spacing of 2 3/4" to fit inside double moldboard ribs.

Moldboard attachment ears to be gusseted with 4" triangular steel gussets

Push frame shall connect to upper portion of the moldboard using two support Arms. The center of the support arm shall be made from 2 x 2 x 1/4" square Box tube. Actual mounting points are 1" schedule 40 pipe fully welded through The box tubing. The box tubing shall be drilled through to accept the pipe.

The actual connection point is 1 1/8" bolt.
Adopted on: November 17, 2021
Official Resolution#: 2021001590

ADJUSTABLE CAST MUSHROOM SHOES

Plow to be fitted with adjustable cast steel mushroom shoes mounted left and right on rear Of semi-circle	<input checked="" type="checkbox"/>	<input type="checkbox"/>
A 1/2" steel plate to be welded onto the semi-circle rear with five (5) adjusting holes for Overall height	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Adjusting handle crank to be stowable against the shoe housing and allow up and down Movement of the shoe via threaded screw	<input checked="" type="checkbox"/>	<input type="checkbox"/>
A 1 1/4" screw with adjusting nut are housed in a 3" square shoe housing with a welded On 5-hole mounting plate	<input checked="" type="checkbox"/>	<input type="checkbox"/>

ITEM # 1 – MODEL YEAR 2023 WESTERN STAR 49X SF SPECIALIZED DUMP TRUCK WITH PLOW AND SPREADER, AS SPECIFIED OR EQUAL (CONT'D)

COMPLIANCE
YES **NO**

ADJUSTABLE CAST MUSHROOM SHOES (Cont'd)

Cast steel mushroom plow shoe has 6" bolt centers, 3/4" square holes and is 10.625" in Diameter and 2.34 inches thick.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Grade 8 hardware shall be used throughout	<input checked="" type="checkbox"/>	<input type="checkbox"/>

HYDRAULICS

Plow angle shall be controlled by two double acting hydraulics cylinders	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Each cylinder shall have a 4" bore with an 8" rod diameter with a maximum Operating pressure of 3,000 psi.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Retracted cylinder length is 21" with both the rod and cylinder ends accepting 1 1/2" Bolts/pins for connecting to the semi-circle and push frame	<input checked="" type="checkbox"/>	<input type="checkbox"/>

QCP

Push frame is equipped with a removable QCP adapter for quick hitch applications	<input checked="" type="checkbox"/>	<input type="checkbox"/>
QCP side plates shall be 1/2" formed plate	<input checked="" type="checkbox"/>	<input type="checkbox"/>
QCP loop diameter shall be 2"	<input checked="" type="checkbox"/>	<input type="checkbox"/>

PAINT

Paint shall be of high quality, free of runs, overspray and defects	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Standard paint type will be epoxy	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Standard paint color shall be safety orange for the moldboard and black for the frame	<input checked="" type="checkbox"/>	<input type="checkbox"/>

BUMPER TO FRAME PLOW HITCH SPECIFICATIONS

Introduced on: November 17, 2021
Adopted on: November 17, 2021
Council Resolution: 2021004380

FRONT HITCH FRAME

- Snow plow hitch must clear hood when open
- Frame is heavy duty, low profile, front frame mounted style. It is designed for use with Trucks equipped with a tilt hood and stationary grill
- Frame is capable of self-storing the hydraulic front lift arm cylinder when not in operation, Allowing the lift arm to fold down parallel to the rest of the frame
- Vertical supports of the hitch are constructed from 4" x 4" x 3/8" square tubing

ITEM # 1 – MODEL YEAR 2023 WESTERN STAR 49X SF SPECIALIZED DUMP TRUCK WITH PLOW AND SPREADER, AS SPECIFIED OR EQUAL (CONT'D)

COMPLIANCE
YES **NO**

BUMPER TO FRAME PLOW HITCH SPECIFICATIONS(Cont'd)

FRONT HITCH FRAME (Cont'd)

Cylinder support bracket on the hitch is constructed a 3" X 2" rectangular tube. The two cylinder mounting tabs are 1/2" steel placed in the center of support bracket and spaced at 2-1/8" apart. Each tab is drilled to accept
A 1" pin.

The upper horizontal support of the hitch is constructed of two (2) pieces:

- The first is a formed 3/8" plate that wraps the top and upper back portion of the Vertical supports this plate also acts as a stop when the lift cylinder is store as Well as one of two points the lift arms connection tabs are welded.
- The second horizontal support is a 1/2" contoured plate that allows the lift cylinder To be stored and provides a second mounting point for the lift arm connection
Tabs

There are two (2) pairs of lift arm support shackles. Each pair is made from 1/2" x 9 3/4" Plate and are drilled to accept t 1/4" pins

Fully welded to the vertical supports are two c 8" x 18.75" channels with 1/2" thick end Plates. The end plates are drilled to accept six (6) 5/8" grade 8 bolts for attaching the hitch Between the frame rails

Support of the lower portion of the hitch is provided by left and right weldments bolted to The tapered portion of the frame. Weldments are drilled with four (4) 5/8" holes for Mounting to the exterior of the truck frame.

A 12-volt electric over hydraulic pump to operate the front hitch wing post slide located Behind cab

FRONT HITCH PIN LOCK QCP

Front hitch attachment is made by a pin lock QCP assembly

Introduced on: November 17, 2021
Adopted on: November 17, 2021
Official Resolution # 2021001590

- Top and bottom of the assembly are made from 1/2" contoured plate. Both plates are Drilled to accept the 2" lock pin ☒
- Welded to the bottom plate is a 5/8" chamfered plate that both provides support to the Lock pin and helps to guide the QCP loop into the hitch ☒
- Welded to the top of the plate is a formed 3/8" plate drilled for the 2" lock pin that Both provides support and protects the pin in the event a plow is set too high while Hitching. ☒

ITEM # 1 – MODEL YEAR 2023 WESTERN STAR 49X SF SPECIALIZED DUMP TRUCK WITH PLOW AND SPREADER, AS SPECIFIED OR EQUAL (CONT'D)

COMPLIANCE
YES NO

BUMPER TO FRAME PLOW HITCH SPECIFICATIONS (Cont'd)

FRONT HITCH PIN LOCK QCP (Cont'd)

- In the front of the QCP assembly are two (2) 1/2" thick formed bumpers. These bumpers Are the resting/pushing point for the plow. They are curved to allow the plow to raise And lower smoothly: ☒

- Lock pin is 2" tapered at one end for ease in guiding into position and has tabs welded to The other for the lift bar attachment ☒

HEAVY DUTY ARM LIFT ASSEMBLY

- Heavy duty lift arm is extendable style with seven (7) different extendable positions ☒

- Frame of the lift arm is constructed from 1/2" x 4" steel plate that is formed to contour The outer tube of the extendable arm. The frame is also the connection point to the hitch And hydraulic cylinder ☒

- The external tube is constructed of 4" heavy wall square tubing. On each end of the tube Are 1" wide bushings ground to fit the inner tube. This shall ensure a long lasting fit. ☒

- Top plate on the lift are is 3/16" and is used to prevent "racking" of the frame Inner tube is constructed of 3" heavy wall square tubing. Tubing is drilled to allow for The seven (7) extendable positions ☒

- Welded to the front of the inner tube is a formed 1/2" plate with notches to accept Standard 1/2" link chain. When required this plate can be changed to match Different level systems. ☒

HYDRAULIC LIFT CYLINDER

- Hitch is provided with a single acting 4" x 10" hydraulic cylinder. A double acting Cylinder can be provided for applications where plow "float" hydraulic controllers ☒

Introduced on: November 17, 2021
Adopted on: November 17, 2021
Official Resolution#: 2021001590

WARRANTY FOR STEEL MOLDBOARD TUBE TABLE, POWER INFINITE REVERSING FULL PLOW (SPX-00000050)

One year from date of delivery

OPTIONS

✓1A. Heavy Duty Heated Crossmemberless Stainless Steel Dump Body Under Options

Body shall be heated through diverter box with thermos-switch for activation with
Stainless steel piping

✓ ITEM # 1 – MODEL YEAR 2023 WESTERN STAR 49X SF SPECIALIZED DUMP TRUCK WITH PLOW AND SPREADER, AS SPECIFIED OR EQUAL (CONT'D)

COMPLIANCE
YES NO

OPTIONS (Cont'd)

✓1B. Freedom 2.2 Spreader Control In Lieu Of Manual Specifications

General

Controller shall have 3 PWM output channels for liquid and granular spreader controller

The controller shall be a microprocessor type capable of PWM control of three
Hydraulic valves.

Controller must be automotive grade for durability. Any gaming type controllers are
Unacceptable.

The controller must offer ground speed control from vehicle signal. No GPS antenna can
Be used for ground speed signal input.

The controller must have three channels to operate an auger/conveyor and liquid
System.

PWM signal must be adjustable for a wide range of implement functionality.

The controller shall be capable of ground speed oriented spreading, ground speed
triggered, and manual mode.

The system will offer a manual mode lock out option.

The spreader controller will operate in open or closed loop configuration.

Controller shall offer remote pause, unload mode, liquid float input, test speed,
And on-screen error with alarms and message reporting.

Sensor short detection with message and alarm.

Introduced on: November 17, 2021
Adopted on: November 17, 2021
System must have 2 auxiliary output channels available.
Official Resolution # 2021001590

- AVL data transfer is available with an additional modem.
- System shall offer spinner configurable mph shut off, storm totals on screen or With USB.
- Operator screen offers knobs or touch screen to control granular and liquid outputs.
- There shall be 9 independently programmable feeder outputs channels for actuate, Lbs. Per mile output.

ITEM # 1 – MODEL YEAR 2023 WESTERN STAR 49X SF SPECIALIZED DUMP TRUCK WITH PLOW AND SPREADER, AS SPECIFIED OR EQUAL (CONT'D)

COMPLIANCE
YES **NO**

OPTIONS (Cont'd)

1B. Freedom 2.2 Spreader Control In Lieu Of Manual Specifications (Cont'd)
General (Cont'd)

- The spinner shall also offer 9 programmable speeds for the spinner.
- System will maintain up to 4 different granular material types.
- There shall be an integrated blast mode with instant off to stop output if necessary.
- Blast must be programmable for flow rate and material distance.
- Unit shall provide an unload mode at speeds of up to 5 mph.
- A standby (pass) mode shall be provided to allow for momentary interrupt of the spreader Without changing the feeder/spinner/liquid output.
- All programing and calibration shall be accomplished using the touch screen of The controller.
- Detachable key board for programming is **NOT ACCEPTABLE**.

Modular Granular and Liquid Valve

**If the freedom 2.2 spreader control is chosen, spreader with detent and reverse on under Control valve on page 42 will need to be removed, and replaced with the following:*

- The modular manifold must be constructed of 6061 anodized aluminum.
- Modular manifold must have an adjustable pressure of up to 3500psi with multiple flow, Pressure, performance, and function configurations.
- Each function will be equipped with screw adjustable manual overrides protected by jacketed Debris covers.
- The modular manifold can operate in either open center (fixed displacement) or

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- Closed center (variable displacement) hydraulic circuits.
- The auger / conveyor must be rated at 15 GPM and features a cartridge valve design for Precision spreading.
- The spinner valve must provide 10 GPM and also feature a cartridge design valve With manual override.
- Pre-wet or anti-ice implements are also available as a 10 GPM hydraulic circuits if necessary.

ITEM # 1 – MODEL YEAR 2023 WESTERN STAR 49X SF SPECIALIZED DUMP TRUCK WITH PLOW AND SPREADER, AS SPECIFIED OR EQUAL (CONT'D)

COMPLIANCE
YES **NO**

OPTIONS (Cont'd)

1B. Freedom 2.2 Spreader Control In Lieu Of Manual Specifications (Cont'd)

- These functions are proportional controlled, pulse width modulated, pressure and flow Compensated, with heavy duty 12vdc coils.
- Spreader control “outside the cab” harnessing shall meet ip 68 standards.

The modular manifold can operate in either open center (fixed displacement) or Closed center (variable displacement) hydraulic circuits.

The auger / conveyor must be rated at 15 GPM and features a cartridge valve design for Precision spreading.

The spinner valve must provide 10 GPM and also feature a cartridge design valve With manual override.

Pre-wet or anti-ice implements are also available as a 10 GPM hydraulic circuits If necessary.

These functions are proportional controlled, pulse width modulated, pressure and flow Compensated, with heavy duty 12vdc coils.

Spreader control “outside the cab” harnessing shall meet IP 68 standards.

Connections must be Nema x6 standards for dust protection.

Outside the cab connections shall be rated as Nema “x8” – protected against The effects of permanent submersion in water as well as able to show no corrosion After 500 hours in a 35° salt spray.

The entire hydraulic system shall be completely serviceable without removing from the enclosure or disassembling sections

- The electronics and hydraulics shall be manufactured by the same company.
- The hydraulic system shall be pressure and flow tested before the installation process.
- The modular spreader valve manifold will be mounted in a weather resistant enclosure.
- Enclosure shall be vented to reduce moisture and finished with 304 stainless steel.

ITEM # 1 – MODEL YEAR 2023 WESTERN STAR 49X SF SPECIALIZED DUMP TRUCK WITH PLOW AND SPREADER, AS SPECIFIED OR EQUAL (CONT'D)

COMPLIANCE
YES **NO**

OPTIONS (Cont'd)

1C. Central Hydraulic System (Electric Proportional Plow / Granular Controls Specifications) In Lieu Of Manual Controls

The in-cab control system shall be an integrated proportional multi-axis (x, y) (3) joystick Console with circuit panel and spreader control.

0 – 5000 gauge

Dump body hoist, front plow, and wing plow shall be controlled by three individual Joysticks capable of proportionally controlling up to 5 bi-directional valves.

Dump body lever must have safety trigger protection.

Controller must include integrated protection and diagnostic systems with safety features Incorporated.

System must have user settable speed control for all hydraulic functions.

Unit shall be designed for floor mount pedestal with armrest

System will integrate with the freedom 2 granular / liquid control systems in The housing

System must supply pulsed voltage to each individual valve coil.

All connections inside the valve enclosure shall be ip68 rated.

All connections will be labeled with appropriate descriptions for each connection To individual solenoids of the hydraulic actuating cylinders.

System must also have integrated accessory control switches: the system Will include up to six (6) switches and up to six (6) warning indicator lights

Introduced on: November 17, 2021
Adopted on: November 17, 2021
Official use only

Each switch will handle 12v up to 10amp load and can be operated as on/off, Momentary or on/off/on as needed.

Installing dealer must be authorized to preform warranty repairs and periodic Maintenance on certified products.

ITEM # 1 – MODEL YEAR 2023 WESTERN STAR 49X SF SPECIALIZED DUMP TRUCK WITH PLOW AND SPREADER, AS SPECIFIED OR EQUAL (CONT'D)

COMPLIANCE
YES **NO**

OPTIONS (Cont'd)

1C. Central Hydraulic System (Electric Proportional Plow / Granular Controls Specifications) In Lieu Of Manual Controls (Cont'd)

Reservoir/Valve Enclosure

Reservoir must be constructed of 7ga stainless steel. Reservoir/valve enclosure must Be 40-gallon capacity with an integrated covered mounting area for the valve. All Plumbing for the hydraulic valve inside the enclosure will be sae rated stainless Steel tubing and terminate on the front of the reservoir with jic bulkhead connectors. The breather cap shall be mounted to an inspection lid. Inspection lid shall also Provide for an in tank mounted return line filter. The filter assembly shall incorporate A 10 micron 50GPM filter element with a 25 psi bypass. The reservoir will include a Twist off filler/breather assembly with 40 micron vent filter and a fill screen. Reservoir Shall be complete with a sight temperature gauge and a magnetic drain plug. Suction port Will allow for installation of a 2” npt 50 GPM suction screen. Suction screen will have A 3 to 5 psi by-pass spring. A 2” full flow ball valve shall be installed in the suction line. Removing of a lid to access the filter and breather cap is not acceptable. The reservoir Shall have a float switch to control PTO operation in the event low oil.

Freedom 2.2 Spreader Control

Controller shall have 3 PWM output channels for liquid and granular spreader Controller

The controller shall be a microprocessor type capable of PWM control of three Hydraulic valves.

Controller must be automotive grade for durability. Any gamming type controllers are Unacceptable.

The controller must offer ground speed control from vehicle signal. No gps Antenna can be used for ground speed signal input.

The controller must have three channels to operate an auger/conveyor and

- PWM signal must be adjustable for a wide range of implement functionality.
- The controller shall be capable of ground speed oriented spreading, ground Speed triggered, and manual mode.
- The system will offer a manual mode lock out option.
- The spreader controller will operate in open or closed loop configuration.

ITEM # 1 – MODEL YEAR 2023 WESTERN STAR 49X SF SPECIALIZED DUMP TRUCK WITH PLOW AND SPREADER, AS SPECIFIED OR EQUAL (CONT'D)

COMPLIANCE
YES **NO**

OPTIONS (Cont'd)

1C. Central Hydraulic System (Electric Proportional Plow / Granular Controls Specifications) In Lieu Of Manual Controls (Cont'd)

Freedom 2.2 Spreader Control (Cont'd)

- Controller shall offer remote pause, unload mode, liquid float input, test speed, And on-screen error with alarms and message reporting.

- Sensor short detection with message and alarm.
- System must have 2 auxiliary output channels available.
- AVL data transfer is available with an additional modem.
- System shall offer spinner configurable mph shut off, storm totals on screen or With USB.
- Operator screen offers knobs or touch screen to control granular and liquid outputs.
- There shall be 9 independently programmable feeder outputs channels for actuate lbs. per mile output.
- The spinner shall also offer 9 programmable speeds for the spinner.
- System will maintain up to 4 different granular material types.
- There shall be an integrated blast mode with instant off to stop output if necessary.
- Blast must be programmable for flow rate and material distance.
- Unit shall provide an unload mode at speeds of up to 5 mph.

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Adopted on: November 17, 2021

Official Resolution # 2021015991
A standby (pass) mode shall be provided to allow for momentary interrupt

Of the spreader without changing the feeder/spinner/liquid output.

All programing and calibration shall be accomplished using the touch Screen of the controller.

Detachable key board for programming is **NOT ACCEPTABLE**

Modular Granular and Liquid Valve

The central hydraulic valve system shall be a mobile design to withstand exposure To de-icing chemicals and severe weather conditions.

ITEM # 1 – MODEL YEAR 2023 WESTERN STAR 49X SF SPECIALIZED DUMP TRUCK WITH PLOW AND SPREADER, AS SPECIFIED OR EQUAL (CONT'D)

COMPLIANCE
YES **NO**

OPTIONS (Cont'd)

1C. Central Hydraulic System (Electric Proportional Plow / Granular Controls Specifications) In Lieu Of Manual Controls (Cont'd)

Modular Granular and Liquid Valve (Cont'd)

System shall provide hydraulic fluid to operate the dump body hoist, front plow, And granular spreader system.

Hydraulic system can run all hydraulic functions simultaneously without inhibiting The action of the others.

Valve sections shall be of cast iron, horizontally stackable, and serviceable without Disassembly.

Directional control valves shall be pre-compensated, proportional, and load Independent.

Valve system shall be closed center for variable displacement pump.

Valve sections must be adjustable for pressures up to 5000psi and flow ratings Up to 40 GPM. Each valve must be laminar flow design for minimal pressure drop. Where required each section must be able to limit the operating speed for the implement.

Each directional valve section must have a built-in check valve prevents the oil From flowing via the pressure adjustment spool to tank.

There shall be main pressure relieve set at 2400psi to protect against system Over-pressurization.

Hoist section must be a PVG 100, 40 GPM 4-way section for double acting hoist With flow control.

- Relief and flow control.
- The hydraulic system shall be pressure and flow tested before the installation.
- Installing dealer must be certified to perform warranty repairs and periodic Maintenance on hydraulic valve sections.
- The spreader manifold must be constructed of 6061 anodized aluminum.

ITEM # 1 – MODEL YEAR 2023 WESTERN STAR 49X SF SPECIALIZED DUMP TRUCK WITH PLOW AND SPREADER, AS SPECIFIED OR EQUAL (CONT'D)

COMPLIANCE
YES **NO**

OPTIONS (Cont'd)

1C. Central Hydraulic System (Electric Proportional Plow / Granular Controls Specifications) In Lieu Of Manual Controls (Cont'd)

Modular Granular and Liquid Valve (Cont'd)

Spreader manifold must have an adjustable pressure of up to 3500psi with multiple flow, Pressure, performance, and function configurations.

Each function will be equipped with screw adjustable manual overrides protected By jacketed debris covers.

The spreader manifold can operate in either open center (fixed displacement) or Closed center (variable displacement) hydraulic circuits.

The auger / conveyor must be rated at 15 GPM and features a cartridge valve design for Precision spreading.

The spinner valve must provide 10 GPM and also feature a cartridge design Valve with manual override.

Pre-wet or anti-ice implements are also available as a 10 GPM hydraulic circuits If necessary.

These functions are proportional controlled, pulse width modulated, pressure and flow Compensated, with heavy duty 12vdc coils.

Spreader control “outside the cab” harnessing shall meet ip 68 standards.

Connections must be Nema x6 standards for dust protection.

Outside the cab connections shall be rated as Nema “x8” – protected against the Effects of permanent submersion in water as well as able to show no corrosion After 500 hours in salt spray.

- The entire hydraulic system shall be completely serviceable without removing From the enclosure or disassembling sections.
- The electronics and hydraulics shall be manufactured by the same company.
- The hydraulic system shall be pressure and flow tested before the installation process.
- The modular spreader valve manifold will be mounted in a weather resistant enclosure.

ITEM # 1 – MODEL YEAR 2023 WESTERN STAR 49X SF SPECIALIZED DUMP TRUCK WITH PLOW AND SPREADER, AS SPECIFIED OR EQUAL (CONT'D)

COMPLIANCE
YES **NO**

OPTIONS (Cont'd)

1C. Central Hydraulic System (Electric Proportional Plow / Granular Controls Specifications) In Lieu Of Manual Controls (Cont'd)

Modular Granular and Liquid Valve (Cont'd)

- Enclosure shall be vented to reduce moisture and finished with black powder coat Or stainless steel.

Specifications for Patrol Wing - Wing Post

- Front wing post shall be removable for summer operation

- The front hitch shall be constructed so that the wing post mount will be able to slide in An out to allow the tilt hood to move forward without obstruction for maintenance and Daily fluid checks.

- The front wing post slide function will be accomplished using a hydraulic cylinder Controlled by an in-cab push button and driven by an independent electric hydraulic Pump

Front Hitch

- The plow lift hinge shall be flame cut from 3/4" steel plate and shall have a full plate Gusset at the top.

- The plow lift cylinder shall be 4" x 10" double acting and shall have O-ring seals.

- QCP hitch with 2" tapered pin;

- There shall be a 10-gauge break formed bumper extension left side.

Front Post

- There shall be provisions for a minimum of 8" of float for the front of the wing.

The cylinder shall have O-ring seals and wipers.

There shall be a 1-1/4" x 12" wing slide to wing hinge pin and a 1-1/4" wing Hinge to wing bolt.

Arm Wing

Enables the chassis hood to open for maintenance and regular fluid checks.

Trip Wing Hinge

The wing shall be attached to the front wing post with a trip hinge.

The hinge shall be designed to allow the wing to trip and reset automatically

ITEM # 1 – MODEL YEAR 2023 WESTERN STAR 49X SF SPECIALIZED DUMP TRUCK WITH PLOW AND SPREADER, AS SPECIFIED OR EQUAL (CONT'D)

COMPLIANCE
YES **NO**

OPTIONS (Cont'd)

1C. Central Hydraulic System (Electric Proportional Plow / Granular Controls Specifications) In Lieu Of Manual Controls (Cont'd)

Trip Wing Hinge (Cont'd)

When hitting an obstruction.

The reset shall be with a rubber compression not with coil spring.

The hinge shall have two offset hinges to lift the wing as it trips.

Side Wing Moldboard

The wing shall be designed for the right side of the truck and shall be heavy duty.

Wing shall have an overall length of 132" and shall have a 120" x 8" 2' cutting edge.

The nose height shall be 32" and the discharge height shall be 39.2"

The cutting edge backer shall be 4" x 6" x 5/8" with gussets and shall be punched to Accept 8" or 3" x 3" x 12" punch cutting edge.

Welded to this backer shall be a minimum of five (5) 3/8" ribs

The leader shall be a minimum of 1" plate steel and shall have two (2) holes to accept A 1 1/4" wing bolt

Sliding post shall be as follows:

- Steel support sliding pivot weldment when in operation the Tubes will run from frame rail to frame rail
- Two (2) 1" quick release hitch pins in easy to reach location to lock the pivot

Weldment into place, during operation mode
 Introduced on: November 17, 2021
 Adopted by: _____
 Official Resolution#: 2021001590

- Hydraulic cylinder mounted to the hitch to allow the pivot point to slide Out 12” and allow the hood to open for maintenance
- Slide cylinder will be actuated using an electric hydraulic pump unit mounted in A stainless steel protective box in the frame rails of the chassis behind the cab
- 3” x 12” toe cylinder to allow front edge of plow to raise 12” off the ground

There shall be several places longitudinally at the back of the wing to allow the push Arms to be attached at proper angles.

The steel on the side wing will be sandblasted and primed. The plow shall be painted Orange on the front and black on the back.

ITEM # 1 – MODEL YEAR 2023 WESTERN STAR 49X SF SPECIALIZED DUMP TRUCK WITH PLOW AND SPREADER, AS SPECIFIED OR EQUAL (CONT'D)

COMPLIANCE
YES **NO**

OPTIONS (Cont'd)

1C. Central Hydraulic System (Electric Proportional Plow / Granular Controls Specifications) In Lieu Of Manual Controls (Cont'd)

Specifications for Patrol Wing (Cont'd)

Rear Wing Post Mount

The rear post wind mount will be removable for summer paving operation using a bolt On steel plate

The rear post mount shall be as follows:

- ½” plate permanent mounted weldment bolted to the frame with a cross member Under the frame to support channel on driver’s side. The frame will not be mounted To the lift axle cross member
- Removable forward portion rear ½” plate mounting weldment bolted to the Permanent section support to allow to forward mount to be removed during the summer
- 4” round torque arm with dampening spring to support rear pf plow board

1D. Paint for Dump Body

Paint specified dump body in a single stage paint a single color (i.e. School bus Yellow or other paint color from color chart)

1E. Road Department Paint Color Scheme

School bus yellow from the bottom of the windows down, Bahama Blue from the bottom of the windows up to and including cab roof and Back, on hood from bottom of windshield to a pont on the hood to make A “v” and match the road department fleet.

Shall be base coat clear coat

(Note: not all vehicles will be painted this way)

1F. Spreader Leg Stands

Main channels to be constructed of 2" x 6" x 7ga tubing

Galvanized tubing is done to ASTM a123 grade 100 – 3.9 mil minimum thickness

Crossmembers to be 3" structural channel

Telescoping rear legs to be constructed of 3 1/2" x 3 1/2" x 3/16" tubing

Adjustable front legs to pivot, constructed of 4" x 4" x 3/16" tubing

ITEM # 1 – MODEL YEAR 2023 WESTERN STAR 49X SF SPECIALIZED DUMP TRUCK WITH PLOW AND SPREADER, AS SPECIFIED OR EQUAL (CONT'D)

COMPLIANCE
YES **NO**

OPTIONS (Cont'd)

1F. Spreader Leg Stands (Cont'd)

4" adjustable steel front roller wheels

Body guide wheels front and rear of stand

1G. One-Way Plow with QCP

The one-way plow shall be designed to be heavy duty and shall be of a high Speed design.

It shall have a clearing path of 9' with an 11' 3" cutting edge length including The nose shoe.

The cutting edge shall be 132" x 8" x 2" and shall be replaceable.

The plow shall have a nose height of 29" and a discharge height of 55".

The moldboard shall be manufactured with a 2" x 2" x 1/4" angle leader welded To the 5 - 3/8" ribs and the steel nose plate.

The bottom cutting edge backer shall be 4" x 6" x 5/8" angle with gussets.

This angle shall be punched to allow the use of both 8" and 3"-3"-12" punched Cutting edges.

There shall be a 3" x 3" angle mid-way of the ribs from the discharge end to the Nose end.

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Adopted on: November 17, 2021
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MOTOR VEHICLES: TRIAXLE DUMP AND TRACTOR TRUCKS

- The moldboard shall be roll formed of 10 gauge steel. ☒
- The moldboard shall pin to the push frame with 3 Au≡ shaped connectors. ☒
- Two of the connectors shall have a heavy duty coil spring to allow the moldboard To trip and assist in absorbing road shock. ☒
- The push frame shall have a 4" x 6" x 5/8" plated angle front with two (2) 4" x 4" x 3/8" tubular steel push arms and there shall be three diagonal Braces with in the push arms. ☒
- There shall be a safety chain to prevent the moldboard from tipping over when Adjuster pin is removed. ☒
- The plow shall have two adjustable push frame shoes and two moldboard shoes. ☒

✓ **ITEM # 1 – MODEL YEAR 2023 WESTERN STAR 49X SF SPECIALIZED DUMP TRUCK WITH PLOW AND SPREADER, AS SPECIFIED OR EQUAL (CONT'D)**

COMPLIANCE
YES NO

OPTIONS (Cont'd)

✓ **1G. One-Way Plow with QCP (Cont'd)**

- The plow shall be manufactured to accept carbide edges and adjust to 55 degrees To 60 degrees attack angle. ☒
- The entire steel structure will be sandblasted and primed. The plow shall be Painted orange on the front and black on the back. ☒
- Plow shall have QCP loop installed with 2" diameter loop ☒

✓ **1H. Diagnostic Tools / Test Equipment**

Cummins Quickserv Unlimited Service plan, with renewals, shall be provided at no cost to the county for a period of five (5) years from the acceptance of the equipment

1. Successful bidder shall be required to supply between one (1) and three (3) Complete sets of testing/diagnostic/programming equipment (i.e. Laptop, Software, cabling, and adapters) and special tools required to perform the Full range of diagnostic and maintenance actions necessary to maintain Vehicle operability. This equipment will cover the vehicle chassis, engine, Transmission, brakes, hydraulics, and all additional equipment (if applicable) ☒
 2. All laptop computers will be of the newest available technology and have sufficient storage and memory to operate all required software ☒
 3. Provide a list of all test/diagnostic/programming equipment and special tools being supplied at the time of bid ☒
 4. All software installations and activations will be completed by the successful bidder at no cost to the county ☒
 5. All software updates and renewal will be provided at no cost to the county ☒
- Introduced on: November 17, 2021
Adopted for a period of five (5) years from the acceptance of the equipment ☒
Official Resolution#: 2021001590

- 6. All technical issues relating to test/diagnostic/programming equipment and special tools shall be resolved by the successful bidder at no cost to the county for a period of five (5) years from the acceptance of the equipment
- 7. Training shall be provided on all items in this section at a specified county location

✓ 1I. Two-Way Radio Power and Wiring Requirements for New Vehicles

For the purpose of installing two-way radios into new county vehicles and equipment, The following power and wiring components shall be included:

- #12 AWG red wire connected to 12vdc battery source rated at 20 amps
- #12 AWG black wire connected to chassis ground
- #16 AWG yellow wire connected to 12vdc ignition sense rated at 5 amps

Wires shall be encased in plastic wire loom and routed from their source into the Cab of the vehicle and secured in the vicinity of the operator. Wiring harness shall be Clearly labeled "two-way radio". Wires shall be unterminated. 12vdc sources Shall be protected from making contact with grounded metal surfaces

✓ ITEM # 1 – MODEL YEAR 2023 WESTERN STAR 49X SF SPECIALIZED DUMP TRUCK WITH PLOW AND SPREADER, AS SPECIFIED OR EQUAL (CONT'D)

COMPLIANCE
YES NO

OPTIONS (Cont'd)

✓ 1J. Installation of County Supplied Two Way Radio and Accessories

Install is to include but not limited to antenna cable, mounts, speakers, brackets, etc. For the purpose of installing two-way radios into new county vehicles and equipment, The following power and wiring components shall be included:

1. #12 awg red wire connected to 12vdc battery source rated at 20 amps.
2. #12 awg black wire connected to chassis ground.
3. #16 awg yellow wire connected to 12vdc ignition sense rated at 5 amps.

These wires shall be encased in plastic wire loom and routed from their source into The cab of the vehicle. The wiring harness shall be clearly labeled "two-way radio".

The 12vdc sources shall be protected from making contact with grounded metal surfaces.

✓ 1K. Technical Support

Technical support is to be provided by factory authorized technical representatives and Is to be the original equipment manufacturer's industry standard technical presentation In a classroom setting. The support provided shall be at the journeyman/equipment technician Level and should address limited theory, fault diagnosis and repair pertaining specifically to the equipment supplied under this specification.

Technical support may be requested in the following areas:

- Engine (cooling, fuel, ignition, lubrication systems) – 1 day at each location.
- Transmission – 1 day at each location
- Electrical – 1 day at each location

- Brakes – 1 day at each location
- Hydraulic system (dump body, spreader, snow plow) – 1 day at each location
- Upfitter (dump body, sweeper, etc.) – 1 day at each location

A technical representative(s) shall be made available for a total of 180 training/support Hours (anticipated to be scheduled in six (6) hour blocks). Shorter training days will be Allowed only with consent of vehicle services. The total training hours will be required To be provided and no additional compensation will be considered. The actual time to be Spent on each area will be by mutual agreement of the vehicle services department and The successful bidder.

For the purposes of determining materials and other training costs, class size is Anticipated to be comprised of six (6) to ten (10) vehicle services department personnel. Actual class size will be determined by the vehicle services department at the time the classes are scheduled.

ITEM # 1 – MODEL YEAR 2023 WESTERN STAR 49X SF SPECIALIZED DUMP TRUCK WITH PLOW AND SPREADER, AS SPECIFIED OR EQUAL (CONT'D)

COMPLIANCE
YES **NO**

OPTIONS (Cont'd)

1K. Technical Support (Cont'd)

Before the training is scheduled, vehicle services and the contractor will agree on the Scope of the training, and the type and quantity of manuals, etc. That are necessary for Proper coverage.

Technical support for vehicle services may be provided at the following fleet Maintenance facility location as scheduled by a vehicle services department Representative:

- Toms River, 152 Chestnut Street, Toms River, N.J. 08753 (two (2) sessions will be provided at this location. One beginning at 7 am and another beginning at 1:30 pm)
- Manahawkin, 379 Haywood Road, Bldg. 109, Manahawkin, N.J. 08050

Technical support for other departments will be held at a location within Ocean County. The requesting department will notify the successful bidder of The location. Training at the successful bidder's site, rather than the designated Locations, will be by mutual consent only. Technical support will be requested And scheduled on an as needed basis up to but not exceeding the 180 hours total During a period not to exceed twelve (12) months from the date of placing the Last unit in service.

ITEM #2 – MODEL YEAR 2023, OR NEWER, SPECIALIZED WESTERN STAR 49X TRACTOR, AS SPECIFIED, OR EQUAL

Manufacturer/Model: Western Star 49X SF

Engine: Cummins X15

Transmission: Allison 4700 RDS

Warranty: 1 Year Basic and Extended Warranty Per Specs

Delivery, A.R.O.: 300 Days

	<u>COMPLIANCE</u>	
	<u>YES</u>	<u>NO</u>
<u>MODEL</u>		
Set Forward Axle	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Lh Primary Steering Location	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<u>GENERAL</u>		
Maximum 8% Expected Grade	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3 Axle Tractor	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Front Axle 16,000 Lbs.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Rear Axle 46,000 Lbs.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Registered GVWR 80,000 Lbs.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Introduced on: November 17, 2021		
Adopted on: November 17, 2021		
Official Resolution#: 2021001590		

ENGINE

Cummins X15 Performance Series	<input checked="" type="checkbox"/>	<input type="checkbox"/>
14.9 L 912 Cid Minimum 525 HP @ 1900 rpm	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Gov 1900 Rpm, And 1850 Lb.-Ft. Torque @ 1000 rpm	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Must Be In Line 6 Cylinder of Wet Sleeve Design, Utilizing Hardened Cylinder Liners for Durability, And Electronics for Simple Service And Diagnosis When Needed	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Minimum Displacement Shall Be 14.9 Liters	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Engine Must Comply With Latest Federal Mandate for Diesel Emissions	<input checked="" type="checkbox"/>	<input type="checkbox"/>

ITEM #2 – MODEL YEAR 2023, OR NEWER, SPECIALIZED WESTERN STAR 49X TRACTOR, AS SPECIFIED, OR EQUAL (CONT'D)

ENGINE (Cont'd)

	<u>COMPLIANCE</u>	
	<u>YES</u>	<u>NO</u>
Should An Alternate Power Plant Be Offered, The Bidder Shall Provide All Necessary Technical Data To Show Proof Of Equality, Including Maintenance Schedules	<input checked="" type="checkbox"/>	<input type="checkbox"/>

ENGINE EQUIPMENT

Engine Shall Have Latest 50 State Clean Idle Diesel Emission Certification	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Oil Check and Fill: Engine Mounted	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Air Intake: Side of Hood Air Intake with Engine Mounted High Capacity Air Cleaner and Passive Precleaner Integrated Into Hood	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Alternator: 200 Amp 28si with Remote Battery Volt Sense	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Batteries: Four (4) 12-Volt 740rc Maintenance-Free 4000 CCA	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Stack Battery Box with Aluminum Cover: Frame Mounted Right Side Aft Of Cab	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Positive Load Disconnect Control Switch Mounted Outboard Of Driver Seat	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Remote Jump Start Studs Mounted On Frame Next To Starter	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Silicone Heater/Radiator Hoses Where Possible	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Introduced on: November 17, 2021		
Adopted on: November 17, 2021		
Official Resolution#: 2021001590		

MOTOR VEHICLES: TRIAXLE DUMP AND TRACTOR TRUCKS

Compressor: Cummins 18.7 CFM with Internal Safety Valve	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Engine Protection: Electronic Engine-Integral Warning System with Shut Down Function	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Engine Brake: Cummins Intebrake Compression Brake With On Off Dash Switch and Low, Med, and High Retardation Switch	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Exhaust: Single Right-Hand Under Cab ATD with Bright Finish Upper 11' Dual Curved Vertical Stacks and Elbows Cab Mounted LH & RH	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Exhaust Shields: Stainless Steel	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Fan Drive: Electronically Controlled Variable Speed Viscous Automatic Fan Control with Dash Switch and Indicator Light	<input checked="" type="checkbox"/>	<input type="checkbox"/>
13 Gallon Diesel Exhaust Fluid Tank	<input checked="" type="checkbox"/>	<input type="checkbox"/>

ITEM #2 – MODEL YEAR 2023, OR NEWER, SPECIALIZED WESTERN STAR 49X TRACTOR, AS SPECIFIED, OR EQUAL (CONT'D)

	<u>COMPLIANCE</u>	
	<u>YES</u>	<u>NO</u>
<u>ENGINE EQUIPMENT (Cont'd)</u>		
Non-Polished Aluminum Cover for DEF Tank	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Oil Filter: Full-Flow	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Radiator: 1400 Square Inch Server Service Assembly Bolted To Engine	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Radiator Drain Valve	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Radiator Protection Package	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2 Piece Fan Shroud and Rear Rock Guard	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Ethylene Glycol Pre-Charged SCA Heavy Duty Coolant-34F	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Coolant Houses: Silicone Heater, Radiator, Where Possible	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Hose Clamps: Constant Tension for Coolant Hoses and Air Intake System	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Engine Heather: Phillips 1500w/115v	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Chrome Heater Receptacle: Mounted Under Driver's Door	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Cast Iron Front and Rear Engine Supports	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Introduced on: November 17, 2021 State of Delco 12v 90amp 1100CP Official Resolution#: 2021001590	<input checked="" type="checkbox"/>	<input type="checkbox"/>

TRANSMISSION AND EQUIPMENT

Allison RDS 4700 Automatic Transmission with PTO Provision	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Programming For Max Speed of 70 Mph	<input checked="" type="checkbox"/>	<input type="checkbox"/>
S1 Performance Primary Shift Schedule	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1900 Rpm Primary Mode Shift Speed	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Disable-Load Based Shift Schedule	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Transmission Prognostics-Enabled	<input checked="" type="checkbox"/>	<input type="checkbox"/>
PTO Mounting LH Side Of Main Transmission	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Water to Oil Transmission Cooler	<input checked="" type="checkbox"/>	<input type="checkbox"/>

✓ **ITEM #2 – MODEL YEAR 2023, OR NEWER, SPECIALIZED WESTERN STAR 49X TRACTOR, AS SPECIFIED, OR EQUAL (CONT'D)**

	<u>COMPLIANCE</u>	
	<u>YES</u>	<u>NO</u>
<u>TRANSMISSION AND EQUIPMENT (Cont'd)</u>		
Magnetic Plugs, Engine Drain, Transmission Drain, Axle(S) Fill and Drain	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Push Button Shift Control	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Synthetic Transmission Fluid	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Transmission Oil Check And Fill With Electronic Oil Level Check	<input checked="" type="checkbox"/>	<input type="checkbox"/>

FRONT AXLE AND SUSPENSION

Detroit Da-F 16.0-5 16,000 Lb. 71.5 KPI/3.74 Drop Front Axle	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Meritor 16.5x6 Q+ Cast Spider Cam Front Brakes	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Brakes, Double Anchor, Fabricated Shoe	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Non-Asbestos Front Brake Lining Severe Service	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Conmet Cast Iron Front Brake Drums	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Front Brake Dust Shields	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Front Oil Seals	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Vented Front Hub Caps with window, Center and Side Plugs	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Adopted on: November 17, 2021
Official Resolution#: 2021001590

MOTOR VEHICLES: TRIAXLE DUMP AND TRACTOR TRUCKS

Synthetic 75W-90 Front Axles Lube	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Haldex Automatic Front Slack Adjusters with Stainless Steel Clevis Pins	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Bendix Single High Capacity 14.6-18k Steering Gear	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Power Steering Oil/Air Cooler	<input checked="" type="checkbox"/>	<input type="checkbox"/>
16,000# Taper Leaf Front Suspension	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4 Quart Power Steering Reservoir	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Threaded Springs Pins and Bushings	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Front Shock Absorbers	<input checked="" type="checkbox"/>	<input type="checkbox"/>

REAR AXLE AND SUSPENSION

Meritor Rt-46-164p Tandem Rear at 46,000 Lbs.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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ITEM #2 – MODEL YEAR 2023, OR NEWER, SPECIALIZED WESTERN STAR 49X TRACTOR, AS SPECIFIED, OR EQUAL (CONT'D)

COMPLIANCE
YES **NO**

REAR AXLE AND SUSPENSION (Cont'd)

Iron Rear Axle Carrier Housing	<input checked="" type="checkbox"/>	<input type="checkbox"/>
SPL250HD XL Dana Spicer Main Driveline with Half Round Yokes	<input checked="" type="checkbox"/>	<input type="checkbox"/>
SPL170 XL Dana Spicer Interaxle Driveline with Half Round Yokes	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Driver Control Differential Lockout Both Rear Axles, Indicator Light For Traction Device	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Synthetic 75W-90W All Axles	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Meritor 16.5 X 8.62" Cast Spider Cam Double Anchor Fabricated Shoes	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Non-Asbestos Rear Brake Lining	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Conmet Cast Iron Rear Brake Drums	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Rear Brake Dust Shields	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Haldex Automatic Rear Slack Adjusters W/Stainless Steel Clevis Pins	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Rear Oil Seals	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Bendix Eversure Longstroke 2-1/2 Drive Axle Spring Heavy Duty 30/36	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Introduced on: November 17, 2021
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Parking Brake Chambers	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Forward Of Axle Mounted Parking Chambers	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Standard Spindle Nuts For All Axles	<input checked="" type="checkbox"/>	<input type="checkbox"/>
46000# Tuftrac Suspension Rubber Isolated Pivit Points Parabolic Taper Leaf Springs Rubber Elastomer Bushings Maintenance Free	<input checked="" type="checkbox"/>	<input type="checkbox"/>
56" Axle Spacing	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Fore/Aft and Transverse Control Rods	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Rear Shock Absorbers – Two Axles	<input checked="" type="checkbox"/>	<input type="checkbox"/>

BRAKE SYSTEM EQUIPMENT

Wabco 4S/4M ABSs With Traction Control And Off-Road Switch	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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ITEM #2 – MODEL YEAR 2023, OR NEWER, SPECIALIZED WESTERN STAR 49X TRACTOR, AS SPECIFIED, OR EQUAL (CONT'D)

	<u>COMPLIANCE</u>	
	<u>YES</u>	<u>NO</u>

BRAKE SYSTEM EQUIPMENT (Cont'd)

Reinforced Nylon, Fabric Braid And Wire Braid Chassis Air Lines	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Bendix Brake Valves Where Possible	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Relay Valve With 5.5 Psi Crack Pressure	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Bendix Ad-9 Air Dryer- Frame Mounted	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Aluminum Air Brake Reservoirs	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Cab Blow Out Kit With Nozzle Inside LH Cab Entry Door	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Dv-2 Auto Drain Valve With Heat To Wet Tank, Pull Cables On All Other Air Reservoirs	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Hand Control Valve For Trailer Brakes	<input checked="" type="checkbox"/>	<input type="checkbox"/>

FRAME AND WHEELBASE

220" Wheelbase with 130" C/T	<input checked="" type="checkbox"/>	<input type="checkbox"/>
.51 X 3-.43 X 10-3/4 Steel Frame 120 KSI 26.81 Sm 3,216,626 RBM Single Channel	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Splayed Frame Rails Front of Chassis, No Inner or Outer Frame Reinforcements	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Introduced on: November 17, 2021
 Adopted on: November 17, 2021
 Official Resolution#: 2021001590

MOTOR VEHICLES: TRIAXLE DUMP AND TRACTOR TRUCKS

Phosphate Coated Frame Bolts	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Tapered Rear End of Frame For Plate Mount	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Heavy Duty Ductile Iron Engine Crossmember	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Heavy Duty Back Oftransmission Crossmember	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Heavy Duty Steel Midship #1 Crossmember	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Tractor Steel C-Channel Crossmember With 3.5" King Pin Clearance	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Standard Weight Rear Mounted Suspension Crossmember	<input checked="" type="checkbox"/>	<input type="checkbox"/>

CHASSIS EQUIPMENT

Connector Powered Through Ignition Mounted End Of Frame	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5/16" Bright Steel Bumper With Center Tow Pin	<input checked="" type="checkbox"/>	<input type="checkbox"/>

ITEM #2 – MODEL YEAR 2023, OR NEWER, SPECIALIZED WESTERN STAR 49X TRACTOR, AS SPECIFIED, OR EQUAL (CONT'D)

COMPLIANCE
YES **NO**

CHASSIS EQUIPMENT (Cont'd)

Fender Mounted Front Mud Flaps	<input checked="" type="checkbox"/>	<input type="checkbox"/>
LH Back Of Cab Access	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Fine Threaded Hex Chassis Fasteners Phosphate Coated	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Air Piping and Electrical Independently Clipped To Frame	<input checked="" type="checkbox"/>	<input type="checkbox"/>
7-Way Round Trailer Plug	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Holland Fw35 ILS Air Slide 5 th Wheel W/Left Hand Release	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Tractor Access Package Including Step Provided For Back Of Cab Access And Deck Plate Between Frame Rails. Step And Hand Rail On Driver's Side.

A Hydraulic Hose Hanger Shall Be Installed In A Way That Allows The Hydraulic Hoses To Be Safely Coiled While Not In Use. There Shall Be Dummy Hydraulic End Couplers Installed Where The End Fittings Of The Hydraulic Hoses Can Plug Into After Coiling; This Will Prevent Damage To The Fittings And Hoses As Well As Protect From Contamination.

<input checked="" type="checkbox"/>	<input type="checkbox"/>
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FUEL TANKS AND EQUIPMENT

Single LH 150 Gallon Fuel Tank With Steps W/60 Gallon RH Hydraulic Oil	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Adopted on: November 17, 2021
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LH Fuel Tank Mounted Forward	<input checked="" type="checkbox"/>	<input type="checkbox"/>
25" Diameter Fuel Tank(S)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Aluminum Fuel Tank Bracket(S)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Plain Aluminum Fuel Tank With Polished Stainless Bands	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Alliance Fuel/Water Separator With Heated Bowl And Indicator Light	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Inboard Fuel System	<input checked="" type="checkbox"/>	<input type="checkbox"/>
High Temperature Reinforced Nylon Fuel Hose	<input checked="" type="checkbox"/>	<input type="checkbox"/>
No Fuel Cooler	<input checked="" type="checkbox"/>	<input type="checkbox"/>
In Tank Fuel Lever Sender	<input checked="" type="checkbox"/>	<input type="checkbox"/>

ITEM #2 – MODEL YEAR 2023, OR NEWER, SPECIALIZED WESTERN STAR 49X TRACTOR, AS SPECIFIED, OR EQUAL (CONT'D)

	COMPLIANCE	
	<u>YES</u>	<u>NO</u>
<u>FRONT TIRES, HUBS, AND WHEELS</u>		
Michelin XZE 12R X 22.5 16 Ply	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Conmet Iron Front Hubs	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Accuride 28828 Inset 2 Hand 22.5 X 8.25 10-Hub Pilot Disc Front Wheels	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<u>REAR DRIVE TIRES, HUBS, AND WHEELS</u>		
Michelin Xds2 11r 22.5 16 Ply Rear Drive Axle Tires	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Conmet Iron Rear Hubs	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Accuride 28828 2 Hand 22.5 X 8.25 10 Hub Pilot Steel	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Steel Disc Rear Wheels	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Nylon Wheel Guards Front And Rear All Interfaces	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Wheel-Check High Visibility Green Loose Wheel Nut Indicator On All Wheels	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<u>CAB EXTERIOR</u>		
121" BBC Conventional Steel Reinforced Aluminum Cab	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<small>Introduced on: November 17, 2021</small>		
<small>Adopted on: November 17, 2021</small>		
<small>Official Resolution#: 2021001590</small>		

MOTOR VEHICLES: TRIAXLE DUMP AND TRACTOR TRUCKS

Galvanized E Coated Sealed Steel Door Construction	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Forged Steel Door Hinges With Steel Reinforced "A" Pillar	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Non-Removable Bug Screen Mounted Behind Grille	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Front Cab Mounts Outboard Of Frame For Stability Or When Taking Off And Applying Torque From Engine	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Bolt On Molded Fender Extensions	<input checked="" type="checkbox"/>	<input type="checkbox"/>
LH/RH Exterior Grab Handles With Rubber Insert And RH Interior Grab Handle Mounted To Reinforced 'A' Post	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Stainless Steel Radiator Mounted Grille	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Stainless Steel Radiator Shell/Hood Bezel With Tilt Hood Handle	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Molded Resin Hood With Isolated Hood Suspension Mounting System	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Hood Opening Strut Assist With safety Lock	<input checked="" type="checkbox"/>	<input type="checkbox"/>

ITEM #2 – MODEL YEAR 2023, OR NEWER, SPECIALIZED WESTERN STAR 49X TRACTOR, AS SPECIFIED, OR EQUAL (CONT'D)

COMPLIANCE
YES **NO**

CAB EXTERIOR (Cont'd)

Two (2) Hadley Sd-978 26" Air Horns	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Single Electric Horn	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Horn Shields	<input checked="" type="checkbox"/>	<input type="checkbox"/>
All Locks Keyed With the Same 6 Keys	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Dual Stage Headlights 45 Degree Pattern with Heated Lens System	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Aerodynamic Led Marker Lights In Stainless Steel Visor	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Individual LED Stop/Tail/Turn/Backup Lights Flush Mounted End Of Frame	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Led Rear Facing Turn Signal Lamps In Convex Mirror Lens In Addition To Standard Front Turn Signal Lamps	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Dualc-Bar Mirror System Bright Finish C-Bar, Heated Mirrors, Dual Remote, Turn Signal indicators, Stainless Steel Back Cover With Integral	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Door Mounted Mirrors, Switches on Door Panels	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Introduced on: November 17, 2021
Adopted on: November 17, 2021
Official Resolution#: 2021001590

102" Equipment Width	<input checked="" type="checkbox"/>	<input type="checkbox"/>
LH/RH Integral Convex Mirrors, Bright Finish Stainless Steel Exterior Sun Visor	<input checked="" type="checkbox"/>	<input type="checkbox"/>
LH/RH Heated Hood Mounted Side View Mirrors, Black Finish	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(3) Piece Solar Tinted Impact Resistant Polycarbonate Rear Window Configuration (1) 31x20" (2) 9x20"	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Tinted Door Glass LH & RH Tinted	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Lower Right Hand Door Window with Fresnel Lens	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Electric Door Window Regulators	<input checked="" type="checkbox"/>	<input type="checkbox"/>
One (1) Piece Tinted Roped In Full Grid Heated Windshield	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Two (2) Gallon Windshield Washer Reservoir With Fluid Level Indicator	<input checked="" type="checkbox"/>	<input type="checkbox"/>

ITEM #2 - MODEL YEAR 2023, OR NEWER, SPECIALIZED WESTERN STAR 49X TRACTOR, AS SPECIFIED, OR EQUAL (CONT'D)

	<u>COMPLIANCE</u>	
	<u>YES</u>	<u>NO</u>
<u>CAB INTERIOR</u>		
Gray Vinyl Premium Interior	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Black Mats With Added Floor Heat Noise Insulation	<input checked="" type="checkbox"/>	<input type="checkbox"/>
12 Volt Power Supply In Dash	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Forward Roof Mounted Console	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Storage Pockets Integrated Into Door Panel, Left And Right Doors	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Coat Hook(S) Cab Backwall	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Wraparound Wing Dash With Six (6) Digital Gauges In Driver Command Center And Up To Thirteen (13) Gauges On The Dash	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5 Lb Fire Extinguisher, Mounted	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Heater, Defroster, And Air Conditioner	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Brushless Blower Motor With Ten (10) Blower Speeds	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Adopted on: November 17, 2021
Official Resolution#: 2021001590

Standard Heater Plumbing With Ball Shutoff Valves At Supply Lines	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Heavy Duty Air Conditioner Compressor	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Radiator Mounted A/C Condenser	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Binary Control, R-134a	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Premium Cab Insulation with Additional Noise/Thermal Treatment	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Centralized Logic Controllers in Main Dash Electrical Panels, Houses Onboard ECU, and Ten (10) Programmable Modules	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Multiplexed Electrical System	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Premium Led Cab Lighting	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Color Coded And Laser Etched Wiring	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Door Activated Led Lights	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Cab Door Latches With Electric Door Locks	<input checked="" type="checkbox"/>	<input type="checkbox"/>

ITEM #2 = MODEL YEAR 2023, OR NEWER, SPECIALIZED WESTERN STAR 49X TRACTOR, AS SPECIFIED, OR EQUAL (CONT'D)

COMPLIANCE
YES **NO**

CAB INTERIOR (Cont'd)

Triangular Reflectors Without Flares	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Elite Heated High Back Air Suspension Driver And Passenger Seats With 3 Chamber Air Lumbar Support, Integrated Cushion Extension, Forward And Rear Cushion Tilt With Adjustable Shock Absorber Inboard And Outboard Driver And Passenger Arm Rests	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Grey Mordura Cloth Driver And Passenger Seat Cover	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3 Point Driver And Passenger Seat Belts With Seat Belt Retractor	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Adjustable Tilt Steering Column	<input checked="" type="checkbox"/>	<input type="checkbox"/>
18" Steering Wheel With Multi-Function Integrated Controls With Chrome Switch Bezels	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Driver/Passenger Interior Sun Visors	<input checked="" type="checkbox"/>	<input type="checkbox"/>

INSTRUMENT PANELS AND CONTROLS

Wrap Around Dash That Allows Up To 13 Gauges And Driver Command	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Introduced on: November 17, 2021 Compliance With Up To 6 Digital Gauges Official Resolution#: 2021001590	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Teak Accent Surround With Round Gauges	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Low Air Pressure Light And Buzzer	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Primary And Secondary Air Pressure Gauges	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Dash Mounted Air Restriction Gauge	<input checked="" type="checkbox"/>	<input type="checkbox"/>
87 Db To 112 Db Self-Adjusting Backup Alarm	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Electronic Stability Control	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Electronic Cruise Control	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Warning Light Bar Display Mounted In Teak Finish	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Instrument Cluster Gauges With Bright Bezels	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Data Star Driver Display	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Heavy Duty Onboard Diagnostic Interface Connector, 9 Pin, SAE J1587/ 1708/1936, Located Below Dash	<input checked="" type="checkbox"/>	<input type="checkbox"/>

ITEM #2 – MODEL YEAR 2023, OR NEWER, SPECIALIZED WESTERN STAR 49X TRACTOR, AS SPECIFIED, OR EQUAL (CONT'D)

	<u>COMPLIANCE</u>	
	<u>YES</u>	<u>NO</u>
<u>INSTRUMENT PANELS AND CONTROLS (Cont'd)</u>		
Electric Fuel Gauge	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Electrical Engine Coolant Temperature Gauge	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Transmission Oil Temperature Gauge	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Engine And Trip Hour Meters Integral Within Driver Display	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Engine Oil Pressure Gauge	<input checked="" type="checkbox"/>	<input type="checkbox"/>
AM/FM WB Stereo Radio with Bluetooth iPod Interface	<input checked="" type="checkbox"/>	<input type="checkbox"/>
USB and Auxiliary Inputs, J1939	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Two (2) Radio Speakers (Cab Only)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Headliner Multi-Band Antenna AM/FM/WB, Wi-Fi, Bluetooth/GNSS/GPS	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Electronic Outside Temperature Sensor, Engine Trip And PTO Hour Meter Display In Driver Command Center	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Adopted on: November 17, 2021
Official Resolution: 2021001990

PTO Switch Dash Mounted With Indicator Light	<input checked="" type="checkbox"/>	<input type="checkbox"/>
24" Wiper Blades	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Electric Windshield Wiper Motor With Delay	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Rotary Headlamp Switch, Marker Lights/Headlights Switch With Pull Out For Optional Road Lamps	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Switch Indicator Light and 10' Of Wire On Chassis LH Back Of Cab for Customer Furnished Utility Lights	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Two-Valve Parking Brake System	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Self-Cancelling Turn Signal Switch With Dimmer Head Light Flash Wash/ Wipe/ Intermittent	<input checked="" type="checkbox"/>	<input type="checkbox"/>

ACCESSORIES TO BE INCLUDED

One (1) Complete Set of Filters For Cab/Chassis, Drive Train And Upfit	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5 Gallons of Recommended-Use Hydraulic Fluid	<input checked="" type="checkbox"/>	<input type="checkbox"/>

One (1) spare front wheel and tire and one (1) spare rear wheel and tire

ITEM #2 – MODEL YEAR 2023, OR NEWER, SPECIALIZED WESTERN STAR 49X TRACTOR, AS SPECIFIED, OR EQUAL (CONT'D)

COMPLIANCE
YES **NO**

PAINT

Paint shall be designated on the Purchase Order and shall be one of the available options listed under Options.

UNDERCOATING

Entire Truck Chassis, Underside Of Cab And Underside Of Added Body, Oil Pan (Dump, Utility, Platform) To Be Coated With Tectyl 2423 Haps Free Black Which Is Low Voc, High Solids, Emulsion Corrosion Preventative Coating, or Equal

PROTECT CLASS-8 CAB RACKS

68" X 80" Deluxe Cab Rack With:

- Window
- Two Chain Hangers
- Two Chain Trays
- One Tool Box

6061 Al Bars In Window

Introduced on: November 17, 2021
Weld Residue Is Removed And Welds Polished
Official Resolution#: 2021001590

MOTOR VEHICLES: TRIAXLE DUMP AND TRACTOR TRUCKS

Two (2) 14-Position Locking Chain Hangers	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Locking Center-Mount Toolbox	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Extruded I-Beam Uprights And Legs Form The Support Structure	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Structural Panels Are 5052 Marine Grade Aluminum And Are Resistant To Corrosion especially Salt-Water Atmosphere	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Robust, Durable Continuous Welds Join The Structural Rib Aluminum Panel To Protech Hept-Tubes	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Stop/Tail/Turn, Oval LED	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<u>PROTECH STORAGE BOX</u>		
Aluminum Step Box with .105 Diamond Plate Aluminum Lid Mounted On Curbside Location	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Grip Strut Steps	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Neoprene Bulb Style Seals	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Stainless Steel Locking T-Latches	<input checked="" type="checkbox"/>	<input type="checkbox"/>

ITEM #2 – MODEL YEAR 2023, OR NEWER, SPECIALIZED WESTERN STAR 49X TRACTOR, AS SPECIFIED, OR EQUAL (CONT'D)

	<u>COMPLIANCE</u>	
	<u>YES</u>	<u>NO</u>
<u>PROTECH STORAGE BOX (Cont'd)</u>		
Internal Mounting Brackets	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Dimensions: 25”H X 28”D X 36”W	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Polished Aluminum (20-2460s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Polished Aluminum Lid	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Wide Mouth Opening (20-2460w)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Continuous Seam Mig Welds On Stress Panels, Such As The Box Floor	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Full-Length Stainless Steel Piano Hinges On Doors And Lids	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<u>INSTALLED EQUIPMENT BEHIND HEADACHE RACK</u>		
40" Chrome Plating Pogo Stick With D-Ring	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Airlines For Low Boy To Be Attached To Pogo Stick	<input checked="" type="checkbox"/>	<input type="checkbox"/>
7-Way Trailer Plug Also Attached To Pogo Stick	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Introduced on: November 17, 2021
 Adopted on: November 17, 2021
 Official Resolution#: 2021001590

MOTOR VEHICLES: TRIAXLE DUMP AND TRACTOR TRUCKS

All Lines Must Be Long Enough To Reach Low Boy Trailer

Bulkhead Bracket To Accommodate Airlines And 7 Way Trailer Plug For

Safe Storage When Trailer Is Not In Use

WHELEN TLI2F

12 Vdc Split Amber/White Surface Mount Lighthouse With 33 Scan-Lock

Flash Patterns:

- Two In The Grill
- Two On The Side
- Two In The Rear
- Lights To Operate Off Cab Switches

FRONT FENDERS

Quarter Front Fenders shall Be Made From Stainless Steel

Brackets shall Be Made Out Of Stainless Steel

REAR MUD FLAPS

Rear Mud Flap With Removable Bracket B83

ITEM #2 – MODEL YEAR 2023, OR NEWER, SPECIALIZED WESTERN STAR 49X TRACTOR, AS SPECIFIED, OR EQUAL (CONT'D)

COMPLIANCE
YES **NO**

HYDRAULIC SPECIFICATIONS FOR LOWBOY SPECIALTY EQUIPMENT TRAILER

See Options

WARRANTY FOR A 2022 WESTERN STAR 4900 SF OR APPROVED EQUAL

Western Star Severe Service

Basic Vehicle - 1 Year, 50,000 Miles

Battery - 1 Year, 50,000 Miles

Brightwork – 6 Months, Unlimited

Cab Corrosion/Perforation – 5 Years, Unlimited

Cab Structure – 1 Year, 100,000 Miles

Corrosion – 6 Months, Unlimited

Crossmembers – 3 Years, 300,000 Miles

Diesel Emission 2010 or Newer Year, 100,000 Miles

Adopted on: November 17, 2021
 Official Resolution#: 2021001590

MOTOR VEHICLES: TRIAXLE DUMP AND TRACTOR TRUCKS

GHG/17 (Medium Heavy Duty To Heavy Duty Trucks/Tractors) – 5 Years, 100,000 Miles	<input checked="" type="checkbox"/>	<input type="checkbox"/>
GHG14/17 Tire (File Direct) – 2 Years, 24,000 Miles	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Frame Rails – 3 Years, 300,000	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Front/Steer Axle: Detroit – 1 Year, Unlimited	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Front/Steer Axle 1 Year, 100,000 Miles	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Paint – 1 Year, 50,000 Miles	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Paint, Chassis – 6 Months, Unlimited	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Rear Axle: 1 Year, 100,000 Miles	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Towing For Warranty Repair – 5 Years Unlimited Mileage	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Cummins 5 Year 100,000 Mile Engine And ATS Warranty	<input checked="" type="checkbox"/>	<input type="checkbox"/>

ITEM #2 – MODEL YEAR 2023, OR NEWER, SPECIALIZED WESTERN STAR 49X TRACTOR, AS SPECIFIED, OR EQUAL (CONT'D)

	<u>COMPLIANCE</u>	
	<u>YES</u>	<u>NO</u>
<u>WARRANTY FOR A 2022 WESTERN STAR 4900 SF OR APPROVED EQUAL (Cont'd)</u>		
Cummins Protection Plan I:	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> • Internal Components, Major Engine Systems And Major Components • Registered Parts And Labor • Covers All These Components Including Mounting Hardware And Gaskets: Cylinder Head Assembly, Cylinder Block Assembly, Rocker Level Assembly, Ecm, Piston, Rings And Liners; Lube Oil Cooler Assembly, Front Gear Cover, Oil Pan, Connecting Rod Assembly, Front Gear Cover, Oil Pan, Connecting Rod Assembly, Lube Pump Assembly, Camshaft And Bushings; Cam Follower Assemblies, Crank Shaft Assemblies, Egr Cooler, Valve And Mixer; Fuel Injectors (Excluding Aftertreatment Injector), Turbo, Water Pump, Fuel Pump, Air Compressor, Select Engine Sensors And Flywheel. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Allison 5 Year Unlimited Miles Transmission Warranty	<input checked="" type="checkbox"/>	<input type="checkbox"/>

OPTIONS

2A. Road Department Options (Shall Consist of all of the following items)

Adopted on: November 17, 2021
Official Resolution#: 2021001590

Brake System Equipment

Air Connections at Back of Truck Glad Hands

Frame and Wheelbase

Square End of Frame with 58" Overhang

Front Tires, Hubs, and Wheels

Michelin Xze 11r X 24.5 16 Ply

Conmet Iron Front Hubs

Accuride 28827 Inset 2 Hand 24.5 X 8.25 10-Hub Pilot Disc Front Wheels Black

Rear Drive Tires, Hubs, and Wheels

Michelin Xds2 11r 24.5 16 Ply Rear Drive Axle Tires

Conmet Iron Rear Hubs

Accuride 28827 2 Hand 24.5 X 8.25 10 Hub Pilot Steel

Steel Disc Rear Wheels Black

Nylon Wheel Guards Front And Rear All Interfaces

✓ ITEM #2 – MODEL YEAR 2023, OR NEWER, SPECIALIZED WESTERN STAR 49X TRACTOR, AS SPECIFIED, OR EQUAL (CONT'D)

COMPLIANCE
YES **NO**

OPTIONS (Cont'd)

OPTIONS

✓ 2A. Road Department Options (Shall consist of all of the following items) (Cont'd)

Rear Drive Tires, Hubs, and Wheels (Cont'd)

Wheel-Check High Visibility Green Loose Wheel Nut Indicator On All Wheels

One (1) Spare Front and (1) Spare Rear Tire with Black Rims

Road Department Paint Color Scheme

School bus yellow from the bottom of the windows down, Bahama Blue from the bottom of the windows up to and including cab roof and Back, on hood from bottom of windshield to a point on the hood to make A "v" and match the road department fleet.

Shall be base coat clear coat

(Note: not all vehicles will be painted this way)

Whelen Led Liberty II Solo IX 54" Light Bar

Light Bar Led Liberty II Solo IX 54", All Modules Filled With Amber LED

- Alley Lights And Takedowns Are To Be White
- Whelen Controller
- Brackets For Mounting On Safety Back Rack
- Lightbar Flush With Top Of Cab

32 Inch 16,200 Lumen Led Clear Combination Spot-Flood Light Bar

Mounted On Top Crossmember Of The Headache Rack Facing Downward

Flash Patterns

Rated Ip67 For Dust And Water Resistance

Height 4.89"

Lead Length 52"

Lens Shape Round

ITEM #2 - MODEL YEAR 2023, OR NEWER, SPECIALIZED WESTERN STAR 49X TRACTOR, AS SPECIFIED, OR EQUAL (CONT'D)

COMPLIANCE
YES **NO**

OPTIONS (Cont'd)

2A. Road Department Options (Shall Consist of all of the following items) (Cont'd)

30 Ton Heavy-Duty Swivel Type Pintle Hook

Color: Black

Finish: Powder Coated

Material: Forged Steel

Pintle Hook Type: Swivel

Drawbar Eye Inner Diameter: 3.00

Maximum Gross Trailer Weight: 60000 Lb

Maximum Vertical Load: 12000 Lb

The Height Of The Inside Body Of The Pintle To Be 28 Inches

1 Inch Pull Plate Mounted On Rear Of Tractor For Hitch Glad Hands Mounted

On Side Of Frame Rail
Introduced on: November 17, 2021
 Adopted on: November 17, 2021
 Official Resolution#: 2021001590

7 Way Trailer Plug Round

Wide Load Sign

Mounted To Front Bumper With A Stainless Steel Hinge

Sign To Be 12" X 92"

Sign Backing To Be Made Of Alupalite Material

Reflective Material To Be Orafol Oralite 5600 5 Mil

Sign To Be Hinged In The Middle And Pinned To Curbside When Closed

Hydraulic Specifications for Lowboy Specialty Equipment Trailer

Fixed Displacement Pump With Hotshift PTO: The Hydraulic Pump

Shall Be A Parker P-20, Fixed Displacement With 2.0" Gear.

Minimum Pump Displacement Is 3.9 Cid Maximum Pressure 3000psi.

Pressure Line Shall Have An In-Line Relief To Protect Against Over Pressurization.

ITEM #2 – MODEL YEAR 2023, OR NEWER, SPECIALIZED WESTERN STAR 49X TRACTOR, AS SPECIFIED, OR EQUAL (CONT'D)

COMPLIANCE
YES **NO**

OPTIONS (Cont'd)

2A. Road Department Options (Shall Consist of all of the following items) (Cont'd)

Hydraulic Specifications for Lowboy Specialty Equipment Trailer (Cont'd)

Pump Shall Be Bi-Rotational Or Uni-Rotational Design.

Hydraulic Pump Must Be Self-Lubricating.

Pump Shaft Shall Have 1 Inch With 15 T-Spline.

Pump Shall Be PTO Mount With 2 Or 4 Bolt B-Flange.

Pump Must Mount Directly To A Chelsea "Hot Shift" PTO On Allison 3000 And 4000 Series Transmissions Without Requiring Bent Axis Or External Mounting Hardware

Pump Must Be Rear Ported.

Installer Must Be Authorized To Preform Warranty Repairs If Required. Such authorization shall be provided with bid submission.

Hydraulic Pump Shall Be A Parker Model P-20 Or Equal.

Introduced on: November 17, 2021
PTO To Be Activated By On/Off Switch In The Cab
Official Resolution#: 2021001590

Reservoir And Filter:

Reservoir Shall Be A Chassis Mounted With 60 Gallon Capacity.

The Return Line Shall Have A 25 Micron Return Filter Rated at 45-50 GPM Per Minute.

Hydraulic Quick Connects To Be Pioneer 4110-5 Male And Pioneer 4150-5 Female On Trailer End And 1" Quick Disconnects On Opposite End For Ease Of Storage

Hoses Are To Be 3/4 Inch, 11 Foot Long

2" Ball Valve Mounted On Hydraulic Tank For Suction Line Going To The Hydraulic Pump

All Hydraulic Hoses shall have a Blind Side Quick Disconnect Mounted on Headache Rack for Safe Storage

ITEM #2 – MODEL YEAR 2023, OR NEWER, SPECIALIZED WESTERN STAR 49X TRACTOR, AS SPECIFIED, OR EQUAL (CONT'D)

COMPLIANCE
YES **NO**

OPTIONS (Cont'd)

2B. Solid Waste Options (Shall consist of all of the following items)

Frame and Wheelbase

Tapered Rear End Of Frame For Plate Mount

Front Tires, Hubs, And Wheels

Michelin XZE 12r X 22.5 16 Ply

Conmet Iron Front Hubs

Accuride 28828 Inset 2 Hand 22.5 X 8.25 10-Hub Pilot Disc Front Wheels White

Rear Drive Tires, Hubs, And Wheels

Michelin Xds2 11r 22.5 16 Ply Rear Drive Axle Tires

Conmet Iron Rear Hubs

Accuride 28828 2 Hand 22.5 X 8.25 10 Hub Pilot Steel

Steel Disc Rear Wheels White

Introduced on: November 17, 2021
Nylon Wheel Guards Front And Rear All Interfaces
Adopted on: November 17, 2021

Official Resolution#: 2021001590

MOTOR VEHICLES: TRIAXLE DUMP AND TRACTOR TRUCKS

Wheel-Check High Visibility Green Loose Wheel Nut Indicator On All
Wheels

One (1) Spare Front and One (1) Spare Rear Tire with White Rims

Paint

Chassis to Be Painted Chestnut Elite. Paint Code: 00751963EY

Equipment to Be Installed Behind Headache Rack

150 Amp Master Tarp Disconnect Switch Inside Cab

Waterproof 150 Amp Reset Breaker In Battery Box

Tarp Cable Connector Model # 3BY23 or equal

One Tarp Cable Connector Mounted To Bulkhead For Tarp Cable Storage

Hydraulic Specifications For Walking Floor Trailer And Lowboy Specialty Equipment Trailer

Fixed Displacement Pump With Hot Shift PTO.

The Hydraulic Pump Shall Be A Parker P-350, Fixed Displacement With 2.0” Gear.

ITEM #2 – MODEL YEAR 2023, OR NEWER, SPECIALIZED WESTERN STAR 49X TRACTOR, AS SPECIFIED, OR EQUAL (CONT'D)

COMPLIANCE
YES **NO**

OPTIONS (Cont'd)

2B. Solid Waste Options (Shall consist of all of the following items) (Cont'd)

Hydraulic Specifications For Walking Floor Trailer And Lowboy Specialty Equipment Trailer (Cont'd)

Minimum Pump Displacement Is 5.11 Cid.

Pump Shall Supply 25 To 30 GPM's At 1200 Rpm's.

Pump Shall Be Bi-Rotational Or Uni-Rotational Design.

Hydraulic Pump Must Be Self-Lubricating.

Pump Shaft Shall Have 1 Inch With 15 T-Spline.

Pump Shall Be PTO Mount With 2 Or 4 Bolt B-Flange.

Pump Must Mount Directly To A Chelsea “Hot Shift” PTO On Allison 3000 And
4000 Series Transmissions Without Requiring Bent Axis Or External Mounting
Hardware

Pump Must Be Rear Ported.

Installer Must Be Authorized To Preform Warranty Repairs If Required.

Swapped authorization shall be included with bid submission.
Official Resolution#: 2021001590

Hydraulic Pump Shall Be A Parker Model P350 Or Equal.

Parker DVG 20 Proportional Valve Group:

The Central Hydraulic Valve System Shall Be A Mobile Design To Withstand Exposure To De-Icing Chemicals And Severe Weather Conditions.

The System Shall Provide Hydraulic Oil To Operate A Walking Floor Trailer And Lowboy Special Equipment Trailer.

The Spool Valve Sections Shall Be Of Cast Iron Construction, Horizontally Stackable And Serviceable Without Disassembly.

The Directional Control Valves Shall Be Cable Actuated.

Valve Sections Must Be Adjustable For Pressures Up To 3500 Psi And Flow Ratings Up To 25 To 30 GPM.

Where Required Each Section Must Be Able To Limit The Operating Pressure With Adjustable Relief.

Each Directional Valve Section Must Have A Built-In Check Valve Prevents The Oil From Flowing Back To Tank. Each Section Must Have A Manual

ITEM #2 – MODEL YEAR 2023, OR NEWER, SPECIALIZED WESTERN STAR 49X TRACTOR, AS SPECIFIED, OR EQUAL (CONT'D)

COMPLIANCE
YES **NO**

OPTIONS (Cont'd)

2B. Solid Waste Options (Shall consist of all of the following items) (Cont'd)

Parker DVG 20 Proportional Valve Group (Cont'd)

Over-Ride With Lever Included.

Valves Must Mount With All The Work Ports Facing Up.

There Shall Be Main Pressure Relieve Set At 3500psi To Protect Against System Over-Pressurization.

The Walking Floor Section Shall Supply 35 GPM At 2900psi.

The Lowboy Section Shall Supply For The Walking Floor Trailer 10 GPM At 1500psi

Parker Valve Actuation With Push Pull Cable Controls

Controls LeverS Shall Be Single Axis Cable Actuation With Return To Center For Safety.

There Shall Be A Combination Of Single Axis De-Tented Levers Stacked Together For Operation Of The Walking Floor And Lowboy Trailer.

Cable Core Shall Be Nylon Covered Stainless Steel Capable Of 100lb Of Push / Pull.

Introduced on: November 17, 2021
Adopted on: November 17, 2021
Official Resolution#: 2021001590

Cable To Valve Connection Shall Be Clevis Ends With Mounting Bracket And Single Nut Adjustment With Locking Nut.

The Controllers Shall Be Mounted In Cab Inside A Totally Enclosed Single Tower.

Reservoir And Filter

Reservoir Shall Be A Chassis Mounted With 60 Gallon Capacity.

The Return Line Shall Have A 25 Micron Return Filter Rated At 45-50 GPM Per Minute.

Hydraulic Quick Connects To Be G95111-1616 Gates And G95121-1616 Gates

Extra Set Mounted To Bulkead For Hose Storage

Hoses Are To Be 3/4 Inch, 11 Foot Long

All Hydraulic Hoses Are To Have A Blind Side Quick Disconnect Mounted On Headache Rach For Safe Storage

2" Ball Valve Mounted On Hydraulic Tank For Suction Line Going To The Hydrualic Pump

ITEM #2 – MODEL YEAR 2023, OR NEWER, SPECIALIZED WESTERN STAR 49X TRACTOR, AS SPECIFIED, OR EQUAL (CONT'D)

COMPLIANCE
YES **NO**

OPTIONS (Cont'd)

2B. Solid Waste Options (Shall consist of all of the following items) (Cont'd)

Reservoir And Filter

A Relief Valve Will Be Installed To Prevent System From Over Presurizing When Hoses Are Not Hooked Up

2C. Diagnostic Tools / Test Equipment

Cummins Quickserv Unlimited Service plan, with renewals, shall be provided at no cost to the county for a period of five (5) years from the acceptance of the equipment

1. Successful bidder shall be required to supply between one (1) and three (3) Complete sets of testing/diagnostic/programming equipment (i.e. Laptop, Software, cabling, and adapters) and special tools required to perform the Full range of diagnostic and maintenance actions necessary to maintain Vehicle operability. This equipment will cover the vehicle chassis, engine, Transmission, brakes, hydraulics, and all additional equipment (if applicable)

2. All laptop computers will be of the newest available technology and have sufficient storage and memory to operate all required software

3. Provide a list of all test/diagnostic/programming equipment and special tools being supplied at the time of bid

All software installations and activations will be completed by the successful Bidder at no cost to the county

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- 5. All software updates and renewal will be provided at no cost to the county for a period of five (5) years from the acceptance of the equipment
- 6. All technical issues relating to test/diagnostic/programming equipment and special tools shall be resolved by the successful bidder at no cost to the county for a period of five (5) years from the acceptance of the equipment
- 7. Training shall be provided on all items in this section at a specified county location

✓ 2D. Two-Way Radio Power and Wiring Requirements for New Vehicles

For the purpose of installing two-way radios into new county vehicles and equipment, The following power and wiring components shall be included:

- #12 AWG red wire connected to 12vdc battery source rated at 20 amps
- #12 AWG black wire connected to chassis ground
- #16 AWG yellow wire connected to 12vdc ignition sense rated at 5 amps

Wires shall be encased in plastic wire loom and routed from their source into the Cab of the vehicle and secured in the vicinity of the operator. Wiring harness shall be Clearly labeled "two-way radio". Wires shall be unterminated. 12vdc sources Shall be protected from making contact with grounded metal surfaces

✓ ITEM #2 – MODEL YEAR 2023, OR NEWER, SPECIALIZED WESTERN STAR 49X TRACTOR, AS SPECIFIED, OR EQUAL (CONT'D)

COMPLIANCE
YES **NO**

OPTIONS (Cont'd)

✓ 2E. Installation of County Supplied Two Way Radio and Accessories

Install is to include but not limited to antenna cable, mounts, speakers, brackets, etc.

For the purpose of installing two-way radios into new county vehicles and equipment, The following power and wiring components shall be included:

1. #12 awg red wire connected to 12vdc battery source rated at 20 amps.
2. #12 awg black wire connected to chassis ground.
3. #16 awg yellow wire connected to 12vdc ignition sense rated at 5 amps.

These wires shall be encased in plastic wire loom and routed from their source into The cab of the vehicle. The wiring harness shall be clearly labeled "two-way radio".

The 12vdc sources shall be protected from making contact with grounded metal surfaces.

✓ 2F. Technical Support

Technical support is to be provided by factory authorized technical representatives and Is to be the original equipment manufacturer's industry standard technical presentation In a classroom setting. The support provided shall be at the journeyman/equipment technician Level and should address limited theory, fault diagnosis and repair pertaining specifically

to the equipment supplied under this specification.

Technical support may be requested in the following areas:

- Engine (cooling, fuel, ignition, lubrication systems) – 1 day at each location.
- Transmission – 1 day at each location
- Electrical – 1 day at each location
- Brakes – 1 day at each location
- Hydraulic system (dump body, spreader, snow plow) – 1 day at each location
- Upfitter (dump body, sweeper, etc.) – 1 day at each location

A technical representative(s) shall be made available for a total of 180 training/support Hours (anticipated to be scheduled in six (6) hour blocks). Shorter training days will be Allowed only with consent of vehicle services. The total training hours will be required To be provided and no additional compensation will be considered. The actual time to be Spent on each area will be by mutual agreement of the vehicle services department and The successful bidder.

For the purposes of determining materials and other training costs, class size is Anticipated to be comprised of six (6) to ten (10) vehicle services department personnel. Actual class size will be determined by the vehicle services department at the time the classes are scheduled.

ITEM #2 – MODEL YEAR 2023, OR NEWER, SPECIALIZED WESTERN STAR 49X TRACTOR, AS SPECIFIED, OR EQUAL (CONT'D)

COMPLIANCE
YES **NO**

OPTIONS (Cont'd)

2F. Technical Support (Cont'd)

Before the training is scheduled, vehicle services and the contractor will agree on the Scope of the training, and the type and quantity of manuals, etc. That are necessary for Proper coverage.

Technical support for vehicle services may be provided at the following fleet Maintenance facility location as scheduled by a vehicle services department Representative:

- Toms River, 152 Chestnut Street, Toms River, N.J. 08753 (two (2) sessions will be provided at this location. One beginning at 7 am and another beginning at 1:30 pm)
- Manahawkin, 379 Haywood Road, Bldg. 109, Manahawkin, N.J. 08050

Technical support for other departments will be held at a location within Ocean County. The requesting department will notify the successful bidder of The location. Training at the successful bidder's site, rather than the designated Locations, will be by mutual consent only. Technical support will be requested And scheduled on an as needed basis up to but not exceeding the 180 hours total During a period not to exceed twelve (12) months from the date of placing the

Last unit in service

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