SPECIFICATION	
---------------	--

Page 1 of 3

037700 - Truck, 11K, 2WD, Regular Cab & Chassis, Diesel Engine, Automatic Transmission, Dual Rear Wheels

This Dual Rear Wheel Model, Chassis Only, Shall Be A Manufacturer's Standard Model Vehicle, Capable Of Carrying Two (2) Passengers. 11,000 Lb GVWR Minimum. Manufacturer's Rating Certified On Door. Chassis to accommodate A 9 Foot Minimum, Flatbed, Service, Shop, Foreman or Survey Body.

Note: " Refer to PCID 1075 for Delivery, and Warranty Requirements".

The following additional items shall be supplied

Air Bags : Shall be equipped with manufacturers standard air bags.

Air Conditioning : Shall be equipped with manufacturers standard air conditioning.

Alternator : Shall be manufacturers largest / heaviest duty available.

Daytime Running Lights : Shall be equipped with manufacturers standard Daytime Running Lights. (Aftermarket Acceptable)

Differential : Shall be equipped with manufacturers standard Limited Slip Differential. Ratio to be selected at time of order from manufacturer's standard available ratios.

DEF Tank : Shall be mounted to not interfere with body installation. Any relocation shall be done in a professional manner using new materials.

Engine : Shall be Manufacturer's highest available horsepower and torque rating, standard or optional diesel engine, to include, immersion inblock type engine heater For water cooled engines, with water-proof plug and flush mounted In front sheet metal to drivers side of vehicle, engine oil cooler, and largest available engine cooling capacity.

Exhaust : Shall be capable of being extended by the body up fitter to the outer most edge of the installed body.

Front Bumper : Shall be Chrome, Black, or Argent.

Fuel Tank : Manufacturer's highest capacity standard tank frame mounted (Tank filler positioned to ensure that filler nozzle can be set on automatic and nozzle will support itself, with unrestricted flow.)

Lubricants : Shall be synthetic where available, with drain plugs identified or painted red. (Engine oil excluded)

Mirrors : Shall be manufacturers standard heavy duty outside mirrors with convex mirror (aftermarket convex spot mirror acceptable) and extendable arms, driver and passenger sides. Shall be equipped with manufacturers standard manual day / night rearview mirror.

Paint : Manufacturer's standard safety or school bus yellow.

Seats: Shall be equipped with Vinyl 40/20/40 seats with center work console, Foam Padded with Seatbelts. (Cloth is Unacceptable)

Suspension : Shall be equipped with trailer and handling package, to include front stabilizer bar, heaviest available front and rear suspension, and heaviest available differential.

Tires : Truck and Body Company shall ensure that proper sized tires and wheels for GVWR are supplied. Tires shall be radial, OEM's most aggressive / severe duty tire available from manufacturer.

Transmission : Shall be automatic with largest available auxiliary oil cooler.

Windshield : Shall be equipped with manufacturers standard tinted windshield.

Windows and Locks : Shall be equipped with manufacturers standard manual windows and door locks.

The following equipment shall be supplied / installed

There shall be a step bar (Westin Part # 251335 or Equal) in Black, must be length of cab entry area on both sides. (Installed)

There shall be an ECCO Model 450 backup alarm, shock mounted. (Installed)

There shall be a seven-way trailer light receptacle, "Pin Type", securely mounted near rear trailer hitch area. Wired per EQN - 80A. Connections shall be sealed and water tight.

There shall be a 7 inch dome light with switch, Ref: Truck-Lite #80354, or approved equal. Installed centered, over the front seat, capable of operating with the Ignition off.

There shall be a warning light: Whelen Model R10HDPA with Deutsch connectors. Supplied and delivered in the cab.

There shall be an emergency triangle warning kit in each unit, in storage box and mounted in cab. EQN - 66A

There shall be a 5 LB. minimum ABC type fire extinguisher rechargeable with vehicle mount. Securely mounted in the cab for easy and quick access.

Page 2 of 3

There shall be a trailer hitch installed, as per EQN - 202B, the upper portion of hitch shall be painted with non-skid paint if extending to or outside body perimeter and is likely to be stepped on. (Tape is not acceptable.)

All the following shall be supplied and delivered in the cab. Buyers Products - Combo Ball Hitch W/ 2 inch Hard Chrome Ball BH8-2000, Pintle Mounting Plate PM-87, Bolt Kit 8520, Hitch Pin HP6253 WC. Or approved equal.

Safety

Unit shall be fitted with temporary mud flaps that shall remain intact.

The cab shall have conspicuity tape as Per EQN-127A.

Any area likely to be stepped on shall be covered with non-skid paint, tape is unacceptable.

All handrails, ladders, and step configurations shall be built for three points of contact.

Anti-slip paint is required on all handholds, for the entire length, (tape is unacceptable).

Options

Option : To be equipped with Four Wheel Drive

Option : To be equipped with Snow Plow Prep package

Option : To be equipped with Power windows, Power door locks, and Power / Heated mirrors with manual extendable arms.

<u>Option</u>: Road watch road/air temperature system. Located on the left front fender. Gauge to be neatly mounted in the dash within the drivers view or installed with control system integrated temperature display.

<u>Option</u>: Vaisala road/air temperature system. Located on the left front fender. Gauge to be neatly mounted in the dash within the drivers view or installed with control system integrated temperature display.

Option : Install FLOCS system as per EQN: 351A.

Option : Flatbed Body upfit, Specification 046900

Option : Service Body upfit, Specification 048900

Option : Shop Body upfit, Specification 039700

Option : Foreman Body upfit, Specification 050400

Option : Survey Body upfit, Specification 049700

Option : Statewide Radio:

<u>GPS Combo Radio Antenna:</u> There shall be a roof mount base with built-in GPS, PCTEL model GPPB-204-54-12-S1-M1 and an elevated feed antenna, PCTEL model BMUF7603. Assembly shall be mounted on a vendor supplied/installed stainless steel fender bracket. The fender bracket shall be mounted on the driver's side of the vehicle and it shall be mounted on the inside of the engine compartment with the base extending out over the top of the fender. Existing fender holes shall be utilized to accommodate mounting, with no holes drilled in the exterior fender surface. There shall be no sharp edges and it shall not interfere with the opening/closing of the hood. The antenna cable shall be routed to the floor area between the seats. It shall be properly secured and protected against heat/road splash. There shall be a minimum of 4 feet of antenna cable coiled at the base of the floor to allow for connection of a radio. Antenna shall be prewired with a MINI - UHF MALE connection. (No substitute, standardization).

<u>Power Distribution Center</u>: There shall be a 4-way power/ground distribution center located on the underside of the dash for connection of our state radio. The lugs shall be configured in the following manner: (1) lug shall be a 30 ampere constant hot circuit, (1) lug shall be a 10 ampere ignition controlled circuit. (2) lugs shall be chassis ground. All connections shall be enclosed in a weatherproof enclosure.

Option : Bidder must provide option pricing for "one" of the following.

Factory: Having unit bid painted PennDOT yellow. Reference DUPONT F9885 shade only. Unit shall be painted PennDOT yellow in lieu of the OEM's original color. Using the same process as with OEM paint.

Aftermarket: Having unit bid painted PennDOT yellow. Reference DUPONT F9885 shade only. All surfaces shall be properly cleaned and prepared prior to paint. Paint shall be the same quality as factory paint. To include all areas of the unit including interior.

	Page 3 <u> of 3</u>
Drawings:EQN-66ARevised 07-20-09sheet 1TRIANGLE STORAGE BOX ANEQN-80ARevised 11-12-09sheet 1WIRING DIAGRAMEQN-115Revised 07-03-12sheet 1GRILL MOUNTED WARNING LI127ARevised 01-02-09sheet 1CONSPICUITY TAPEEQN-202BRevised 11-03-06sheet 1HITCH: WEIGHT DISTRIBUTINGEQN-351ARevised 10-20-06sheet 1 & 2FAST LUBE OIL CHANGE SYS	IGHTS EQN-
Note : All up fitting shall be in accordance with the chassis manufacturers body builders	up fitter manual.
Installation Practices All lights shall meet all Federal and State regulations. All wire splices shall be insulated with heat shrink materials or removable connectors th All wires shall be securely fastened with no wires hanging or protruding where they are All junction boxes shall be located for easy accecability and shall not be blocked by any All electrical connections shall be treated with di-electric grease. All wiring shall be secured using "P" type clamps at intervels not to exceed 12" between All wires shall be in a protective covering and protected from chaffing, rubbing and getti Any alterations / relocation to fuel fill, DEF tank, exhaust, Etc. to allow installation of boc materials. Any place steel and aluminum contact each other Mylar or an approved equal shall be urubber is unacceptable. All vertical and horizontal seams of the body sides shall utilize full penetration welds in forth by the American Welding Society and sealed water tight to create one integral bod All corners shall be angled or rounded for safety.	exposed to the risk of damage. r means for access. In securment. Ing pulled or torn from external sources. dy shall be made in a professional manner using new used as a buffer. Laminate accordance with standard welding practices as set
All mounting procedures shall be in accordance with NTEA standards. The use of any of the following items or practices WILL NOT BE ACCEPTED. Non-steel fittings on hydraulic pressure lines. Excessive use of elbows on hydraulic lines. Use of thread tape on hydraulic fittings. Use of galvanized fittings or components on hydraulic system. Improper hydraulic line size. Use of high-pressure hose for hydraulic suction line. Scotchlok-type wire splices. Non-insulated wire splices. Improper hose or wire routing near exhaust, over-sharp edges or through holes without Improperly prepared, primed and painted surfaces. Non-fused electric circuits. Hydraulic circuits without pressure relief protection. Laminated Rubber	grommets, or sharp edges.
	Oct,16,2012 JF

	Page <u>1 of 3</u>
SPECIFICATION	
037710 - Truck, 11K, 2WD, Regular Cab & Chassis, Gasoline Engine, Aut	omatic Transmission, Dual Rear Wheels
This Dual Rear Wheel Model, Chassis Only, Shall Be A Manufacturer's Standar	rd Model Vehicle, Capable Of Carrying Two (2)
Passengers. 11,000 Lb GVWR Minimum. Manufacturer's Rating Certified On Doc	or. Chassis to accommodate A 9 Foot Minimum,
Flatbed, Service, Shop, Foreman or Surv	ey Body.

Note: " Refer to PCID 1075 for Delivery, and Warranty Requirements".

The following additional items shall be supplied

Air Bags : Shall be equipped with manufacturers standard air bags.

Air Conditioning : Shall be equipped with manufacturers standard air conditioning.

Alternator : Shall be manufacturers largest / heaviest duty available.

Daytime Running Lights : Shall be equipped with manufacturers standard Daytime Running Lights. (Aftermarket Acceptable)

Differential : Shall be equipped with manufacturers standard Limited Slip Differential. Ratio to be selected at time of order from manufacturer's standard available ratios.

Engine : Shall be Manufacturer's highest available horsepower and torque rating, standard or optional gasoline engine, to include, engine oil cooler , and largest available engine cooling capacity.

Exhaust : Shall be capable of being extended by the body up fitter to the outer most edge of the installed body.

Front Bumper : Shall be Chrome, Black, or Argent.

Fuel Tank : Manufacturer's highest capacity standard tank frame mounted (Tank filler positioned to ensure that filler nozzle can be set on automatic and nozzle will support itself, with unrestricted flow.)

Lubricants : Shall be synthetic where available, with drain plugs identified or painted red. (Engine oil excluded)

Mirrors : Shall be manufacturers standard heavy duty outside mirrors with convex mirror (aftermarket convex spot mirror acceptable) and extendable arms, driver and passenger sides. Shall be equipped with manufacturers standard manual day / night rearview mirror.

Paint : Manufacturer's standard safety or school bus yellow.

Seats: Shall be equipped with Vinyl 40/20/40 seats with center work console, Foam Padded with Seatbelts. (Cloth is Unacceptable)

Suspension : Shall be equipped with trailer and handling package, to include front stabilizer bar, heaviest available front and rear suspension, and heaviest available differential.

Tires : Truck and Body Company shall ensure that proper sized tires and wheels for GVWR are supplied. Tires shall be radial, OEM's most aggressive / severe duty tire available from manufacturer.

Transmission : Shall be automatic with largest available auxiliary oil cooler.

Windshield : Shall be equipped with manufacturers standard tinted windshield.

Windows and Locks : Shall be equipped with manufacturers standard manual windows and door locks

The following equipment shall be supplied / installed

There shall be a step bar (Westin Part # 251335 or Equal) in Black, must be length of cab entry area on both sides. (Installed)

There shall be an ECCO Model 450 backup alarm, shock mounted. (Installed)

There shall be a seven-way trailer light receptacle, "Pin Type", securely mounted near rear trailer hitch area. Wired per EQN - 80A. Connections shall be sealed and water tight.

There shall be a 7 inch dome light with switch, Ref: Truck-Lite #80354, or approved equal. Installed centered, over the front seat, capable of operating with the Ignition off.

There shall be a warning light: Whelen Model R10HDPA with Deutsch connectors. Supplied and delivered in the cab.

There shall be an emergency triangle warning kit in each unit, in storage box and mounted in cab. EQN - 66A

There shall be a 5 LB. minimum ABC type fire extinguisher rechargeable with vehicle mount. Securely mounted in the cab for easy and quick access.

Page 2 of 3

There shall be a trailer hitch installed, as per EQN - 202B, the upper portion of hitch shall be painted with non-skid paint if extending to or outside body perimeter and is likely to be stepped on. (Tape is not acceptable.)

All the following shall be supplied and delivered in the cab. Buyers Products - Combo Ball Hitch W/ 2 inch Hard Chrome Ball BH8-2000, Pintle Mounting Plate PM-87, Bolt Kit 8520, Hitch Pin HP6253 WC. Or approved equal.

Safety

Unit shall be fitted with temporary mud flaps that shall remain intact.

The cab shall have conspicuity tape as Per EQN-127A.

Any area likely to be stepped on shall be covered with non-skid paint, tape is unacceptable.

All handrails, ladders, and step configurations shall be built for three points of contact.

Anti-slip paint is required on all handholds, for the entire length, (tape is unacceptable).

Options

Option : To be equipped with Four Wheel Drive

Option : To be equipped with Snow Plow Prep package

Option : To be equipped with Power windows, Power door locks, and Power / Heated mirrors with manual extendable arms.

<u>Option</u>: Road Watch road/air temperature system. Located on the left front fender. Gauge to be neatly mounted in the dash within the drivers view or installed with control system integrated temperature display.

<u>Option</u>: Vaisala road/air temperature system. Located on the left front fender. Gauge to be neatly mounted in the dash within the drivers view or installed with control system integrated temperature display.

Option : Install FLOCS system as per EQN: 351A.

Option : Flatbed Body upfit, Specification 046900

Option : Service Body upfit, Specification 048900

Option : Shop Body upfit, Specification 039700

Option : Foreman Body upfit, Specification 050400

Option : Survey Body upfit, Specification 049700

Option : Statewide Radio:

<u>GPS Combo Radio Antenna:</u> There shall be a roof mount base with built-in GPS, PCTEL model GPPB-204-54-12-S1-M1 and an elevated feed antenna, PCTEL model BMUF7603. Assembly shall be mounted on a vendor supplied/installed stainless steel fender bracket. The fender bracket shall be mounted on the driver's side of the vehicle and it shall be mounted on the inside of the engine compartment with the base extending out over the top of the fender. Existing fender holes shall be utilized to accommodate mounting, with no holes drilled in the exterior fender surface. There shall be no sharp edges and it shall not interfere with the opening/closing of the hood. The antenna cable shall be routed to the floor area between the seats. It shall be properly secured and protected against heat/road splash. There shall be a minimum of 4 feet of antenna cable coiled at the base of the floor to allow for connection of a radio. Antenna shall be prewired with a MINI - UHF MALE connection. (No substitute, standardization).

<u>Power Distribution Center</u>: There shall be a 4-way power/ground distribution center located on the underside of the dash for connection of our state radio. The lugs shall be configured in the following manner: (1) lug shall be a 30 ampere constant hot circuit, (1) lug shall be a 10 ampere ignition controlled circuit. (2) lugs shall be chassis ground. All connections shall be enclosed in a weatherproof enclosure.

Option : Bidder must provide option pricing for "one" of the following.

Factory: Having unit bid painted PennDOT yellow. Reference DUPONT 6808 shade only. Unit shall be painted PennDOT yellow in lieu of the OEM's original color. Using the same process as with OEM paint.

Aftermarket: Having unit bid painted PennDOT yellow. Reference DUPONT 6808 shade only. All surfaces shall be properly cleaned and prepared prior to paint. Paint shall be the same quality as factory paint. To include all areas of the unit including interior.

							Page 3 <u> of 3</u>
Drawings:							
EQN-66A	Revised 0	7-20-09	sheet 1	TRIANGLE S	TORAGE BOX	AND BRACKET	
EQN-80A	Revised 1	1-12-09	sheet 1	WIRING DIA	GRAM		
EQN-127A	Revised 0	1-02-09	sheet 1	CONSPICUIT	Y TAPE		
EQN-202B	Revised 1	1-03-06	sheet 1	HITCH: WEIG	HT DISTRIBU	TING	
EQN-351A	Revised 1	0-20-06	sheet 1 & 2	2 FAST LUBE	OIL CHANGE	SYSTEM OVERVIEW AN	D PARTS LIST
Note : All up fittir	ng shall be in a	accordanc	e with the ch	assis manufact	urers body buil	ders up fitter manual.	
All wires shall be All junction boxes All electrical conr All wiring shall be All wires shall be Any alterations / materials. Any place steel a rubber is unacce All vertical and h forth by the Ame All corners shall	eet all Federal hall be insulate securley faste s shall be locat nections shall be secured using in a protective relocation to fu and aluminum of ptable. orizontal seam rican Welding be angled or ro	ed with he ened with ted for ea- be treated g "P" type e covering uel fill, DE contact ea- ns of the b Society al- pounded fo	eat shrink ma no wires har sy accecabili d with di-elec e clamps at ir g and protect F tank, exha ach other My body sides sh nd sealed wa or safety.	aterials or remov nging or protrudi ity and shall not tric grease. ntervels not to e ed from chaffing just, Etc. to allow vlar or an approv nall utilize full per ater tight to crea	ng where they be blocked by xceed 12" betv y, rubbing and v installation of red equal shall netration welds te one integral	getting pulled or torn from body shall be made in a p be used as a buffer. s in accordance with stand	damage.
All mounting proc The use of any of Non-steel fittings	cedures shall b	ng items o	ordance with or practices				
Excessive use of							
Use of thread tag			00.				
Use of galvanize	,	0	s on hydraulie	c system			
Improper hydrau	•	npononio	onnyaraan	y system.			
Use of high-pres		overaulie	suction line				
Scotchlok-type w		iyuraulic s	suction line.				
Non-insulated wi							
			ust over ehe	arn addee or thr		nout grommets, or sharp e	daes
				in eages or this	agit notes with	iour grommers, or sharp e	uyes.
Improperly prepa Non-fused electri		iu painteo	a sunaces.				
			protoction				
	without proces						
Hydraulic circuits	•	ure relief	protection.				

SPECIFICATION 038100 - Steel Dump Body Upfit For Use With a 17K Chassis

Reference: Heil Yardbird, Omaha Standard Eagle, Galion / Godwin 100, Crysteel E Tipper, or prior approved equal.

Note: " Refer to PCID 1075 for Delivery, Training, and Warranty Requirements".

Note : All up fitting shall be in accordance with the chassis manufacturers body builders up fitter manual.

Body Shall Include The Following Equipment:

Body - Installation:

It shall be the responsibility of the successful vendor to have the dump body mounted on the chassis(s). The installation shall be engineered and approved by the vehicle manufacturer and shall have no adverse affect upon the manufacturer's warranty. When any portion of the complete vehicle is to be installed by anybody other than the bidder or the chassis manufacturer, they shall indicate the name of the sub-contractor performing such installation and the location of their plants. The dump body dimensions shall cover the rear wheels. Any other applicable changes required to accommodate this type unit is the responsibility of the bidder.

Frame rails shall be prepared by cleaning, priming and final painting.

The body shall be attached to the truck chassis using four (4) U-bolts, or bolt thru, lock nuts, and appropriate shear plates as required to comply with manufacturer's standards.

Body Components:

Length of body shall be 9 Feet Minimum.

Capacity: 2 1/4 (approximate) cubic yards water level.

Side board pockets and tailgate height shall provide an additional carrying capacity.

The bulkhead shall be slotted, punched or checker-boarded to allow for visibility through the rear vehicle window.

There shall be a lever operated chute.

Body shall be fitted with a bed prop system, manufacture standard

Hoist cylinder shall have a lifting capacity of 9 tons. Minimum. Cylinder rod shall be chrome platted.

Hydraulic tank shall be a minimum of 20 Gallons working capacity. It is the responsibility of the vendor to insure all hydraulic functions can operate uninterrupted to include all plow, body, and spreader functions.

All points of movement such as lift arms, tailgate linkage, etc. shall be fitted with threaded grease fittings.

Upper telescopic cylinder pin shall have a remote grease fitting.

There shall be wheel chocks and holders per EQN-82. Holders can be mounted on the driver's side splash guards.

There shall be a ladder to access the dump bed on the drivers side. Shall have grab handles to provide three points of contact when entering the bed. Steps shall be Bustin aluminum No. NST4 full size, or Bustin 628 steel, or Ohio Grating or IKG Industries serrated swage lock, with end band. The outer step edge must be serrated in lieu of plain, smooth metal edge. All edges shall be banded (skirting) on the outer perimeter. Overlay is not acceptable. Grab handles shall be covered with non-skid paint (non-skid tape is unacceptable).

Tailgate shall have a height of 24 inches minimum. Shall be a double acting tailgate with offset hinges. Shall have two (2) "J" hooks welded to the tailgate for chain hangers. 1.25" diameter, greasable self-aligning top hinge pins with tapered end and with sufficient length for easy removal. Pins shall be affixed with chains to prevent loss and be non-rotating. The holding device for the tailgate shall be operated by a control lever with a safety holding chain and ring. Severe duty tailgate hardware shall be adjustable. Coal chute gate with levers and operating handle. Shall have four (4) tailgate banjo chain brackets, two (2) on each side, banjo brackets shall be a minimum of 3/8 inch thickness and be fully welded. Tailgate / spreader chains shall be 3/8 inch and covered with black expandable braided sleeving monofilament.

Rear corner posts On both sides, shall be full depth construction from the top of the tailgate to the bottom of the rear bolster and free of holes. Rear bolster shall be full depth and full width.

Cab shield shall cover half of the cab, continuously welded.

Body structure shall have 4" structural channel cross members of equal strength on 12" centers. The body and body sub-frame shall be reinforced to withstand SEVERE duty service. IE: Dump body up while spreading salt and anti-skid material, or excavation rip rap being dropped in the bed. Heavy gussets shall be furnished at all cross members on the outside. Where not possible, they will be furnished on the inside.

Construction:

All body parts are to be electrically full welded into one integral body.

For all threaded connections at least two (2) full threads shall be visible beyond the nut.

The fuel tank fill shall be positioned in such a way to ensure the filler nozzle can be set on automatic and nozzle will support itself with unrestricted flow.

	Page <u>2 of 4</u>
Exhaust: All tool boxes above any exhaust tailpipe or within close proximity of muffler, DPF, etc. to protect it. Exhaust shall be extended to the outer most edge of the installed body.	shall receive a heat shield plate to the box in order
Mud Flaps: Mud flaps front and rear of rear tires, unmarked, full width of tires, and gusseted. Length shall be consistent with the unloaded rear axle height, And in accordance with t The Flaps in front of the rear tires shall extend downward 3/4 of the length of the rear s mud flap attached for the remaining distance. The Flaps at the rear, of the rear tires, shall be constructed of 0.1406 in (10 gauge) ste steel backed plates.	plash guard/mud flap, with a 1/4 length, unmarked
Electrical: Whelen Light Kit Part # PADOTSY6, Kit contains the following lighting. 1 - R10PADOT Light Bar to be mounted to the driver's side of the bulkhead. Light bar s In no case shall the light bar be mounted on the roof of the vehicle. Light Bar, rear and	

2- LINZ6A lights to be grill mounted per EQN - 115

2 - 5VA02ZAD Vertical Amber warning lights, to be mounted within the rear bolster facing rearward. Per EQN- 120U

2 - 50R00XRD Vertical Red stop, turn, tail lights to be mounted within the rear bolster facing rearward Per EQN- 120U

2 - 50A02ZAD Amber warning lights, to be mounted one each side of dump bed as Per EQN-120U

1 - M6BUD Back-up light, to be mounted between frame rails where practical, including one M6 brush guard kit.

5 - W441D Harness side mating Deutch connectors.

The above lights are supplied with male and female Deutsch connectors that shall be utilized to connect the vendor supplied harness to each light source.

1 - PFP1PA Tripod pedestal work light with coiled cord, remove mount and plug to be supplied in the cab. Work Light receptacle shall be wired and mounted in the rear of the truck. Work light receptacle shall have a constant 12 volt power supply, circuit to be properly protected and have a chassis ground. Remote mount location to be determined at pilot model inspection.

1 - Portable light retainer shall be supplied and mounting location determined at pilot model inspection

Body builder to supply remaining stop / tail / turn, marker and ICC lighting, they shall be protected against damage and shall also be shock mounted. Connections shall be water tight. All Body lighting shall be LED.

The Warning lights / Light bar shall have (1) lighted, permanently labeled toggle switch located in the dash controling all I warning lights together

Body wiring shall be Grote, Trucklite, or Prior Approved Equal.

There shall be no splices outside of a sealed box or fixture.

There shall be a seven-way trailer (Pin Type) receptacle mounted on rear. Per EQN - 80A

A color-coded electrical wiring chart and schematic shall accompany each body.

Paint:

Body priming and painting to ensure full coverage to all areas of the body

Color of the body, including inside and outside of compartments, and the bed, shall be cab manufacturer's standard safety or school bus yellow, or optional PennDOT yellow DuPont F9885 for shade. (Powder Coat, if available from factory.) It will be the responsibility of the successful vendor to ensure color of the body matches the cab.

All metal surfaces to be painted shall be cleaned and prepared by abrasive blasting to 1-1/2 mil profile in accordance with Steel Structure Painting Council Standard SSPC-SP-6.

A rust preventative treatment shall be applied.

Conspicuity tape on body as per EQN-127A. Red/white on sides of body and cab,

Alternating Red / Yellow Reflective sheeting shall be mounted diagonally (45 degree angle) on the entire tailgate as per EQN-120N. ICC Rear Under ride Protector, hitch and ladders shall be painted black.

Hitch:

There shall be a hitch installed, Per EQN-202B, the Upper Portion Of Hitch Shall Be Painted With Non-Skid Paint If extending to or outside body perimeter and is likely to be stepped on. Below hardware shall be supplied in truck cab.

Buyers Products (216-974-888)	OR	Wallace Forge Company (800-328-1203)
BH8-2000		23071911
PM-87		2200170 PADOT
8520		2117240
HP6253 WC		HP58412
	BH8-2000 PM-87 8520	BH8-2000 PM-87 8520

					Page <u>3 of 4</u>
	m and Cara				
lydraulic Syste Reference: Lanc			Control Pro	, Component Technology - Electronic Co	ontrol System SG1, Basic Hydraulic CS-105,
orce America -	SSC-VT, Cre	est - PHS H	lydraulics		
				e operated by single pump, to include al	I plow body and spreader functions.
				t driven gear pump with electric clutch.	
/lain valve shall lo hydraulic line					
					nner spot, plow/headlights, main on/off, aux
nounted in betw			-	is, cluten pump switch, rotating light, spi	The spot, plow freading its, main of on, aux.
		•	•	ed with blast, auger reverse and pause.	Quick connect to remove spreader control (ir
summer mode).		opon 100p,	9.00.000		
,	ectric solenoi	d operated	for plow ho	st, plow angle, body hoist and spreader of	controls.
Drawings: EQN-80A	Revised	11-29-06	sheet 1	WIRING DIAGRAM	
EQN-82	Revised		sheet 1	CHOCK AND HOLDER	
EQN-115		07-23-09	sheet 1	GRILL MOUNTED WARNING LIGHTS	3
EQN-120N	Revised		sheet 1	TAILGATE REFLECTIVE SHEETING	
EQN-120U		08-14-12	sheet 1	17K DUMP TAIL GATE LIGHTING	
EQN-127A	Revised		sheet 1	CONSPICUITY TAPE	
EQN-202B	Revised		sheet 1	HITCH: WEIGHT DISTRIBUTING	
EQN-210B	Revised	01-07-10	sheet 3	HIGH VOLTAGE WARNING LIGHT (B	RACKET)
				Options	
Spreader, Unde		-			
Direct drive (cha	•		•	e).	
Quick attach hai					
System properly					
Salt calibration of	•				a ath
				painted, with all edges deburred and smo	DOIN.
There shall be a	• •		-	ver tail, turn or brake light.	
•					
			-	ble blade with a Minimum 9 foot mold	
Reference: Boss	s, Power V, W	estern MVI	P Plus,West	ern Pro Plus or prior to bid approved equ	ial).
Cab controls for	angle and lift	mechanisn	n.		
Moldboard mark	ers (wands).				
Auxiliary snow p	low lights, tur	n signals, s	hall be hitch	mounted and reinforced.	
The snow plow s	hall be moun	ted on spec	cified chassi	s with all accessories	
Quick attach end	ds for hydraul	ic hoses.			
Trip mechanism					
All electrical circ					
Front moldboard					
			ed and shal	be in concurrence with the truck manufa	cturer's engineering approval. Factory snov
	ge shall be si				
			nounted.		
Snow plow lights	tandard colo				
Snow plow lights					
Snow plow lights					
Snow plow lights Manufacturer's s nstallation Prac	tices				
Snow plow lights Manufacturer's s nstallation Prac All lights shall m	tices eet all Federa		-		
Snow plow lights Manufacturer's s nstallation Prac All lights shall m All wire splices s	tices eet all Federa hall be insula	ted with he	at shrink ma	terials or removable connectors that creater	
Snow plow lights Manufacturer's s Installation Prac All lights shall m All wire splices s All wires shall be	tices eet all Federa hall be insula securely fas	ted with he tened with r	at shrink ma no wires har	terials or removable connectors that creating or protruding where they are exposite	ed to the risk of damage.
Snow plow lights Manufacturer's s Installation Prac All lights shall m All wire splices s All wires shall be All junction boxe	tices eet all Federa hall be insula securely fas s shall be loc	ted with he tened with r ated for eas	at shrink ma no wires har sy accecabi	terials or removable connectors that creating or protruding where they are expositive and shall not be blocked by any mean	ed to the risk of damage.
Snow plow lights Manufacturer's s Installation Prac All lights shall m All wire splices s All wires shall be All junction boxe All electrical con	tices eet all Federa hall be insula securely fas s shall be loc nections shal	ted with heat tened with r ated for eas I be treated	at shrink ma no wires har sy accecabi with di-elec	terials or removable connectors that creating or protruding where they are expositive and shall not be blocked by any mear tric grease.	ed to the risk of damage. as for access.
Snow plow lights Manufacturer's s Installation Prac All lights shall m All wire splices s All wires shall be All junction boxe All electrical con All wiring shall b	tices eet all Federa hall be insula securely fas s shall be loc nections shal e secured usi	ted with he tened with r ated for eas l be treated ng "P" type	at shrink ma no wires har sy accecabi with di-elec clamps at i	terials or removable connectors that creating or protruding where they are expositive and shall not be blocked by any mear tric grease.	ed to the risk of damage. is for access. rment.
Snow plow lights Manufacturer's s Installation Prac All lights shall m All wire splices s All wires shall be All junction boxe All electrical con All wiring shall b All wires shall be	tices eet all Federa hall be insula securely fas s shall be loc nections shal e secured usi a in a protectiv	ted with here tened with r ated for ease l be treated ng "P" type ve covering	at shrink ma no wires han sy accecabi with di-elec clamps at i and protec	terials or removable connectors that creating or protruding where they are expositive and shall not be blocked by any mear tric grease. Intervals not to exceed 12" between secured from chaffing, rubbing and getting pul	ed to the risk of damage. is for access. rment. led or torn from external sources.
Snow plow lights Manufacturer's s Installation Prac All lights shall m All wire splices s All wires shall be All junction boxe All electrical con All wiring shall be Any alterations /	tices eet all Federa hall be insula securely fas s shall be loc nections shal e secured usi a in a protectiv	ted with here tened with r ated for ease l be treated ng "P" type ve covering	at shrink ma no wires han sy accecabi with di-elec clamps at i and protec	terials or removable connectors that creating or protruding where they are expositive and shall not be blocked by any mear tric grease. Intervals not to exceed 12" between secured from chaffing, rubbing and getting pul	ed to the risk of damage. is for access. rment.
Snow plow lights Manufacturer's s Installation Prace All lights shall m All wire splices s All wires shall be All junction boxe All electrical con All wiring shall be Any alterations / new materials.	tices eet all Federa hall be insula s securely fas s shall be loc nections shal e secured usi in a protectiv relocation to	ted with he tened with r ated for eas I be treated ng "P" type ve covering fuel fill, DE	at shrink ma no wires har sy accecabi with di-elec clamps at i and protec F tank, exha	terials or removable connectors that crea ging or protruding where they are expos- ity and shall not be blocked by any mear tric grease. ntervals not to exceed 12" between secur ed from chaffing, rubbing and getting pul ust, Etc. to allow installation of body sha	ed to the risk of damage. as for access. rment. led or torn from external sources. Il be made in a professional manner using
Snow plow lights Manufacturer's s Installation Prac All lights shall m All wire splices s All wires shall be All junction boxe All electrical con All wiring shall be All wires shall be Any alterations / new materials.	tices eet all Federa hall be insula s securely fas s shall be loc nections shal e secured usi in a protectiv relocation to and aluminum	ted with he tened with r ated for ease I be treated ng "P" type ve covering fuel fill, DE	at shrink ma no wires har sy accecabi with di-elec clamps at i and protec F tank, exha	terials or removable connectors that creating or protruding where they are expositive and shall not be blocked by any mear tric grease. Intervals not to exceed 12" between secured from chaffing, rubbing and getting pul	ed to the risk of damage. as for access. rment. led or torn from external sources. Il be made in a professional manner using
Snow plow lights Manufacturer's s Installation Prace All lights shall m All wire splices s All wires shall be All junction boxe All electrical con All wiring shall be All wires shall be Any alterations / new materials. Any place steel Laminate rubber	tices eet all Federa hall be insula e securely fas s shall be loc nections shal e secured usi in a protectiv relocation to and aluminum is unaccepta	ted with he- tened with r ated for ease l be treated ng "P" type ve covering fuel fill, DE n contact ease ble.	at shrink ma no wires har sy accecabi with di-elec clamps at i and protec F tank, exha ach other M	terials or removable connectors that crea ging or protruding where they are expos- ity and shall not be blocked by any mear tric grease. htervals not to exceed 12" between secur ed from chaffing, rubbing and getting pul ust, Etc. to allow installation of body sha lar or an approved equal shall be used a	ed to the risk of damage. as for access. rment. led or torn from external sources. Il be made in a professional manner using as a buffer.
Snow plow lights Manufacturer's s Installation Prace All lights shall m All wire splices s All wires shall be All ures shall be All electrical con All wiring shall be Any alterations / new materials. Any place steel Laminate rubber All vertical and h	tices eet all Federa hall be insula e securely fas s shall be loc nections shal e secured usi in a protectiv relocation to and aluminum is unaccepta porizontal sea	ted with here tened with n ated for ease l be treated ng "P" type ve covering fuel fill, DE n contact ease ble. ms of the b	at shrink ma no wires han sy accecabi with di-elec clamps at i and protec F tank, exha ach other M ody sides sl	terials or removable connectors that creating or protruding where they are expositive and shall not be blocked by any mean tric grease. Intervals not to exceed 12" between secured from chaffing, rubbing and getting pull ust, Etc. to allow installation of body shall ar or an approved equal shall be used a call utilize full penetration continuous website the secure from the secure from the secure of the secure from the secure of the secure from	ed to the risk of damage. as for access. rment. led or torn from external sources. Il be made in a professional manner using as a buffer. ds in accordance with standard welding
Snow plow lights Manufacturer's s Installation Prace All lights shall m All wire splices s All wires shall be All ures shall be All uring shall be Any alterations / new materials. Any place steel Laminate rubber All vertical and h	tices eet all Federa hall be insula s securely fas s shall be loc nections shal e secured usi e in a protectiv relocation to and aluminum is unaccepta orizontal sea forth by the A	ted with he tened with r ated for ease l be treated ng "P" type ve covering fuel fill, DE n contact ea ble. ms of the b merican W	at shrink ma no wires han sy accecabi with di-elec clamps at i and protec F tank, exha ach other My ody sides sl elding Socie	terials or removable connectors that crea ging or protruding where they are expos- ity and shall not be blocked by any mear tric grease. htervals not to exceed 12" between secur ed from chaffing, rubbing and getting pul ust, Etc. to allow installation of body sha lar or an approved equal shall be used a	ed to the risk of damage. as for access. rment. led or torn from external sources. Il be made in a professional manner using as a buffer. ds in accordance with standard welding

	Page 4 <u> of 4</u>
The use of any of the following items or practices WILL NOT BE ACCEPTED.	
Non-steel fittings on hydraulic pressure lines.	
Excessive use of elbows on hydraulic lines.	
Use of thread tape on hydraulic fittings.	
Use of galvanized fittings or components on hydraulic system.	
Improper hydraulic line size.	
Use of high-pressure hose for hydraulic suction line.	
Scotchlok-type wire splices.	
Non-insulated wire splices.	
Improper hose or wire routing near exhaust, over-sharp edges or through holes witho	out grommets, or sharp edges.
Improperly prepared, primed and painted surfaces.	
Non-fused electric circuits.	
Hydraulic circuits without pressure relief protection.	
	Oct 16,2012 JF

SPECIFICATION	
038110 - Aluminum Dump Body Upfit For Use With a 17K Chassis	

Page 1 of 4

Reference: Heil Yardbird, Omaha Standard Eagle, Galion / Godwin 100, Crysteel E Tipper, or prior approved equal.

Note: " Refer to PCID 1075 for Delivery, Training, and Warranty Requirements".

Note : All up fitting shall be in accordance with the chassis manufacturers body builders up fitter manual.

Body Shall Include The Following Equipment:

Body - Installation:

It shall be the responsibility of the successful vendor to have the dump body mounted on the chassis(s). The installation shall be engineered and approved by the vehicle manufacturer and shall have no adverse affect upon the manufacturer's warranty. When any portion of the complete vehicle is to be installed by anybody other than the bidder or the chassis manufacturer, they shall indicate the name of the sub-contractor performing such installation and the location of their plants. The dump body dimensions shall cover the rear wheels. Any other applicable changes required to accommodate this type unit is the responsibility of the bidder.

Frame rails shall be prepared by cleaning, priming and final painting.

The body shall be attached to the truck chassis using four (4) U-bolts, or bolt thru, lock nuts, and appropriate shear plates as required to comply with manufacturer's standards.

Body Components:

Length of body shall be 9 Feet Minimum.

Floor Thickness shall be 0.1875" thick, minimum, abrasion-resistant aluminum 5454H32. Continuously welded to all cross members, side panels and longitudinal members. Area reinforcements where necessary.

Capacity: 2 1/4 (approximate) cubic yards water level.

Side board pockets and tailgate height shall provide an additional carrying capacity.

The bulkhead shall be slotted, punched or checker-boarded to allow for visibility through the rear vehicle window.

There shall be a lever operated chute.

Body shall be fitted with a bed prop system, manufacture standard

Hoist cylinder shall have a lifting capacity of 9 tons. Minimum. Cylinder rod shall be chrome platted.

Hydraulic tank shall be a minimum of 20 Gallons working capacity. It is the responsibility of the vendor to insure all hydraulic functions can operate uninterrupted to include all plow, body, and spreader functions.

All points of movement such as lift arms, tailgate linkage, etc. shall be fitted with threaded grease fittings.

Upper telescopic cylinder pin shall have a remote grease fitting.

There shall be wheel chocks and holders per EQN-82. Holders can be mounted on the driver's side splash guards.

There shall be a ladder to access the dump bed on the drivers side. Shall have grab handles to provide three points of contact when entering the bed. Steps shall be Bustin aluminum No. NST4 full size, or Bustin 628 steel, or Ohio Grating or IKG Industries serrated swage lock, with end band. The outer step edge must be serrated in lieu of plain, smooth metal edge. All edges shall be banded (skirting) on the outer perimeter. Overlay is not acceptable. Grab handles shall be covered with non-skid paint (non-skid tape is unacceptable).

Tailgate shall have a height of 24 inches minimum. Shall be a double acting tailgate with offset hinges. Shall have two (2) "J" hooks welded to the tailgate for chain hangers. 1.25" diameter, greasable self-aligning top hinge pins with tapered end and with sufficient length for easy removal. Pins shall be affixed with chains to prevent loss and be non-rotating. The holding device for the tailgate shall be operated by a control lever with a safety holding chain and ring. Severe duty tailgate hardware shall be adjustable. Coal chute gate with levers and operating handle, Door to be 304 Stainless steel. Shall have four (4) tailgate banjo chain brackets, two (2) on each side, banjo brackets shall be a minimum of 1/2 inch thickness and be fully welded. Tailgate / spreader chains shall be 3/8 inch and covered with black expandable braided sleeving monofilament.

Rear corner posts On both sides, shall be full depth construction from the top of the tailgate to the bottom of the rear bolster and free of holes. Rear bolster shall be full depth and full width.

Cab shield shall cover half of the cab, continuously welded.

Body structure shall have 4" structural channel cross members of equal strength on 12" centers. The body and body sub-frame shall be reinforced to withstand SEVERE duty service. IE: Dump body up while spreading salt and anti-skid material, or excavation rip rap being dropped in the bed. Heavy gussets shall be furnished at all cross members on the outside. Where not possible, they will be furnished on the inside.

Construction:

All body parts are to be electrically full welded into one integral body.

For all threaded connections at least two (2) full threads shall be visible beyond the nut.

The fuel tank fill shall be positioned in such a way to ensure the filler nozzle can be set on automatic and nozzle will support itself with unrestricted flow.

	Page <u>2 of 4</u>
Exhaust: All tool boxes above any exhaust tailpipe or within close proximity of muffler, DPF, e to protect it. Exhaust shall be extended to the outer most edge of the installed body.	•
Mud Flaps:	
Mud flaps front and rear of rear tires, unmarked, full width of tires, and gusseted.	the the DA State Increation Laws

Length shall be consistent with the unloaded rear axle height, And in accordance with the PA State Inspection Laws.

The Flaps in front of the rear tires shall extend downward 3/4 of the length of the rear splash guard/mud flap, with a 1/4 length, unmarked mud flap attached for the remaining distance.

The Flaps at the rear, of the rear tires, shall be constructed of 0.1406 in (10 gauge) steel, and include a rubber flap using 3 bolts and flat steel backed plates.

Electrical:

Whelen Light Kit Part # PADOTSY6, Kit contains the following lighting.

1 - R10PADOT Light Bar to be mounted to the driver's side of the bulkhead. Light bar shall be mounted on swivel base as per EQN-210B. In no case shall the light bar be mounted on the roof of the vehicle. Light Bar, rear and side warning lights shall be on the same switch.

- 2- LINZ6A lights to be grill mounted per EQN 115
- 2 5VA02ZAD Vertical Amber warning lights, to be mounted within the rear bolster facing rearward. Per EQN- 120U
- 2 50R00XRD Vertical Red stop, turn, tail lights to be mounted within the rear bolster facing rearward Per EQN- 120U

2 - 50A02ZAD Amber warning lights, to be mounted one each side of dump bed as Per EQN-120U

1 - M6BUD Back-up light, to be mounted between frame rails where practical, including one M6 brush guard kit.

5 - W441D Harness side mating Deutch connectors.

The above lights are supplied with male and female Deutsch connectors that shall be utilized to connect the vendor supplied harness to each light source.

1 - PFP1PA Tripod pedestal work light with coiled cord, remote mount and plug to be supplied in the cab. Work Light receptacle shall be wired and mounted in the rear of the truck. Work light receptacle shall have a constant 12 volt power supply, circuit to be properly protected and have a chassis ground. Remote mount location to be determined at pilot model inspection

Body builder to supply remaining stop / tail / turn, marker and ICC lighting, they shall be protected against damage and shall also be shock mounted. Connections shall be water tight. All Body lighting shall be LED.

The Warning lights / Light bar shall have a lighted, permanently labeled toggle switch located in the dash.

Body wiring shall be Grote, Trucklite, or Prior Approved Equal.

There shall be no splices outside of a sealed box or fixture.

There shall be a seven-way trailer (Pin Type) receptacle mounted on rear. Per EQN - 80A

A color-coded electrical wiring chart and schematic shall accompany each body.

Paint:

Body priming and painting to ensure full coverage to all areas of the body

Color of the body, including inside and outside of compartments, and the bed, shall be cab manufacturer's standard safety or school bus yellow, or optional PennDOT yellow DuPont F9885 for shade. (Powder Coat, if available from factory.) It will be the responsibility of the successful vendor to ensure color of the body matches the cab.

All metal surfaces to be painted shall be cleaned and prepared by abrasive blasting to 1-1/2 mil profile in accordance with Steel Structure Painting Council Standard SSPC-SP-6.

A rust preventative treatment shall be applied.

Conspicuity tape on body as per EQN-127A. Red/white on sides of body and cab,

Alternating Red / Yellow Reflective sheeting shall be mounted diagonally (45 degree angle) on the entire tailgate as per EQN-120N. ICC Rear Under ride Protector, hitch and ladders shall be painted black.

Hitch:

There shall be a hitch installed, Per EQN-202B, the Upper Portion Of Hitch Shall Be Painted With Non-Skid Paint If extending to or outside body perimeter and is likely to be stepped on. Below hardware shall be supplied in truck cab.

		Wallace Forge Company (800-328-1203)
BH8-2000		23071911
PM-87		2200170 PADOT
8520		2117240
HP6253 WC		HP58412
	PM-87 8520	PM-87 8520

				Page <u>3 of 4</u>
	em and Console			
Force America Shall be Centra	– SSC-VT, Crest – P⊢ I Hydraulic System – a	S Hydraulics Il functions to	be operated by single pump, to in	ronic Control System SG1, Basic Hydraulic CS- clude all plow body and spreader functions.
Hydraulic pump	ll be fully proportional	1625 RPIVI De	elt driven gear pump with electric o	ciutch.
	es or valving to be ins			
				ight, spinner spot, plow/headlights, main on/off,
	ween the drivers and p			
		op, ground sp	eed with blast, auger reverse and	pause. Quick connect to remove spreader contr
summer mode)		od for play by	oist, plow angle, body hoist and sp	reader controle
	electric solenoid opera		bist, plow angle, body holst and sp	Teader controls.
Drawings EQN		ed 11-29-06	sheet 1 WIRING DIAGRAM	Μ
EQN-82 EQN-115	Revised 07-23-0 Revised 07-03-12			ICHTS
EQN-115 EQN-120N	Revised 07-03-12 Revised 09-29-1		GRILL MOUNTED WARNING L TAILGATE REFLECTIVE SHE	
EQN-1200	Revised 09-29-1		17K DUMP TAIL GATE LIGH	
EQN-127A	Revised 01-02-0		CONSPICUITY TAPE	-
EQN-202B	Revised 11-03-0	6 sheet 1	HITCH: WEIGHT DISTRIBUTI	NG
EQN-210B	Revised 01-07-1	0 sheet 3	HIGH VOLTAGE WARNING L	IGHT (BRACKET)
			Options	
Spreader Lind	er Tailgate: (Installed)	options	
•			+1-)	
	ain sprocket or gear-ty		ble).	
	rdware kit installed on			
System properl	y sized to dump body/	ailgate drop.		
System properl Salt calibration	y sized to dump body/ charts required for set	ailgate drop. tings.		
System properl Salt calibration Spreader manu	y sized to dump body/ charts required for set factured using stainles	ailgate drop. tings. s steel 304, u	unpainted, with all edges deburred	and smooth.
System properl Salt calibration Spreader manu	y sized to dump body/ charts required for set	ailgate drop. tings. s steel 304, u	unpainted, with all edges deburred	and smooth.
System properl Salt calibration Spreader manu There shall be a	y sized to dump body/ charts required for set factured using stainles a spinner spreader LE	ailgate drop. tings. s steel 304, u D light.		
System properl Salt calibration Spreader manu There shall be a Snow Plow, Ad	y sized to dump body/ charts required for set factured using stainles a spinner spreader LE djustable Angle, or S	ailgate drop. tings. is steel 304, u D light. raight revers	unpainted, with all edges deburred sible blade with a Minimum 9 for stern Pro Plus or prior to bid appro	ot moldboard: (Installed)
System properl Salt calibration Spreader manu There shall be a Snow Plow, Ac Reference: Bos	y sized to dump body/ charts required for set factured using stainles a spinner spreader LE djustable Angle, or S	ailgate drop. tings. ss steel 304, u D light. raight revers //VP Plus,Wes	sible blade with a Minimum 9 foo	ot moldboard: (Installed)
System properl Salt calibration Spreader manu There shall be a Snow Plow, Ao Reference: Bos Cab controls fo Moldboard mar	y sized to dump body/ charts required for set factured using stainles a spinner spreader LE djustable Angle, or S is, Power V, Western I r angle and lift mechan kers (wands).	ailgate drop. tings. s steel 304, u D light. raight revers //VP Plus,Wes	sible blade with a Minimum 9 foo stern Pro Plus or prior to bid appro	ot moldboard: (Installed)
System properl Salt calibration Spreader manu There shall be Snow Plow, Ac Reference: Bos Cab controls fo Moldboard mar Auxiliary snow	y sized to dump body/ charts required for set factured using stainles a spinner spreader LE djustable Angle, or Si s, Power V, Western I r angle and lift mechar kers (wands). blow lights, turn signals	ailgate drop. tings. as steel 304, u D light. raight revers <i>IVP Plus,Wes</i> s, shall be hitc	sible blade with a Minimum 9 for stern Pro Plus or prior to bid appro	ot moldboard: (Installed)
System properl Salt calibration Spreader manu There shall be a Snow Plow, Ad Reference: Bos Cab controls fo Moldboard mar Auxiliary snow The snow plow	y sized to dump body/ charts required for set factured using stainles a spinner spreader LE Jjustable Angle, or S is, Power V, Western I r angle and lift mechar kers (wands). blow lights, turn signal- shall be mounted on s	ailgate drop. tings. is steel 304, u D light. raight revers <i>IVP</i> Plus,Wes ism. s, shall be hito pecified chase	sible blade with a Minimum 9 foo stern Pro Plus or prior to bid appro	ot moldboard: (Installed)
System properl Salt calibration Spreader manu There shall be a Snow Plow, Ad Reference: Bos Cab controls fo Moldboard mar Auxiliary snow The snow plow Quick attach er	y sized to dump body// charts required for set factured using stainles a spinner spreader LE djustable Angle, or Si s, Power V, Western I r angle and lift mechar kers (wands). blow lights, turn signal- shall be mounted on s ads for hydraulic hoses	ailgate drop. tings. is steel 304, u D light. raight revers <i>IVP</i> Plus,Wes ism. s, shall be hito pecified chase	sible blade with a Minimum 9 for stern Pro Plus or prior to bid appro	ot moldboard: (Installed)
System properl Salt calibration Spreader manu There shall be a Snow Plow, Ac Reference: Bos Cab controls Bos Moldboard mar Auxiliary snow µ The snow plow Quick attach er Trip mechanisn	y sized to dump body/ charts required for set factured using stainles a spinner spreader LE djustable Angle, or S ss, Power V, Western I r angle and lift mechar kers (wands). blow lights, turn signals shall be mounted on s shall be mounted on s shall be mounted on s shall be mounted on s	ailgate drop. tings. is steel 304, u D light. raight revers <i>IVP</i> Plus,Wes ism. s, shall be hito pecified chase	sible blade with a Minimum 9 for stern Pro Plus or prior to bid appro	ot moldboard: (Installed)
System properl Salt calibration Spreader manu There shall be a Snow Plow, Ac Reference: Bos Cab controls for Moldboard mar Auxiliary snow plow Quick attach er Trip mechanisn All electrical cir	y sized to dump body/ charts required for set factured using stainles a spinner spreader LE djustable Angle, or S ss, Power V, Western I r angle and lift mechar kers (wands). blow lights, turn signals shall be mounted on s ds for hydraulic hoses n. cuits shall be fused.	ailgate drop. tings. is steel 304, u D light. raight revers <i>IVP</i> Plus,Wes ism. s, shall be hito pecified chase	sible blade with a Minimum 9 for stern Pro Plus or prior to bid appro	ot moldboard: (Installed)
System properl Salt calibration Spreader manu There shall be a Snow Plow, Ac Reference: Bos Cab controls fo Moldboard mar Auxiliary snow p The snow plow Quick attach er Trip mechanisn All electrical cir Front moldboar	y sized to dump body/ charts required for set factured using stainles a spinner spreader LE dijustable Angle, or S is, Power V, Western I r angle and lift mechar kers (wands). blow lights, turn signale shall be mounted on s ids for hydraulic hoses n. cuits shall be fused. d snow deflector.	ailgate drop. tings. ss steel 304, u D light. raight revers <i>IVP Plus,Wes</i> sism. s, shall be hitc pecified chase	sible blade with a Minimum 9 for stern Pro Plus or prior to bid appro th mounted and reinforced. sis with all accessories	ot moldboard: (Installed) ved equal).
System properl Salt calibration Spreader manu There shall be a Snow Plow, Ac Reference: Bos Cab controls fo Moldboard mar Auxiliary snow plow Quick attach er Trip mechanisn All electrical cir Front moldboar Plow frame sha	y sized to dump body/ charts required for set factured using stainles a spinner spreader LE djustable Angle, or S s, Power V, Western I r angle and lift mechar kers (wands). blow lights, turn signal shall be mounted on s shall be mounted on s ads for hydraulic hoses h. cuits shall be fused. d snow deflector. Il be furnished and ins	ailgate drop. tings. ss steel 304, u D light. raight revers <i>IVP Plus,Wes</i> sism. s, shall be hitc pecified chase	sible blade with a Minimum 9 for stern Pro Plus or prior to bid appro th mounted and reinforced. sis with all accessories	ot moldboard: (Installed)
System properl Salt calibration Spreader manu There shall be a Snow Plow, Ac Reference: Bos Cab controls fo Moldboard mar Auxiliary snow plow Quick attach er Trip mechanism All electrical cir Front moldboar Plow frame sha plow prep pack	y sized to dump body/ charts required for set factured using stainles a spinner spreader LE djustable Angle, or S s, Power V, Western I r angle and lift mechar kers (wands). blow lights, turn signal shall be mounted on s shall be mounted on s n. cuits shall be fused. d snow deflector. Il be furnished and ins age shall be supplied.	ailgate drop. tings. s steel 304, u D light. raight revers AVP Plus,Wes ism. s, shall be hitc pecified chass talled and sha	sible blade with a Minimum 9 for stern Pro Plus or prior to bid appro th mounted and reinforced. sis with all accessories	ot moldboard: (Installed) ved equal).
System properl Salt calibration Spreader manu There shall be a Snow Plow, Ac Reference: Bos Cab controls fo Moldboard mar Auxiliary snow I The snow plow Quick attach er Trip mechanisn All electrical cir Front moldboar Plow frame sha plow prep pack Snow plow light	y sized to dump body/ charts required for set factured using stainles a spinner spreader LE djustable Angle, or S s, Power V, Western I r angle and lift mechar kers (wands). blow lights, turn signal shall be mounted on s shall be mounted on s ads for hydraulic hoses h. cuits shall be fused. d snow deflector. Il be furnished and ins	ailgate drop. tings. s steel 304, u D light. raight revers AVP Plus,Wes ism. s, shall be hitc pecified chass talled and sha	sible blade with a Minimum 9 for stern Pro Plus or prior to bid appro th mounted and reinforced. sis with all accessories	ot moldboard: (Installed) ved equal).
System properl Salt calibration Spreader manu There shall be a Snow Plow, Ac Reference: Bos Cab controls fo Moldboard mar Auxiliary snow I The snow plow Quick attach er Trip mechanisn All electrical cir Front moldboar Plow frame sha plow prep pack Snow plow light	y sized to dump body/ charts required for set factured using stainles a spinner spreader LE djustable Angle, or S s, Power V, Western I r angle and lift mechar kers (wands). blow lights, turn signal shall be mounted on s inds for hydraulic hoses n. cuits shall be fused. d snow deflector. Il be furnished and ins age shall be supplied. s shall be furnished an	ailgate drop. tings. s steel 304, u D light. raight revers AVP Plus,Wes ism. s, shall be hitc pecified chass talled and sha	sible blade with a Minimum 9 for stern Pro Plus or prior to bid appro th mounted and reinforced. sis with all accessories	ot moldboard: (Installed) ved equal).
System properl Salt calibration Spreader manu There shall be a Snow Plow, Ac Reference: Bos Cab controls fo Moldboard mar Auxiliary snow I The snow plow Quick attach er Trip mechanisn All electrical cir Front moldboar Plow frame sha plow prep pack Snow plow light	y sized to dump body/ charts required for set factured using stainles a spinner spreader LE djustable Angle, or S s, Power V, Western I r angle and lift mechar kers (wands). blow lights, turn signal shall be mounted on s inds for hydraulic hoses n. cuits shall be fused. d snow deflector. Il be furnished and ins age shall be supplied. s shall be furnished an	ailgate drop. tings. s steel 304, u D light. raight revers AVP Plus,Wes ism. s, shall be hitc pecified chass talled and sha	sible blade with a Minimum 9 for stern Pro Plus or prior to bid appro th mounted and reinforced. sis with all accessories	ot moldboard: (Installed) ved equal).
System properl Salt calibration Spreader manu There shall be a Snow Plow, Ac Reference: Bos Cab controls fo Moldboard mar Auxiliary snow I The snow plow Quick attach er Trip mechanisn All electrical cir Front moldboar Plow frame sha plow prep pack Snow plow light	y sized to dump body/ charts required for set factured using stainles a spinner spreader LE djustable Angle, or S s, Power V, Western I r angle and lift mechar kers (wands). blow lights, turn signal: shall be mounted on s ds for hydraulic hoses n. cuits shall be fused. d snow deflector. Il be furnished and ins age shall be supplied. s shall be furnished an standard color.	ailgate drop. tings. s steel 304, u D light. raight revers AVP Plus,Wes ism. s, shall be hitc pecified chass talled and sha	sible blade with a Minimum 9 for stern Pro Plus or prior to bid appro th mounted and reinforced. sis with all accessories	ot moldboard: (Installed) ved equal).
System properl Salt calibration Spreader manu There shall be a Snow Plow, Ac Reference: Bos Cab controls fo Moldboard mar Auxiliary snow J The snow plow Quick attach er Trip mechanism All electrical cir Front moldboar Plow frame sha plow prep pack Snow plow light Manufacturer's Installation Pra All lights shall n	y sized to dump body/ charts required for set factured using stainles a spinner spreader LE djustable Angle, or S s, Power V, Western I r angle and lift mechar kers (wands). blow lights, turn signal shall be mounted on s shall be mounted on s shall be furnished and ins age shall be fused. d snow deflector. Il be furnished and ins age shall be supplied. s shall be furnished an standard color.	ailgate drop. tings. ss steel 304, u D light. raight revers AVP Plus,Wes ism. s, shall be hitc pecified chass talled and sha ad mounted.	sible blade with a Minimum 9 for stern Pro Plus or prior to bid appro ch mounted and reinforced. sis with all accessories all be in concurrence with the truck	ot moldboard: (Installed) ved equal). manufacturer's engineering approval. Factory
System properl Salt calibration Spreader manu There shall be a Snow Plow, Ac Reference: Bos Cab controls fo Moldboard mar Auxiliary snow J The snow plow Quick attach er Trip mechanisn All electrical cir Front moldboar Plow frame sha plow prep pack Snow plow light Manufacturer's Installation Pra All lights shall n All wire splices	y sized to dump body// charts required for set factured using stainles a spinner spreader LE djustable Angle, or S s, Power V, Western I r angle and lift mechark kers (wands). blow lights, turn signal: shall be mounted on s shall be mounted on s shall be furnished and ins age shall be fused. d snow deflector. Il be furnished and ins age shall be supplied. s shall be furnished and standard color.	ailgate drop. tings. s steel 304, u D light. raight revers AVP Plus,Wes ism. s, shall be hitc pecified chass talled and sha ad mounted. ate regulation heat shrink m	sible blade with a Minimum 9 for stern Pro Plus or prior to bid appro ch mounted and reinforced. sis with all accessories all be in concurrence with the truck	ot moldboard: (Installed) ved equal). manufacturer's engineering approval. Factory
System properl Salt calibration Spreader manu There shall be a Snow Plow, Ad Reference: Bos Cab controls fo Moldboard mar Auxiliary snow The snow plow Quick attach er Trip mechanisn All electrical cir Front moldboar Plow frame sha plow prep pack Snow plow light Manufacturer's Installation Pra All lights shall n All wire splices All wires shall b	y sized to dump body/ charts required for set factured using stainles a spinner spreader LE Jjustable Angle, or Si is, Power V, Western I r angle and lift mechar kers (wands). blow lights, turn signal- shall be mounted on s inds for hydraulic hoses h. cuits shall be fused. d snow deflector. Il be furnished and ins age shall be supplied. s shall be furnished an standard color.	ailgate drop. tings. is steel 304, u D light. raight revers AVP Plus,Wes- tism. s, shall be hitco pecified chase talled and sha ad mounted. ate regulation heat shrink m th no wires ha	sible blade with a Minimum 9 for stern Pro Plus or prior to bid appro ch mounted and reinforced. sis with all accessories all be in concurrence with the truck	bt moldboard: (Installed) wed equal). manufacturer's engineering approval. Factory that create a water tight connection. e exposed to the risk of damage.
System properl Salt calibration Spreader manu There shall be a Snow Plow, Ad Reference: Bos Cab controls fo Moldboard mar Auxiliary snow The snow plow Quick attach er Trip mechanism All electrical cir Front moldboar Plow frame sha plow prep pack Snow plow light Manufacturer's Installation Pra All lights shall r All wire splices All wires shall b All junction box	y sized to dump body/ charts required for set factured using stainles a spinner spreader LE djustable Angle, or Si s, Power V, Western I r angle and lift mechar kers (wands). blow lights, turn signal- shall be mounted on s inds for hydraulic hoses n. cuits shall be fused. d snow deflector. Il be furnished and ins age shall be supplied. s shall be furnished and standard color.	ailgate drop. tings. is steel 304, u D light. raight revers AVP Plus,Wes- tism. s, shall be hitco- pecified chass talled and sha ad mounted. ate regulation heat shrink m th no wires ha easy accecab	sible blade with a Minimum 9 for stern Pro Plus or prior to bid appro ch mounted and reinforced. sis with all accessories all be in concurrence with the truck sis. naterials or removable connectors anging or protruding where they are bility and shall not be blocked by a	bt moldboard: (Installed) wed equal). manufacturer's engineering approval. Factory that create a water tight connection. e exposed to the risk of damage.
System properl Salt calibration Spreader manu There shall be a Snow Plow, Ad Reference: Bos Cab controls fo Moldboard mar Auxiliary snow The snow plow Quick attach er Trip mechanism All electrical cir Front moldboar Plow frame sha plow prep pack Snow plow light Manufacturer's Installation Pra All lights shall r All lights shall n All wire splices All wire shall box All junction box All electrical co	y sized to dump body/ charts required for set factured using stainles a spinner spreader LE djustable Angle, or Si s, Power V, Western I r angle and lift mechar kers (wands). olow lights, turn signal- shall be mounted on s inds for hydraulic hoses n. cuits shall be fused. d snow deflector. Il be furnished and ins age shall be supplied. s shall be furnished and standard color.	ailgate drop. tings. is steel 304, u D light. raight revers AVP Plus,Wes- tism. s, shall be hitco- pecified chase talled and sha ad mounted. ate regulation heat shrink m th no wires ha easy accecab ted with di-ele	sible blade with a Minimum 9 for stern Pro Plus or prior to bid appro- ch mounted and reinforced. sis with all accessories all be in concurrence with the truck sis. aterials or removable connectors anging or protruding where they are bility and shall not be blocked by a actric grease.	that create a water tight connection. e exposed to the risk of damage. hy means for access.
System properl Salt calibration Spreader manu There shall be a Snow Plow, Ad Reference: Bos Cab controls fo Moldboard mar Auxiliary snow The snow plow Quick attach er Trip mechanisn All electrical cir Front moldboar Plow frame sha plow prep pack Snow plow light Manufacturer's Installation Pra All lights shall r All wire splices All wires shall b All wires shall b	y sized to dump body/ charts required for set factured using stainles a spinner spreader LE Jjustable Angle, or S is, Power V, Western I r angle and lift mechar kers (wands). olow lights, turn signal- shall be mounted on s inds for hydraulic hoses in. cuits shall be fused. d snow deflector. Il be furnished and ins age shall be fused and standard color. actices meet all Federal and Si shall be insulated with e securely fastened w es shall be located for innections shall be treat be secured using "P" to	ailgate drop. tings. as steel 304, u D light. raight revers AVP Plus,Wes- tism. as, shall be hito pecified chass talled and sha ad mounted. ate regulation heat shrink m th no wires ha easy accecab ted with di-ele (pe clamps at	sible blade with a Minimum 9 for stern Pro Plus or prior to bid appro- ch mounted and reinforced. sis with all accessories all be in concurrence with the truck all be in concurrence with the truck sis. naterials or removable connectors anging or protruding where they are bility and shall not be blocked by an ectric grease. intervals not to exceed 12" betwee	that create a water tight connection. e exposed to the risk of damage. hy means for access. en securment.
System properl Salt calibration Spreader manu There shall be a Snow Plow, Ad Reference: Bos Cab controls fo Moldboard mar Auxiliary snow j The snow plow Quick attach er Trip mechanisn All electrical cir Front moldboar Plow frame sha plow prep pack Snow plow light Manufacturer's Installation Pri All lights shall n All wire splices All wires shall b All wires shall b All wires shall b All wires shall b	y sized to dump body/ charts required for set factured using stainles a spinner spreader LE Jjustable Angle, or Si ss, Power V, Western I r angle and lift mechark kers (wands). olow lights, turn signal: shall be mounted on s inds for hydraulic hoses in. cuits shall be fused. d snow deflector. Il be furnished and ins age shall be furnished and standard color. actices meet all Federal and Si shall be insulated with e securely fastened w es shall be located for innections shall be treat the in a protective cover	ailgate drop. tings. as steel 304, u D light. raight revers AVP Plus,Wes- tism. as, shall be hitco- pecified chass talled and sha ad mounted. ate regulation heat shrink m th no wires ha easy accecab ted with di-ele /pe clamps at ing and protect	sible blade with a Minimum 9 for stern Pro Plus or prior to bid appro- stern Pro Plus or prior to bid appro- stern Bro Plus or prior to bid appro- stern and reinforced. sis with all accessories all be in concurrence with the truck all be in concurrence with the truck sis. anging or protructing where they are sterials or removable connectors anging or protructing where they are bility and shall not be blocked by a sctric grease. intervals not to exceed 12" betwee cted from chaffing, rubbing and ge	that create a water tight connection. e exposed to the risk of damage. hy means for access. en securment. tting pulled or torn from external sources.
System properl Salt calibration Spreader manu There shall be a Snow Plow, Ac Reference: Bos Cab controls fo Moldboard mar Auxiliary snow The snow plow Quick attach er Trip mechanisn All electrical cir Front moldboar Plow frame sha plow prep pack Snow plow light Manufacturer's Installation Pri All lights shall r All wires shall b All junction box All electrical co All wiring shall l All wires shall b Any alterations	y sized to dump body/ charts required for set factured using stainles a spinner spreader LE Jjustable Angle, or Si ss, Power V, Western I r angle and lift mechark kers (wands). olow lights, turn signal: shall be mounted on s inds for hydraulic hoses in. cuits shall be fused. d snow deflector. Il be furnished and ins age shall be furnished and standard color. actices meet all Federal and Si shall be insulated with e securely fastened w es shall be located for innections shall be treat the in a protective cover	ailgate drop. tings. as steel 304, u D light. raight revers AVP Plus,Wes- tism. as, shall be hitco- pecified chass talled and sha ad mounted. ate regulation heat shrink m th no wires ha easy accecab ted with di-ele /pe clamps at ing and protect	sible blade with a Minimum 9 for stern Pro Plus or prior to bid appro- stern Pro Plus or prior to bid appro- stern Bro Plus or prior to bid appro- stern and reinforced. sis with all accessories all be in concurrence with the truck all be in concurrence with the truck sis. anging or protructing where they are sterials or removable connectors anging or protructing where they are bility and shall not be blocked by a sctric grease. intervals not to exceed 12" betwee cted from chaffing, rubbing and ge	that create a water tight connection. e exposed to the risk of damage. hy means for access. en securment.
System properl Salt calibration Spreader manu There shall be a Snow Plow, Ac Reference: Bos Cab controls for Moldboard mar Auxiliary snow The snow plow Quick attach er Trip mechanisn All electrical cir Front moldboar Plow frame sha plow prep pack Snow plow light Manufacturer's Installation Pri All lights shall r All wires shall b All junction box All electrical co All wiring shall I All wires shall b All junction box	y sized to dump body/ charts required for set factured using stainles a spinner spreader LE djustable Angle, or S is, Power V, Western I r angle and lift mechar kers (wands). blow lights, turn signal: shall be mounted on s ids for hydraulic hoses h. cuits shall be fused. d snow deflector. Il be furnished and ins age shall be supplied. s shall be furnished and standard color. actices neet all Federal and Si shall be insulated with e securely fastened w es shall be located for nnections shall be treat be secured using "P" ty e in a protective cover / relocation to fuel fill,	ailgate drop. tings. as steel 304, u D light. raight revers AVP Plus,Wes- tism. s, shall be hitco- pecified chass talled and sha ad mounted. ate regulation heat shrink m th no wires ha easy accecab ted with di-ele (pe clamps at ing and protec DEF tank, exh	sible blade with a Minimum 9 for stern Pro Plus or prior to bid appro- ch mounted and reinforced. sis with all accessories all be in concurrence with the truck all be in concurrence with the truck sis. naterials or removable connectors anging or protruding where they ar bility and shall not be blocked by a actric grease. intervals not to exceed 12" betwee cted from chaffing, rubbing and ge naust, Etc. to allow installation of b	that create a water tight connection. e exposed to the risk of damage. hy means for access. en securment. tting pulled or torn from external sources. ody shall be made in a professional manner usi
System properl Salt calibration Spreader manu There shall be a Snow Plow, Ac Reference: Bos Cab controls fo Moldboard mar Auxiliary snow plow Quick attach er Trip mechanisn All electrical cir Front moldboar Plow frame sha plow prep pack Snow plow light Manufacturer's Installation Pra All lights shall r All wires shall b All wires shall b Any alterations new materials. Any place steel	y sized to dump body/ charts required for set factured using stainles a spinner spreader LE djustable Angle, or S is, Power V, Western I r angle and lift mechar kers (wands). olow lights, turn signal: shall be mounted on s ids for hydraulic hoses n. cuits shall be fused. d snow deflector. Il be furnished and ins age shall be supplied. s shall be furnished and standard color. actices neet all Federal and S shall be insulated with e securely fastened w es shall be located for nnections shall be treat oe secured using "P" to e in a protective cover / relocation to fuel fill, and aluminum contact	ailgate drop. tings. as steel 304, u D light. raight revers AVP Plus,Wes- tism. s, shall be hitco- pecified chass talled and sha ad mounted. ate regulation heat shrink m th no wires ha easy accecab ted with di-ele (pe clamps at ing and protec DEF tank, exh	sible blade with a Minimum 9 for stern Pro Plus or prior to bid appro- stern Pro Plus or prior to bid appro- stern Bro Plus or prior to bid appro- stern and reinforced. sis with all accessories all be in concurrence with the truck all be in concurrence with the truck sis. anging or protructing where they are sterials or removable connectors anging or protructing where they are bility and shall not be blocked by a sctric grease. intervals not to exceed 12" betwee cted from chaffing, rubbing and ge	that create a water tight connection. e exposed to the risk of damage. hy means for access. en securment. tting pulled or torn from external sources. ody shall be made in a professional manner usi
System properl Salt calibration Spreader manu There shall be a Snow Plow, Ac Reference: Bos Cab controls fo Moldboard mar Auxiliary snow plow Quick attach er Trip mechanisn All electrical cir Front moldboar Plow frame sha plow prep pack Snow plow light Manufacturer's Installation Pra All lights shall r All wire splices All wires shall b All wires shall b Any alterations new materials. Any place steel Laminate rubbe	y sized to dump body/ charts required for set factured using stainles a spinner spreader LE djustable Angle, or S is, Power V, Western I r angle and lift mechar kers (wands). blow lights, turn signal: shall be mounted on s ids for hydraulic hoses h. cuits shall be fused. d snow deflector. Il be furnished and ins age shall be supplied. s shall be furnished and standard color. actices neet all Federal and S shall be insulated with e securely fastened w es shall be located for nnections shall be treat be secured using "P" to e in a protective cover / relocation to fuel fill, and aluminum contactor er is unacceptable.	ailgate drop. tings. is steel 304, u D light. raight revers AVP Plus,Wes- ism. s, shall be hitco- pecified chase talled and sha ad mounted. ate regulation heat shrink m th no wires ha easy accecab ted with di-ele /pe clamps at ing and proteco- DEF tank, exh t each other M	sible blade with a Minimum 9 for stern Pro Plus or prior to bid appro- ch mounted and reinforced. sis with all accessories all be in concurrence with the truck all be in concurrence with the truck s. naterials or removable connectors anging or protruding where they are polity and shall not be blocked by an extric grease. intervals not to exceed 12" betwee cted from chaffing, rubbing and ge haust, Etc. to allow installation of b Mylar or an approved equal shall be	that create a water tight connection. e exposed to the risk of damage. my means for access. en securment. tting pulled or torn from external sources. ody shall be made in a professional manner usi e used as a buffer.
System properl Salt calibration Spreader manu There shall be a Snow Plow, Ac Reference: Bos Cab controls fo Moldboard mar Auxiliary snow plow Quick attach er Trip mechanisn All electrical cir Front moldboar Plow frame sha plow prep pack Snow plow light Manufacturer's Installation Pra All lights shall r All wire splices All wires shall b All wires shall b Any alterations new materials. Any place steel Laminate rubbe All vertical and	y sized to dump body/ charts required for set factured using stainles a spinner spreader LE djustable Angle, or S s, Power V, Western I r angle and lift mechar kers (wands). blow lights, turn signal: shall be mounted on s dds for hydraulic hoses h. cuits shall be fused. d snow deflector. Il be furnished and ins age shall be supplied. s shall be furnished and standard color. actices meet all Federal and Si shall be insulated with e securely fastened w es shall be located for nnections shall be treat be securely fastened w es shall be located for nnections shall be treat be securely fastened w es shall be located for nnections shall be treat be securely fastened w es unacceptable. horizontal seams of th	ailgate drop. tings. as steel 304, u D light. raight revers AVP Plus,Wes- s, shall be hitco- pecified chase talled and sha ad mounted. ate regulation heat shrink m th no wires ha easy accecab ted with di-ele /pe clamps at ing and protecab ted with di-ele /pe clamps at ing and protecab ted with di-ele /pe clamps at ing and protecab ted with di-ele /pe clamps at ing and protecab DEF tank, exh t each other M e body sides s	sible blade with a Minimum 9 for stern Pro Plus or prior to bid appro- ch mounted and reinforced. sis with all accessories all be in concurrence with the truck all be in concurrence with the truck sis. naterials or removable connectors anging or protruding where they are bility and shall not be blocked by an extric grease. intervals not to exceed 12" betwee cted from chaffing, rubbing and ge naust, Etc. to allow installation of b Aylar or an approved equal shall be shall utilize full penetration continu	that create a water tight connection. e exposed to the risk of damage. hy means for access. en securment. tting pulled or torn from external sources. ody shall be made in a professional manner usi e used as a buffer. ous welds in accordance with standard welding
System properl Salt calibration Spreader manu There shall be a Snow Plow, Ad Reference: Bos Cab controls fo Moldboard mar Auxiliary snow J The snow plow Quick attach er Trip mechanism All electrical cir Front moldboar Plow frame shal plow prep pack Snow plow light Manufacturer's Installation Pra All lights shall n All wires shall b All wires shall b All wires shall b Any alterations new materials. Any place steel Laminate rubbe All vertical and practices as se	y sized to dump body/ charts required for set factured using stainles a spinner spreader LE djustable Angle, or Si s, Power V, Western I r angle and lift mechar kers (wands). blow lights, turn signal- shall be mounted on s hds for hydraulic hoses h. cuits shall be fused. d snow deflector. Il be furnished and ins age shall be supplied. s shall be furnished and standard color. detector. detector shall be insulated with e securely fastened w es shall be located for nections shall be trea be secured using "P" ty e in a protective cover / relocation to fuel fill, and aluminum contact r is unacceptable. horizontal seams of th t forth by the Americar	ailgate drop. tings. is steel 304, u D light. raight revers AVP Plus,Wes- ism. s, shall be hitco- pecified chass talled and sha ad mounted. ate regulation heat shrink m th no wires ha easy accecab ted with di-ele /pe clamps at ing and protector DEF tank, exh t each other M e body sides s Welding Soc	sible blade with a Minimum 9 for stern Pro Plus or prior to bid appro- ch mounted and reinforced. sis with all accessories all be in concurrence with the truck all be in concurrence with the truck s. naterials or removable connectors anging or protruding where they are polity and shall not be blocked by an extric grease. intervals not to exceed 12" betwee cted from chaffing, rubbing and ge haust, Etc. to allow installation of b Mylar or an approved equal shall be	that create a water tight connection. e exposed to the risk of damage. hy means for access. en securment. tting pulled or torn from external sources. ody shall be made in a professional manner usi e used as a buffer. ous welds in accordance with standard welding
System properl Salt calibration Spreader manu There shall be a Snow Plow, Ad Reference: Bos Cab controls fo Moldboard mar Auxiliary snow The snow plow Quick attach er Trip mechanism All electrical cir Front moldboar Plow frame sha plow prep pack Snow plow light Manufacturer's Installation Pra All lights shall n All wire splices All wires shall b All wires shall b All wires shall b Any alterations new materials. Any place steel Laminate rubbe All vertical and practices as se All corners shall	y sized to dump body/ charts required for set factured using stainles a spinner spreader LE djustable Angle, or S s, Power V, Western I r angle and lift mechar kers (wands). blow lights, turn signal: shall be mounted on s dds for hydraulic hoses h. cuits shall be fused. d snow deflector. Il be furnished and ins age shall be supplied. s shall be furnished and standard color. actices meet all Federal and Si shall be insulated with e securely fastened w es shall be located for nnections shall be treat be securely fastened w es shall be located for nnections shall be treat be securely fastened w es shall be located for nnections shall be treat be securely fastened w es unacceptable. horizontal seams of th	ailgate drop. tings. is steel 304, u D light. raight revers AVP Plus,Wes- ism. s, shall be hitco- pecified chass talled and sha ad mounted. ate regulation heat shrink m th no wires ha easy accecab ted with di-ele (pe clamps at ing and protec DEF tank, exh t each other M e body sides s Welding Soc I for safety.	sible blade with a Minimum 9 for stern Pro Plus or prior to bid appro- ch mounted and reinforced. sis with all accessories all be in concurrence with the truck all be in concurrence with the truck staterials or removable connectors anging or protruding where they are polity and shall not be blocked by an actric grease. intervals not to exceed 12" betwee cted from chaffing, rubbing and ge haust, Etc. to allow installation of b Aylar or an approved equal shall be shall utilize full penetration continu iety and sealed water tight to crea	that create a water tight connection. e exposed to the risk of damage. hy means for access. en securment. tting pulled or torn from external sources. ody shall be made in a professional manner usi e used as a buffer. ous welds in accordance with standard welding

	Page 4 <u> of 4</u>
The use of any of the following items or practices WILL NOT BE ACCEPTED.	
Non-steel fittings on hydraulic pressure lines.	
Excessive use of elbows on hydraulic lines.	
Use of thread tape on hydraulic fittings.	
Use of galvanized fittings or components on hydraulic system.	
Improper hydraulic line size.	
Use of high-pressure hose for hydraulic suction line.	
Scotchlok-type wire splices.	
Non-insulated wire splices.	
Improper hose or wire routing near exhaust, over-sharp edges or through holes witho	out grommets, or sharp edges.
Improperly prepared, primed and painted surfaces.	
Non-fused electric circuits.	
Hydraulic circuits without pressure relief protection.	
	Oct 16,2012 JF

SPECIFICATION

038120 - Stainless Steel Dump Body Upfit For Use With a 17K Chassis

Reference: Heil Yardbird, Omaha Standard Eagle, Galion / Godwin 100, Crysteel E Tipper, Henderson Mark III or prior approved equal.

Note: " Refer to PCID 1075 for Delivery, Training, and Warranty Requirements".

Note: " Stainless Steal shall be either 201 or 304 grade".

Note : All up fitting shall be in accordance with the chassis manufacturers body builders up fitter manual.

Body Shall Include The Following Equipment:

Body - Installation:

It shall be the responsibility of the successful vendor to have the dump body mounted on the chassis(s). The installation shall be engineered and approved by the vehicle manufacturer and shall have no adverse affect upon the manufacturer's warranty. When any portion of the complete vehicle is to be installed by anybody other than the bidder or the chassis manufacturer, they shall indicate the name of the sub-contractor performing such installation and the location of their plants. The dump body dimensions shall cover the rear wheels. Any other applicable changes required to accommodate this type unit is the responsibility of the bidder.

Frame rails shall be prepared by cleaning, priming and final painting.

The body shall be attached to the truck chassis using four (4) U-bolts, or bolt thru, lock nuts, and appropriate shear plates as required to comply with manufacturer's standards.

Body Components:

Length of body shall be 9 Feet Minimum.

Floor Thickness shall be 3/16 of an inch minimum.

Capacity: 2 (approximate) cubic yards water level.

Side board pockets and tailgate height shall provide an additional carrying capacity.

The bulkhead shall be slotted, punched or checker-boarded to allow for visibility through the rear vehicle window.

There shall be a lever operated chute.

Body shall be fitted with a bed prop system, manufacture standard

Hoist cylinder shall have a lifting capacity of 9 tons. Minimum. Cylinder rod shall be chrome platted.

Hydraulic tank shall be a minimum of 20 Gallons working capacity. It is the responsibility of the vendor to insure all hydraulic functions can operate uninterrupted to include all plow, body, and spreader functions.

All points of movement such as lift arms, tailgate linkage, etc. shall be fitted with threaded grease fittings.

Upper telescopic cylinder pin shall have a remote grease fitting.

There shall be wheel chocks and holders per EQN-82. Holders can be mounted on the driver's side splash guards.

There shall be a ladder to access the dump bed on the drivers side. Shall have grab handles to provide three points of contact when entering the bed. Steps shall be Bustin aluminum No. NST4 full size, or Bustin 628 steel, or Ohio Grating or IKG Industries serrated swage lock, with end band. The outer step edge must be serrated in lieu of plain, smooth metal edge. All edges shall be banded (skirting) on the outer perimeter. Overlay is not acceptable. Grab handles shall be covered with non-skid paint (non-skid tape is unacceptable).

Tailgate shall have a height of 24 inches minimum. Shall be a double acting tailgate with offset hinges. Shall have two (2) "J" hooks welded to the tailgate for chain hangers. 1.25" diameter, greasable self-aligning top hinge pins with tapered end and with sufficient length for easy removal. Pins shall be affixed with chains to prevent loss and be non-rotating. The holding device for the tailgate shall be operated by a control lever with a safety holding chain and ring. Severe duty tailgate hardware shall be adjustable. Coal chute gate with levers and operating handle. Shall have four (4) tailgate banjo chain brackets, two (2) on each side, banjo brackets shall be a minimum of 3/8 inch thickness and be fully welded. Tailgate / spreader chains shall be 3/8 inch and covered with black expandable braided sleeving monofilament.

Rear corner posts On both sides, shall be full depth construction from the top of the tailgate to the bottom of the rear bolster and free of holes. Rear bolster shall be full depth and full width.

Cab shield shall cover half of the cab, continuously welded.

Body structure shall have 4" structural channel cross members of equal strength on 12" centers. The body and body sub-frame shall be reinforced to withstand SEVERE duty service. IE: Dump body up while spreading salt and anti-skid material, or excavation rip rap being dropped in the bed. Heavy gussets shall be furnished at all cross members on the outside. Where not possible, they will be furnished on the inside.

Construction:

All body parts are to be electrically full welded into one integral body.

For all threaded connections at least two (2) full threads shall be visible beyond the nut.

The fuel tank fill shall be positioned in such a way to ensure the filler nozzle can be set on automatic and nozzle will support itself with unrestricted flow.

	Page <u>2 of 4</u>
Exhaust: All tool boxes above any exhaust tailpipe or within close proximity of muffler to protect it. Exhaust shall be extended to the outer most edge of the installe	•
Mud Flaps: Mud flaps front and rear of rear tires, unmarked, full width of tires, and guss Length shall be consistent with the unloaded rear axle height, And in accord The Flaps in front of the rear tires shall extend downward 3/4 of the length o mud flap attached for the remaining distance. The Flaps at the rear, of the rear tires, shall be constructed of 0.1406 in (10 steel backed plates.	lance with the PA State Inspection Laws. If the rear splash guard/mud flap, with a 1/4 length, unmarked
Electrical: Whelen Light Kit Part # PADOTSY6, Kit contains the following lighting. 1 - R10PADOT Light Bar to be mounted to the driver's side of the bulkhead. In no case shall the light bar be mounted on the roof of the vehicle. Light Ba 2- LINZ6A lights to be grill mounted per EQN - 115 2 - 5VA02ZAD Vertical Amber warning lights, to be mounted within the rear 2 - 50R00XRD Vertical Red stop, turn, tail lights to be mounted within the rear 2 - 50A02ZAD Amber warning lights, to be mounted one each side of dump 1 - M6BUD Back-up light, to be mounted between frame rails where practica 5 - W441D Harness side mating Deutch connectors. The above lights are supplied with male and female Deutsch connectors that each light source. 1 - PFP1PA Tripod pedestal work light with coiled cord, remote mount and wired and mounted in the rear of the truck. Work light receptacle shall have protected and have a chassis ground. Remote mount location to be determ	Light bar shall be mounted on swivel base as per EQN-210B. ar, rear and side warning lights shall be on the same switch. bolster facing rearward Per EQN-120U bed as Per EQN-120U al, including one M6 brush guard kit. at shall be utilized to connect the vendor supplied harness to plug to be supplied in the cab. Work Light receptacle shall be a constant 12 volt power supply, circuit to be properly
Body builder to supply remaining stop / tail / turn, marker and ICC lighting, t mounted. Connections shall be water tight. All Body lighting shall be LED. The Warning lights / Light bar shall have a lighted, permanently labeled togo Body wiring shall be Grote, Trucklite, or Prior Approved Equal. There shall be no splices outside of a sealed box or fixture. There shall be a seven-way trailer (Pin Type) receptacle mounted on rear. F A color-coded electrical wiring chart and schematic shall accompany each b	gle switch located in the dash. Per EQN - 80A
Paint: Body priming and painting to ensure full coverage to all areas of the body Color of the body, including inside and outside of compartments, and the be yellow, or optional PennDOT yellow DuPont F9885 for shade. (Powder Coa successful vendor to ensure color of the body matches the cab. All metal surfaces to be painted shall be cleaned and prepared by abrasive Painting Council Standard SSPC-SP-6. A rust preventative treatment shall be applied.	t, if available from factory.) It will be the responsibility of the
Conspicuity tape on body as per EQN-127A. Red/white on sides of body an Alternating Red / Yellow Reflective sheeting shall be mounted diagonal	

Alternating Red / Yellow Reflective sheeting shall be mounted diagonally (45 degree angle) on the entire tailgate as per EQN-120N. ICC Rear Under ride Protector, hitch and ladders shall be painted black.

Hitch:

There shall be a hitch installed, Per EQN-202B, the Upper Portion Of Hitch Shall Be Painted With Non-Skid Paint If extending to or outside body perimeter and is likely to be stepped on. Below hardware shall be supplied in truck cab.

	Buyers Products (216-974-888)	OR Wallace Forge Company (800-328-1203)		
Combo Ball Hitch W/ 2 inch Hard Chrome Ball:	BH8-2000		23071911	
Pintle Mounting Plate:	PM-87		2200170 PADOT	
Bolt Kit:	8520		2117240	
Hitch Pin: HP6253 WC			HP58412	

			Page <u>3 of 4</u>
Hydraulic Syste	em and Console		
		. Control Pre	o, Component Technology - Electronic Control System SG1, Basic Hydraulic CS-105,
Force America -	SSC-VT, Crest - PHS I	Hydraulics	
			be operated by single pump, to include all plow body and spreader functions.
			It driven gear pump with electric clutch.
	be fully proportional electric solutions of the second sec	-	
			ons, clutch pump switch, rotating light, spinner spot, plow/headlights, main on/off, aux.
mounted in betw	een the drivers and pas	senger seat	
•	ntrol shall be open loop,	ground spe	ed with blast, auger reverse and pause. Quick connect to remove spreader control (in
summer mode). Controls to be e	ectric solenoid operated	for plow ho	ist, plow angle, body hoist and spreader controls.
Drawings:			
EQN-80A	Revised 11-29-06	sheet 1	WIRING DIAGRAM
EQN-82 EQN-115	Revised 07-23-09 Revised 07-03-12	sheet 1 sheet 1	CHOCK AND HOLDER GRILL MOUNTED WARNING LIGHTS
EQN-115 EQN-120N	Revised 07-03-12 Revised 09-29-11	sheet 1	TAILGATE REFLECTIVE SHEETING / WARNING LIGHTS
EQN-1200	Revised 08-14-12	sheet 1	17K DUMP TAIL GATE LIGHTING
EQN-127A	Revised 01-02-09	sheet 1	CONSPICUITY TAPE
EQN-202B	Revised 11-03-06	sheet 1	HITCH: WEIGHT DISTRIBUTING
EQN-210B	Revised 01-07-10	sheet 3	HIGH VOLTAGE WARNING LIGHT (BRACKET)
			<u>Options</u>
-	r Tailgate: (Installed)		
	in sprocket or gear-type		ble).
	dware kit installed on du		
	sized to dump body/tail		
		,	npainted, with all edges deburred and smooth.
	spinner spreader LED li		
	• •	-	
			ble blade with a Minimum 9 foot moldboard: (Installed)
			tern Pro Plus or prior to bid approved equal).
	angle and lift mechanism	n.	
Moldboard mark		hall ha hitak	n mounted and reinforced.
	shall be mounted on spe		
•	ds for hydraulic hoses.		
Trip mechanism	-		
•	uits shall be fused.		
Front moldboard			
		ed and shal	I be in concurrence with the truck manufacturer's engineering approval. Factory snow
	ge shall be supplied.		
	s shall be furnished and i	nounted.	
Manufacturer's s			
Installation Pra		rogulation	
	eet all Federal and State		s. aterials or removable connectors that create a water tight connection.
			nging or protruding where they are exposed to the risk of damage.
			ility and shall not be blocked by any means for access.
	nections shall be treated		
			intervals not to exceed 12" between securment.
			ted from chaffing, rubbing and getting pulled or torn from external sources. aust, Etc. to allow installation of body shall be made in a professional manner using
			ylar or an approved equal shall be used as a buffer.
Any alterations / new materials.	and aluminum contact e	ach other M	
Any alterations / new materials. Any place steel Laminate rubber	is unacceptable.		
Any alterations / new materials. Any place steel Laminate rubber All vertical and h	is unacceptable. orizontal seams of the b	ody sides s	hall utilize full penetration continuous welds in accordance with standard welding
Any alterations / new materials. Any place steel Laminate rubber All vertical and h practices as set	is unacceptable. lorizontal seams of the b forth by the American W	ody sides s elding Soci	
Any alterations / new materials. Any place steel Laminate rubber All vertical and h practices as set All corners shall	is unacceptable. orizontal seams of the b	ody sides s elding Soci r safety.	hall utilize full penetration continuous welds in accordance with standard welding ety and sealed water tight to create one integral body.

	Page 4 of 4
The use of any of the following items or practices WILL NOT BE ACCEPTED.	
Non-steel fittings on hydraulic pressure lines.	
Excessive use of elbows on hydraulic lines.	
Use of thread tape on hydraulic fittings.	
Use of galvanized fittings or components on hydraulic system.	
Improper hydraulic line size.	
Use of high-pressure hose for hydraulic suction line.	
Scotchlok-type wire splices.	
Non-insulated wire splices.	
Improper hose or wire routing near exhaust, over-sharp edges or through holes witho	ut grommets, or sharp edges.
Improperly prepared, primed and painted surfaces.	
Non-fused electric circuits.	
Hydraulic circuits without pressure relief protection.	
	Oct 16,2012
	001 10,2012

Page <u>1 of 3</u>

SPECIFICATION

039700 - Shop Body Upfit With Under hood Air Compressor and Crane For Use With 11K and 17K Chassis

Reference: Stahl, Warner, Omaha Standard, or Knapheide, meeting these specifications.

Note: " Refer to PCID 1075 for Delivery, Training, and Warranty Requirements".

Note : All up fitting shall be in accordance with the chassis manufacturers body builders up fitter manual.

Body Shall Include The Following Equipment:

Body - Installation:

It shall be the responsibility of the successful vendor to have the foreman body mounted on the chassis(s). The installation shall be engineered and approved by the vehicle manufacturer and shall have no adverse affect upon the manufacturer's warranty. When any portion of the complete vehicle is to be installed by anybody other than the bidder or the chassis manufacturer, they shall indicate the name of the sub-contractor performing such installation and the location of their plants. The foreman body dimensions shall cover the rear wheels. Any other applicable changes required to accommodate this type unit is the responsibility of the bidder.

The body shall have a front mounted bulkhead and shall be a minimum 14 gauge steel with punched or expandable metal area in alignment with the cab rear window. It shall be constructed of sufficient strength to eliminate damage to the rear of the cab. The bulkhead shall not interfere with the visibility of the third brake light.

Proposed bulkhead shall be reviewed for acceptance prior to pilot model inspection by the Equipment Division. The bulkhead shall have a forward extension mounted to the driver's side, of sufficient size to support the base of the warning light and this extension shall have a gusset.

Frame rails shall be prepared by cleaning, priming and final painting.

The body shall be attached to the truck chassis using four (4) U-bolts, or bolt thru, lock nuts, and appropriate shear plates as required to comply with manufacturer's standards.

Body Components:

There shall be 3 compartments on each side Overall compartment depth shall be 24 in. minimum.

One (1) curbside compartment shall be 70" long x 18" high or 76" long or 18" high minimum.

Piano hinge is unacceptable.

All door and compartment hinges shall be rod and nylon bushing or stainless steel heavy duty strap hinge with nylon or Teflon bushings and rubber door seals.

Vertical compartment doors shall have a limiting device, shock type or steel lock strap type. Chain or cable is acceptable on horizontal doors only.

All compartments shall be keyed alike, with no two individual completed units having the same keys.

The top left and right area's of the service body shall be covered with aluminum diamond deck (unpainted), and sealed all around.

Vertical compartment doors shall have a limiting device, shock type or steel lock strap type. Chain or cable straps on horizontal doors is unacceptable. Solid stock with a removable pin shall be utilized on all horizontal opening doors.

All compartments shall be keyed alike, with no two individual completed units having the same keys.

The heavy-duty rear bumper shall be constructed with a minimum of 1/8 inch reinforced steel. The size and strength shall be in accordance with the truck manufacturer's step design. The platform on top of the bumper shall be Bustin aluminum No. NST4 full size, or Bustin 628 steel, or Ohio Grating or IKG Industries serrated swage lock, with end band. The outer step edge must be serrated in lieu of plain, smooth metal edge. All edges shall be banded (skirting) on the outer perimeter. Overlay is not acceptable.

There shall be a stainless steel grab handle on each rear side of the utility body to assist the operator in entering and exiting the bed area, Non-skid paint or rubber shall be utilized, (non-skid tape is unacceptable). Ref: Non skid paint, Gamma Laboratories (Tel. 304-489-2828.) All compartment floors shall be covered with yellow DriDek (Tel: 800-348-2398).

Any area likely to be stepped on shall be covered with non-skid paint.

Each compartment shall have the Vista Compartment lighting System (Tel: 219-264-0711). The "Krystal-Lite" lighting sections shall be mounted on the roof of each compartment and shall occupy at a minimum (approximately) ¾ of the compartments length. All compartments lighting shall be controlled by a single illuminated rocker switch mounted within easy reach of the driver.

Construction:

All body parts are to be electrically full welded into one integral body.

For all threaded connections at least two (2) full threads shall be visible beyond the nut.

The fuel tank fill shall be positioned in such a way to ensure the filler nozzle can be set on automatic and nozzle will support itself with unrestricted flow.

Exhaust:

All tool boxes above any exhaust tailpipe or within close proximity of muffler, DPF, etc. shall receive a heat shield plate to the box in order to protect it. Exhaust shall be extended to the outer most edge of the installed body.

Mud Flaps:

Mud flaps front and rear of rear tires, unmarked, full width of tires, and gusseted.

Length shall be consistent with the unloaded rear axle height, And in accordance with the PA State Inspection Laws.

The Flaps in front of the rear tires shall be constructed of 0.1406 in (10 gauge) steel.

The Flaps at the rear, of the rear tires, shall be constructed of 0.1406 in (10 gauge) steel, and include a rubber flap using 3 bolts and flat steel backed plates.

			Page 2 of 3		
Electrical:			· • • • • • • •		
Whelen Light Kit Part	# PADOTSY5, Kit contains the following li	ghting.			
•	ar to be mounted to the driver's side of the bu	Ikhead. In no case s	shall the light bar be mounted on the roof of the		
2- LINZ6A lights to be 2 - M6AD Amber warni	grill mounted per EQN - 115				
2 - M6AD Ander warnin 2 - M6BTTD Stop, Tail,					
2 - M6BUD Back-up lig	5				
		varning, STT, and ba	ack up lights shall be mounted within housing per		
EQN - 120M.		0			
in conjunction with abo	ve light bar.	each side of bed p	er EQN - 120M. Side warning lights are to be wired		
2 - LINZ6 Grommet Kits	-				
	le mating Deutch connectors.	tara that ahall ha uti	lized to connect the wonder ownilled berness to		
each light source.			ilized to connect the vendor supplied harness to		
wired and mounted in		all have a constant	upplied in the cab. Work Light receptacle shall be 12 volt power supply, circuit to be properly protected n.		
	remaining marker and ICC lighting, they shall	be protected agains	st damage and shall also be shock mounted.		
	ater tight. All Body lighting shall be LED. ght bar shall have a lighted, permanently labe	led toggle switch loo	cated in the dash.		
Body wiring shall be Gr	ote, Trucklite, or Prior Approved Equal.				
	es outside of a sealed box or fixture.				
	-way trailer (Pin Type) receptacle mounted or)A		
	l wiring chart and schematic shall accompany exposed or hung where it could be damaged b	•	lohric		
no wining shall be left e	sposed of hung where it could be damaged t		65113.		
successful vendor to All metal surfaces to be Painting Council Standa A rust preventative trea Conspicuity tape on bo Alternating Red / Yello ICC Rear Under ride Pr	ensure color of the body matches the cab. e painted shall be cleaned and prepared by at ard SSPC-SP-6. Itment shall be applied. dy as per EQN-127A. Red/white on sides of b	brasive blasting to 1- body and cab, iagonally (45 degre	e from factory.) It will be the responsibility of the -1/2 mil profile in accordance with Steel Structure ee angle) on the rear of body as per EQN-120K.		
	e of cabinets shall have a minimum 12 inch l	nigh aluminum diam	ond plate for chip resistance.		
		f Hitch Shall Be Pair	nted With Non-Skid Paint If extending to or outside		
There shall be a hitch in	nstalled, Per EQN-202B, the Upper Portion O	f Hitch Shall Be Pair	nted With Non-Skid Paint If extending to or outside		
There shall be a hitch in	nstalled, Per EQN-202B, the Upper Portion O	f Hitch Shall Be Pair	nted With Non-Skid Paint If extending to or outside		
There shall be a hitch in body perimeter and is li Combo Ball	nstalled, Per EQN-202B, the Upper Portion O kely to be stepped on. Below hardware shall	f Hitch Shall Be Pair be supplied in truck	nted With Non-Skid Paint If extending to or outside cab.		
There shall be a hitch in body perimeter and is li	nstalled, Per EQN-202B, the Upper Portion O kely to be stepped on. Below hardware shall	f Hitch Shall Be Pair be supplied in truck	nted With Non-Skid Paint If extending to or outside cab.		
There shall be a hitch in body perimeter and is li Combo Ball Hitch W/ 2	nstalled, Per EQN-202B, the Upper Portion O kely to be stepped on. Below hardware shall	f Hitch Shall Be Pair be supplied in truck	nted With Non-Skid Paint If extending to or outside cab.		
There shall be a hitch in body perimeter and is li Combo Ball Hitch W/ 2 inch Hard	nstalled, Per EQN-202B, the Upper Portion O kely to be stepped on. Below hardware shall Buyers Products (216-974-888)	f Hitch Shall Be Pair be supplied in truck	nted With Non-Skid Paint If extending to or outside cab. Wallace Forge Company (800-328-1203)		
There shall be a hitch in body perimeter and is li Combo Ball Hitch W/ 2 inch Hard Chrome Ball:	nstalled, Per EQN-202B, the Upper Portion O kely to be stepped on. Below hardware shall Buyers Products (216-974-888)	f Hitch Shall Be Pair be supplied in truck	nted With Non-Skid Paint If extending to or outside cab. Wallace Forge Company (800-328-1203)		
There shall be a hitch in body perimeter and is li Combo Ball Hitch W/ 2 inch Hard Chrome Ball: Pintle	nstalled, Per EQN-202B, the Upper Portion O kely to be stepped on. Below hardware shall Buyers Products (216-974-888)	f Hitch Shall Be Pair be supplied in truck	nted With Non-Skid Paint If extending to or outside cab. Wallace Forge Company (800-328-1203)		
There shall be a hitch in body perimeter and is li Combo Ball Hitch W/ 2 inch Hard Chrome Ball: Pintle Mounting Plate:	nstalled, Per EQN-202B, the Upper Portion O kely to be stepped on. Below hardware shall Buyers Products (216-974-888) BH8-2000 PM-87	f Hitch Shall Be Pair be supplied in truck	nted With Non-Skid Paint If extending to or outside cab. Wallace Forge Company (800-328-1203) 23071911 2200170 PADOT		
There shall be a hitch in body perimeter and is li Combo Ball Hitch W/ 2 inch Hard Chrome Ball: Pintle Mounting	nstalled, Per EQN-202B, the Upper Portion O kely to be stepped on. Below hardware shall Buyers Products (216-974-888) BH8-2000	f Hitch Shall Be Pair be supplied in truck	nted With Non-Skid Paint If extending to or outside cab. Wallace Forge Company (800-328-1203) 23071911		

		Page <u>3 of 3</u>
Auxiliary Air S		shall be a quitab that only allows compressor to rup when the vahials is placed in
park/neutral).	AR COMPRESSOR SYSTEM, (Inere s	shall be a switch that only allows compressor to run when the vehicle is placed in
,		
		console shall be properly mounted and bracketed.
		ol console, all necessary hardware and brackets, and complete accessories.
		quick couplers complete and one on a housed (out of the weather, on the road side)
	, spare 50 ft hose shall be shipped in t	
	separator, Chicago Pneumatic #CA-0	48360.
ine lubricator	Chicago Pneumatic #CA-048361.	
Pressure regul	lator Chicago Pneumatic #CA-048362	to adjust to OSHA approved levels of 30 psi.
Гwo (2) conne	ctors Chicago Pneumatic #CA-048363	3.
		nted on a convenient service panel and shall incorporate a master gate valve.
) female and (0.250 in) female connectors.
ank vibration		
Crane:		
er EQN-120J	l, Ref: Autocrane 3203PRX-HW or equ	ivenlant. Original crane manufacturer's color is acceptable. Body manufacture is
esponsible for	r engineering body to incorporate mou	nting and use of the crane with out damage to the body.
)rowings:		
Drawings: EQN-80A	Povisod 11 12 00 shart 1	
	Revised 11-12-09 sheet 1	
QN-82	Revised 09-28-11 sheet 1	CHOCK AND HOLDER
QN-115	Revised 07-03-12 sheet 1	GRILL MOUNTED WARNING LIGHTS
QN-120J	Revised 09-28-11 sheet 1	9' SERVICE BODY
QN-120K	Revised 09-28-11 sheet 1	TYPICAL REFLECTIVE SHEETING
EQN-120M	Revised 09-28-11 sheet 1	CREW CAB BODY LIGHTING
EQN-127A	Revised 01-02-09 sheet 1	CONSPICUITY TAPE
EQN-202B	Revised 11-03-06 sheet 1	HITCH: WEIGHT DISTRIBUTING
		Options
		<u></u>
S		
Bed Liner:		hall an un fland hatte interim side manuals. An et interim sound and tailer to interim Oball
Center Cargo		
Center Cargo <i>i</i> be a minimum	of 150 Mils. Thickness. Material shall	hall cover floor, both interior side panels, front interior panel and tailgate interior. Shall have No VOCS and be applied utilizing a high pressure spray. (Ref: Rhino, Linex or p
Center Cargo A	of 150 Mils. Thickness. Material shall	
Center Cargo A	of 150 Mils. Thickness. Material shall	
Center Cargo	of 150 Mils. Thickness. Material shall	
Center Cargo / pe a minimum pproved equa	of 150 Mils. Thickness. Material shall al.)	
Center Cargo / be a minimum approved equa	of 150 Mils. Thickness. Material shall al.) ractices	have No VOCS and be applied utilizing a high pressure spray. (Ref: Rhino, Linex or p
Center Cargo , be a minimum approved equa nstallation Pr All lights shall	of 150 Mils. Thickness. Material shall al.) ractices meet all Federal and State regulations	have No VOCS and be applied utilizing a high pressure spray. (Ref: Rhino, Linex or p
Center Cargo , be a minimum approved equa nstallation Pr All lights shall All wire splices	of 150 Mils. Thickness. Material shall al.) ractices meet all Federal and State regulations s shall be insulated with heat shrink ma	have No VOCS and be applied utilizing a high pressure spray. (Ref: Rhino, Linex or p
Center Cargo , be a minimum approved equa nstallation Pr All lights shall All wire splices All wires shall	of 150 Mils. Thickness. Material shall al.) ractices meet all Federal and State regulations s shall be insulated with heat shrink ma be securley fastened with no wires ha	have No VOCS and be applied utilizing a high pressure spray. (Ref: Rhino, Linex or p
Center Cargo , be a minimum approved equa nstallation Pr All lights shall All wire splices All wires shall All junction box	of 150 Mils. Thickness. Material shall al.) ractices meet all Federal and State regulations s shall be insulated with heat shrink ma be securley fastened with no wires hall xes shall be located for easy accecabil	have No VOCS and be applied utilizing a high pressure spray. (Ref: Rhino, Linex or p
Center Cargo , be a minimum approved equa nstallation Pr All lights shall All wire splices All wires shall All junction box All electrical co	of 150 Mils. Thickness. Material shall al.) ractices meet all Federal and State regulations is shall be insulated with heat shrink ma be securley fastened with no wires han xes shall be located for easy accecabil connections shall be treated with di-elect	have No VOCS and be applied utilizing a high pressure spray. (Ref: Rhino, Linex or p
Center Cargo , be a minimum approved equa nstallation Pr All lights shall All wire splices All wires shall All junction box All electrical co	of 150 Mils. Thickness. Material shall al.) ractices meet all Federal and State regulations is shall be insulated with heat shrink ma be securley fastened with no wires han xes shall be located for easy accecabil connections shall be treated with di-elect	have No VOCS and be applied utilizing a high pressure spray. (Ref: Rhino, Linex or p
Center Cargo , be a minimum approved equa nstallation Pr NI lights shall , NI wire splices NI wires shall NI junction box NI electrical co NI electrical co NI wiring shall	of 150 Mils. Thickness. Material shall al.) ractices meet all Federal and State regulations is shall be insulated with heat shrink ma be securley fastened with no wires har xes shall be located for easy accecabil ponnections shall be treated with di-elec be secured using "P" type clamps at i	have No VOCS and be applied utilizing a high pressure spray. (Ref: Rhino, Linex or p
Center Cargo , be a minimum approved equa installation Pr All lights shall All wire splices All wires shall All junction box All electrical co All wiring shall All wires shall	of 150 Mils. Thickness. Material shall al.) ractices meet all Federal and State regulations is shall be insulated with heat shrink ma be securley fastened with no wires har xes shall be located for easy accecabil ponnections shall be treated with di-elec be secured using "P" type clamps at i be in a protective covering and protect	have No VOCS and be applied utilizing a high pressure spray. (Ref: Rhino, Linex or p aterials or removable connectors that create a water tight connection. Anging or protruding where they are exposed to the risk of damage. Ity and shall not be blocked by any means for access. Attric grease. Intervels not to exceed 12" between securment.
Center Cargo J be a minimum approved equa installation Pr All lights shall J All wire splices All wires shall All junction box All electrical co All electrical co All wiring shall Any alterations naterials.	of 150 Mils. Thickness. Material shall al.) ractices meet all Federal and State regulations is shall be insulated with heat shrink ma be securley fastened with no wires han xes shall be located for easy accecabil ponnections shall be treated with di-elec be secured using "P" type clamps at i be in a protective covering and protect is / relocation to fuel fill, DEF tank, exha	have No VOCS and be applied utilizing a high pressure spray. (Ref: Rhino, Linex or p atterials or removable connectors that create a water tight connection. Anging or protruding where they are exposed to the risk of damage. With and shall not be blocked by any means for access. Antervels not to exceed 12" between securment. The form chaffing, rubbing and getting pulled or torn from external sources. Analytic to allow installation of body shall be made in a professional manner using networks.
Center Cargo J be a minimum approved equa installation Pr All lights shall J All wire splices All wires shall All junction box All electrical co All wiring shall All wires shall Any alterations naterials. Any place stee	of 150 Mils. Thickness. Material shall al.) ractices meet all Federal and State regulations is shall be insulated with heat shrink ma be securley fastened with no wires han xes shall be located for easy accecabil pronections shall be treated with di-elec be secured using "P" type clamps at i be in a protective covering and protect is / relocation to fuel fill, DEF tank, exha el and aluminum contact each other Ma	have No VOCS and be applied utilizing a high pressure spray. (Ref: Rhino, Linex or p aterials or removable connectors that create a water tight connection. Anging or protruding where they are exposed to the risk of damage. Ity and shall not be blocked by any means for access. Attric grease. Intervels not to exceed 12" between securment. Ated from chaffing, rubbing and getting pulled or torn from external sources.
Center Cargo be a minimum approved equa nstallation Pr All lights shall All wire splices All wires shall all junction boo All electrical co All electrical co All wiring shall Any alterations naterials. Any place stee ubber is unac	of 150 Mils. Thickness. Material shall al.) ractices meet all Federal and State regulations is shall be insulated with heat shrink ma be securley fastened with no wires han xes shall be located for easy accecabil onnections shall be treated with di-elec be secured using "P" type clamps at i be in a protective covering and protect is / relocation to fuel fill, DEF tank, exha el and aluminum contact each other My ceptable.	have No VOCS and be applied utilizing a high pressure spray. (Ref: Rhino, Linex or p atterials or removable connectors that create a water tight connection. nging or protruding where they are exposed to the risk of damage. lity and shall not be blocked by any means for access. tric grease. Intervels not to exceed 12" between securment. ted from chaffing, rubbing and getting pulled or torn from external sources. aust, Etc. to allow installation of body shall be made in a professional manner using ne ylar or an approved equal shall be used as a buffer.
Center Cargo J be a minimum approved equa installation Pr All lights shall All wire splices All wires shall J All wires shall J All wires shall J All wires shall J Any alterations inaterials. Any place stee ubber is unacc All vertical and	of 150 Mils. Thickness. Material shall al.) ractices meet all Federal and State regulations is shall be insulated with heat shrink may be securely fastened with no wires hall the securely fastened with no wires hall be secured using "P" type clamps at i be in a protective covering and protect is / relocation to fuel fill, DEF tank, exha el and aluminum contact each other My ceptable.	have No VOCS and be applied utilizing a high pressure spray. (Ref: Rhino, Linex or p aterials or removable connectors that create a water tight connection. nging or protruding where they are exposed to the risk of damage. ity and shall not be blocked by any means for access. etric grease. Intervels not to exceed 12" between securment. ted from chaffing, rubbing and getting pulled or torn from external sources. aust, Etc. to allow installation of body shall be made in a professional manner using ne ylar or an approved equal shall be used as a buffer.
Center Cargo J be a minimum approved equa installation Pr All lights shall All wire splices All wires shall J All wires shall J All wires shall J All wires shall J Any alterations materials. Any place stee subber is unacc All vertical and	of 150 Mils. Thickness. Material shall al.) ractices meet all Federal and State regulations is shall be insulated with heat shrink ma be securley fastened with no wires han xes shall be located for easy accecabil onnections shall be treated with di-elec be secured using "P" type clamps at i be in a protective covering and protect is / relocation to fuel fill, DEF tank, exha el and aluminum contact each other My ceptable.	have No VOCS and be applied utilizing a high pressure spray. (Ref: Rhino, Linex or p aterials or removable connectors that create a water tight connection. nging or protruding where they are exposed to the risk of damage. ity and shall not be blocked by any means for access. etric grease. Intervels not to exceed 12" between securment. ted from chaffing, rubbing and getting pulled or torn from external sources. aust, Etc. to allow installation of body shall be made in a professional manner using ne ylar or an approved equal shall be used as a buffer.
Center Cargo J be a minimum approved equa nstallation Pr All lights shall All wire splices All wires shall I All wires shall I All wires shall I All wires shall I Any alterations materials. Any place stee tubber is unacc All vertical and orth by the An	of 150 Mils. Thickness. Material shall al.) ractices meet all Federal and State regulations is shall be insulated with heat shrink may be securely fastened with no wires hall the securely fastened with no wires hall be secured using "P" type clamps at i be in a protective covering and protect is / relocation to fuel fill, DEF tank, exha el and aluminum contact each other My ceptable.	have No VOCS and be applied utilizing a high pressure spray. (Ref: Rhino, Linex or p aterials or removable connectors that create a water tight connection. nging or protruding where they are exposed to the risk of damage. ity and shall not be blocked by any means for access. etric grease. Intervels not to exceed 12" between securment. ted from chaffing, rubbing and getting pulled or torn from external sources. aust, Etc. to allow installation of body shall be made in a professional manner using ne ylar or an approved equal shall be used as a buffer.
Center Cargo J be a minimum approved equa mstallation Pr All lights shall All wire splices All wires shall All wires shall I All junction boo All electrical co All electrical co All viring shall Any alterations naterials. Any place stee ubber is unacc All vertical and orth by the An All corners sha	of 150 Mils. Thickness. Material shall al.) ractices meet all Federal and State regulations is shall be insulated with heat shrink may be securely fastened with no wires hall be securely fastened with no wires hall the securely fastened with no wires hall be secured using "P" type clamps at i be in a protective covering and protect is / relocation to fuel fill, DEF tank, exha el and aluminum contact each other My ceptable. I horizontal seams of the body sides sh nerican Welding Society and sealed w	have No VOCS and be applied utilizing a high pressure spray. (Ref: Rhino, Linex or p aterials or removable connectors that create a water tight connection. nging or protruding where they are exposed to the risk of damage. lity and shall not be blocked by any means for access. tric grease. Intervels not to exceed 12" between securment. ted from chaffing, rubbing and getting pulled or torn from external sources. aust, Etc. to allow installation of body shall be made in a professional manner using ne ylar or an approved equal shall be used as a buffer. Lamina hall utilize full penetration welds in accordance with standard welding practices as set ater tight to create one integral body.

The use of any of the following items or practices WILL NOT BE ACCEPTED.

Non-steel fittings on hydraulic pressure lines.

Excessive use of elbows on hydraulic lines.

Use of thread tape on hydraulic fittings.

Use of galvanized fittings or components on hydraulic system.

Improper hydraulic line size.

Use of high-pressure hose for hydraulic suction line.

Scotchlok-type wire splices.

Non-insulated wire splices.

Improper hose or wire routing near exhaust, over-sharp edges or through holes without grommets, or sharp edges.

Improperly prepared, primed and painted surfaces.

Non-fused electric circuits.

Hydraulic circuits without pressure relief protection.

Oct 16,2012 JF

	Page <u>1 of 3</u>
SPECIFICATION	
045660 - Truck 17K 2WD Crew Cab & Chassis Diesel Engine Auton	natic Transmission, Dual Rear Wheels

This Dual Rear Wheel Model, Chassis Only, Shall Be A Manufacturer's Standard Model Vehicle, Capable Of Carrying Five (5) Passengers. 17,000 Lb GVWR Minimum. Manufacturer's Rating Certified On Door. Chassis to accommodate A 9 Foot Minimum, Flatbed, Service, Shop, Foreman, Weld, Dump Body or Survey Body.

Note: " Refer to PCID 1075 for <u>Delivery</u>, and <u>Warranty</u> Requirements".

The following additional items shall be supplied

Air Bags : Shall be equipped with manufacturers standard air bags.

Air Conditioning : Shall be equipped with manufacturers standard air conditioning

Alternator : Shall be manufacturers largest / heaviest duty available.

Daytime Running Lights : Shall be equipped with manufacturers standard Daytime Running Lights. (Aftermarket Acceptable)

Differential : Shall be equipped with manufacturers standard Limited Slip Differential. Rear Axle Ratio Shall be 4.88.

DEF Tank : Shall be mounted to not interfere with body installation. Any relocation shall be done in a professional manner using new materials.

Engine : Shall be Manufacturer's highest available horsepower and torque rating, standard or optional diesel engine, to include, immersion inblock type engine heater For water cooled engines, with water-proof plug and flush mounted In drivers side front sheet metal, engine oil cooler, and largest available engine cooling capacity.

Exhaust : Shall be capable of being extended by the body up fitter to the outer most edge of the installed body.

Front Bumper : Shall be Chrome, Black, or Argent.

Fuel Tank : Manufacturer's highest capacity standard tank frame mounted (Tank filler positioned to ensure that filler nozzle can be set on automatic and nozzle will support itself, with unrestricted flow.)

Lubricants : Shall be synthetic where available, with drain plugs identified or painted red. (Engine oil excluded)

Mirrors : Shall be manufacturers standard heavy duty outside mirrors with convex mirror (aftermarket convex spot mirror acceptable) and extendable arms, driver and passenger sides. Shall be equipped with manufacturers standard manual day / night rearview mirror.

Paint : Manufacturer's standard safety or school bus yellow.

Seats: Shall be equipped with Vinyl 40/20/40 seats with center work console, Foam Padded with Seatbelts. (Cloth is Unacceptable)

Suspension : Shall be equipped with trailer and handling package, to include front and rear stabilizer bars, heaviest available front and rear suspension, and heaviest available differential.

Tires : Truck and Body Company shall ensure that proper sized tires and wheels for GVWR are supplied. Tires shall be radial, OEM's most aggressive / severe duty tire available from manufacturer.

Transmission : Shall be automatic with largest available auxiliary oil cooler.

Windshield : Shall be equipped with manufacturers standard tinted windshield.

Windows and Locks : Shall be equipped with manufacturers standard manual windows and door locks.

The following equipment shall be supplied / installed

There shall be a step bar (Westin Part # 251335 or Equal) in Black, must be length of cab entry area on both sides. (Installed)

There shall be an ECCO Model 450 backup alarm, shock mounted. (Installed)

There shall be a seven-way trailer light receptacle, "Pin Type", securely mounted near rear trailer hitch area. Wired per EQN - 80A. Connections shall be sealed and water tight.

There shall be a 7 inch dome light with switch, Ref: Truck-Lite #80354, or approved equal. Installed centered, over the front seat, capable of operating with the Ignition off.

There shall be a warning light: Whelen Model R10HDPA with Deutsch connectors. Supplied and delivered in the cab.

There shall be an emergency triangle warning kit in each unit, in storage box and mounted in cab. EQN - 66A

There shall be a 5 LB. minimum ABC type fire extinguisher rechargeable with vehicle mount. Securely mounted in the cab for easy and guick access.

There shall be a trailer hitch installed, as per EQN - 202B, the upper portion of hitch shall be painted with non-skid paint if extending to or outside body perimeter and is likely to be stepped on. (Tape is not acceptable.)

Page 2 of 3

All the following shall be supplied and delivered in the cab. Buyers Products - Combo Ball Hitch W/ 2 inch Hard Chrome Ball BH8-2000, Pintle Mounting Plate PM-87, Bolt Kit 8520, Hitch Pin HP6253 WC. Or approved equal.

Safety

Unit shall be fitted with temporary mud flaps that shall remain intact.

The cab shall have conspicuity tape as Per EQN-127A.

Any area likely to be stepped on shall be covered with non-skid paint, tape is unacceptable.

All handrails, ladders, and step configurations shall be built for three points of contact.

Anti-slip paint is required on all handholds, for the entire length, (tape is unacceptable).

Options

Option : To be equipped with Four Wheel Drive.

Option : To be equipped with Snow Plow Prep package.

Option : To be equipped with Power windows, Power door locks, and Power / Heated mirrors with manual extendable arms.

<u>Option</u>: Road Watch road/air temperature system. Located on the left front fender. Gauge to be neatly mounted in the dash within the drivers view or installed with control system integrated temperature display.

<u>Option</u>: Vaisala road/air temperature system. Located on the left front fender. Gauge to be neatly mounted in the dash within the drivers view or installed with control system integrated temperature display.

Option : Install FLOCS system as per EQN: 351A.

Option : Flatbed Body upfit, Specification 046900

Option : Service Body upfit, Specification 048900

Option : Shop Body upfit, Specification 039700

Option : Foreman Body upfit, Specification 050400

Option: Forman Body upfit, Split door option Specification 050401

Option : Survey Body upfit, Specification 049700

Option : Weld Body upfit, Specification 045860

Option : Steel Dump Body upfit, Specification 038100

Option : Aluminum Dump Body upfit, Specification 038110

Option : Stainless Steel Dump Body upfit, Specification 038120

Option : Snow Plow upfit, Specification 038100, 038110, or 038120

Option : Spreader upfit, Specification 038100, 038110, or 038120

Page 3 <u> of 3</u>

Option : Statewide Radio:

<u>GPS Combo Radio Antenna:</u> There shall be a roof mount base with built-in GPS, PCTEL model GPPB-204-54-12-S1-M1 and an elevated feed antenna, PCTEL model BMUF7603. Assembly shall be mounted on a vendor supplied/installed stainless steel fender bracket. The fender bracket shall be mounted on the driver's side of the vehicle and it shall be mounted on the inside of the engine compartment with the base extending out over the top of the fender. Existing fender holes shall be utilized to accommodate mounting, with no holes drilled in the exterior fender surface. There shall be no sharp edges and it shall not interfere with the opening/closing of the hood. The antenna cable shall be routed to the floor area between the seats. It shall be properly secured and protected against heat/road splash. There shall be a minimum of 4 feet of antenna cable coiled at the base of the floor to allow for connection of a radio. Antenna shall be prewired with a MINI - UHF MALE connection. (No substitute, standardization).

<u>Power Distribution Center</u>: There shall be a 4-way power/ground distribution center located on the underside of the dash for connection of our state radio. The lugs shall be configured in the following manner: (1) lug shall be a 30 ampere constant hot circuit, (1) lug shall be a 10 ampere ignition controlled circuit. (2) lugs shall be chassis ground. All connections shall be enclosed in a weatherproof enclosure.

Option : Bidder must provide option pricing for "one" of the following.

Factory: Having unit bid painted PennDOT yellow. Reference DUPONT F9885 shade only. Unit shall be painted PennDOT yellow in lieu of the OEM's original color. Using the same process as with OEM paint.

Aftermarket: Having unit bid painted PennDOT yellow. Reference DUPONT F9885 shade only. All surfaces shall be properly cleaned and prepared prior to paint. Paint shall be the same quality as factory paint. To include all areas of the unit including interior.

Drawings	
----------	--

Dramingo.				
EQN-66A	Revised	07-20-09	sheet 1	TRIANGLE STORAGE BOX AND BRACKET
EQN-80A	Revised	11-12-09	sheet 1	WIRING DIAGRAM
EQN-127A	Revised	01-02-09	sheet 1	CONSPICUITY TAPE
EQN-202B	Revised	11-03-06	sheet 1	HITCH: WEIGHT DISTRIBUTING
EQN-351A	Revised	10-20-06	sheet 1 & 2	FAST LUBE OIL CHANGE SYSTEM OVERVIEW AND PARTS LIST

Note : All up fitting shall be in accordance with the chassis manufacturers body builders up fitter manual.

Installation Practices

All lights shall meet all Federal and State regulations.

All wire splices shall be insulated with heat shrink materials or removable connectors that create a water tight connection.

All wires shall be securley fastened with no wires hanging or protruding where they are exposed to the risk of damage.

All junction boxes shall be located for easy accecability and shall not be blocked by any means for access.

All electrical connections shall be treated with di-electric grease.

All wiring shall be secured using "P" type clamps at intervels not to exceed 12" between securment.

All wires shall be in a protective covering and protected from chaffing, rubbing and getting pulled or torn from external sources.

Any alterations / relocation to fuel fill, DEF tank, exhaust, Etc. to allow installation of body shall be made in a professional manner using new materials.

Any place steel and aluminum contact each other Mylar or an approved equal shall be used as a buffer. Laminate rubber is unacceptable.

All vertical and horizontal seams of the body sides shall utilize full penetration welds in accordance with standard welding practices as set forth by the American Welding Society and sealed water tight to create one integral body.

All corners shall be angled or rounded for safety.

All mounting procedures shall be in accordance with NTEA standards.

The use of any of the following items or practices WILL NOT BE ACCEPTED.

Non-steel fittings on hydraulic pressure lines.

Excessive use of elbows on hydraulic lines.

Use of thread tape on hydraulic fittings.

Use of galvanized fittings or components on hydraulic system.

Improper hydraulic line size.

Use of high-pressure hose for hydraulic suction line.

Scotchlok-type wire splices.

Non-insulated wire splices.

Improper or not secured hose or wire routing near exhaust, over-sharp edges or through holes without grommets, or sharp edges.

Improperly prepared, primed and painted surfaces.

Non-fused electric circuits.

Hydraulic circuits without pressure relief protection.

Laminated Rubber

Oct 16,2012 JF

SPECIFICATION				
045661 - Truck, 17K, 2WD, Crew Cab & Chassis, Gas Engine, Automatic Transmission, Dual Rear Wheels				
This Dual Rear Wheel Model, Chassis Only, Shall Be A Manufacturer's Standard Model Vehicle, Capable Of Carrying Five (5) Passengers. 17,000 Lb GVWR Minimum. Manufacturer's Rating Certified On Door. Chassis to accommodate A 9 Foot Minimum, Flatbed, Service, Shop, Foreman, Weld, Dump Body or Survey Body.				
Note: " Refer to PCID 1075 for <u>Delivery</u> , and <u>Warranty</u> Requirements".				
The following additional items shall be supplied				
Air Bags : Shall be equipped with manufacturers standard air bags.				
Air Conditioning : Shall be equipped with manufacturers standard air conditioning.				
Alternator : Shall be manufacturers largest / heaviest duty available.				
Daytime Running Lights : Shall be equipped with manufacturers standard Daytime Running Lights. (Aftermarket Acceptable)				
Differential : Shall be equipped with manufacturers standard Limited Slip Differential. Rear Axle Ratio Shall be 4.88.				
Engine : Shall be Manufacturer's highest available horsepower and torque rating, standard or optional gas engine, to include, engine oil cooler , and largest available engine cooling capacity.				
Exhaust : Shall be capable of being extended by the body up fitter to the outer most edge of the installed body.				
Front Bumper : Shall be Chrome, Black, or Argent.				
Fuel Tank : Manufacturer's highest capacity standard tank frame mounted (Tank filler positioned to ensure that filler nozzle can be set on automatic and nozzle will support itself, with unrestricted flow.)				
Lubricants : Shall be synthetic where available, with drain plugs identified or painted red. (Engine oil excluded)				
Mirrors : Shall be manufacturers standard heavy duty outside mirrors with convex mirror (aftermarket convex spot mirror acceptable) and extendable arms, driver and passenger sides. Shall be equipped with manufacturers standard manual day / night rearview mirror.				
Paint : Manufacturer's standard safety or school bus yellow.				
Seats: Shall be equipped with Vinyl 40/20/40 seats with center work console, Foam Padded with Seatbelts. (Cloth is Unacceptable)				
Suspension : Shall be equipped with trailer and handling package, to include front and rear stabilizer bars, heaviest available front and rear suspension, and heaviest available differential.				
Tires : Truck and Body Company shall ensure that proper sized tires and wheels for GVWR are supplied. Tires shall be radial, OEM's most aggressive / severe duty tire available from manufacturer.				
Transmission : Shall be automatic with largest available auxiliary oil cooler.				

Page 1 of 3

Windshield : Shall be equipped with manufacturers standard tinted windshield.

Windows and Locks : Shall be equipped with manufacturers standard manual windows and door locks.

The following equipment shall be supplied / installed

There shall be a step bar (Westin Part # 251335 or Equal) in Black, must be length of cab entry area on both sides. (Installed)

There shall be an ECCO Model 450 backup alarm, shock mounted. (Installed)

There shall be a seven-way trailer light receptacle, "Pin Type", securely mounted near rear trailer hitch area. Wired per EQN - 80A. Connections shall be sealed and water tight.

There shall be a 7 inch dome light with switch, Ref: Truck-Lite #80354, or approved equal. Installed centered, over the front seat, capable of operating with the Ignition off.

There shall be a warning light: Whelen Model R10HDPA with Deutsch connectors. Supplied and delivered in the cab.

There shall be an emergency triangle warning kit in each unit, in storage box and mounted in cab. EQN - 66A

There shall be a 5 LB. minimum ABC type fire extinguisher rechargeable with vehicle mount. Securely mounted in the cab for easy and quick access.

Page 2 of 3

There shall be a trailer hitch installed, as per EQN - 202B, the upper portion of hitch shall be painted with non-skid paint if extending to or outside body perimeter and is likely to be stepped on. (Tape is not acceptable.)

All the following shall be supplied and delivered in the cab. Buyers Products - Combo Ball Hitch W/2 inch Hard Chrome Ball BH8-2000, Pintle Mounting Plate PM-87, Bolt Kit 8520, Hitch Pin HP6253 WC. Or approved equal.

Safety

Unit shall be fitted with temporary mud flaps that shall remain intact.

The cab shall have conspicuity tape as Per EQN-127A.

Any area likely to be stepped on shall be covered with non-skid paint, tape is unacceptable.

All handrails, ladders, and step configurations shall be built for three points of contact.

Anti-slip paint is required on all handholds, for the entire length, (tape is unacceptable).

Options

Option : To be equipped with Four Wheel Drive.

Option : To be equipped with Snow Plow Prep package.

Option : To be equipped with Power windows, Power door locks, and Power / Heated mirrors with manual extendable arms.

<u>Option</u>: Road Watch road/air temperature system. Located on the left front fender. Gauge to be neatly mounted in the dash within the drivers view or installed with control system integrated temperature display.

<u>Option</u>: Vaisala road/air temperature system. Located on the left front fender. Gauge to be neatly mounted in the dash within the drivers view or installed with control system integrated temperature display.

Option : Install FLOCS system as per EQN: 351A.

Option : Flatbed Body upfit, Specification 046900

Option : Service Body upfit, Specification 048900

Option : Shop Body upfit, Specification 039700

Option : Foreman Body upfit, Specification 050400

Option : Foreman Body upfit, Split Door option 050401

Option : Survey Body upfit, Specification 049700

Option : Weld Body upfit, Specification 045860

Option : Steel Dump Body upfit, Specification 038100

Option : Aluminum Dump Body upfit, Specification 038110

Option : Stainless Steel Dump Body upfit, Specification 038120

Option : Snow Plow upfit, Specification 038100, 038110, or 038120

Option : Spreader upfit, Specification 038100, 038110, or 038120

be routed to the floor area betwe of 4 feet of antenna cable coiled MALE connection. (No substitute Power Distribution Center: The our state radio. The lugs shall be	en the seats. It shall be properly secured and protected against heat/road splash. There shall be a minimum at the base of the floor to allow for connection of a radio. Antenna shall be prewired with a MINI - UHF s, standardization). For shall be a 4-way power/ground distribution center located on the underside of the dash for connection of configured in the following manner: (1) lug shall be a 30 ampere constant hot circuit, (1) lug shall be a 10 . (2) lugs shall be chassis ground. All connections shall be enclosed in a weatherproof enclosure.
Factory: Having unit bid painted the OEM's original color. Using the Aftermarket: Having unit bid pa	otion pricing for "one" of the following. I PennDOT yellow. Reference DUPONT F9885 shade only. Unit shall be painted PennDOT yellow in lieu of the same process as with OEM paint. inted PennDOT yellow. Reference DUPONT F9885 shade only. All surfaces shall be properly cleaned and Il be the same quality as factory paint. To include all areas of the unit including interior.
Drawings: EQN-66A Revised 07- EQN-80A Revised 11- EQN-127A Revised 01- EQN-202B Revised 11- EQN-351A Revised 10- Note : All up fitting shall be in action	12-09 sheet 1 WIRING DIAGRAM .02-09 sheet 1 CONSPICUITY TAPE .03-06 sheet 1 HITCH: WEIGHT DISTRIBUTING
All wires shall be securley fasten. All junction boxes shall be locate All electrical connections shall be All wiring shall be secured using All wires shall be in a protective of Any alterations / relocation to fue materials. Any place steel and aluminum co rubber is unacceptable. All vertical and horizontal seams forth by the American Welding So All corners shall be angled or rou	 with heat shrink materials or removable connectors that create a water tight connection. ed with no wires hanging or protruding where they are exposed to the risk of damage. d for easy accecability and shall not be blocked by any means for access. e treated with di-electric grease. "P" type clamps at intervels not to exceed 12" between securment. covering and protected from chaffing, rubbing and getting pulled or torn from external sources. d fill, DEF tank, exhaust, Etc. to allow installation of body shall be made in a professional manner using new ontact each other Mylar or an approved equal shall be used as a buffer. Laminate of the body sides shall utilize full penetration welds in accordance with standard welding practices as set ociety and sealed water tight to create one integral body.
Non-steel fittings on hydraulic pre Excessive use of elbows on hydr Use of thread tape on hydraulic f Use of galvanized fittings or com Improper hydraulic line size. Use of high-pressure hose for hy Scotchlok-type wire splices. Non-insulated wire splices.	aulic lines. ittings. ponents on hydraulic system. draulic suction line. ar exhaust, over-sharp edges or through holes without grommets, or sharp edges. I painted surfaces.
	Oct 16, 2012 JF

GPS Combo Radio Antenna: There shall be a roof mount base with built-in GPS, PCTEL model GPPB-204-54-12-S1-M1 and an elevated feed antenna, PCTEL model BMUF7603. Assembly shall be mounted on a vendor supplied/installed stainless steel fender bracket. The fender bracket shall be mounted on the driver's side of the vehicle and it shall be mounted on the inside of the engine compartment with the base extending out over the top of the fender. Existing fender holes shall be utilized to accommodate mounting, with no holes drilled in the exterior fender surface. There shall be no sharp edges and it shall not interfere with the opening/closing of the hood. The antenna cable shall

Option : Statewide Radio:

Page 3 of 3

SPECIFICATION	
045800 - Truck, 17K, 2WD, Regular Cab & Chassis, Diesel Engine, Autor	matic Transmission Dual Rear Wheels
043000 - Truck, TTR, ZWD, Regular Oab & Onassis, Dieser Engine, Autor	mane manamiaalon, Duar Near Wheela

Daga 1 of 2

This Dual Rear Wheel Model, Chassis Only, Shall Be A Manufacturer's Standard Model Vehicle, Capable Of Carrying Two (2) Passengers. 17,000 Lb GVWR Minimum. Manufacturer's Rating Certified On Door. Chassis to accommodate A 9 Foot Minimum, Flatbed, Service, Shop, Foreman, Weld, Dump Body or Survey Body.

Note: " Refer to PCID 1075 for <u>Delivery</u>, and <u>Warranty</u> Requirements".

The following additional items shall be supplied

Air Bags : Shall be equipped with manufacturers standard air bags.

Air Conditioning : Shall be equipped with manufacturers standard air conditioning.

Alternator : Shall be manufacturers largest / heaviest duty available.

Daytime Running Lights : Shall be equipped with manufacturers standard Daytime Running Lights. (Aftermarket Acceptable)

Differential : Shall be equipped with manufacturers standard Limited Slip Differential. Rear Axle Ratio Shall be 4.88.

DEF Tank : Shall be mounted to not interfere with body installation. Any relocation shall be done in a professional manner using new materials.

Engine : Shall be Manufacturer's highest available horsepower and torque rating, standard or optional diesel engine, to include, immersion inblock type engine heater For water cooled engines, with water-proof plug and flush mounted In driver's side front sheet metal, engine oil cooler, and largest available engine cooling capacity.

Exhaust : Shall be capable of being extended by the body up fitter to the outer most edge of the installed body.

Front Bumper : Shall be Chrome, Black, or Argent.

Fuel Tank : Manufacturer's highest capacity standard tank frame mounted (Tank filler positioned to ensure that filler nozzle can be set on automatic and nozzle will support itself, with unrestricted flow.)

Lubricants : Shall be synthetic where available, with drain plugs identified or painted red. (Engine oil excluded)

Mirrors : Shall be manufacturers standard heavy duty outside mirrors with convex mirror (aftermarket convex spot mirror acceptable) and extendable arms, driver and passenger sides. Shall be equipped with manufacturers standard manual day / night rearview mirror.

Paint : Manufacturer's standard safety or school bus yellow.

Seats: Shall be equipped with Vinyl 40/20/40 seats with center work console, Foam Padded with Seatbelts. (Cloth is Unacceptable)

Suspension : Shall be equipped with trailer and handling package, to include front and rear stabilizer bars, heaviest available front and rear suspension, and heaviest available differential.

Tires : Truck and Body Company shall ensure that proper sized tires and wheels for GVWR are supplied. Tires shall be radial, OEM's most aggressive / severe duty tire available from manufacturer.

Transmission : Shall be automatic with largest available auxiliary oil cooler.

Windshield : Shall be equipped with manufacturers standard tinted windshield.

Windows and Locks : Shall be equipped with manufacturers standard manual windows and door locks.

The following equipment shall be supplied / installed

There shall be a step bar (Westin Part # 251335 or Equal) in Black, must be length of cab entry area on both sides. (Installed)

There shall be an ECCO Model 450 backup alarm, shock mounted. (Installed)

There shall be a seven-way trailer light receptacle, "Pin Type", securely mounted near rear trailer hitch area. Wired per EQN - 80A. Connections shall be sealed and water tight.

There shall be a 7 inch dome light with switch, Ref: Truck-Lite #80354, or approved equal. Installed centered, over the front seat, capable of operating with the Ignition off.

There shall be a warning light: Whelen Model R10HDPA with Deutsch connectors. Supplied and delivered in the cab.

There shall be an emergency triangle warning kit in each unit, in storage box and mounted in cab. EQN - 66A

There shall be a 5 LB. minimum ABC type fire extinguisher rechargeable with vehicle mount. Securely mounted in the cab for easy and quick access.

There shall be a trailer hitch installed, as per EQN - 202B, the upper portion of hitch shall be painted with non-skid paint if extending to or outside body perimeter and is likely to be stepped on. (Tape is not acceptable.)

Page 2 of 3

All the following shall be supplied and delivered in the cab. Buyers Products - Combo Ball Hitch W/ 2 inch Hard Chrome Ball BH8-2000, Pintle Mounting Plate PM-87, Bolt Kit 8520, Hitch Pin HP6253 WC. Or approved equal.

Safety

Unit shall be fitted with temporary mud flaps that shall remain intact.

The cab shall have conspicuity tape as Per EQN-127A.

Any area likely to be stepped on shall be covered with non-skid paint, tape is unacceptable.

All handrails, ladders, and step configurations shall be built for three points of contact.

Anti-slip paint is required on all handholds, for the entire length, (tape is unacceptable).

Options

Option : To be equipped with Four Wheel Drive.

Option : To be equipped with Snow Plow Prep package.

Option : To be equipped with Power windows, Power door locks, and Power / Heated mirrors with manual extendable arms.

<u>Option</u>: Road Watch road/air temperature system. Located on the left front fender. Gauge to be neatly mounted in the dash within the drivers view or installed with control system integrated temperature display.

<u>Option</u>: Vaisala road/air temperature system. Located on the left front fender. Gauge to be neatly mounted in the dash within the drivers view or installed with control system integrated temperature display.

Option : Install FLOCS system as per EQN: 351A.

Option : Flatbed Body upfit, Specification 046900

Option : Service Body upfit, Specification 048900

Option : Shop Body upfit, Specification 039700

Option : Foreman Body upfit, Specification 050400

Option : Foreman Body upfit, Split Door configuration, Specification 050401

Option : Survey Body upfit, Specification 049700

Option : Weld Body upfit, Specification 045860

Option : Steel Dump Body upfit, Specification 038100

Option : Aluminum Dump Body upfit, Specification 038110

Option : Stainless Steel Dump Body upfit, Specification 038120

Option : Snow Plow upfit, Specification 038100, 038110, or 038120

Option : Spreader upfit, Specification 038100, 038110, or 038120

Page 3 <u> of 3</u>

Option : Statewide Radio:

<u>GPS Combo Radio Antenna:</u> There shall be a roof mount base with built-in GPS, PCTEL model GPPB-204-54-12-S1-M1 and an elevated feed antenna, PCTEL model BMUF7603. Assembly shall be mounted on a vendor supplied/installed stainless steel fender bracket. The fender bracket shall be mounted on the driver's side of the vehicle and it shall be mounted on the inside of the engine compartment with the base extending out over the top of the fender. Existing fender holes shall be utilized to accommodate mounting, with no holes drilled in the exterior fender surface. There shall be no sharp edges and it shall not interfere with the opening/closing of the hood. The antenna cable shall be routed to the floor area between the seats. It shall be properly secured and protected against heat/road splash. There shall be a minimum of 4 feet of antenna cable coiled at the base of the floor to allow for connection of a radio. Antenna shall be prewired with a MINI - UHF MALE connection. (No substitute, standardization).

<u>Power Distribution Center</u>: There shall be a 4-way power/ground distribution center located on the underside of the dash for connection of our state radio. The lugs shall be configured in the following manner: (1) lug shall be a 30 ampere constant hot circuit, (1) lug shall be a 10 ampere ignition controlled circuit. (2) lugs shall be chassis ground. All connections shall be enclosed in a weatherproof enclosure.

Option : Bidder must provide option pricing for "one" of the following.

Factory: Having unit bid painted PennDOT yellow. Reference DUPONT F9885 shade only. Unit shall be painted PennDOT yellow in lieu of the OEM's original color. Using the same process as with OEM paint.

Aftermarket: Having unit bid painted PennDOT yellow. Reference DUPONT F9885 shade only. All surfaces shall be properly cleaned and prepared prior to paint. Paint shall be the same quality as factory paint. To include all areas of the unit including interior.

D	ra	wi	nc	IS'
	i a	** 1	шg	j 3.

Diawings.				
EQN-66A	Revised	07-20-09	sheet 1	TRIANGLE STORAGE BOX AND BRACKET
EQN-80A	Revised	11-12-09	sheet 1	WIRING DIAGRAM
EQN-127A	Revised	01-02-09	sheet 1	CONSPICUITY TAPE
EQN-202B	Revised	11-03-06	sheet 1	HITCH: WEIGHT DISTRIBUTING
EQN-351A	Revised	10-20-06	sheet 1 & 2	FAST LUBE OIL CHANGE SYSTEM OVERVIEW AND PARTS LIST

Note : All up fitting shall be in accordance with the chassis manufacturers body builders up fitter manual.

Installation Practices

All lights shall meet all Federal and State regulations.

All wire splices shall be insulated with heat shrink materials or removable connectors that create a water tight connection.

All wires shall be securley fastened with no wires hanging or protruding where they are exposed to the risk of damage.

All junction boxes shall be located for easy accecability and shall not be blocked by any means for access.

All electrical connections shall be treated with di-electric grease.

All wiring shall be secured using "P" type clamps at intervels not to exceed 12" between securment.

All wires shall be in a protective covering and protected from chaffing, rubbing and getting pulled or torn from external sources.

Any alterations / relocation to fuel fill, DEF tank, exhaust, Etc. to allow installation of body shall be made in a professional manner using new materials.

Any place steel and aluminum contact each other Mylar or an approved equal shall be used as a buffer. Laminate rubber is unacceptable.

All vertical and horizontal seams of the body sides shall utilize full penetration welds in accordance with standard welding practices as set forth by the American Welding Society and sealed water tight to create one integral body.

All corners shall be angled or rounded for safety.

All mounting procedures shall be in accordance with NTEA standards.

The use of any of the following items or practices WILL NOT BE ACCEPTED. Non-steel fittings on hydraulic pressure lines. Excessive use of elbows on hydraulic lines.

Use of thread tape on hydraulic fittings.

Use of galvanized fittings or components on hydraulic system.

Improper hydraulic line size.

Use of high-pressure hose for hydraulic suction line.

Scotchlok-type wire splices.

Non-insulated wire splices.

Improper hose or wire routing near exhaust, over-sharp edges or through holes without grommets, or sharp edges.

Improperly prepared, primed and painted surfaces.

Non-fused electric circuits.

Hydraulic circuits without pressure relief protection.

Laminated Rubber

Oct 16,2012 JF

SPECIFICATION				
045801 - Truck, 17K, 2WD, Regular Cab & Chassis, Gas Engine, Automatic Transmission, Dual Rear Wheels				
This Dual Rear Wheel Model, Chassis Only, Shall Be A Manufacturer's Standard Model Vehicle, Capable Of Carrying Two (2) Passengers. 17,000 Lb GVWR Minimum. Manufacturer's Rating Certified On Door. Chassis to accommodate A 9 Foot Minimum, Flatbed, Service, Shop, Foreman, Weld, Dump Body or Survey Body.				
Note: " Refer to PCID 1075 for <u>Delivery</u> , and <u>Warranty</u> Requirements".				
The following additional items shall be supplied				
Air Bags : Shall be equipped with manufacturers standard air bags.				
Air Conditioning : Shall be equipped with manufacturers standard air conditioning.				
Alternator : Shall be manufacturers largest / heaviest duty available.				
Daytime Running Lights : Shall be equipped with manufacturers standard Daytime Running Lights. (Aftermarket Acceptable)				
Differential : Shall be equipped with manufacturers standard Limited Slip Differential. Rear Axle Ratio Shall be 4.88.				
Engine : Shall be Manufacturer's highest available horsepower and torque rating, standard or optional gas engine, to include, engine oil cooler , and largest available engine cooling capacity.				
Exhaust : Shall be capable of being extended by the body up fitter to the outer most edge of the installed body.				
Front Bumper : Shall be Chrome, Black, or Argent.				
Fuel Tank : Manufacturer's highest capacity standard tank frame mounted (Tank filler positioned to ensure that filler nozzle can be set on automatic and nozzle will support itself, with unrestricted flow.)				
Lubricants : Shall be synthetic where available, with drain plugs identified or painted red. (Engine oil excluded)				
Mirrors : Shall be manufacturers standard heavy duty outside mirrors with convex mirror (aftermarket convex spot mirror acceptable) and extendable arms, driver and passenger sides. Shall be equipped with manufacturers standard manual day / night rearview mirror.				
Paint : Manufacturer's standard safety or school bus yellow.				
Seats: Shall be equipped with Vinyl 40/20/40 seats with center work console, Foam Padded with Seatbelts. (Cloth is Unacceptable)				
Suspension : Shall be equipped with trailer and handling package, to include front and rear stabilizer bars, heaviest available front and rear suspension, and heaviest available differential.				
Tires : Truck and Body Company shall ensure that proper sized tires and wheels for GVWR are supplied. Tires shall be radial, OEM's most aggressive / severe duty tire available from manufacturer.				
Transmission : Shall be automatic with largest available auxiliary oil cooler.				
Windshield : Shall be equipped with manufacturers standard tinted windshield.				

Page 1 of 3

Windows and Locks : Shall be equipped with manufacturers standard manual windows and door locks.

The following equipment shall be supplied / installed

There shall be a step bar (Westin Part # 251335 or Equal) in Black, must be length of cab entry area on both sides. (Installed)

There shall be an ECCO Model 450 backup alarm, shock mounted. (Installed)

There shall be a seven-way trailer light receptacle, "Pin Type", securely mounted near rear trailer hitch area. Wired per EQN - 80A. Connections shall be sealed and water tight.

There shall be a 7 inch dome light with switch, Ref: Truck-Lite #80354, or approved equal. Installed centered, over the front seat, capable of operating with the Ignition off.

There shall be a warning light: Whelen Model R10HDPA with Deutsch connectors. Supplied and delivered in the cab.

There shall be an emergency triangle warning kit in each unit, in storage box and mounted in cab. EQN - 66A

There shall be a 5 LB. minimum ABC type fire extinguisher rechargeable with vehicle mount. Securely mounted in the cab for easy and guick access.

Page 2 of 3

There shall be a trailer hitch installed, as per EQN - 202B, the upper portion of hitch shall be painted with non-skid paint if extending to or outside body perimeter and is likely to be stepped on. (Tape is not acceptable.)

All the following shall be supplied and delivered in the cab. Buyers Products - Combo Ball Hitch W/2 inch Hard Chrome Ball BH8-2000, Pintle Mounting Plate PM-87, Bolt Kit 8520, Hitch Pin HP6253 WC. Or approved equal.

Safety

The cab shall have conspicuity tape as Per EQN-127A.

Unit shall be fitted with temporary mud flaps that shall remain intact.

Any area likely to be stepped on shall be covered with non-skid paint, tape is unacceptable.

All handrails, ladders, and step configurations shall be built for three points of contact.

Anti-slip paint is required on all handholds, for the entire length, (tape is unacceptable).

Options

Option : To be equipped with Four Wheel Drive.

Option : To be equipped with Snow Plow Prep package.

Option : To be equipped with Power windows, Power door locks, and Power / Heated mirrors with manual extendable arms.

<u>Option</u>: Road Watch road/air temperature system. Located on the left front fender. Gauge to be neatly mounted in the dash within the drivers view or installed with control system integrated temperature display.

<u>Option</u>: Vaisala road/air temperature system. Located on the left front fender. Gauge to be neatly mounted in the dash within the drivers view or installed with control system integrated temperature display.

Option : Install FLOCS system as per EQN: 351A.

Option : Flatbed Body upfit, Specification 046900

Option : Service Body upfit, Specification 048900

Option : Shop Body upfit, Specification 039700

Option : Foreman Body upfit, Specification 050400

Option : Forman Body upfit, Split Door Configuration 050401

Option : Survey Body upfit, Specification 049700

Option : Weld Body upfit, Specification 045860

Option : Steel Dump Body upfit, Specification 038100

Option : Aluminum Dump Body upfit, Specification 038110

Option : Stainless Steel Dump Body upfit, Specification 038120

Option : Snow Plow upfit, Specification 038100, 038110, or 038120

Option : Spreader upfit, Specification 038100, 038110, or 038120

be routed to the flo of 4 feet of antenna MALE connection.	or area between th a cable coiled at th (No substitute, sta	e seats. It shall e base of the flo ndardization).	be properly secured or to allow for conne	and protected ction of a radi	d against heat/road splash. There o. Antenna shall be prewired with	shall be a minimum a MINI - UHF
our state radio. Th	<u>Power Distribution Center</u> : There shall be a 4-way power/ground distribution center located on the underside of the dash for connection of our state radio. The lugs shall be configured in the following manner: (1) lug shall be a 30 ampere constant hot circuit, (1) lug shall be a 10 ampere ignition controlled circuit. (2) lugs shall be chassis ground. All connections shall be enclosed in a weatherproof enclosure.					
the OEM's original Aftermarket: Hav	init bid painted Per color. Using the sa ing unit bid painted	nDOT yellow. F me process as PennDOT yello	Reference DUPONT with OEM paint. w. Reference DUPC	DNT F9885 sł	only. Unit shall be painted PennI nade only. All surfaces shall be pr reas of the unit including interior.	
Drawings: EQN-66A EQN-80A EQN-127A EQN-202B EQN-351A	Revised 07-20-0 Revised 11-12-0 Revised 01-02-0 Revised 11-03-0 Revised 10-20-0	9 sheet 1 9 sheet 1 6 sheet 1 6 sheet 1 & 2		M PE DISTRIBUTING CHANGE SYS	G TEM OVERVIEW AND PARTS L	IST
Note : All up fitting	shall be in accord	ance with the ch	assis manufacturers	body builders	s up fitter manual.	
All wires shall be s All junction boxes s All electrical conne All wiring shall be s All wires shall be in Any alterations / re materials. Any place steel an rubber is unaccept All vertical and hor forth by the Americ All corners shall be All mounting proce	ecurley fastened w shall be located for actions shall be trea secured using "P" t a protective cove elocation to fuel fill, d aluminum contact able. izontal seams of the can Welding Societ angled or rounder dures shall be in a	ith no wires han easy accecabili ted with di-elect ype clamps at in ing and protecte DEF tank, exha t each other My e body sides sh y and sealed wa f for safety. ccordance with I	ging or protruding wh ty and shall not be bl ric grease. tervels not to exceed ad from chaffing, rubl ust, Etc. to allow inst lar or an approved ed all utilize full penetra ter tight to create on NTEA standards.	here they are ocked by any d 12" between bing and getti allation of boo qual shall be u tion welds in e integral boo	n securment. ng pulled or torn from external so dy shall be made in a professiona used as a buffer. accordance with standard weldin	urces. I manner using new Laminate
Non-steel fittings of Excessive use of e Use of thread tape Use of galvanized Improper hydraulic Use of high-pressu Scotchlok-type win Non-insulated wire	n hydraulic pressu lows on hydraulic on hydraulic fitting fittings or compone line size. ure hose for hydrau e splices. splices. vire routing near ex ed, primed and pair circuits. vithout pressure rel	e lines. lines. s. ints on hydraulic lic suction line. ihaust, over-sha ited surfaces.			grommets, or sharp edges.	
					Oct 16,2012	JF
					<u> </u>	

GPS Combo Radio Antenna: There shall be a roof mount base with built-in GPS, PCTEL model GPPB-204-54-12-S1-M1 and an elevated feed antenna, PCTEL model BMUF7603. Assembly shall be mounted on a vendor supplied/installed stainless steel fender bracket. The fender bracket shall be mounted on the driver's side of the vehicle and it shall be mounted on the inside of the engine compartment with the base extending out over the top of the fender. Existing fender holes shall be utilized to accommodate mounting, with no holes drilled in the exterior fender surface. There shall be no sharp edges and it shall not interfere with the opening/closing of the hood. The antenna cable shall

Option : Statewide Radio:

Page 3 of 3

	Page <u>1 of 3</u>	
SPECIFICATION		
045802 - Truck, 17K, 2WD, Extended Cab & Chassis, Diesel Engine, Aut	omatic Transmission, Dual Rear Wheels	

Dama 4 of 2

This Dual Rear Wheel Model, Chassis Only, Shall Be A Manufacturer's Standard Model Vehicle, Capable Of Carrying Two (2) Passengers. 17,000 Lb GVWR Minimum. Manufacturer's Rating Certified On Door. Chassis to accommodate A 9 Foot Minimum, Flatbed, Service, Shop, Foreman, Weld, Dump Body or Survey Body.

Note: " Refer to PCID 1075 for Delivery, and Warranty Requirements".

The following additional items shall be supplied

Air Bags : Shall be equipped with manufacturers standard air bags.

Air Conditioning : Shall be equipped with manufacturers standard air conditioning.

Alternator : Shall be manufacturers largest / heaviest duty available.

Daytime Running Lights : Shall be equipped with manufacturers standard Daytime Running Lights. (Aftermarket Acceptable)

Differential : Shall be equipped with manufacturers standard Limited Slip Differential. Rear Axle Ratio Shall be 4.88.

DEF Tank : Shall be mounted to not interfere with body installation. Any relocation shall be done in a professional manner using new materials.

Engine : Shall be Manufacturer's highest available horsepower and torque rating, standard or optional diesel engine, to include, immersion inblock type engine heater For water cooled engines, with water-proof plug and flush mounted In drivers side front sheet metal, engine oil cooler, and largest available engine cooling capacity.

Exhaust : Shall be capable of being extended by the body up fitter to the outer most edge of the installed body.

Front Bumper : Shall be Chrome, Black, or Argent.

Fuel Tank : Manufacturer's highest capacity standard tank frame mounted (Tank filler positioned to ensure that filler nozzle can be set on automatic and nozzle will support itself, with unrestricted flow.)

Lubricants : Shall be synthetic where available, with drain plugs identified or painted red. (Engine oil excluded)

Mirrors : Shall be manufacturers standard heavy duty outside mirrors with convex mirror (aftermarket convex spot mirror acceptable) and extendable arms, driver and passenger sides. Shall be equipped with manufacturers standard manual day / night rearview mirror.

Paint : Manufacturer's standard safety or school bus yellow.

Seats: Shall be equipped with Vinyl 40/20/40 seats with center work console, Foam Padded with Seatbelts. (Cloth is Unacceptable)

Suspension : Shall be equipped with trailer and handling package, to include front and rear stabilizer bars, heaviest available front and rear suspension, and heaviest available differential.

Tires : Truck and Body Company shall ensure that proper sized tires and wheels for GVWR are supplied. Tires shall be radial, OEM's most aggressive / severe duty tire available from manufacturer.

Transmission : Shall be automatic with largest available auxiliary oil cooler.

Windshield : Shall be equipped with manufacturers standard tinted windshield.

Windows and Locks : Shall be equipped with manufacturers standard manual windows and door locks.

The following equipment shall be supplied / installed

There shall be a step bar (Westin Part # 251335 or Equal) in Black, must be length of cab entry area on both sides. (Installed)

There shall be an ECCO Model 450 backup alarm, shock mounted. (Installed)

There shall be a seven-way trailer light receptacle, "Pin Type", securely mounted near rear trailer hitch area. Wired per EQN - 80A. Connections shall be sealed and water tight.

There shall be a 7 inch dome light with switch, Ref: Truck-Lite #80354, or approved equal. Installed centered, over the front seat, capable of operating with the Ignition off.

There shall be a warning light: Whelen Model R10HDPA with Deutsch connectors. Supplied and delivered in the cab.

There shall be an emergency triangle warning kit in each unit, in storage box and mounted in cab. EQN - 66A

There shall be a 5 LB. minimum ABC type fire extinguisher rechargeable with vehicle mount. Securely mounted in the cab for easy and quick access.

There shall be a trailer hitch installed, as per EQN - 202B, the upper portion of hitch shall be painted with non-skid paint if extending to or outside body perimeter and is likely to be stepped on. (Tape is not acceptable.)

Page 2 of 3

All the following shall be supplied and delivered in the cab. Buyers Products - Combo Ball Hitch W/ 2 inch Hard Chrome Ball BH8-2000, Pintle Mounting Plate PM-87, Bolt Kit 8520, Hitch Pin HP6253 WC. Or approved equal.

Safety

Unit shall be fitted with temporary mud flaps that shall remain intact.

The cab shall have conspicuity tape as Per EQN-127A.

Any area likely to be stepped on shall be covered with non-skid paint, tape is unacceptable.

All handrails, ladders, and step configurations shall be built for three points of contact.

Anti-slip paint is required on all handholds, for the entire length, (tape is unacceptable).

Options

Option : To be equipped with Four Wheel Drive.

Option : To be equipped with Snow Plow Prep package.

Option : To be equipped with Power windows, Power door locks, and Power / Heated mirrors with manual extendable arms.

<u>Option</u>: Road Watch road/air temperature system. Located on the left front fender. Gauge to be neatly mounted in the dash within the drivers view or installed with control system integrated temperature display.

<u>Option</u>: Vaisala road/air temperature system. Located on the left front fender. Gauge to be neatly mounted in the dash within the drivers view or installed with control system integrated temperature display.

Option : Install FLOCS system as per EQN: 351A.

Option : Flatbed Body upfit, Specification 046900

Option : Service Body upfit, Specification 048900

Option : Shop Body upfit, Specification 039700

Option : Foreman Body upfit, Specification 050400

Option : Foreman Body upfit, Split Door Configuration 050401

Option : Survey Body upfit, Specification 049700

Option : Weld Body upfit, Specification 045860

Option : Steel Dump Body upfit, Specification 038100

Option : Aluminum Dump Body upfit, Specification 038110

Option : Stainless Steel Dump Body upfit, Specification 038120

Option : Snow Plow upfit, Specification 038100, 038110, or 038120

Option : Spreader upfit, Specification 038100, 038110, or 038120

Page 3 <u> of 3</u>

Option : Statewide Radio:

<u>GPS Combo Radio Antenna:</u> There shall be a roof mount base with built-in GPS, PCTEL model GPPB-204-54-12-S1-M1 and an elevated feed antenna, PCTEL model BMUF7603. Assembly shall be mounted on a vendor supplied/installed stainless steel fender bracket. The fender bracket shall be mounted on the driver's side of the vehicle and it shall be mounted on the inside of the engine compartment with the base extending out over the top of the fender. Existing fender holes shall be utilized to accommodate mounting, with no holes drilled in the exterior fender surface. There shall be no sharp edges and it shall not interfere with the opening/closing of the hood. The antenna cable shall be routed to the floor area between the seats. It shall be properly secured and protected against heat/road splash. There shall be a minimum of 4 feet of antenna cable coiled at the base of the floor to allow for connection of a radio. Antenna shall be prewired with a MINI - UHF MALE connection. (No substitute, standardization).

<u>Power Distribution Center</u>: There shall be a 4-way power/ground distribution center located on the underside of the dash for connection of our state radio. The lugs shall be configured in the following manner: (1) lug shall be a 30 ampere constant hot circuit, (1) lug shall be a 10 ampere ignition controlled circuit. (2) lugs shall be chassis ground. All connections shall be enclosed in a weatherproof enclosure.

Option : Bidder must provide option pricing for "one" of the following.

Factory: Having unit bid painted PennDOT yellow. Reference DUPONT F9885 shade only. Unit shall be painted PennDOT yellow in lieu of the OEM's original color. Using the same process as with OEM paint.

Aftermarket: Having unit bid painted PennDOT yellow. Reference DUPONT F9885 shade only. All surfaces shall be properly cleaned and prepared prior to paint. Paint shall be the same quality as factory paint. To include all areas of the unit including interior.

-				
11	ra	A/11	nn	c '
ν	ıaı	/ 1 1	IЧ	э.

Dramingo.				
EQN-66A	Revised	07-20-09	sheet 1	TRIANGLE STORAGE BOX AND BRACKET
EQN-80A	Revised	11-12-09	sheet 1	WIRING DIAGRAM
EQN-127A	Revised	01-02-09	sheet 1	CONSPICUITY TAPE
EQN-202B	Revised	11-03-06	sheet 1	HITCH: WEIGHT DISTRIBUTING
EQN-351A	Revised	10-20-06	sheet 1 & 2	FAST LUBE OIL CHANGE SYSTEM OVERVIEW AND PARTS LIST

Note : All up fitting shall be in accordance with the chassis manufacturers body builders up fitter manual.

Installation Practices

All lights shall meet all Federal and State regulations.

All wire splices shall be insulated with heat shrink materials or removable connectors that create a water tight connection.

All wires shall be securley fastened with no wires hanging or protruding where they are exposed to the risk of damage.

All junction boxes shall be located for easy accecability and shall not be blocked by any means for access.

All electrical connections shall be treated with di-electric grease.

All wiring shall be secured using "P" type clamps at intervels not to exceed 12" between securment.

All wires shall be in a protective covering and protected from chaffing, rubbing and getting pulled or torn from external sources.

Any alterations / relocation to fuel fill, DEF tank, exhaust, Etc. to allow installation of body shall be made in a professional manner using new materials.

Any place steel and aluminum contact each other Mylar or an approved equal shall be used as a buffer. Laminate rubber is unacceptable.

All vertical and horizontal seams of the body sides shall utilize full penetration welds in accordance with standard welding practices as set forth by the American Welding Society and sealed water tight to create one integral body.

All corners shall be angled or rounded for safety.

All mounting procedures shall be in accordance with NTEA standards.

The use of any of the following items or practices WILL NOT BE ACCEPTED. Non-steel fittings on hydraulic pressure lines. Excessive use of elbows on hydraulic lines. Use of thread tape on hydraulic fittings.

Use of galvanized fittings or components on hydraulic system.

Improper hydraulic line size.

Use of high-pressure hose for hydraulic suction line.

Scotchlok-type wire splices.

Non-insulated wire splices.

Improper hose or wire routing near exhaust, over-sharp edges or through holes without grommets, or sharp edges.

Improperly prepared, primed and painted surfaces.

Non-fused electric circuits.

Hydraulic circuits without pressure relief protection.

Laminated Rubber

Oct 16,2012 JF

SPECIFICATION						
045803 - Truck, 17K, 2WD, Extended Cab & Chassis, Gas Engine, Automatic Transmission, Dual Rear Wheels This Dual Rear Wheel Model, Chassis Only, Shall Be A Manufacturer's Standard Model Vehicle, Capable Of Carrying Two (2) Passengers. 17,000 Lb GVWR Minimum. Manufacturer's Rating Certified On Door. Chassis to accommodate A 9 Foot Minimum, Flatbed, Service, Shop, Foreman, Weld, Dump Body or Survey Body.						
The following additional items shall be supplied						
Air Bags : Shall be equipped with manufacturers standard air bags.						
Air Conditioning : Shall be equipped with manufacturers standard air conditioning.						
Alternator : Shall be manufacturers largest / heaviest duty available.						
Daytime Running Lights : Shall be equipped with manufacturers standard Daytime Running Lights. (Aftermarket Acceptable)						
Differential : Shall be equipped with manufacturers standard Limited Slip Differential. Rear Axle Ratio Shall be 4.88.						
Engine : Shall be Manufacturer's highest available horsepower and torque rating, standard or optional gas engine, to include, engine oil cooler , and largest available engine cooling capacity.						
Exhaust : Shall be capable of being extended by the body up fitter to the outer most edge of the installed body.						
Front Bumper : Shall be Chrome, Black, or Argent.						
Fuel Tank : Manufacturer's highest capacity standard tank frame mounted (Tank filler positioned to ensure that filler nozzle can be set on automatic and nozzle will support itself, with unrestricted flow.)						
Lubricants : Shall be synthetic where available, with drain plugs identified or painted red. (Engine oil excluded)						
Mirrors : Shall be manufacturers standard heavy duty outside mirrors with convex mirror (aftermarket convex spot mirror acceptable) and extendable arms, driver and passenger sides. Shall be equipped with manufacturers standard manual day / night rearview mirror.						
Paint : Manufacturer's standard safety or school bus yellow.						
Seats: Shall be equipped with Vinyl 40/20/40 seats with center work console, Foam Padded with Seatbelts. (Cloth is Unacceptable)						
Suspension : Shall be equipped with trailer and handling package, to include front and rear stabilizer bars, heaviest available front and rear suspension, and heaviest available differential.						
Tires : Truck and Body Company shall ensure that proper sized tires and wheels for GVWR are supplied. Tires shall be radial, OEM's most aggressive / severe duty tire available from manufacturer.						
Transmission : Shall be automatic with largest available auxiliary oil cooler.						
Vindshield : Shall be equipped with manufacturers standard tinted windshield.						

Page 1 of 3

Windows and Locks : Shall be equipped with manufacturers standard manual windows and door locks.

The following equipment shall be supplied / installed

There shall be a step bar (Westin Part # 251335 or Equal) in Black, must be length of cab entry area on both sides. (Installed)

There shall be an ECCO Model 450 backup alarm, shock mounted. (Installed)

There shall be a seven-way trailer light receptacle, "Pin Type", securely mounted near rear trailer hitch area. Wired per EQN - 80A. Connections shall be sealed and water tight.

There shall be a 7 inch dome light with switch, Ref: Truck-Lite #80354, or approved equal. Installed centered, over the front seat, capable of operating with the Ignition off.

There shall be a warning light: Whelen Model R10HDPA with Deutsch connectors. Supplied and delivered in the cab.

All switches shall be permanently labeled and backlit.

There shall be two (2) front tow hooks, installed.

There shall be an emergency triangle warning kit in each unit, in storage box and mounted in cab. EQN - 66A

There shall be a 5 LB. minimum ABC type fire extinguisher rechargeable with vehicle mount. Securely mounted in the cab for easy and quick access.

Page 2 of 3

There shall be a trailer hitch installed, as per EQN - 202B, the upper portion of hitch shall be painted with non-skid paint if extending to or outside body perimeter and is likely to be stepped on. (Tape is not acceptable.)

All the following shall be supplied and delivered in the cab. Buyers Products - Combo Ball Hitch W/2 inch Hard Chrome Ball BH8-2000, Pintle Mounting Plate PM-87, Bolt Kit 8520, Hitch Pin HP6253 WC. Or approved equal.

Safety

Unit shall be fitted with temporary mud flaps that shall remain intact

The cab shall have conspicuity tape as Per EQN-127A.

Any area likely to be stepped on shall be covered with non-skid paint, tape is unacceptable.

All handrails, ladders, and step configurations shall be built for three points of contact.

Anti-slip paint is required on all handholds, for the entire length, (tape is unacceptable).

Options

Option : To be equipped with Four Wheel Drive.

Option : To be equipped with Snow Plow Prep package.

Option : To be equipped with Power windows, Power door locks, and Power / Heated mirrors with manual extendable arms.

<u>Option</u>: Road Watch road/air temperature system. Located on the left front fender. Gauge to be neatly mounted in the dash within the drivers view or installed with control system integrated temperature display.

<u>Option</u>: Vaisala road/air temperature system. Located on the left front fender. Gauge to be neatly mounted in the dash within the drivers view or installed with control system integrated temperature display.

Option : Install FLOCS system as per EQN: 351A.

Option : Flatbed Body upfit, Specification 046900

Option : Service Body upfit, Specification 048900

Option : Shop Body upfit, Specification 039700

Option : Foreman Body upfit, Specification 050400

Option : Foreman Body upfit, Split Door Configuration, Specification 050401

Option : Survey Body upfit, Specification 049700

Option : Weld Body upfit, Specification 045860

Option : Steel Dump Body upfit, Specification 038100

Option : Aluminum Dump Body upfit, Specification 038110

Option : Stainless Steel Dump Body upfit, Specification 038120

Option : Snow Plow upfit, Specification 038100, 038110, or 038120

Option : Spreader upfit, Specification 038100, 038110, or 038120

	Page 3 <u> of 3</u>
Option : Statewide Badio:	

GPS Combo Radio Antenna: There shall be a roof mount base with built-in GPS, PCTEL model GPPB-204-54-12-S1-M1 and an elevated feed antenna, PCTEL model BMUF7603. Assembly shall be mounted on a vendor supplied/installed stainless steel fender bracket. The fender bracket shall be mounted on the driver's side of the vehicle and it shall be mounted on the inside of the engine compartment with the base extending out over the top of the fender. Existing fender holes shall be utilized to accommodate mounting, with no holes drilled in the exterior fender surface. There shall be no sharp edges and it shall not interfere with the opening/closing of the hood. The antenna cable shall be routed to the floor area between the seats. It shall be properly secured and protected against heat/road splash. There shall be a minimum of 4 feet of antenna cable coiled at the base of the floor to allow for connection of a radio. Antenna shall be prewired with a MINI - UHF MALE connection. (No substitute, standardization).

<u>Power Distribution Center</u>: There shall be a 4-way power/ground distribution center located on the underside of the dash for connection of our state radio. The lugs shall be configured in the following manner: (1) lug shall be a 30 ampere constant hot circuit, (1) lug shall be a 10 ampere ignition controlled circuit. (2) lugs shall be chassis ground. All connections shall be enclosed in a weatherproof enclosure.

Option : Bidder must provide option pricing for "one" of the following.

Factory: Having unit bid painted PennDOT yellow. Reference DUPONT F9885 shade only. Unit shall be painted PennDOT yellow in lieu of the OEM's original color. Using the same process as with OEM paint.

Aftermarket: Having unit bid painted PennDOT yellow. Reference DUPONT F9885 shade only. All surfaces shall be properly cleaned and prepared prior to paint. Paint shall be the same quality as factory paint. To include all areas of the unit including interior.

Drawings:				
EQN-66A	Revised	07-20-09	sheet 1	TRIANGLE STORAGE BOX AND BRACKET
EQN-80A	Revised	11-12-09	sheet 1	WIRING DIAGRAM
EQN-127A	Revised	01-02-09	sheet 1	CONSPICUITY TAPE
EQN-202B	Revised	11-03-06	sheet 1	HITCH: WEIGHT DISTRIBUTING
EQN-351A	Revised	10-20-06	sheet 1 & 2	FAST LUBE OIL CHANGE SYSTEM OVERVIEW AND PARTS LIST

Note : All up fitting shall be in accordance with the chassis manufacturers body builders up fitter manual.

Installation Practices

All lights shall meet all Federal and State regulations.

All wire splices shall be insulated with heat shrink materials or removable connectors that create a water tight connection.

All wires shall be securley fastened with no wires hanging or protruding where they are exposed to the risk of damage.

All junction boxes shall be located for easy accecability and shall not be blocked by any means for access.

All electrical connections shall be treated with di-electric grease.

All wiring shall be secured using "P" type clamps at intervels not to exceed 12" between securment.

All wires shall be in a protective covering and protected from chaffing, rubbing and getting pulled or torn from external sources.

Any alterations / relocation to fuel fill, DEF tank, exhaust, Etc. to allow installation of body shall be made in a professional manner using new materials.

Any place steel and aluminum contact each other Mylar or an approved equal shall be used as a buffer. Laminate rubber is unacceptable.

All vertical and horizontal seams of the body sides shall utilize full penetration welds in accordance with standard welding practices as set forth by the American Welding Society and sealed water tight to create one integral body.

All corners shall be angled or rounded for safety.

All mounting procedures shall be in accordance with NTEA standards.

The use of any of the following items or practices WILL NOT BE ACCEPTED.

Non-steel fittings on hydraulic pressure lines.

Excessive use of elbows on hydraulic lines.

Use of thread tape on hydraulic fittings.

Use of galvanized fittings or components on hydraulic system.

Improper hydraulic line size.

Use of high-pressure hose for hydraulic suction line.

Scotchlok-type wire splices.

Non-insulated wire splices.

Improper hose or wire routing near exhaust, over-sharp edges or through holes without grommets, or sharp edges.

Improperly prepared, primed and painted surfaces.

Non-fused electric circuits.

Hydraulic circuits without pressure relief protection.

Laminated Rubber

Oct 16,2012 JF

SPECIFICATION
045860 - Weld Body Upfit For Use With a 17K Chassis

Reference: Crest, PA weld truck arrangement (9/13/93) or prior to bid approved equal. Per EQN-120F

Note: " Refer to PCID 1075 for Delivery, Training, and Warranty Requirements".

Note : All up fitting shall be in accordance with the chassis manufacturers body builders up fitter manual.

Body Shall Include The Following Equipment:

Body - Installation:

It shall be the responsibility of the successful vendor to have the foreman body mounted on the chassis(s). The installation shall be engineered and approved by the vehicle manufacturer and shall have no adverse affect upon the manufacturer's warranty. When any portion of the complete vehicle is to be installed by anybody other than the bidder or the chassis manufacturer, they shall indicate the name of the sub-contractor performing such installation and the location of their plants. The foreman body dimensions shall cover the rear wheels.

Any other applicable changes required to accommodate this type unit is the responsibility of the bidder.

The body shall have a front mounted bulkhead and shall be a minimum 14 gauge steel with punched or expandable metal area in alignment with the cab rear window. It shall be constructed of sufficient strength to eliminate damage to the rear of the cab. The bulkhead shall not interfere with the visibility of the third brake light.

Proposed bulkhead shall be reviewed for acceptance prior to pilot model inspection by the Equipment Division. The bulkhead shall have a forward extension mounted to the driver's side, of sufficient size to support the base of the warning light and this extension shall have a gusset.

Frame rails shall be prepared by cleaning, priming and final painting.

The body shall be attached to the truck chassis using four (4) U-bolts, or bolt thru, lock nuts, and appropriate shear plates as required to comply with manufacturer's standards.

Body Components:

Forward right cabinet shall be large enough to accommodate an acetylene tank and oxygen tank, minimum height 55 inches, minimum width 24 inches, with hose rack on the inside door.

Cabinet shall be properly vented and all bottle-securing hardware included.

Dimension "A" shall accommodate the larger dimension of a Big Blue 50D or a Hobart Mega Arc 4030D.

The body shall be designed and shall include everything shown in EQN-120F, except the arc welder assembly, and acetylene rig.

The left rear cabinet shall have a pull out drawer for welding rod, minimum 6 inch high x width and depth of cabinet.

There shall be a drip rail above all doors.

Piano hinge is unacceptable.

All door and compartment hinges shall be rod and nylon bushing or stainless steel heavy duty strap hinge with nylon or Teflon bushings and rubber door seals.

Vertical compartment doors shall have a limiting device, shock type or steel lock strap type. Chain or cable is acceptable on horizontal doors only.

All compartments shall be keyed alike, with no two individual completed units having the same keys.

The top left and right area's of the service body shall be covered with aluminum diamond deck (unpainted), and sealed all around. Vertical compartment doors shall have a limiting device, shock type or steel lock strap type.

All compartments shall be keyed alike, with no two individual completed units having the same keys.

The heavy-duty rear bumper shall be constructed with a minimum of 1/8 inch reinforced steel. The size and strength shall be in accordance with the truck manufacturer's step design. The platform on top of the bumper shall be Bustin aluminum No. NST4 full size, or Bustin 628 steel, or Ohio Grating or IKG Industries serrated swage lock, with end band. The outer step edge must be serrated in lieu of plain, smooth metal edge. All edges shall be banded (skirting) on the outer perimeter. Overlay is not acceptable.

There shall be a stainless steel grab handle on each rear side of the utility body to assist the operator in entering and exiting the bed area, Non-skid paint or rubber shall be utilized, (non-skid tape is unacceptable). Ref: Non skid paint, Gamma Laboratories (Tel. 304-489-2828.) All compartment floors shall be covered with yellow DriDek (Tel: 800-348-2398).

Any area likely to be stepped on shall be covered with non-skid paint.

Each compartment shall have the Vista Compartment lighting System (Tel: 219-264-0711). The "Krystal-Lite" lighting sections shall be mounted on the roof of each compartment and shall occupy at a minimum (approximately) ³/₄ of the compartments length. All compartments lighting shall be controlled by a single illuminated rocker switch mounted within easy reach of the driver.

Construction:

All body parts are to be electrically full welded into one integral body.

For all threaded connections at least two (2) full threads shall be visible beyond the nut.

The fuel tank fill shall be positioned in such a way to ensure the filler nozzle can be set on automatic and nozzle will support itself with unrestricted flow.

Page 1 of 3

	Page <u>2 of 3</u>
Exhaust: All tool boxes above any exhaust tailpipe or within close proximity of muffler, DPF, or to protect it. Exhaust shall be extended to the outer most edge of the installed body	•
Mud Flaps: Mud flaps front and rear of rear tires, unmarked, full width of tires, and gusseted. _ength shall be consistent with the unloaded rear axle height, And in accordance w The Flaps in front of the rear tires shall be constructed of 0.1406 in (10 gauge) stee The Flaps at the rear, of the rear tires, shall be constructed of 0.1406 in (10 gauge) steel backed plates.	el.
Electrical: Whelen Light Kit Part # PADOTSY5, Kit contains the following lighting. 1 - R10PADOT Light Bar to be mounted to the driver's side of the bulkhead. In no c vehicle. 2- LINZ6A lights to be grill mounted per EQN - 115 2 - M6AD Amber warning lights 2 - M6BUD Back-up lights 2 - M6BUD Back-up lights 2 - M6BUD Back-up lights 2 - M6BUD Back-up lights 2 - M1-486152-000 Vertical black flange housing assembly. Above warning, STT, a EQN - 120M. 2 - LINZ6AD Amber warning lights, grommet mounted, mounted 1 to each side of b n conjunction with above light bar. 2 - LINZ6 Grommet Kits 3 - W441D Harness side mating Deutch connectors. The above lights are supplied with male and female Deutsch connectors that shall b each light source. 1 - PFP1PA Tripod pedestal work light with coiled cord, remote mount and plug to 1 wired and mounted in the rear of the truck. Work light receptacle shall have a conso protected and have a chassis ground. Remote mount location shall be determined Body builder to supply remaining marker and ICC lighting, they shall be protected a Connections shall be water tight. All Body lighting shall be LED. The Warning lights / Light bar shall have a lighted, permanently labeled toggle swite Body wiring shall be Grote, Trucklite, or Prior Approved Equal. There shall be no splices outside of a sealed box or fixture.	and back up lights shall be mounted within housing per bed per EQN - 120M. Side warning lights are to be wire be utilized to connect the vendor supplied harness to be supplied in the cab. Work Light receptacle shall be stant 12 volt power supply, circuit to be properly at pilot model inspection.
There shall be a seven-way trailer (Pin Type) receptacle mounted on rear. Per EQN A color-coded electrical wiring chart and schematic shall accompany each body. Paint: Body priming and painting to ensure full coverage to all areas of the body	J - 80A
Color of the body, including inside and outside of compartments, and the bed, shall yellow, or optional PennDOT yellow DuPont 6808 for shade. (Powder Coat, if availa successful vendor to ensure color of the body matches the cab. All metal surfaces to be painted shall be cleaned and prepared by abrasive blasting Painting Council Standard SSPC-SP-6. A rust preventative treatment shall be applied.	able from factory.) It will be the responsibility of the

Alternating Red / Yellow Reflective sheeting shall be mounted diagonally (45 degree angle) on the rear of body as per EQN-120K. ICC Rear Under ride Protector, hitch and grip strut ladders shall be painted black. Front lower leading edge of cabinets shall have a minimum 12 inch high aluminum diamond plate for chip resistance.

Hitch:

There shall be a hitch installed, Per EQN-202B, the Upper Portion Of Hitch Shall Be Painted With Non-Skid Paint If extending to or outside body perimeter and is likely to be stepped on. Below hardware shall be supplied in truck cab.

	Buyers Products (216-974-888)	OR	OR Wallace Forge Company (800-328-1203)		
Combo Ball Hitch W/ 2 inch Hard Chrome Ball:	BH8-2000		23071911		
Pintle Mounting Plate:	PM-87		2200170 PADOT		
Bolt Kit:	8520		2117240		
Hitch Pin:	HP6253 WC		HP58412		

Page <u>3 of 3</u>

Auxiliary Air System:

VMAC VR70 AIR COMPRESSOR SYSTEM, (there shall be a switch that only allows compressor to run when the vehicle is placed in park/neutral).

The installation of the compressor, tank and control console shall be properly mounted and bracketed.

The installation shall include compressor, tank, control console, all necessary hardware and brackets, and complete accessories.

There shall be two (2) 50 ft hoses, one with 0.250 in quick couplers complete and one on a housed (out of the weather, on the road side) reel (one only), spare 50 ft hose shall be shipped in the utility body.

Filter moisture separator, Chicago Pneumatic #CA-048360.

Line lubricator Chicago Pneumatic #CA-048361.

Pressure regulator Chicago Pneumatic #CA-048362 to adjust to OSHA approved levels of 30 psi.

Two (2) connectors Chicago Pneumatic #CA-048363.

The before-mentioned unit shall be assembled, mounted on a convenient service panel and shall incorporate a master gate valve.

The service end shall have a service 'T" with (0.50 in) female and (0.250 in) female connectors.

Tank vibration mounts.

Crane:

Per EQN-120F, Ref: Autocrane 2003--HW series or equal. Original crane manufacturer's color is acceptable. Body manufacture is responsible for engineering body to incorporate mounting and use of the crane with out damage to the body.

Drawings:				
EQN-80A	Revised	11-12-09	sheet 1	WIRING DIAGRAM
EQN-82	Revised	09-28-11	sheet 1	CHOCK AND HOLDER
EQN-115	Revised	07-03-12	sheet 1	GRILL MOUNTED WARNING LIGHTS
EQN-120F	Revised	09-28-11	sheet 1 & 2	2 WELD BODY STEEL
EQN-120K	Revised	09-28-11	sheet 1	TYPICAL REFLECTIVE SHEETING
EQN-120M		09-28-11	sheet 1	CREW CAB BODY LIGHTING
EQN-127A	Revised	01-02-09	sheet 1	CONSPICUITY TAPE
EQN-202B	Revised	11-03-06	sheet 1	HITCH: WEIGHT DISTRIBUTING

Options

Bed Liner:

Center Cargo Area shall have a sprayed bed liner. Shall cover floor, both interior side panels, front interior panel and tailgate interior. Shall be a minimum of 150 Mils. Thickness. Material shall have No VOCS and be applied utilizing a high pressure spray. (Ref: Rhino, Linex or pre approved equal.)

Installation Practices

All lights shall meet all Federal and State regulations.

All wire splices shall be insulated with heat shrink materials or removable connectors that create a water tight connection.

All wires shall be securley fastened with no wires hanging or protruding where they are exposed to the risk of damage.

All junction boxes shall be located for easy accecability and shall not be blocked by any means for access.

All electrical connections shall be treated with di-electric grease.

All wiring shall be secured using "P" type clamps at intervels not to exceed 12" between securment.

All wires shall be in a protective covering and protected from chaffing, rubbing and getting pulled or torn from external sources.

Any alterations / relocation to fuel fill, DEF tank, exhaust, Etc. to allow installation of body shall be made in a professional manner using new materials.

Any place steel and aluminum contact each other Mylar or an approved equal shall be used as a buffer.

Laminate rubber is unacceptable.

All vertical and horizontal seams of the body sides shall utilize full penetration welds in accordance with standard welding practices as set forth by the American Welding Society and sealed water tight to create one integral body.

All corners shall be angled or rounded for safety.

All mounting procedures shall be in accordance with NTEA standards.

he use of any of the following items or practices WILL NOT BE ACCEPTED.	
on-steel fittings on hydraulic pressure lines.	
xcessive use of elbows on hydraulic lines.	
se of thread tape on hydraulic fittings.	
se of galvanized fittings or components on hydraulic system.	
nproper hydraulic line size.	
se of high-pressure hose for hydraulic suction line.	
cotchlok-type wire splices.	
on-insulated wire splices.	
nproper hose or wire routing near exhaust, over-sharp edges or through holes without grommets, or sharp edges.	
nproperly prepared, primed and painted surfaces.	
on-fused electric circuits.	
ydraulic circuits without pressure relief protection.	

SPE	CIE	ICAT	ION

Page 1 of 3

046000 - Truck, 11K, 2WD, Extended Cab & Chassis, Diesel Engine, Automatic Transmission, Dual Rear Wheels

This Dual Rear Wheel Model, Chassis Only, Shall Be A Manufacturer's Standard Model Vehicle, Capable Of Carrying Two (2) Passengers. 11,000 Lb GVWR Minimum. Manufacturer's Rating Certified On Door. Chassis to accommodate A 9 Foot Minimum, Flatbed, Service, Shop, Foreman or Survey Body.

Note: " Refer to PCID 1075 for Delivery, and Warranty Requirements".

The following additional items shall be supplied

Air Bags : Shall be equipped with manufacturers standard air bags.

Air Conditioning : Shall be equipped with manufacturers standard air conditioning.

Alternator : Shall be manufacturers largest / heaviest duty available.

Daytime Running Lights : Shall be equipped with manufacturers standard Daytime Running Lights. (Aftermarket Acceptable)

Differential : Shall be equipped with manufacturers standard Limited Slip Differential. Ratio to be selected at time of order from manufacturer's standard available ratios.

DEF Tank : Shall be mounted to not interfere with body installation. Any relocation shall be done in a professional manner using new materials.

Engine : Shall be Manufacturer's highest available horsepower and torque rating, standard or optional diesel engine, to include, immersion inblock type engine heater For water cooled engines, with water-proof plug and flush mounted In drivers side front sheet metal, engine oil cooler, and largest available engine cooling capacity.

Exhaust : Shall be capable of being extended by the body up fitter to the outer most edge of the installed body.

Front Bumper : Shall be Chrome, Black, or Argent.

Fuel Tank : Manufacturer's highest capacity standard tank frame mounted (Tank filler positioned to ensure that filler nozzle can be set on automatic and nozzle will support itself, with unrestricted flow.)

Lubricants : Shall be synthetic where available, with drain plugs identified or painted red. (Engine oil excluded)

Mirrors : Shall be manufacturers standard heavy duty outside mirrors with convex mirror (aftermarket convex spot mirror acceptable) and extendable arms, driver and passenger sides. Shall be equipped with manufacturers standard manual day / night rearview mirror.

Paint : Manufacturer's standard safety or school bus yellow.

Seats: Shall be equipped with Vinyl 40/20/40 seats with center work console, Foam Padded with Seatbelts. (Cloth is Unacceptable)

Suspension : Shall be equipped with trailer and handling package, to include front stabilizer bar, heaviest available front and rear suspension, and heaviest available differential.

Tires : Truck and Body Company shall ensure that proper sized tires and wheels for GVWR are supplied. Tires shall be radial, OEM's most aggressive / severe duty tire available from manufacturer.

Transmission : Shall be automatic with largest available auxiliary oil cooler.

Windshield : Shall be equipped with manufacturers standard tinted windshield.

Windows and Locks : Shall be equipped with manufacturers standard manual windows and door locks.

The following equipment shall be supplied / installed

There shall be a step bar (Westin Part # 251335 or Equal) in Black, must be length of cab entry area on both sides. (Installed)

There shall be an ECCO Model 450 backup alarm, shock mounted. (Installed)

There shall be a seven-way trailer light receptacle, "Pin Type", securely mounted near rear trailer hitch area. Wired per EQN - 80A. Connections shall be sealed and water tight.

There shall be a 7 inch dome light with switch, Ref: Truck-Lite #80354, or approved equal. Installed centered, over the front seat, capable of operating with the Ignition off.

There shall be a warning light: Whelen Model R10HDPA with Deutsch connectors. Supplied and delivered in the cab.

All switches shall be permanently labeled and backlit.

	Page <u>2 of 3</u>
There shall be two (2) front tow hooks, installed.	

There shall be an emergency triangle warning kit in each unit, in storage box and mounted in cab. EQN - 66A

There shall be a 5 LB. minimum ABC type fire extinguisher rechargeable with vehicle mount. Securely mounted in the cab for easy and quick access.

There shall be a trailer hitch installed, as per EQN - 202B, the upper portion of hitch shall be painted with non-skid paint if extending to or outside body perimeter and is likely to be stepped on. (Tape is not acceptable.)

All the following shall be supplied and delivered in the cab. Buyers Products - Combo Ball Hitch W/ 2 inch Hard Chrome Ball BH8-2000, Pintle Mounting Plate PM-87, Bolt Kit 8520, Hitch Pin HP6253 WC. Or approved equal.

Safety

Unit shall be fitted with temporary mud flaps that shall remain intact.

The cab shall have conspicuity tape as Per EQN-127A.

Any area likely to be stepped on shall be covered with non-skid paint, tape is unacceptable.

All handrails, ladders, and step configurations shall be built for three points of contact.

Anti-slip paint is required on all handholds, for the entire length, (tape is unacceptable).

Options

Option : To be equipped with Four Wheel Drive.

Option : To be equipped with Snow Plow Prep package

Option : To be equipped with Power windows, Power door locks, and Power / Heated mirrors with manual extendable arms.

<u>Option</u>: Road Watch road/air temperature system. Located on the left front fender. Gauge to be neatly mounted in the dash within the drivers view or installed with control system integrated temperature display.

<u>Option</u>: Vaisala road/air temperature system. Located on the left front fender. Gauge to be neatly mounted in the dash within the drivers view or installed with control system integrated temperature display.

Option : Install FLOCS system as per EQN: 351A.

Option : Flatbed Body upfit, Specification 046900

Option : Service Body upfit, Specification 048900

Option : Shop Body upfit, Specification 039700

Option : Foreman Body upfit, Specification 050400

Option : Foreman Body upfit, Split door option, Specification 050401

Option : Survey Body upfit, Specification 049700

Option : Statewide Radio:

<u>GPS Combo Radio Antenna:</u> There shall be a roof mount base with built-in GPS, PCTEL model GPPB-204-54-12-S1-M1 and an elevated feed antenna, PCTEL model BMUF7603. Assembly shall be mounted on a vendor supplied/installed stainless steel fender bracket. The fender bracket shall be mounted on the driver's side of the vehicle and it shall be mounted on the inside of the engine compartment with the base extending out over the top of the fender. Existing fender holes shall be utilized to accommodate mounting, with no holes drilled in the exterior fender surface. There shall be no sharp edges and it shall not interfere with the opening/closing of the hood. The antenna cable shall be routed to the floor area between the seats. It shall be properly secured and protected against heat/road splash. There shall be a minimum of 4 feet of antenna cable coiled at the base of the floor to allow for connection of a radio. Antenna shall be prewired with a MINI - UHF MALE connection. (No substitute, standardization).

<u>Power Distribution Center</u>: There shall be a 4-way power/ground distribution center located on the underside of the dash for connection of our state radio. The lugs shall be configured in the following manner: (1) lug shall be a 30 ampere constant hot circuit, (1) lug shall be a 10 ampere ignition controlled circuit. (2) lugs shall be chassis ground. All connections shall be enclosed in a weatherproof enclosure.

Option : Bidder must provide option pricing for "one" of the following.

Factory: Having unit bid painted PennDOT yellow. Reference DUPONT F9885 shade only. Unit shall be painted PennDOT yellow in lieu of the OEM's original color. Using the same process as with OEM paint.

Aftermarket: Having unit bid painted PennDOT yellow. Reference DUPONT F9885 shade only. All surfaces shall be properly cleaned and prepared prior to paint. Paint shall be the same quality as factory paint. To include all areas of the unit including interior.

						Page 3 <u>of 3</u>	
Drawings:							
EQN-66A	Revised 0	7-20-09	sheet 1	TRIANGLE ST	FORAGE BOX ANI	D BRACKET	
EQN-80A	Revised 1	1-12-09	sheet 1	WIRING DIAG	GRAM		
EQN-127A	Revised 0	1-02-09	sheet 1	CONSPICUITY	(TAPE		
EQN-202B	Revised 1	1-03-06	sheet 1	HITCH: WEIG	HT DISTRIBUTING	G	
EQN-351A	Revised 1	0-20-06	sheet 1 & 2	FAST LUBE (DIL CHANGE SYS	TEM OVERVIEW AND PARTS LIST	
<u>Note</u> : All up fit	ting shall be in a	ccordance	e with the cha	assis manufactu	irers body builders	up fitter manual.	
Installation Pra	actices						
All lights shall n	neet all Federal	and State	regulations.				
All wire splices	shall be insulate	ed with hea	at shrink mat	erials or remova	able connectors that	at create a water tight connection.	
All wires shall b	e securley faste	ned with r	no wires hang	ging or protrudir	ng where they are e	exposed to the risk of damage.	
All junction box	es shall be locat	ted for eas	sy accecabilit	y and shall not I	be blocked by any	means for access.	
All electrical co	nnections shall l	be treated	with di-electi	ric grease.			
All wiring shall	be secured usin	g "P" type	clamps at in	tervels not to ex	ceed 12" between	securment.	
All wires shall b	e in a protective	covering	and protecte	d from chaffing	, rubbing and gettir	ng pulled or torn from external sources.	
Any alterations materials.	/ relocation to fu	uel fill, DEI	tank, exhau	ust, Etc. to allow	installation of bod	ly shall be made in a professional manner	using new
	and aluminum	contact ea	ch other Mv	ar or an approv	ed equal shall be u	used as a buffer.	Laminate
rubber is unacc			ion outor myr	ar of all approve	ou oquur onun oo o		Lammato
	•	s of the b	ndv sides sha	all utilize full per	etration welds in a	accordance with standard welding practice	es as set
					e one integral bod		0 00 001
	ll be angled or ro			ter tight to oreat	e one integral bou	y.	
	ocedures shall b			JTFA standards			
All mounting pi			dance with r		•		
The use of any	y of the followir	na items c	or practices	WILL NOT BE	ACCEPTED.		
	s on hydraulic p						
	of elbows on hy						
	ape on hydraulic						
	ed fittings or co	0	on hydraulic	system			
Improper hydra		mponomo	onnyaraano	oyotonn.			
	essure hose for h	ovdraulic s	uction line				
Scotchlok-type		iyaraano o					
Non-insulated v							
			ist over-shai	rn edges or thro	ugh holes without	grommets, or sharp edges.	
	pared, primed ar				agri noies without	gronnieto, or sharp euges.	
Non-fused elec			sanaoos.				
	ts without press	ura raliaf r	votection				
Laminated Rub	•						
						Oct 16, 2012 JF	
						001 10, 2012 JF	

	Page <u>1 of 3</u>
SPECIFICATION	
046010 - Truck, 11K, 2WD, Extended Cab & Chassis, Gasoline Engine, Au	utomatic Transmission, Dual Rear Wheels
This Dual Rear Wheel Model, Chassis Only, Shall Be A Manufacturer's Standa	rd Model Vehicle, Capable Of Carrying Two (2)
Passengers. 11,000 Lb GVWR Minimum. Manufacturer's Rating Certified On Do	or. Chassis to accommodate A 9 Foot Minimum,

Flatbed, Service, Shop, Foreman or Survey Body.

Note: " Refer to PCID 1075 for Delivery, and Warranty Requirements".

The following additional items shall be supplied

Air Bags : Shall be equipped with manufacturers standard air bags.

Air Conditioning : Shall be equipped with manufacturers standard air conditioning.

Alternator : Shall be manufacturers largest / heaviest duty available.

Daytime Running Lights : Shall be equipped with manufacturers standard Daytime Running Lights. (Aftermarket Acceptable)

Differential : Shall be equipped with manufacturers standard Limited Slip Differential. Ratio to be selected at time of order from manufacturer's standard available ratios.

Engine : Shall be Manufacturer's highest available horsepower and torque rating, standard or optional gasoline engine, to include, engine oil cooler, and largest available engine cooling capacity.

Exhaust : Shall be capable of being extended by the body up fitter to the outer most edge of the installed body.

Front Bumper : Shall be Chrome, Black, or Argent.

Fuel Tank : Manufacturer's highest capacity standard tank frame mounted (Tank filler positioned to ensure that filler nozzle can be set on automatic and nozzle will support itself, with unrestricted flow.)

Lubricants : Shall be synthetic where available, with drain plugs identified or painted red. (Engine oil excluded)

Mirrors : Shall be manufacturers standard heavy duty outside mirrors with convex mirror (aftermarket convex spot mirror acceptable) and extendable arms, driver and passenger sides. Shall be equipped with manufacturers standard manual day / night rearview mirror.

Paint : Manufacturer's standard safety or school bus yellow.

Seats: Shall be equipped with Vinyl 40/20/40 seats with center work console, Foam Padded with Seatbelts. (Cloth is Unacceptable)

Suspension : Shall be equipped with trailer and handling package, to include front stabilizer bar, heaviest available front and rear suspension, and heaviest available differential.

Tires : Truck and Body Company shall ensure that proper sized tires and wheels for GVWR are supplied. Tires shall be radial, OEM's most aggressive / severe duty tire available from manufacturer.

Transmission : Shall be automatic with largest available auxiliary oil cooler.

Windshield : Shall be equipped with manufacturers standard tinted windshield.

Windows and Locks : Shall be equipped with manufacturers standard manual windows and door locks.

The following equipment shall be supplied / installed

There shall be a step bar (Westin Part # 251335 or Equal) in Black, must be length of cab entry area on both sides. (Installed)

There shall be an ECCO Model 450 backup alarm, shock mounted. (Installed)

There shall be a seven-way trailer light receptacle, "Pin Type", securely mounted near rear trailer hitch area. Wired per EQN - 80A. Connections shall be sealed and water tight.

There shall be a 7 inch dome light with switch, Ref: Truck-Lite #80354, or approved equal. Installed centered, over the front seat, capable of operating with the Ignition off.

There shall be a warning light: Whelen Model R10HDPA with Deutsch connectors. Supplied and delivered in the cab.

All switches shall be permanently labeled and backlit.

	Page <u>2 of 3</u>
There shall be two (2) front tow hooks, installed.	

There shall be an emergency triangle warning kit in each unit, in storage box and mounted in cab. EQN - 66A

There shall be a 5 LB. minimum ABC type fire extinguisher rechargeable with vehicle mount. Securely mounted in the cab for easy and quick access.

There shall be a trailer hitch installed, as per EQN - 202B, the upper portion of hitch shall be painted with non-skid paint if extending to or outside body perimeter and is likely to be stepped on. (Tape is not acceptable.)

All the following shall be supplied and delivered in the cab. Buyers Products - Combo Ball Hitch W/ 2 inch Hard Chrome Ball BH8-2000, Pintle Mounting Plate PM-87, Bolt Kit 8520, Hitch Pin HP6253 WC. Or approved equal.

Safety

Unit shall be fitted with temporary mud flaps that shall remain intact.

The cab shall have conspicuity tape as Per EQN-127A.

Any area likely to be stepped on shall be covered with non-skid paint, tape is unacceptable.

All handrails, ladders, and step configurations shall be built for three points of contact.

Anti-slip paint is required on all handholds, for the entire length, (tape is unacceptable).

Options

Option : To be equipped with Four Wheel Drive.

Option : To be equipped with Snow Plow Prep package.

Option : To be equipped with Power windows, Power door locks, and Power / Heated mirrors with manual extendable arms.

<u>Option</u>: Road Watch road/air temperature system. Located on the left front fender. Gauge to be neatly mounted in the dash within the drivers view or installed with control system integrated temperature display.

<u>Option</u>: Vaisala road/air temperature system. Located on the left front fender. Gauge to be neatly mounted in the dash within the drivers view or installed with control system integrated temperature display.

Option : Install FLOCS system as per EQN: 351A.

Option : Flatbed Body upfit, Specification 046900

Option : Service Body upfit, Specification 048900

Option : Shop Body upfit, Specification 039700

Option : Foreman Body upfit, Specification 050400

Option : Foreman Body upfit, Split door optionSpecification 050401

Option : Survey Body upfit, Specification 049700

Option : Statewide Radio:

<u>GPS Combo Radio Antenna:</u> There shall be a roof mount base with built-in GPS, PCTEL model GPPB-204-54-12-S1-M1 and an elevated feed antenna, PCTEL model BMUF7603. Assembly shall be mounted on a vendor supplied/installed stainless steel fender bracket. The fender bracket shall be mounted on the driver's side of the vehicle and it shall be mounted on the inside of the engine compartment with the base extending out over the top of the fender. Existing fender holes shall be utilized to accommodate mounting, with no holes drilled in the exterior fender surface. There shall be no sharp edges and it shall not interfere with the opening/closing of the hood. The antenna cable shall be routed to the floor area between the seats. It shall be properly secured and protected against heat/road splash. There shall be a minimum of 4 feet of antenna cable coiled at the base of the floor to allow for connection of a radio. Antenna shall be prewired with a MINI - UHF MALE connection. (No substitute, standardization).

Power Distribution Center: There shall be a 4-way power/ground distribution center located on the underside of the dash for connection of our state radio. The lugs shall be configured in the following manner: (1) lug shall be a 30 ampere constant hot circuit, (1) lug shall be a 10 ampere ignition controlled circuit. (2) lugs shall be chassis ground. All connections shall be enclosed in a weatherproof enclosure.

Option : Bidder must provide option pricing for "one" of the following.

Factory: Having unit bid painted PennDOT yellow. Reference DUPONT F9885 shade only. Unit shall be painted PennDOT yellow in lieu of the OEM's original color. Using the same process as with OEM paint.

Aftermarket: Having unit bid painted PennDOT yellow. Reference DUPONT F9885 shade only. All surfaces shall be properly cleaned and prepared prior to paint. Paint shall be the same quality as factory paint. To include all areas of the unit including interior.

				Page	3 <u>of 3</u>
Drawings:					
EQN-66A	Revised 07-20	0-09 sheet 1	TRIANGLE STORAG	GE BOX AND BRACKET	
EQN-80A	Revised 11-12	2-09 sheet 1	WIRING DIAGRAM		
EQN-127A	Revised 01-02	2-09 sheet 1	CONSPICUITY TAPE		
EQN-202B	Revised 11-03	3-06 sheet 1	HITCH: WEIGHT DIS	STRIBUTING	
EQN-351A	Revised 10-20	0-06 sheet 1 &	2 FAST LUBE OIL CH	ANGE SYSTEM OVERVIEW AND PAI	RTS LIST
Note : All up fitti	ing shall be in acco	rdance with the c	hassis manufacturers b	ody builders up fitter manual.	
Installation Pra	actices neet all Federal and	State regulations			
0		•		nnectors that create a water tight conn	ection
				re they are exposed to the risk of dama	
				ked by any means for access.	igo.
	nnections shall be tr				
			0	2" between securment.	
0	•			ng and getting pulled or torn from extern	nal sources
	•	•	•	ation of body shall be made in a profes	
		aat aaab athar M	vier er en ennreved egu	al shall be used as a buffer	Laminata
rubber is unacce		act each other M	ylar or an approved equ	al shall be used as a buffer.	Laminate
		ممامر مام مط	hall utilize full peretretie	n welds in accordance with standard v	ualding practices as act
			•		veloting practices as set
			ater tight to create one	integral body.	
	l be angled or round				
All mounting pro	ocedures shall be in	accordance with	NTEA standards.		
			S WILL NOT BE ACCE	PTED.	
	s on hydraulic press				
	of elbows on hydrau				
	ape on hydraulic fitti	0			
•	ed fittings or compo	nents on hydraul	ic system.		
Improper hydrau					
•••	ssure hose for hydra	aulic suction line.			
Scotchlok-type					
Non-insulated w	•				
			arp edges or through ho	les without grommets, or sharp edges.	
	ared, primed and p	ainted surfaces.			
Non-fused elect					
Hydraulic circuit	ts without pressure	relief protection.			
Laminated Rubl	ber				
				Oct 16,	2012 JF
					2012 01

SPECIFICATION

Page 1 of 3

046100 - Truck, 11K, 2WD, Crew Cab & Chassis, Diesel Engine, Automatic Transmission, Dual Rear Wheels

This Dual Rear Wheel Model, Chassis Only, Shall Be A Manufacturer's Standard Model Vehicle, Capable Of Carrying Five (5) Passengers. 11,000 Lb GVWR Minimum. Manufacturer's Rating Certified On Door. Chassis to accommodate A 9 Foot Minimum, Flatbed, Service, Shop, Foreman or Survey Body.

Note: " Refer to PCID 1075 for Delivery, and Warranty Requirements".

The following additional items shall be supplied

Air Bags : Shall be equipped with manufacturers standard air bags.

Air Conditioning : Shall be equipped with manufacturers standard air conditioning.

Alternator : Shall be manufacturers largest / heaviest duty available.

Daytime Running Lights : Shall be equipped with manufacturers standard Daytime Running Lights. (Aftermarket Acceptable)

Differential : Shall be equipped with manufacturers standard Limited Slip Differential. Ratio to be selected at time of order from manufacturer's standard available ratios.

DEF Tank : Shall be mounted to not interfere with body installation. Any relocation shall be done in a professional manner using new materials.

Engine : Shall be Manufacturer's highest available horsepower and torque rating, standard or optional diesel engine, to include, immersion inblock type engine heater For water cooled engines, with water-proof plug and flush mounted In driver's side front sheet metal, engine oil cooler, and largest available engine cooling capacity.

Exhaust : Shall be capable of being extended by the body up fitter to the outer most edge of the installed body.

Front Bumper : Shall be Chrome, Black, or Argent.

Fuel Tank : Manufacturer's highest capacity standard tank frame mounted (Tank filler positioned to ensure that filler nozzle can be set on automatic and nozzle will support itself, with unrestricted flow.)

Lubricants : Shall be synthetic where available, with drain plugs identified or painted red. (Engine oil excluded)

Mirrors : Shall be manufacturers standard heavy duty outside mirrors with convex mirror (aftermarket convex spot mirror acceptable) and extendable arms, driver and passenger sides. Shall be equipped with manufacturers standard manual day / night rearview mirror.

Paint : Manufacturer's standard safety or school bus yellow.

Seats: Shall be equipped with Vinyl 40/20/40 seats with center work console, Foam Padded with Seatbelts. (Cloth is Unacceptable)

Suspension : Shall be equipped with trailer and handling package, to include front stabilizer bar, heaviest available front and rear suspension, and heaviest available differential.

Tires : Truck and Body Company shall ensure that proper sized tires and wheels for GVWR are supplied. Tires shall be radial, OEM's most aggressive / severe duty tire available from manufacturer.

Transmission : Shall be automatic with largest available auxiliary oil cooler.

Windshield : Shall be equipped with manufacturers standard tinted windshield.

Windows and Locks : Shall be equipped with manufacturers standard manual windows and door locks.

The following equipment shall be supplied / installed

There shall be a step bar (Westin Part # 251335 or Equal) in Black, must be length of cab entry area on both sides. (Installed)

There shall be an ECCO Model 450 backup alarm, shock mounted. (Installed)

There shall be a seven-way trailer light receptacle, "Pin Type", securely mounted near rear trailer hitch area. Wired per EQN - 80A. Connections shall be sealed and water tight.

There shall be a 7 inch dome light with switch, Ref: Truck-Lite #80354, or approved equal. Installed centered, over the front seat, capable of operating with the Ignition off.

There shall be a warning light: Whelen Model R10HDPA with Deutsch connectors. Supplied and delivered in the cab.

All switches shall be permanently labeled and backlit.

	Page <u>2 of 3</u>
There shall be two (2) front tow hooks, installed.	

There shall be an emergency triangle warning kit in each unit, in storage box and mounted in cab. EQN - 66A

There shall be a 5 LB. minimum ABC type fire extinguisher rechargeable with vehicle mount. Securely mounted in the cab for easy and quick access.

There shall be a trailer hitch installed, as per EQN - 202B, the upper portion of hitch shall be painted with non-skid paint if extending to or outside body perimeter and is likely to be stepped on. (Tape is not acceptable.)

All the following shall be supplied and delivered in the cab. Buyers Products - Combo Ball Hitch W/ 2 inch Hard Chrome Ball BH8-2000, Pintle Mounting Plate PM-87, Bolt Kit 8520, Hitch Pin HP6253 WC. Or approved equal.

Safety

Unit shall be fitted with temporary mud flaps that shall remain intact.

The cab shall have conspicuity tape as Per EQN-127A.

Any area likely to be stepped on shall be covered with non-skid paint, tape is unacceptable.

All handrails, ladders, and step configurations shall be built for three points of contact.

Anti-slip paint is required on all handholds, for the entire length, (tape is unacceptable).

Options

Option : To be equipped with Four Wheel Drive.

Option : To be equipped with Snow Plow Prep package

Option : To be equipped with Power windows, Power door locks, and Power / Heated mirrors with manual extendable arms.

<u>Option</u>: Road Watch road/air temperature system. Located on the left front fender. Gauge to be neatly mounted in the dash within the drivers view or installed with control system integrated temperature display.

<u>Option</u>: Vaisala road/air temperature system. Located on the left front fender. Gauge to be neatly mounted in the dash within the drivers view or installed with control system integrated temperature display.

Option : Install FLOCS system as per EQN: 351A.

Option : Flatbed Body upfit, Specification 046900

Option : Service Body upfit, Specification 048900

Option : Shop Body upfit, Specification 039700

Option : Foreman Body upfit, Specification 050400

Option : Foreman Body upfit, Split door configuration, Specification 050401

Option : Survey Body upfit, Specification 049700

Option : Statewide Radio:

<u>GPS Combo Radio Antenna:</u> There shall be a roof mount base with built-in GPS, PCTEL model GPPB-204-54-12-S1-M1 and an elevated feed antenna, PCTEL model BMUF7603. Assembly shall be mounted on a vendor supplied/installed stainless steel fender bracket. The fender bracket shall be mounted on the driver's side of the vehicle and it shall be mounted on the inside of the engine compartment with the base extending out over the top of the fender. Existing fender holes shall be utilized to accommodate mounting, with no holes drilled in the exterior fender surface. There shall be no sharp edges and it shall not interfere with the opening/closing of the hood. The antenna cable shall be routed to the floor area between the seats. It shall be properly secured and protected against heat/road splash. There shall be a minimum of 4 feet of antenna cable coiled at the base of the floor to allow for connection of a radio. Antenna shall be prewired with a MINI - UHF MALE connection. (No substitute, standardization).

<u>Power Distribution Center</u>: There shall be a 4-way power/ground distribution center located on the underside of the dash for connection of our state radio. The lugs shall be configured in the following manner: (1) lug shall be a 30 ampere constant hot circuit, (1) lug shall be a 10 ampere ignition controlled circuit. (2) lugs shall be chassis ground. All connections shall be enclosed in a weatherproof enclosure.

Option : Bidder must provide option pricing for "one" of the following.

Factory: Having unit bid painted PennDOT yellow. Reference DUPONT F9885 shade only. Unit shall be painted PennDOT yellow in lieu of the OEM's original color. Using the same process as with OEM paint.

Aftermarket: Having unit bid painted PennDOT yellow. Reference DUPONT F9885 shade only. All surfaces shall be properly cleaned and prepared prior to paint. Paint shall be the same quality as factory paint. To include all areas of the unit including interior.

						Page 3 <u> of 3</u>	
Drawings:							
EQN-66A	Revised	07-20-09	sheet 1 7	RIANGLE STORAGE B	OX AND	BRACKET	
EQN-80A	Revised	11-12-09	sheet 1 V	VIRING DIAGRAM			
EQN-127A	Revised	01-02-09	sheet 1 C	ONSPICUITY TAPE			
EQN-202B	Revised	11-03-06	sheet 1 H	ITCH: WEIGHT DISTRI	BUTING		
EQN-351A	Revised	10-20-06	sheet 1 & 2	AST LUBE OIL CHANG	SE SYST	EM OVERVIEW AND PARTS LIST	
Note : All up fittir	ng shall be ir	ו accordanc	e with the chase	sis manufacturers body l	ouilders	up fitter manual.	
All wires shall be All junction boxe All electrical com All wiring shall be All wires shall be Any alterations / materials. Any place steel a rubber is unacce All vertical and h	eet all Feder hall be insul securley fa s shall be lo nections sha e secured us in a protect relocation to and aluminuu ptable. orizontal sea rican Weldir be angled o	ated with he stened with cated for ea all be treated sing "P" type tive covering o fuel fill, DE m contact ea ams of the b ng Society a r rounded fo	eat shrink materi no wires hangin sy accecability a d with di-electric e clamps at inter and protected F tank, exhaust ach other Mylar body sides shall nd sealed water or safety.	g or protruding where th and shall not be blocked grease. vels not to exceed 12" b from chaffing, rubbing ai , Etc. to allow installation or an approved equal sh utilize full penetration we tight to create one integ	by are e by any r etween nd gettin n of body nall be us elds in a	securment. g pulled or torn from external sources. / shall be made in a professional manner sed as a buffer. uccordance with standard welding practic	Laminate
The use of any	of the follow	wing items	or practices W		D.		
Non-steel fittings	-	•					
			es.				
		•					
Use of thread tap	d fitting and an	components	s on hydraulic sy	stem.			
Use of thread tap Use of galvanize	•						
Use of thread tap Use of galvanize Improper hydrau	lic line size.						
Use of thread tap Use of galvanize Improper hydrau Use of high-pres	lic line size. sure hose fo	or hydraulic s	suction line.				
Use of thread tap Use of galvanize Improper hydrau Use of high-pres Scotchlok-type w	lic line size. sure hose fo vire splices.	or hydraulic :	suction line.				
Use of thread tap Use of galvanize Improper hydrau Use of high-pres Scotchlok-type w Non-insulated wi	lic line size. sure hose fo vire splices. ire splices.						
Use of thread tap Use of galvanize Improper hydrau Use of high-pres Scotchlok-type w Non-insulated wi Improper hose o	lic line size. sure hose fo vire splices. ire splices. r wire routing	g near exha	ust, over-sharp	edges or through holes	without g	grommets, or sharp edges.	
Use of thread tap Use of galvanize Improper hydrau Use of high-pres Scotchlok-type w Non-insulated wi Improper hose o Improperly prepa	lic line size. sure hose fo vire splices. ire splices. r wire routing ared, primed	g near exha	ust, over-sharp	edges or through holes	without g	grommets, or sharp edges.	
Use of thread tap Use of galvanize Improper hydrau Use of high-pres Scotchlok-type w Non-insulated wi Improper hose o Improperly prepa	lic line size. sure hose fo vire splices. ire splices. r wire routing ared, primed	g near exha	ust, over-sharp	edges or through holes	without g	grommets, or sharp edges.	
Excessive use of Use of thread tap Use of galvanize Improper hydrau Use of high-pres Scotchlok-type w Non-insulated wi Improper hose o Improperly prepa Non-fused electr Hydraulic circuits	lic line size. sure hose fo vire splices. ire splices. r wire routing ared, primed ic circuits.	g near exha and painted	ust, over-sharp d surfaces.	edges or through holes	without ç	grommets, or sharp edges.	
Use of thread tap Use of galvanize Improper hydrau Use of high-pres Scotchlok-type w Non-insulated wi Improper hose o Improperly prepa Non-fused electr	lic line size. sure hose fo vire splices. r wire routing ared, primed ic circuits. s without pre	g near exha and painted	ust, over-sharp d surfaces.	edges or through holes	without g	grommets, or sharp edges.	

-

	Page <u>1 of 3</u>
SPECIFICATION	
046110 - Truck, 11K, 2WD, Crew Cab & Chassis, Gasoline Engine, Aut	omatic Transmission, Dual Rear Wheels
This Dual Rear Wheel Model, Chassis Only, Shall Be A Manufacturer's Standa	

Passengers. 11,000 Lb GVWR Minimum. Manufacturer's Rating Certified On Door. Chassis to accommodate A 9 Foot Minimum, Flatbed, Service, Shop, Foreman or Survey Body.

Note: " Refer to PCID 1075 for Delivery, and Warranty Requirements".

The following additional items shall be supplied

Air Bags : Shall be equipped with manufacturers standard air bags.

Air Conditioning : Shall be equipped with manufacturers standard air conditioning.

Alternator : Shall be manufacturers largest / heaviest duty available.

Daytime Running Lights : Shall be equipped with manufacturers standard Daytime Running Lights. (Aftermarket Acceptable)

Differential : Shall be equipped with manufacturers standard Limited Slip Differential. Ratio to be selected at time of order from manufacturer's standard available ratios.

Engine : Shall be Manufacturer's highest available horsepower and torque rating, standard or optional gasoline engine, to include, engine oil cooler, and largest available engine cooling capacity.

Exhaust : Shall be capable of being extended by the body up fitter to the outer most edge of the installed body.

Front Bumper : Shall be Chrome, Black, or Argent.

Fuel Tank : Manufacturer's highest capacity standard tank frame mounted (Tank filler positioned to ensure that filler nozzle can be set on automatic and nozzle will support itself, with unrestricted flow.)

Lubricants : Shall be synthetic where available, with drain plugs identified or painted red. (Engine oil excluded)

Mirrors : Shall be manufacturers standard heavy duty outside mirrors with convex mirror (aftermarket convex spot mirror acceptable) and extendable arms, driver and passenger sides. Shall be equipped with manufacturers standard manual day / night rearview mirror.

Paint : Manufacturer's standard safety or school bus yellow.

Seats: Shall be equipped with Vinyl 40/20/40 seats with center work console, Foam Padded with Seatbelts. (Cloth is Unacceptable)

Suspension : Shall be equipped with trailer and handling package, to include front stabilizer bar, heaviest available front and rear suspension, and heaviest available differential.

Tires : Truck and Body Company shall ensure that proper sized tires and wheels for GVWR are supplied. Tires shall be radial, OEM's most aggressive / severe duty tire available from manufacturer.

Transmission : Shall be automatic with largest available auxiliary oil cooler.

Windshield : Shall be equipped with manufacturers standard tinted windshield.

Windows and Locks : Shall be equipped with manufacturers standard manual windows and door locks.

The following equipment shall be supplied / installed

There shall be a step bar (Westin Part # 251335 or Equal) in Black, must be length of cab entry area on both sides. (Installed)

There shall be an ECCO Model 450 backup alarm, shock mounted. (Installed)

There shall be a seven-way trailer light receptacle, "Pin Type", securely mounted near rear trailer hitch area. Wired per EQN - 80A. Connections shall be sealed and water tight.

There shall be a 7 inch dome light with switch, Ref: Truck-Lite #80354, or approved equal. Installed centered, over the front seat, capable of operating with the Ignition off.

There shall be a warning light: Whelen Model R10HDPA with Deutsch connectors. Supplied and delivered in the cab.

All switches shall be permanently labeled and backlit.

	Page <u>2 of 3</u>
There shall be two (2) front tow hooks, installed.	

There shall be an emergency triangle warning kit in each unit, in storage box and mounted in cab. EQN - 66A

There shall be a 5 LB. minimum ABC type fire extinguisher rechargeable with vehicle mount. Securely mounted in the cab for easy and quick access.

There shall be a trailer hitch installed, as per EQN - 202B, the upper portion of hitch shall be painted with non-skid paint if extending to or outside body perimeter and is likely to be stepped on. (Tape is not acceptable.)

All the following shall be supplied and delivered in the cab. Buyers Products - Combo Ball Hitch W/ 2 inch Hard Chrome Ball BH8-2000, Pintle Mounting Plate PM-87, Bolt Kit 8520, Hitch Pin HP6253 WC. Or approved equal.

Safety

Unit shall be fitted with temporary mud flaps that shall remain intact.

The cab shall have conspicuity tape as Per EQN-127A.

Any area likely to be stepped on shall be covered with non-skid paint, tape is unacceptable.

All handrails, ladders, and step configurations shall be built for three points of contact.

Anti-slip paint is required on all handholds, for the entire length, (tape is unacceptable).

Options

Option : To be equipped with Four Wheel Drive.

Option : To be equipped with Snow Plow Prep package.

Option : To be equipped with Power windows, Power door locks, and Power / Heated mirrors with manual extendable arms.

<u>Option</u>: Road Watch road/air temperature system. Located on the left front fender. Gauge to be neatly mounted in the dash within the drivers view or installed with control system integrated temperature display.

<u>Option</u>: Vaisala road/air temperature system. Located on the left front fender. Gauge to be neatly mounted in the dash within the drivers view or installed with control system integrated temperature display.

Option : Install FLOCS system as per EQN: 351A.

Option : Flatbed Body upfit, Specification 046900

Option : Service Body upfit, Specification 048900

Option : Shop Body upfit, Specification 039700

Option : Foreman Body upfit, Specification 050400

Option : Foreman Body upfit, Split door configuration, Specification 050401

Option : Survey Body upfit, Specification 049700

Option : Statewide Radio:

<u>GPS Combo Radio Antenna:</u> There shall be a roof mount base with built-in GPS, PCTEL model GPPB-204-54-12-S1-M1 and an elevated feed antenna, PCTEL model BMUF7603. Assembly shall be mounted on a vendor supplied/installed stainless steel fender bracket. The fender bracket shall be mounted on the driver's side of the vehicle and it shall be mounted on the inside of the engine compartment with the base extending out over the top of the fender. Existing fender holes shall be utilized to accommodate mounting, with no holes drilled in the exterior fender surface. There shall be no sharp edges and it shall not interfere with the opening/closing of the hood. The antenna cable shall be routed to the floor area between the seats. It shall be properly secured and protected against heat/road splash. There shall be a minimum of 4 feet of antenna cable coiled at the base of the floor to allow for connection of a radio. Antenna shall be prewired with a MINI - UHF MALE connection. (No substitute, standardization).

Power Distribution Center: There shall be a 4-way power/ground distribution center located on the underside of the dash for connection of our state radio. The lugs shall be configured in the following manner: (1) lug shall be a 30 ampere constant hot circuit, (1) lug shall be a 10 ampere ignition controlled circuit. (2) lugs shall be chassis ground. All connections shall be enclosed in a weatherproof enclosure.

Option : Bidder must provide option pricing for "one" of the following.

Factory: Having unit bid painted PennDOT yellow. Reference DUPONT F9885 shade only. Unit shall be painted PennDOT yellow in lieu of the OEM's original color. Using the same process as with OEM paint.

Aftermarket: Having unit bid painted PennDOT yellow. Reference DUPONT F9885 shade only. All surfaces shall be properly cleaned and prepared prior to paint. Paint shall be the same quality as factory paint. To include all areas of the unit including interior.

							Page 3 <u> of 3</u>	
Drawings:								
EQN-66A	Revised	07-20-09	sheet 1	TRIANGLE	STORAGE BO	X AND	BRACKET	
EQN-80A	Revised	11-12-09	sheet 1	WIRING DIA	GRAM			
EQN-127A	Revised	01-02-09	sheet 1	CONSPICUI	TY TAPE			
EQN-202B	Revised	11-03-06	sheet 1	HITCH: WEI	GHT DISTRIBL	JTING		
EQN-351A	Revised	10-20-06	sheet 1 & 2	2 FAST LUBE	OIL CHANGE	SYSTI	EM OVERVIEW AND PARTS LIST	
Note : All up fittin	ıg shall be ir	n accordanc	e with the ch	assis manufac	turers body bu	ilders u	ıp fitter manual.	
All wires shall be All junction boxes All electrical conr All wiring shall be All wires shall be Any alterations / materials. Any place steel a rubber is unaccep All vertical and he forth by the Amer All corners shall b	eet all Feder nall be insul securley fa s shall be loo nections sha e secured us in a protect relocation to and aluminum ptable. prizontal sea rican Weldir pe angled of	ated with he stened with cated for ea all be treated sing "P" type ive covering o fuel fill, DE m contact e ams of the b ng Society a r rounded fo	eat shrink ma no wires har sy accecabil d with di-elec e clamps at in g and protect F tank, exha ach other My pody sides sh nd sealed wo or safety.	aterials or remo nging or protruc lity and shall no ctric grease. Intervels not to o ted from chaffin aust, Etc. to allo ylar or an appro- nall utilize full pr ater tight to cre	ling where they t be blocked by exceed 12" bet g, rubbing and w installation c ved equal shal enetration weld ate one integra	y are ex y any m ween s I getting of body II be us ds in ac	g pulled or torn from external sources. shall be made in a professional manr red as a buffer. ccordance with standard welding prac	Laminate
All mounting proc	cedures sha	II be in acco ving items	ordance with or practices					
Non-steel fittings		•						
Excessive use of		,	es.					
Use of thread tap		•						
Use of galvanized	d fittings or o	components	s on hydrauli	c system.				
Improper hydraul	ic line size.							
Use of high-press	sure hose fo	or hydraulic	suction line.					
Scotchlok-type w	ire splices.							
Non-insulated wil	re splices.							
Improper hose or	wire routing	g near exha	ust, over-sha	arp edges or th	ough holes wit	thout gi	rommets, or sharp edges.	
Improperly prepa	red, primed	and painted	d surfaces.	-		-	· -	
Non-fused electri	c circuits.							
Hydraulic circuits	without pre	ssure relief	protection.					
Laminated Rubbe	er							

SPECIFICATION

046900 - Heavy Duty Flat Bed Body Upfit For Use With 11K and 17K Chassis

Reference: Hostettler Truck Body 9 FT. Flatbed made for PENNDOT or, Approved Equal.

Note: " Refer to PCID 1075 for Delivery, Training, and Warranty Requirements".

Note : All up fitting shall be in accordance with the chassis manufacturers body builders up fitter manual.

Body Shall Include The Following Equipment:

The flatbed body dimensions shall cover the rear wheels.

Any other applicable changes required to accommodate this type unit is the responsibility of the bidder.

The body shall be designed to accommodate stake body sides

(Note: Jigs are available by contacting the Equipment Division at 717-783-1395).

There shall be a front mounted bulkhead.

Body - Installation:

It shall be the responsibility of the successful vendor to have this flatbed mounted on the chassis(s). The installation shall be engineered and approved by the vehicle manufacturer and shall have no adverse affect upon the manufacturer's warranty. When any portion of the complete vehicle is to be installed by anybody other than the bidder or the chassis manufacturer, they shall indicate the name of the sub-contractor performing such installation and the location of their plants.

The Department will furnish the vendor with sideboard jigs to ensure pocket dimension uniformity. Upon completion of the pilot model, this set of sides shall be returned to the Equipment Division at 17th Street & Arsenal Blvd., Harrisburg, PA to be utilized on all future specifications to ensure the Department of flatbed stake size standardization. (Phone (717) 783-2371).

The bulkhead shall be a minimum 14 gauge steel with punched or expandable metal area in alignment with the cab rear window. It shall be constructed of sufficient strength to eliminate damage to the rear of the cab. The bulkhead shall not interfere with the visibility of the third brake light.

Proposed bulkhead shall be reviewed for acceptance prior to pilot model inspection by the Equipment Division. The bulkhead shall have a forward extension mounted to driver's side, of sufficient size to support the base of the warning light and this extension shall have a gusset.

Floor - Wood:

Reference for pine floor: Southern Pine Inspection Bureau (SPIB).

Pre-dried lumber. Vacuum process or kiln dried).

Pressure Treated (AWPA). Tongue and groove male and female groove same size, minimum 2 in thick, nominal.

LUMBER (PRESSURE TREATED) SPECIFICATIONS:

Pressure treated lumber shall be No. 1 stress rated Southern Pine.

Construction:

All body parts are to be electrically full welded into one integral body.

No welding inside the stake pockets.

Gusset plates shall be welded on both the sides.

For all threaded connections at least two (2) full threads shall be visible beyond the nut.

The fuel tank fill shall be positioned in such a way to ensure the filler nozzle can be set on automatic and nozzle will support itself with unrestricted flow.

Mud Flaps:

Mud flaps front and rear of rear tires, unmarked, full width of tires, and gusseted.

Length shall be consistent with the unloaded rear axle height, And in accordance with the PA State Inspection Laws.

The Flaps in front of the rear tires shall be constructed of 0.1406 in (10 gauge) steel.

The Flaps at the rear, of the rear tires, shall be constructed of 0.1406 in (10 gauge) steel, and include a rubber flap using 3 bolts and flat steel backed plates.

Electrical:

Whelen Light Kit Part # PADOTSY7, Kit contains the following lighting.

1 - R10PADOT Light Bar to be mounted to the driver's side of the bulkhead. In no case shall the light bar be mounted on the roof of the vehicle.

2- LINZ6A lights to be grill mounted per EQN - 115

2 - M6AD Amber warning lights with brush guard mounted to the rear of bed per EQN - 120L

- 2 M6BTTD Stop, Tail, Turn lights with brush guard per EQN 120L
- 2 M6BUD Back-up lights with brush guards per EQN 120L

2 - LINZ6AD Amber warning lights, grommet mounted, mounted 1 to each side of bed per EQN - 120L. Side warning lights are to be wired in conjunction with above light bar.

2 - LINZ6 Grommet Kits

8 - W441D Harness side mating Deutch connectors.

The above lights are supplied with male and female Deutsch connectors that shall be utilized to connect the vendor supplied harness to each light source.

1 - PFP1PA Tripod pedestal work light with coiled cord and plug to be supplied in the cab. Work Light receptacle shall be wired and mounted in the rear of the truck.

Body builder to supply remaining marker and ICC lighting, they shall be protected against damage and shall also be shock mounted. Connections shall be water tight. All Body lighting shall be LED.

The Warning lights / Light bar shall have a lighted, permanently labeled toggle switch located in the dash.

Body wiring shall be Grote, Trucklite, or Prior Approved Equal.

There shall be no splices outside of a sealed box or fixture.

There shall be a seven-way trailer (Pin Type) receptacle mounted on rear. Per EQN - 80A

A color-coded electrical wiring chart and schematic shall accompany each body.

						Page 2 <u>of 2</u>	
yellow, or optional successful vendor	including ir PennDOT to ensure of to be painto tandard SS treatment Il be unpair	iside and ou yellow DuPo color of the l ed shall be o SPC-SP-6. shall be app ited.	itside of con ont F9885 fc body matche cleaned and blied.	npartments, and th or shade. (Powde es the cab.	ne bed, shall be ca r Coat, if available	ab manufacturer's standard safety or school bus e from factory.) It will be the responsibility of the -1/2 mil profile in accordance with Steel Structur)
HITCH: There shall be a h body perimeter an						nted With Non-Skid Paint If extending to or outs cab.	ide
	E	Buyers Prod	ucts (216-97	74-888)	OR	Wallace Forge Company (800-328-1203	6)
Combo Ball Hitch W/ 2 inch Hard Chrome Ball:		В	3H8-2000			23071911	
Pintle Mounting							
Plate:			PM-87			2200170 PADOT	
Bolt Kit: Hitch Pin:		н	8520 P6253 WC			2117240 HP58412	
DRAWINGS:		П	F0255 WC			HF36412	
EQN-2C EQN-80A EQN-115 EQN-120L EQN-127A EQN-202B	Revised	11-12-09 07-03-12 09-28-11 01-02-09	sheet 1-4 sheet 1 sheet 1 sheet 1 sheet 1 sheet 1	FLAT BED BOI CONSPICUITY HITCH: WEIGH	AM ED WARNING LIC DY LIGHTING		
				<u></u>	<u></u>		
All wires shall be s All junction boxes All electrical conne All wiring shall be All wires shall be i Any alterations / re materials. place steel and alu is unacceptable.	at all Federa all be insula ecurley fas shall be loc ections shal secured us n a protecti elocation to uminum cor rizontal sea can Welding e angled or	ated with here tened with re- reated for ease ll be treated ing "P" type ve covering fuel fill, DEI htact each o ms of the be g Society ar rounded for	at shrink ma ho wires har sy accecabil with di-elec clamps at ir and protect F tank, exha ther Mylar o bdy sides sh hd sealed war safety.	tterials or removal aging or protruding ity and shall not b tric grease. ntervels not to exc ed from chaffing, itust, Etc. to allow i r an approved equ hall utilize full pene ater tight to create	where they are e e blocked by any r eed 12" between rubbing and gettin nstallation of body ual shall be used a etration welds in a	ng pulled or torn from external sources. y shall be made in a professional manner using as a buffer. Laminate accordance with standard welding practices as s	Any rubber
The use of any of Non-steel fittings of Excessive use of e Use of thread tape Use of galvanized Improper hydraulic Use of high-press Scotchlok-type wir Non-insulated wire Improper hose or Improperly prepare Non-fused electric Hydraulic circuits of	on hydraulic elbows on h on hydraul fittings or c line size. ure hose for e splices. splices. vire routing ed, primed a circuits.	pressure lin hydraulic line lic fittings. components r hydraulic s near exhau and painted	nes. on hydraulio uction line. ist, over-sha surfaces.	c system.		grommets, or sharp edges.	
						Oct 16, 2012 JF	

Page 1 of 3

SPECIFICATION 048900 - Service Body Upfit For Use With 11K and 17K Chassis

Reference: Stahl, Warner, Omaha Standard, or Knapheide, meeting these specifications.

Note: " Refer to PCID 1075 for <u>Delivery</u>, and <u>Warranty</u> Requirements".

Note : All up fitting shall be in accordance with the chassis manufacturers body builders up fitter manual.

Body Shall Include The Following Equipment:

Body - Installation:

It shall be the responsibility of the successful vendor to have the service body mounted on the chassis(s). The installation shall be engineered and approved by the vehicle manufacturer and shall have no adverse affect upon the manufacturer's warranty. When any portion of the complete vehicle is to be installed by anybody other than the bidder or the chassis manufacturer, they shall indicate the name of the sub-contractor performing such installation and the location of their plants. The service body dimensions shall cover the rear wheels. Any other applicable changes required to accommodate this type unit is the responsibility of the bidder.

The body shall have a front mounted bulkhead and shall be a minimum 14 gauge steel with punched or expandable metal area in alignment with the cab rear window. It shall be constructed of sufficient strength to eliminate damage to the rear of the cab. The bulkhead shall not interfere with the visibility of the third brake light.

Proposed bulkhead shall be reviewed for acceptance prior to pilot model inspection by the Equipment Division. The bulkhead shall have a forward extension mounted to the driver's side, of sufficient size to support the base of the warning light and this extension shall have a gusset.

Frame rails shall be prepared by cleaning, priming and final painting.

The body shall be attached to the truck chassis using four (4) U-bolts, or bolt thru, lock nuts, and appropriate shear plates as required to comply with manufacturer's standards.

Body Components:

There shall be 3 compartments on each side. Overall compartment depth shall be 24 in. minimum.

One (1) curbside compartment shall be 70" long x 18" high or 76" long or 18" high minimum.

There shall be a drip rail above all doors.

Piano hinge is unacceptable.

All door and compartment hinges shall be rod and nylon bushing or stainless steel heavy duty strap hinge with nylon or Teflon bushings and rubber door seals.

The top left and right area's of the service body shall be covered with aluminum diamond deck (unpainted), and sealed all around.

Vertical compartment doors shall have a limiting device, shock type or steel lock strap type.

If steel lock straps are used for a limiting device, they shall be detatchable by use of a hitch pin or other easily removeable device to allow door to open fully. Rubber

stops shall be installed on body under all horizontal doors opening down to keep them from contacting the sides of the body.

Vertical compartment doors shall have a limiting device, shock type or steel lock strap type.

Horizontal compartment doors shall have a removable limiting device, seel lock strap type.

All compartments shall be equipped with Stainless steel bolt on latches, Rivit on latches are unexceptable

All compartments shall be keyed alike, with no two individual completed units having the same keys.

The heavy-duty rear bumper shall be constructed with a minimum of 1/8 inch reinforced steel. The size and strength shall be in accordance with the truck manufacturer's step design. The platform on top of the bumper shall be Bustin aluminum No. NST4 full size, or Bustin 628 steel, or Ohio Grating or IKG Industries serrated swage lock, with end band. The outer step edge must be serrated in lieu of plain, smooth metal edge. All edges shall be banded (skirting) on the outer perimeter. Overlay is not acceptable.

There shall be a stainless steel grab handle on each rear side of the utility body to assist the operator in entering and exiting the bed area, Non-skid paint or rubber shall be utilized, (non-skid tape is unacceptable). Ref: Non skid paint, Gamma Laboratories (Tel. 304-489-2828.) Two, 2" deep x 12" long steps hung by 6" long 3/4" diameter cables shall be mounted, one under each side of bumper. Both hung 12" in from edge of bumper.

All compartment floors shall be covered with yellow DriDek (Tel: 800-348-2398).

Any area likely to be stepped on shall be covered with non-skid paint.

Each compartment shall have the Vista Compartment lighting System (Tel: 219-264-0711). The "Krystal-Lite" lighting sections shall be mounted on the roof of each compartment and shall occupy at a minimum (approximately) ¾ of the compartments length. All compartments lighting shall be controlled by a single illuminated rocker switch mounted within easy reach of the driver.

Construction:

All body parts are to be electrically full welded into one integral body.

For all threaded connections at least two (2) full threads shall be visible beyond the nut.

The fuel tank fill shall be positioned in such a way to ensure the filler nozzle can be set on automatic and nozzle will support itself with unrestricted flow.

Exhaust:

All tool boxes above any exhaust tailpipe or within close proximity of muffler, DPF, etc. shall receive a heat shield plate to the box in order to protect it. Exhaust shall be extended to the outer most edge of the installed body.

Mud Flaps:

Mud flaps front and rear of rear tires, unmarked, full width of tires, and gusseted.

Length shall be consistent with the unloaded rear axle height, And in accordance with the PA State Inspection Laws.

The Flaps in front of the rear tires shall be constructed of 0.1406 in (10 gauge) steel.

The Flaps at the rear, of the rear tires, shall be constructed of 0.1406 in (10 gauge) steel, and include a rubber flap using 3 bolts and flat steel backed plates.

	Page <u>2 of 3</u>
Electrical: Whelen Light Kit Part # PADOTSY5, Kit contains the following lig 1 - R10PADOT Light Bar to be mounted to the driver's side of the bulk vehicle.	
 2-LINZ6A Amber warning, to be flush mounted to outer edges of the f 2 - M6AD Amber warning lights 2 - M6BTTD Stop, Tail, Turn lights 	ront grill per EQN-115
 2 - M6BUD Back-up lights 2 - 11-486152-000 Vertical black flange housing assembly. Above wa EQN - 120M. 	arning, STT, and back up lights shall be mounted within housing per
 2 - LINZ6AD Amber warning lights, grommet mounted, mounted 1 to in conjunction with above light bar. 2 - LINZ6 Grommet Kits 	each side of bed per EQN - 120M. Side warning lights are to be wired
8 - W441D Harness side mating Deutch connectors. The above lights are supplied with male and female Deutsch connect each light source.	ors that shall be utilized to connect the vendor supplied harness to
1 - PFP1PA Tripod pedestal work light with coiled cord, remote mour wired and mounted in the rear of the truck. Work light receptacle sha and have a chassis ground. Portable light retainer mounting location v Body builder to supply remaining marker and ICC lighting, they shall b Connections shall be water tight. All Body lighting shall be LED.	Il have a constant 12 volt power supply, circuit to be properly protected will be determined at pilot inspection.
The Warning lights / Light bar shall have a lighted, permanently labele Body wiring shall be Grote, Trucklite, or Prior Approved Equal.	
There shall be no splices outside of a sealed box or fixture. Box SHAL There shall be a seven-way trailer (Pin Type) receptacle mounted on A color-coded electrical wiring chart and schematic shall accompany e	rear. Per EQN - 80A
All wiring shall be secured using "P" type clamps 12" maximum betwee hanging wires are unexceptable.	
Color of the body, including inside and outside of compartments, and yellow, or optional PennDOT yellow DuPont F9885 for shade. (Powd successful vendor to ensure color of the body matches the cab . All metal surfaces to be painted shall be cleaned and prepared by abr Painting Council Standard SSPC-SP-6. A rust preventative treatment shall be applied. Conspicuity tape on body as per EQN-127A. Red/white on sides of bot Alternating Red / Yellow Reflective sheeting shall be mound does	er Coat, if available from factory.) It will be the responsibility of the rasive blasting to 1-1/2 mil profile in accordance with Steel Structure bdy and cab, agonally (45 degree angle) on the rear of body as per EQN-120K.
ICC Rear Under ride Protector, hitch and grip strut ladders shall be pa Front lower leading edge of cabinets shall have a minimum 12 inch hi	
HITCH: There shall be a hitch installed, Per EQN-202B, the Upper Portion Of body perimeter and is likely to be stepped on. Below hardware shall b	
Buyers Products (216-974-888)	OR Wallace Forge Company (800-328-1203)
Combo Ball Hitch W/ 2 inch Hard	
Chrome Ball: Buyers Products (216-974-888) Pintle	23071911
Mounting Plate: PM-87	2200170 PADOT
Bolt Kit: 8520	2117240
Hitch Pin: HP6253 WC	HP58412

				Page <u>3 of 3</u>	
Shovel Stora	ge Basket:				
cross supports	s for added stre	ength.		D in aluminum pre-punched pan, all edges to have hem and minimum three (3) exteri long and mounted on top of street side compartment, per attached drawing. REF: Ed	
Drawings: EQN-80A	Revised	11-12-09	sheet 1	WIRING DIAGRAM	

Dama 2 af 2

EQIN-80A	Revised	11-12-09	sneet	
EQN-115	Revised	07-03-12	sheet 1	GRILL MOUNTED WARNING LIGHTS
EQN-120K	Revised	09-28-11	sheet 1	TYPICAL REFLECTIVE SHEETING
EQN-120M		09-28-11	sheet 1	CREW CAB BODY LIGHTING
EQN-127A	Revised	01-02-09	sheet 1	CONSPICUITY TAPE
EQN-134	Revised	01-11-06	sheet 1	SHOVEL BASKET
EQN-202B	Revised	11-03-06	sheet 1	HITCH: WEIGHT DISTRIBUTING

Options

Bed Liner:

Center Cargo Area shall have a sprayed bed liner. Shall cover floor, both interior side panels, front interior panel and tailgate interior. Shall be a minimum of 150 Mils. Thickness. Material shall have No VOCS and be applied utilizing a high pressure spray. (Ref: Rhino, Linex or pre approved equal.)

Installation Practices

All lights shall meet all Federal and State regulations.

All wire splices shall be insulated with heat shrink materials or removable connectors that create a water tight connection.

All wires shall be securley fastened with no wires hanging or protruding where they are exposed to the risk of damage.

All junction boxes shall be located for easy accecability and shall not be blocked by any means for access.

All electrical connections shall be treated with di-electric grease.

All wiring shall be secured using "P" type clamps at intervels not to exceed 12" between securment.

All wires shall be in a protective covering and protected from chaffing, rubbing and getting pulled or torn from external sources. Any alterations / relocation to fuel fill, DEF tank, exhaust, Etc. to allow installation of body shall be made in a professional manner using new

materials.

Any place steel and aluminum contact each other Mylar or an approved equal shall be used as a buffer. Laminate rubber is unacceptable.

All vertical and horizontal seams of the body sides shall utilize full penetration welds in accordance with standard welding practices as set forth by the American Welding Society and sealed water tight to create one integral body.

All corners shall be angled or rounded for safety.

All mounting procedures shall be in accordance with NTEA standards.

 The use of any of the following items or practices WILL NOT BE ACCEPTED.

 Non-steel fittings on hydraulic pressure lines.

 Excessive use of elbows on hydraulic lines.

 Use of thread tape on hydraulic fittings.

 Use of galvanized fittings or components on hydraulic system.

 Improper hydraulic line size.

 Use of high-pressure hose for hydraulic suction line.

 Scotchlok-type wire splices.

 Non-insulated wire splices.

 Improper hose or wire routing near exhaust, over-sharp edges or through holes without grommets, or sharp edges.

 Improperly prepared, primed and painted surfaces.

 Non-fused electric circuits.

 Hydraulic circuits without pressure relief protection.

 Loose hanging wires that are not secure or are pulled tight so they are suspended with no support.

 Oct 16, 2012 JF

SPECIFICATION

Page 1 of 3

049700 - Steel Survey Body Upfit For Use With 11K and 17K Chassis

Reference: Stahl, Omaha Standard, or Knapheide, meeting these specifications.

Note: " Refer to PCID 1075 for Delivery, Training, and Warranty Requirements".

Note : All up fitting shall be in accordance with the chassis manufacturers body builders up fitter manual.

Body Shall Include The Following Equipment:

Body - Installation:

It shall be the responsibility of the successful vendor to have the survey body mounted on the chassis(s). The installation shall be engineered and approved by the vehicle manufacturer and shall have no adverse affect upon the manufacturer's warranty. When any portion of the complete vehicle is to be installed by anybody other than the bidder or the chassis manufacturer, they shall indicate the name of the sub-contractor performing such installation and the location of their plants. The survey body dimensions shall cover the rear wheels. Any other applicable changes required to accommodate this type unit is the responsibility of the bidder.

Frame rails shall be prepared by cleaning, priming and final painting.

The body shall be attached to the truck chassis using four (4) U-bolts, or bolt thru, lock nuts, and appropriate shear plates as required to comply with manufacturer's standards.

Body Components:

Minimum height for inside of canopy 60 inches

There shall be a Betts M77V-I0-0066, 7 in dome light with switch or Truck-Lite 80354 dome light with switch, mounted in the center inside roof with a Betts 56V-10-0066 switch and boot assembly mounted on the right inside within arms reach.

There shall be glass panels in the rear doors.

Lower glass panels shall be protected with steel mesh or expandable metal.

All doors shall have rubber seals that contact them around their entire perimeter.

There shall be a drip rail above all doors.

Piano hinge is unacceptable.

All door and compartment hinges shall be rod and nylon bushing or stainless steel heavy duty strap hinge with nylon or Teflon bushings and rubber door seals.

All compartments shall be keyed alike, with no two individual completed units having the same keys.

Vertical compartment doors shall have a limiting device, shock type or steel lock strap type. Chain or cable is acceptable on horizontal doors only.

All compartments shall be keyed alike, with no two individual completed units having the same keys.

The heavy-duty rear bumper shall be constructed with a minimum of 1/8 inch reinforced steel. The size and strength shall be in accordance with the truck manufacturer's step design. The platform on top of the bumper shall be Bustin aluminum No. NST4 full size, or Bustin 628 steel, or Ohio Grating or IKG Industries serrated swage lock, with end band. The outer step edge must be serrated in lieu of plain, smooth metal edge. All edges shall be banded (skirting) on the outer perimeter. Overlay is not acceptable.

There shall be a stainless steel grab handle on each rear side of the utility body to assist the operator in entering and exiting the bed area, Non-skid paint or rubber shall be utilized, (non-skid tape is unacceptable). Ref: Non skid paint, Gamma Laboratories (Tel. 304-489-2828.) All compartment floors shall be covered with yellow DriDek (Tel: 800-348-2398).

Any area likely to be stepped on shall be covered with non-skid paint.

Each compartment shall have the Vista Compartment lighting System (Tel: 219-264-0711). The "Krystal-Lite" lighting sections shall be mounted on the roof of each compartment and shall occupy at a minimum (approximately) ¾ of the compartments length. All compartments lighting shall be controlled by a single illuminated rocker switch mounted within easy reach of the driver.

Construction:

All body parts are to be electrically full welded into one integral body.

For all threaded connections at least two (2) full threads shall be visible beyond the nut.

The fuel tank fill shall be positioned in such a way to ensure the filler nozzle can be set on automatic and nozzle will support itself with unrestricted flow.

	Page <u>2 of 3</u>
Exhaust: All tool boxes above any exhaust tailpipe or within close proximity of muffler, to protect it. Exhaust shall be extended to the outer most edge of the installe	•
Mud Flaps: Mud flaps at rear of rear tires, unmarked, full width of tires, and gusseted. Length shall be consistent with the unloaded rear axle height, And in accord The Flaps at the rear, of the rear tires, shall be constructed of 0.1406 in (10 steel backed plates.	
Electrical: Whelen Light Kit Part # PADOTSY5, Kit contains the following lighting. 1 - R10PADOT Light Bar to be mounted to the driver's side of the bulkhead. vehicle. 2 - M6AD Amber warning lights 2 - M6BTTD Stop, Tail, Turn lights	
 2 - M6BUD Back-up lights 2 - 11-486152-000 Vertical black flange housing assembly. Above warning, EQN - 120M. 4 - LINZ6AD Amber warning lights, grommet mounted, mounted 1 to each sin conjunction with above light bar and two flush mounted in the grill with rub 2 - LINZ6 Grommet Kits 	ide of bed per EQN - 120M. Side warning lights are to be wired
 8 - W441D Harness side mating Deutch connectors. The above lights are supplied with male and female Deutsch connectors tha each light source. 1 - PFP1PA Tripod pedestal work light with coiled cord and plug to be suppl mounted in the rear of the truck. Work light receptacle shall have a constant a chassis ground. 	lied in the cab. Work Light receptacle shall be wired and
Body builder to supply remaining marker and ICC lighting, they shall be prote Connections shall be water tight. All Body lighting shall be LED. The Warning lights / Light bar shall have a lighted, permanently labeled togo Body wiring shall be Grote, Trucklite, or Prior Approved Equal. There shall be no splices outside of a sealed box or fixture. There shall be a seven-way trailer (Pin Type) receptacle mounted on rear. P A color-coded electrical wiring chart and schematic shall accompany each b	gle switch located in the dash. Per EQN - 80A
Paint: Body priming and painting to ensure full coverage to all areas of the body Color of the body, including inside and outside of compartments, and the be yellow, or optional PennDOT yellow DuPont 6808 for shade. (Powder Coat, successful vendor to ensure color of the body matches the cab. All metal surfaces to be painted shall be cleaned and prepared by abrasive I Painting Council Standard SSPC-SP-6. A rust preventative treatment shall be applied.	if available from factory.) It will be the responsibility of the
Conspicuity tape on body as per EQN-127A. Red/white on sides of body and Alternating Red / Yellow Reflective sheeting shall be mounted diagonal ICC Rear Under ride Protector, hitch and grip strut ladders shall be painted I Front lower leading edge of cabinets shall have a minimum 12 inch high alu	ly (45 degree angle) on the rear of body as per EQN-120K. black.

There shall be a hitch installed, Per EQN-202B, the Upper Portion Of Hitch Shall Be Painted With Non-Skid Paint If extending to or outside body perimeter and is likely to be stepped on. Below hardware shall be supplied in truck cab.

	Buyers Products (216-974-888)	OR	Wallace Forge Company (800-328-1203)
Combo Ball Hitch W/ 2 inch Hard Chrome Ball:	BH8-2000		23071911
Pintle Mounting Plate:	PM-87		2200170 PADOT
Bolt Kit:	8520		2117240
Hitch Pin:	HP6253 WC		HP58412

					Page <u>3 of 3</u>
Drawings:					
EQN-80A	Revised	11-12-09	sheet 1	WIRING DIAGRAM	
EQN-120K	Revised	09-28-11	sheet 1	TYPICAL REFLECTIVE SHEE	ETING
EQN-120M		09-28-11	sheet 1	CREW CAB BODY LIGHTIN	G
EQN-127A	Revised	01-02-09	sheet 1	CONSPICUITY TAPE	
EQN-202B	Revised	11-03-06	sheet 1	HITCH: WEIGHT DISTRIBUT	ING
				<u>Options</u>	
All wires shall b All junction box All electrical con All wiring shall b Any wires shall b Any alterations new materials. Any place steel Laminate rubbe All vertical and forth by the Am All corners shal	e securley fas es shall be loo nnections sha be secured us e in a protecti / relocation to and aluminur er is unaccepta horizontal sea erican Weldin Il be angled or	stened with cated for ea II be treated ing "P" type ve covering fuel fill, DE n contact ea able. ms of the b g Society a rounded fo	no wires ha sy accecab d with di-ele e clamps at g and prote F tank, exh ach other N body sides s nd sealed v or safety.	anging or protruding where they a bility and shall not be blocked by a ectric grease. intervels not to exceed 12" betwe cted from chaffing, rubbing and gu naust, Etc. to allow installation of I Aylar or an approved equal shall b	een securment. etting pulled or torn from external sources. body shall be made in a professional manner using be used as a buffer. in accordance with standard welding practices as set
Non-steel fitting Excessive use of Use of thread ta Use of galvaniz Improper hydra Use of high-pre Scotchlok-type Non-insulated v	as on hydraulid of elbows on h ape on hydrau aed fittings or o ulic line size. assure hose fo wire splices. or wire splices. or wire routing bared, primed tric circuits.	c pressure I hydraulic lin lic fittings. components r hydraulic s near exha and painted	ines. es. s on hydrau suction line ust, over-sl d surfaces.	harp edges or through holes withc	but grommets, or sharp edges.
,					
					Oct 16, 2012 JF

SPECIFICATION

050400 - Foreman Body Upfit For Use With 11K and 17K Chassis, Full Standard Doors

Reference: Crest FBP9D, Warner, Stahl HD96T-09, Knapheide PVMXT-93C or Approved Equal.

Note: " Refer to PCID 1075 for Delivery, Training, and Warranty Requirements".

Note : All up fitting shall be in accordance with the chassis manufacturers body builders up fitter manual

Body Shall Include The Following Equipment:

Body - Installation:

It shall be the responsibility of the successful vendor to have the foreman body mounted on the chassis(s). The installation shall be engineered and approved by the vehicle manufacturer and shall have no adverse affect upon the manufacturer's warranty. When any portion of the complete vehicle is to be installed by anybody other than the bidder or the chassis manufacturer, they shall indicate the name of the sub-contractor performing such installation and the location of their plants. The foreman body dimensions shall cover the rear wheels. Any other applicable changes required to accommodate this type unit is the responsibility of the bidder.

The body shall have a front mounted bulkhead and shall be a minimum 14 gauge steel with punched or expandable metal area in alignment with the cab rear window. It shall be constructed of sufficient strength to eliminate damage to the rear of the cab. The bulkhead shall not interfere with the visibility of the third brake light.

Proposed bulkhead shall be reviewed for acceptance prior to pilot model inspection by the Equipment Division. The bulkhead shall have a forward extension mounted to the driver's side, of sufficient size to support the base of the warning light and this extension shall have a gusset.

Frame rails shall be prepared by cleaning, priming and final painting.

The body shall be attached to the truck chassis using four (4) U-bolts, or bolt thru, lock nuts, and appropriate shear plates as required to comply with manufacturer's standards.

Body Components:

Shall have two (3) compartments on curb side and three (3) compartments on road side. **COMPARTMENTS SHALL BE 15**" **DEEP.** The front curbside compartment shall have two (2) adjustable shelves.

The top road side compartments shall have one (1) adjustable shelf each.

There shall be a drip rail above all doors.

The top left and right area's of the forman's body shall be covered with aluminum diamond deck (unpainted), and sealed all around. Piano hinge is unacceptable.

All door and compartment hinges shall be cadium plated rod with zinc cast hinge block and nylon bushing or stainless steel heavy duty strap hinge with nylon or Teflon bushings and automotive type rubber door seals.

Vertical compartment doors shall have a limiting device, shock type or steel lock strap type.

Horizontal compartment doors shall have a removable limiting device, steel lock strap type.

Horizontal compartment doors shall open down with hinge on bottom of the door and one latch at the top of the door.

Rubber bumpers shall be placed on the body to hit all horizontally opening doors that open downward to keep them from damage.

Each compartment shall be equipped with ONE Stainless steel bolt on latch, Rivit on latches are unexceptable.

All compartments shall be keyed alike, with no two individual completed units having the same keys.

Each unit shall have an step bumber made from minimum 1/8" reinforced steel and equipped with bustin steel grip graiting, minimum step surface 9" x 27" (ref:Knaphide used 94J Bustin Steel bar bumper). The platform on top of the bumper shall be Bustin aluminum No. NST4 full size, or Bustin 628 steel, or Ohio Grating or IKG Industries serrated swage lock, with end band. The outer step edge must be serrated in lieu of plain, smooth metal edge. All edges shall be banded (skirting) on the outer perimeter. Overlay is not acceptable.

Two, 2" deep x 12" long steps hung by 6" long 3/4" diameter cables shall be mounted, one under each side of bumper. Both hung 12" in from edge of bumper, step shall be Bustin steel grip grating.

A 12" non-slip grab handle on top of each cabinet at rear shall also be provided to assist operators when climbing into rear of body. (anti-slip tape is unacceptable)

There shall be a stainless steel grab handle on each rear side of the utility body to assist the operator in entering and exiting the bed area, Non-skid paint or rubber shall be utilized, (non-skid tape is unacceptable). Ref: Non skid paint, Gamma Laboratories (Tel. 304-489-2828.) All compartment floors shall be covered with yellow DriDek (Tel: 800-348-2398).

Any area likely to be stepped on shall be covered with non-skid paint.

Compartment lighting:

Each compartment shall have the Vista Compartment lighting System (Tel: 219-264-0711). The "Krystal-Lite" lighting sections shall be mounted on the roof of each compartment and shall occupy at a minimum (approximately) ¾ of the compartments length. All compartments lighting shall be controlled by a single illuminated rocker switch mounted within easy reach of the driver.

Construction:

All body parts are to be electrically full welded into one integral body.

For all threaded connections at least two (2) full threads shall be visible beyond the nut.

The fuel tank fill shall be positioned in such a way to ensure the filler nozzle can be set on automatic and nozzle will support itself with unrestricted flow.

Exhaust:

All tool boxes above any exhaust tailpipe or within close proximity of muffler, DPF, etc. shall receive a heat shield plate to the box in order to protect it. Exhaust shall be extended to the outer most edge of the installed body.

Mud Flaps:

Mud flaps front and rear of rear tires, unmarked, full width of tires, and gusseted.

Length shall be consistent with the unloaded rear axle height, And in accordance with the PA State Inspection Laws.

The Flaps in front of the rear tires shall be constructed of 0.1406 in (10 gauge) steel.

The Flaps at the rear, of the rear tires, shall be constructed of 0.1406 in (10 gauge) steel, and include a rubber flap using 3 bolts and flat steel backed plates.

		Page <u>2 of 4</u>
Electrical:		
Whelen Light Kit Part # PADOTSY5, Kit contains the following lighting. 1 - R10PADOT Light Bar to be mounted to the driver's side of the bulkhead. I vehicle.	n no case sł	nall the light bar be mounted on the roof of the
 2-LINZ6A Amber warning, to be flush mounted to outer edges of the front gril 2 - M6AD Amber warning lights 2 - M6BTTD Stop, Tail, Turn lights 	l per EQN-1	15
2 - M6BUD Back-up lights		
2 - 11-486152-000 Vertical black flange housing assembly. Above warning, S	STT. and bad	ck up lights shall be mounted within housing per
EQN - 120M. 2 - LINZ6AD Amber warning lights, grommet mounted, mounted 1 to each sid		
in conjunction with above light bar. 2 - LINZ6 Grommet Kits		
8 - W441D Harness side mating Deutch connectors. The above lights are supplied with male and female Deutsch connectors that each light source.	shall be utili	zed to connect the vendor supplied harness to
1 - PFP1PA Tripod pedestal work light with coiled cord, remote mount and pl wired and mounted in the rear of the truck. Work light receptacle shall have a and have a chassis ground. Remote mounting location to be determined at pl and have a chassis ground.	a constant 12	2 volt power supply, circuit to be properly protected
Body builder to supply remaining marker and ICC lighting, they shall be prote Connections shall be water tight. All Body lighting shall be LED. The Warning lights / Light bar shall have a lighted, permanently labeled toggl	-	-
Body wiring shall be Grote, Trucklite, or Prior Approved Equal. There shall be no splices outside of a sealed box or fixture.		
There shall be a seven-way trailer (Pin Type) receptacle mounted on rear. Pe A color-coded electrical wiring chart and schematic shall accompany each bo		х
Paint: Body priming and painting to ensure full coverage to all areas of the body Color of the body, including inside and outside of compartments, and the bed yellow, or optional PennDOT yellow DuPont F9885 for shade. (Powder Coat, successful vendor to ensure color of the body matches the cab. All metal surfaces to be painted shall be cleaned and prepared by abrasive bl Painting Council Standard SSPC-SP-6. A rust preventative treatment shall be applied.	if available	from factory.) It will be the responsibility of the
Conspicuity tape on body as per EQN-127A. Red/white on sides of body and Alternating Red / Yellow Reflective sheeting shall be mounted diagonally ICC Rear Under ride Protector, hitch and grip strut ladders shall be painted bl Front lower leading edge of cabinets shall have a minimum 12 inch high alum	/ (45 degree ack.	
HITCH: There shall be a hitch installed, Per EQN-202B, the Upper Portion Of Hitch SI		
body perimeter and is likely to be stepped on. Below hardware shall be suppli	ed in truck c	ab.
Buyers Products (216-974-888)	OR	Wallace Forge Company (800-328-1203)
Combo Ball Hitch W/ 2 inch Hard		
Chrome Ball: BH8-2000		23071911
Pintle Mounting		
Plate: PM-87		2200170 PADOT
Bolt Kit: 8520		2117240
Hitch Pin: HP6253 WC		HP58412

	Page <u>3 of 4</u>
Body Specifications:	
Length (O.D.):	112.4"
Length (I.D.)	110"
Width (O.D.):	95"
Cargo area floor width (I.D.)	64"
Floor Construction:	12 Gauge steel deck-plate floor
Side and end rails:	5 ¾" Formed steel side and end rails with square corners
Long sills:	6", 8.2# structural steel channel long sills gusseted to every cross member
Cross members:	5 3/4" high formed steel cross members on 18" centers
Tailgate:	15" hinged steel tailgate with rubber coated chain retainers
Toolbox construction:	14-gauge 2-sided; A40 galvannealed steel with rotary slam action latches with keyed alike lock cylinders and compartment weather- proofing (Piano hinge is NOT ACCEPTABLE)
Curbside toolboxes:	80.38" L x 23" H x 15.25" D (CSR)
	32" L x 46" H x 15 ¼" D (CSF)
	Horizontal box to have 1 latch handle and (2) latch catch points per door
	32" L x 18" H x 15.25 D (CSRU)
Roadside toolboxes:	55.97" L x 23" H x 15.25" D (RSR)
	56.41" L x 23" H x 15.25 D (RSM)
	32" L x 18" H x 15.25 D (RSFU)
Bulkhead:	Special tapered bulkhead 10 gauge punched. Bottom half on bulkhead 18" high full width of cargo area bulkhead. Top half shall be 19" high with tapered sides.
Possum belly compartment:	Full length possum belly located between long sills to include lockable-hinged access door.
Splash shields:	Steel splash shields in front of rear wheels.

Shovel Storage Basket:

Shovel basket to be constructed with minimum .100 in aluminum pre-punched pan, all edges to have hem and minimum three (3) exterior cross supports for added strength.

Storage basket to be 10 in high x 20 in wide x 96 in long and mounted on top of street side compartment, per attached drawing. REF: EQN - 134

Drawings:				
EQN-80A	Revised	11-12-09	sheet 1	WIRING DIAGRAM
EQN-115	Revised	07-03-12	sheet 1	GRILL MOUNTED WARNING LIGHTS
EQN-120H	Revised	8-2-12	sheet 1	FORMAN BODY
EQN-120K	Revised	09-28-11	sheet 1	TYPICAL REFLECTIVE SHEETING
EQN-120M		09-28-11	sheet 1	CREW CAB BODY LIGHTING
EQN-127A	Revised	01-02-09	sheet 1	CONSPICUITY TAPE

Options

Bed Liner:

Center Cargo Area shall have a sprayed bed liner. Shall cover floor, both interior side panels, front interior panel and tailgate interior. Shall be a minimum of 150 Mils. Thickness. Material shall have No VOCS and be applied utilizing a high pressure spray. (Ref: Rhino, Linex or pre approved equal.)

Installation Practices

All lights shall meet all Federal and State regulations.

All wire splices shall be insulated with heat shrink materials or removable connectors that create a water tight connection.

- All wires shall be securley fastened with no wires hanging or protruding where they are exposed to the risk of damage.
- All junction boxes shall be located for easy accecability and shall not be blocked by any means for access.

All electrical connections shall be treated with di-electric grease.

All wiring shall be secured using "P" type clamps at intervels not to exceed 12" between securment.

All wires shall be in a protective covering and protected from chaffing, rubbing and getting pulled or torn from external sources.

Any alterations / relocation to fuel fill, DEF tank, exhaust, Etc. to allow installation of body shall be made in a professional manner using new materials.

Laminate

Any place steel and aluminum contact each other Mylar or an approved equal shall be used as a buffer. rubber is unacceptable.

All vertical and horizontal seams of the body sides shall utilize full penetration welds in accordance with standard welding practices as set forth by the American Welding Society and sealed water tight to create one integral body.

All corners shall be angled or rounded for safety.

All mounting procedures shall be in accordance with NTEA standards.

	Page <u>4 of 4</u>
The use of any of the following items or practices WILL NOT BE ACCEPTED.	
Non-steel fittings on hydraulic pressure lines.	
Excessive use of elbows on hydraulic lines.	
Use of thread tape on hydraulic fittings.	
Use of galvanized fittings or components on hydraulic system.	
Improper hydraulic line size.	
Use of high-pressure hose for hydraulic suction line.	
Scotchlok-type wire splices.	
Non-insulated wire splices.	
Improper hose or wire routing near exhaust, over-sharp edges or through holes without gro	mmets, or sharp edges.
Improperly prepared, primed and painted surfaces.	
Non-fused electric circuits.	
Hydraulic circuits without pressure relief protection.	
Loose hanging wires that are not secure or are pulled tight so they are suspended with no s	support.
	Oct 16.2012 JF

SPECIFICATION

050401 - Foreman Body Upfit For Use With 11K and 17K Chassis Split horizontal door configuration

Reference: Warner, Knapheide or Approved Equal.

Note: " Refer to PCID 1075 for Delivery, Training, and Warranty Requirements".

Note : All up fitting shall be in accordance with the chassis manufacturers body builders up fitter manual.

Body Shall Include The Following Equipment:

Body - Installation:

It shall be the responsibility of the successful vendor to have the foreman body mounted on the chassis(s). The installation shall be engineered and approved by the vehicle manufacturer and shall have no adverse affect upon the manufacturer's warranty. When any portion of the complete vehicle is to be installed by anybody other than the bidder or the chassis manufacturer, they shall indicate the name of the sub-contractor performing such installation and the location of their plants. The foreman body dimensions shall cover the rear wheels. Any other applicable changes required to accommodate this type unit is the responsibility of the bidder.

The body shall have a front mounted bulkhead and shall be a minimum 14 gauge steel with punched or expandable metal area in alignment with the cab rear window. It shall be constructed of sufficient strength to eliminate damage to the rear of the cab. The bulkhead shall not interfere with the visibility of the third brake light.

Proposed bulkhead shall be reviewed for acceptance prior to pilot model inspection by the Equipment Division. The bulkhead shall have a forward extension mounted to the driver's side, of sufficient size to support the base of the warning light and this extension shall have a gusset.

Frame rails shall be prepared by cleaning, priming and final painting.

The body shall be attached to the truck chassis using four (4) U-bolts, or bolt thru, lock nuts, and appropriate shear plates as required to comply with manufacturer's standards.

Body Components:

Shall have two (3) compartments on curb side and three (3) compartments on road side. **COMPARTMENTS SHALL BE 15**" **DEEP.** The front curbside compartment shall have two (2) adjustable shelves.

The top road side compartments shall have one (1) adjustable shelf each.

There shall be a drip rail above all doors.

The top left and right area's of the forman's body shall be covered with aluminum diamond deck (unpainted), and sealed all around. Piano hinge is unacceptable.

All door and compartment hinges shall be cadium plated rod with zinc cast hinge block and nylon bushing or stainless steel heavy duty strap hinge with nylon or Teflon bushings and automotive type rubber door seals.

Vertical compartment doors shall have a limiting device, shock type or steel lock strap type.

Horizontal compartment doors that open up shall ultilize a gas shock to assure door stays in open position, min 135° opening angle.

Horizontal compartment doors that open down shall have a removable limiting device, steel lock strap type.

Rubber bumpers shall be placed on the body to stop all horizontally opening doors that open downward to keep them from damage.

Each compartment shall be equipped with ONE Stainless steel bolt on latch, Rivit on latches are unexceptable.

All compartments shall be keyed alike, with no two individual completed units having the same keys.

Each unit shall have an step bumber made from minimum 1/8" reinforced steel and equipped with bustin steel grip graiting, minimum step surface 9" x 27" (ref:Knaphide used 94J Bustin Steel bar bumper). The platform on top of the bumper shall be Bustin aluminum No. NST4 full size, or Bustin 628 steel, or Ohio Grating or IKG Industries serrated swage lock, with end band. The outer step edge must be serrated in lieu of plain, smooth metal edge. All edges shall be banded (skirting) on the outer perimeter. Overlay is not acceptable.

Two, 2" deep x 12" long steps hung by 6" long 3/4" diameter cables shall be mounted, one under each side of bumper. Both hung 12" in from edge of bumper, step shall be Bustin steel grip grating.

A 12" non-slip grab handle on top of each cabinet at rear shall also be provided to assist operators when climbing into rear of body. (anti-slip tape is unacceptable)

There shall be a stainless steel grab handle on each rear side of the utility body to assist the operator in entering and exiting the bed area, Non-skid paint or rubber shall be utilized, (non-skid tape is unacceptable). Ref: Non skid paint, Gamma Laboratories (Tel. 304-489-2828.) All compartment floors shall be covered with yellow DriDek (Tel: 800-348-2398).

Any area likely to be stepped on shall be covered with non-skid paint.

Compartment lighting:

Each compartment shall have the Vista Compartment lighting System (Tel: 219-264-0711). The "Krystal-Lite" lighting sections shall be mounted on the roof of each compartment and shall occupy at a minimum (approximately) ¾ of the compartments length. All compartments lighting shall be controlled by a single illuminated rocker switch mounted within easy reach of the driver.

Construction:

All body parts are to be electrically full welded into one integral body.

For all threaded connections at least two (2) full threads shall be visible beyond the nut.

The fuel tank fill shall be positioned in such a way to ensure the filler nozzle can be set on automatic and nozzle will support itself with unrestricted flow.

Exhaust:

All tool boxes above any exhaust tailpipe or within close proximity of muffler, DPF, etc. shall receive a heat shield plate to the box in order to protect it. Exhaust shall be extended to the outer most edge of the installed body.

Mud Flaps:

Mud flaps front and rear of rear tires, unmarked, full width of tires, and gusseted.

Length shall be consistent with the unloaded rear axle height, And in accordance with the PA State Inspection Laws.

The Flaps in front of the rear tires shall be constructed of 0.1406 in (10 gauge) steel.

The Flaps at the rear, of the rear tires, shall be constructed of 0.1406 in (10 gauge) steel, and include a rubber flap using 3 bolts and flat steel backed plates.

	Page <u>2 of 4</u>
Electrical: Whelen Light Kit Part # PADOTSY5, Kit contains the following lighting. 1 - R10PADOT Light Bar to be mounted to the driver's side of the bulkhead. vehicle.	In no case shall the light bar be mounted on the roof of the
 2-LINZ6A Amber warning, to be flush mounted to outer edges of the front gri 2 - M6AD Amber warning lights 2 - M6BTTD Stop, Tail, Turn lights 	l per EQN-115
 2 - M6BUD Back-up lights 2 - 11-486152-000 Vertical black flange housing assembly. Above warning, EQN - 120M. 	STT, and back up lights shall be mounted within housing per
 2 - LINZ6AD Amber warning lights, grommet mounted, mounted 1 to each si in conjunction with above light bar. 2 - LINZ6 Grommet Kits 	de of bed per EQN - 120M. Side warning lights are to be wired
8 - W441D Harness side mating Deutch connectors. The above lights are supplied with male and female Deutsch connectors that each light source.	shall be utilized to connect the vendor supplied harness to
1 - PFP1PA Tripod pedestal work light with coiled cord, remote mount and p wired and mounted in the rear of the truck. Work light receptacle shall have and have a chassis ground. Remote mounting location to be determined at p	a constant 12 volt power supply, circuit to be properly protected
Body builder to supply remaining marker and ICC lighting, they shall be prote Connections shall be water tight. All Body lighting shall be LED. The Warning lights / Light bar shall have a lighted, permanently labeled toggl Body wiring shall be Grote, Trucklite, or Prior Approved Equal. There shall be no splices outside of a sealed box or fixture. There shall be a seven-way trailer (Pin Type) receptacle mounted on rear. Pe A color-coded electrical wiring chart and schematic shall accompany each box	e switch located in the dash. er EQN - 80A
Paint: Body priming and painting to ensure full coverage to all areas of the body Color of the body, including inside and outside of compartments, and the bed yellow, or optional PennDOT yellow DuPont F9885 for shade. (Powder Coat successful vendor to ensure color of the body matches the cab. All metal surfaces to be painted shall be cleaned and prepared by abrasive b Painting Council Standard SSPC-SP-6. A rust preventative treatment shall be applied.	, if available from factory.) It will be the responsibility of the
Conspicuity tape on body as per EQN-127A. Red/white on sides of body and Alternating Red / Yellow Reflective sheeting shall be mounted diagonall ICC Rear Under ride Protector, hitch and grip strut ladders shall be painted b Front lower leading edge of cabinets shall have a minimum 12 inch high alun	y (45 degree angle) on the rear of body as per EQN-120K. lack.
HITCH: There shall be a hitch installed, Per EQN-202B, the Upper Portion Of Hitch S body perimeter and is likely to be stepped on. Below hardware shall be suppl	
Buyers Products (216-974-888)	OR Wallace Forge Company (800-328-1203)
Combo Ball Hitch W/ 2 inch Hard	
Chrome Ball: BH8-2000	23071911
Pintle Mounting	
Plate: PM-87	2200170 PADOT
Bolt Kit: 8520	2117240
Hitch Pin: HP6253 WC	HP58412

	Page <u>3 of 4</u>
Body Specifications:	
Length (O.D.):	112.4"
Length (I.D.)	110"
Width (O.D.):	95"
Cargo area floor width (I.D.)	64"
Floor Construction:	12 Gauge steel deck-plate floor
Side and end rails:	5 ¾" Formed steel side and end rails with square corners
Long sills:	6", 8.2# structural steel channel long sills gusseted to every cross member
Cross members:	5 3/4" high formed steel cross members on 18" centers
Tailgate:	15" hinged steel tailgate with rubber coated chain retainers
Toolbox construction:	14-gauge 2-sided; A40 galvannealed steel with rotary slam action latches with keyed alike lock cylinders and compartment weather- proofing (Piano hinge is NOT ACCEPTABLE)
Curbside toolboxes:	80.38" L x 23" H x 15.25" D (CSR)
	32" L x 46" H x 15 ¼" D (CSF)
	Horizontal box to have 1 latch handle and (2) latch catch points per door
	32" L x 18" H x 15.25 D (CSRU)
Roadside toolboxes:	55.97" L x 23" H x 15.25" D (RSR)
	56.41" L x 23" H x 15.25 D (RSM)
	32" L x 18" H x 15.25 D (RSFU)
	All Horizontaly opening doors shall utilize two doors, one folding up and one folding down.
Bulkhead:	Special tapered bulkhead 10 gauge punched. Bottom half on bulkhead 18" high full width of cargo area bulkhead. Top half shall be 19" high with tapered sides.
Possum belly compartment:	Full length possum belly located between long sills to include lockable-hinged access door.
Splash shields:	Steel splash shields in front of rear wheels.

Shovel Storage Basket:

Shovel basket to be constructed with minimum .100 in aluminum pre-punched pan, all edges to have hem and minimum three (3) exterior cross supports for added strength.

Storage basket to be 10 in high x 20 in wide x 96 in long and mounted on top of street side compartment, per attached drawing. REF: EQN - 134

Drawings:					
EQN-80A	Revised	11-12-09	sheet 1	WIRING DIAGRAM	
EQN-115	Revised	07-03-12	sheet 1	GRILL MOUNTED WARNING LIGHTS	
EQN-120HS	Revised	08-02-12	sheet 1	FORMAN BODY	
EQN-120K	Revised	09-28-11	sheet 1	TYPICAL REFLECTIVE SHEETING	
EQN-120M		09-28-11	sheet 1	CREW CAB BODY LIGHTING	
EQN-127A	Revised	01-02-09	sheet 1	CONSPICUITY TAPE	

Options

Bed Liner:

Center Cargo Area shall have a sprayed bed liner. Shall cover floor, both interior side panels, front interior panel and tailgate interior. Shall be a minimum of 150 Mils. Thickness. Material shall have No VOCS and be applied utilizing a high pressure spray. (Ref: Rhino, Linex or pre approved equal.)

Installation Practices

All lights shall meet all Federal and State regulations.

All wire splices shall be insulated with heat shrink materials or removable connectors that create a water tight connection.

- All wires shall be securley fastened with no wires hanging or protruding where they are exposed to the risk of damage.
- All junction boxes shall be located for easy accecability and shall not be blocked by any means for access.

All electrical connections shall be treated with di-electric grease.

All wiring shall be secured using "P" type clamps at intervels not to exceed 12" between securment.

All wires shall be in a protective covering and protected from chaffing, rubbing and getting pulled or torn from external sources. Any alterations / relocation to fuel fill, DEF tank, exhaust, Etc. to allow installation of body shall be made in a professional manner using new

materials. Any place steel and aluminum contact each other Mylar or an approved equal shall be used as a buffer.

Any place steel and aluminum contact each other Mylar or an approved equal shall be used as a buffer. rubber is unacceptable.

All vertical and horizontal seams of the body sides shall utilize full penetration welds in accordance with standard welding practices as set forth by the American Welding Society and sealed water tight to create one integral body.

All corners shall be angled or rounded for safety.

All mounting procedures shall be in accordance with NTEA standards.

	Page <u>4 of 4</u>
The use of any of the following items or practices WILL NOT BE ACCEPTED.	
Non-steel fittings on hydraulic pressure lines.	
Excessive use of elbows on hydraulic lines.	
Use of thread tape on hydraulic fittings.	
Use of galvanized fittings or components on hydraulic system.	
Improper hydraulic line size.	
Use of high-pressure hose for hydraulic suction line.	
Scotchlok-type wire splices.	
Non-insulated wire splices.	
Improper hose or wire routing near exhaust, over-sharp edges or through holes without gro	mmets, or sharp edges.
Improperly prepared, primed and painted surfaces.	
Non-fused electric circuits.	
Hydraulic circuits without pressure relief protection.	
Loose hanging wires that are not secure or are pulled tight so they are suspended with no s	support.
	Oct 16.2012 JF

Truck-Sign, 17K, 2WD, Gas, Cab and Chassis, 11 Foot body With Automatic Transmission

Truck, Sign, Regular Cab, Gas (064300) Truck, Sign, With Crane, Regular Cab, Gas (064400) Truck, Sign, With Aerial Bucket, Regular Cab, Gas (064500) Truck, Sign, Extended Cab, Gas (064520)

This dual-rear wheel model chassis shall be a manufacturer's standard cab model, which is engineered, certified and capable of towing a trailer, without brakes. 17,000 Lb GVWR minimum with the manufacturer's rating certified on door. Chassis shall accommodate the specific body options referenced within this specification.

Unit Shall Include The Following Optional Equipment:

	Jele i i della i i
Alternator:	Manufacturers largest / heaviest duty available.
Air bags:	Driver and passenger.
Air Conditioning:	Standard.
Am/Fm Radio:	Standard.
Manual Windows/Locks: Standard.	
Seats:	Shall be equipped with Vinyl 40/20/40 seats with center work console,
	Foam Padded with Seatbelts. (Cloth is Unacceptable)

Daytime Running Lights: (Aftermarket acceptable).

Electrical:

Whelen Light Kit Part # PADOTSY5, Kit contains the following lighting.

1 - R10PADOT Light Bar to be mounted to the driver's side of the bulkhead, mounting as per EQN-483, sheet 1 of 7. In no case shall the light bar be mounted on the roof of the vehicle.

2 - M6AD Amber warning lights

2 - M6BTTD Stop, Tail, Turn lights

2 - M6BUD Back-up lights

2 - 11-486152-000 Vertical black flange housing assembly. Above warning, STT, and back up lights shall be mounted within housing per EQN – 120M.

2- LINZ6AD Amber warning lights, grommet mounted, grill mounted per EQN-115

2 - LINZ6AD Amber warning lights, grommet mounted, mounted 1 to each side of bed per

EQN – 120M. Side warning lights are to be wired in conjunction with above light bar.

2 - LINZ6 Grommet Kits

8 - W441D Harness side mating Deutch connectors.

The above lights are supplied with male and female Deutsch connectors that shall be utilized to connect the vendor supplied harness to each light source.

1 - PFP1PA Tripod pedestal work light with coiled cord, remote mount and plug to be supplied in the cab. Work Light receptacle shall be wired and mounted in the rear of the truck. Work light receptacle shall have a constant 12 volt power supply, circuit to be properly protected and have a chassis ground. Remote mount location to be determined at pilot model inspection.

Body builder to supply remaining marker and ICC lighting, they shall be protected against damage and shall also be shock mounted. Connections shall be water tight. All Body lighting shall be LED.

The Warning lights / Light bar shall have a lighted, permanently labeled toggle switch located in the dash.

Body wiring shall be Grote, Trucklite, or Prior Approved Equal.

There shall be no splices outside of a sealed box or fixture.

There shall be a seven-way trailer (Pin Type) receptacle mounted on rear. Per EQN - 80A A color-coded electrical wiring chart and schematic shall accompany each body.

Option: Power windows, Power Locks, Power and heated mirrors with manual extendable arms.

Option: FLOCS System per EQN-351A.

ENGINE

Gasoline Engine:

Manufacturer's highest available horsepower and torque rating, standard or optional gasoline engine, to include, engine

	oil cooler, and largest available engine cooling capacity.
Front Bumper: Fuel Tank:	Chrome, Black, or Argent. Manufacturer's highest capacity standard tank, frame mounted (Tank filler positioned to ensure that filler nozzle can be set on automatic and nozzle will support itself, with unrestricted flow).
License Plate Bracket:	Rear (Lighted).
Limited Slip Differential:	Standard.
Lubricants:	Shall be synthetic where available, with drain plugs identified or painted red. (Engine oil excluded).
Mirrors:	Mirrors shall be manufacturer's standard heavy duty convex mirrors (aftermarket convex spot mirror acceptable) with extendable arms.
Paint:	Manufacturer's standard safety or school bus yellow.
OPTION:	Yellow, Ref: Dupont F9885 for shade. If aftermarket, paint shall be OEM quality, including but not limited to door jams and under hood etc. Warranty shall be the same as OEM manufactures warranty.
Rear Axle Ratio:	Shall be 4.88.
Rearview mirror:	Manual day/night.
Tinted Windshield:	Manufacturers standard.

oil coolor, and largest available ongine cooling capacity

Tires:

Truck and Body Company shall ensure that proper sized tires and wheels for GVWR are supplied. Tires shall be radial, all season mud and snow type tread.

Transmission: Automatic with auxiliary oil cooler.

Trailer and Handling Package: To include rear stabilizer bar if available from the manufacturer as standard or optional equipment.

Unit Shall Also Include The Following Equipment:

- There shall be installed, a step bar (Westin part # 251335 or equal) in black, must be length of cab entry area on both sides.
- There shall be an ECCO model 450 back-up alarm, shock mounted.
- There shall be a 7 inch dome light, with switch, installed and centered over the front seat that is capable of operating with the ignition switch in the off position. (Ref: Truck-Lite #80354, or approved equal).
- All switches shall be permanently labeled and backlit.
- There shall be two (2) front tow hooks, installed.
- There shall be an emergency triangle warning kit, with storage box, mounted in cab.
- There shall be a minimum 5 LB. ABC type fire extinguisher, rechargeable with vehicle mount, installed in the cab for easy and quick access.
- Manufacturer's standard heavy-duty rubber floor covering.

HITCH:

• There shall be a hitch, as per EQN-202B. The upper portion of hitch shall be painted with non-skid paint if extending to or outside body perimeter and is likely to be stepped on. All below components shall be supplied within the cab.

	Buyers Products	<u>OR</u>	Wallace Forge Company
Combo ball hitch with			
2 inch hard chrome ball:	BH8-2000		23071911
Pintle mounting plate:	PM-87		2200170 PADOT
Bolt kit:	8520		2117240
Hitch pin:	HP6253 WC		HP58412

(064300) & (064520): SIGN BODY: Sign body shall be furnished as per EQN-483, Type I and the specification below.

- The body and compartments shall be comparable to the Stahl model 129 or Warner S12MDWSP (dual wheel) 11 foot sign body (steel).
- The bulkhead shall be reinforced for severe duty.
- Compartment tops and rear of body shall be a minimum of 14 gauge, zinc coated.

- The load-bed floor shall be a minimum 12 gauge tread-plate floor, zinc coated, or Electra-life coating.
- Compartment doors shall be double paneled with reinforcement and automotive type rubber door seals around the entire perimeter. Hinges shall be stainless steel or have nylon bushings bolted / riveted to body. Piano type hinges are unacceptable.
- Compartments shall have paddle lock handles of stainless steel. Handles shall be in a recessed section of minimum galvanneal material.
- All vertical doors shall have a positive locking system to ensure doors will not blow closed on the operator due to wind. All horizontal doors shall be fitted with a limiting device to ensure that the door will not contact the body when open.
 - Compartment A (front) approx. 18 x 37 x 21 with (2) adjustable material tray with dividers.
 - Compartment B approx. 18 x 42 x 21 with (1) adjustable material tray with dividers.
 - Compartment C approx. 18 x 42 x 21 with (1) adjustable material tray with dividers.
 - Compartment D approx. 15 x 51 x 18.
 - Compartment A shall have 2 locking stainless steel paddle handles. Compartments B, C, D & E will have (1) each.
 - Compartment E approx. 13.50 x 20 x 14.
 - Post bin shall be approx. 129" x 21" x 8" with a reinforced front bin wall. The door shall be bottom hinged. There shall be a second post in approx. 4" x 24" x 48" located in the center of the rear body, below the cargo area.
- There shall be a grab handle extending approx. 12" above the catwalk and mounted to both sides.
- There shall be a grip strut step bumper approx. 14" deep. Receiver (2" square) mounted in or under bumper, in either case; it shall be a Class III hitch. There shall be "D" rings (2) for safety chain connection.
- There shall be two grip strut steps on each side of the rear body to allow access to the grip strut catwalk that extends the width and length of the lower rear right side compartment top.
 - Compartment G approx. 33 x 55.75 door opening and be 35" deep with (1) front hinged door. There shall be vertical sign holders on 2" centers to fit the entire width and height throughout the compartment.
 - Compartment H approx. 15" x 45" door opening, approx. 35" deep, minimum. There shall be a shelf mounted 16" from the top
 - Compartment J approx. 26" x 49" door opening, 35" deep. There shall be three (3) pull-out material trays mounted in the rear half of compartment. Trays shall be evenly spaced. The forward half of the compartment shall have vertical sign holders on 4" centers covering the entire height and depth of compartment.
 - Compartment K approx. 20" x 42" door opening, 35" deep.

OR

- Compartment A (front) approx. 18.88 x 48.50 x 21 with (2) adjustable material tray with dividers
- Compartment C1 approx. 18.88 x 25.18 x 21 with (1) adjustable material tray with dividers
- Compartment C2 approx. 18.88 x 25.18 x 21 with (1) adjustable material tray with dividers
- Compartment D approx. 15.38 x 27 x 18
- Compartment A shall have 2 locking stainless steel paddle handles. Compartments C1, C2, D &E will have (1) each.
- Compartment E approx. 13.50 x 20 x 14
- Post bin shall be approx. 100" x 21" x 8" with a reinforced front bin wall. The door shall be bottom hinged. There shall be a second post in approx. 4" x 24" x 48" located in the center of the rear body, below the cargo area.
- There shall be a grab handle extending approx. 12" above the body and mounted to both sides.

- There shall be a grip strut step bumper (not installed) approx. 14" deep. Receiver (2" square) mounted in or under bumper, in either case it shall be a Class III hitch. There shall be "D" rings (2) for safety chain connection.
- There shall be two grip strut steps on each side of the rear body to allow access to the grip strut catwalk that extends the width and length of the lower rear right side compartment top.
 - Compartment G approx. 26 x 55.75 door opening and be 37" deep with (1) front hinged door. There shall be vertical sign holders on 2" centers to fit the entire width and height throughout the compartment.
- Compartment J approx. 26.88" x 49" door opening, 37" deep. There shall be three (3) pull-out material trays mounted in the rear half of compartment. Trays shall be evenly spaced. The forward half of the compartment shall have vertical sign holders on 4" centers covering the entire height and depth of compartment.

(064400) : SIGN BODY WITH CRANE: Sign body shall be furnished as per EQN-483, Type II and the specification below.

• Same as Type I except unit shall be fitted with a minimum 3,200 lb crane, mounted on a reinforced compartment on the load bed front. Autocrane 3203PRX or IMT 1015 or equal.

(064500) : SIGN BODY WITH AERIAL BUCKET: Sign body shall be furnished as per EQN-483, Type III and the specification below.

- Same as Type I except unit shall be fitted with a telescopic fiberglass upper boom hydraulic aerial lift.
- Height shall be a minimum of 30 feet ground to bottom of bucket.
- Reach from centerline of rotation shall be a minimum of 20 feet. Rotation shall be 370 degrees (non-continuous).
- Platform bucket capacity shall be a minimum of 300 LBS.
- Platform bucket shall be fiberglass with a minimum of one step.
- Bucket shall be minimum 24 inch x 24 inch x 42 inch high.
- There shall be a bucket platform cover for inclement weather.
- There shall be hydraulic feather able controls located in/on the bucket to allow 1) up/down, 2) rotate, 3) extend/retract, 4) tilt, 5) engine speed control for hydraulic tool circuit, 6) engine start/stop.
- There shall be override protection provided at the lower control station.
- Platform bucket shall have a tool tray and safety harness.
- There shall be a hydraulic power tool outlet at the bucket platform. The hydraulic power tool circuit shall be capable of operating tools rated at 7 to 9 GPM.
- The hydraulic tank and circuits shall be properly sized to allow the hydraulic tools to be operated with the telescoping boom at full extension.
- There shall be an emergency electric operating system with DC pump and motor and all necessary hardware and fittings.
- Hydraulic system shall have a clutch mount engine pump (daweeze or equivalent) or a transmission driven PTO pump. Regardless of design, hydraulics shall be on demand live hydraulics at all times.
- The pedestal/mainframe, turntable/turret and lower boom shall be steel weld-ment or tube/s formed into box structures. All pins and fasteners used in conjunction with the lift shall be plated. Only graded bolts are acceptable.
- All necessary structural adaptability shall be material and labor with the truck chassis made to ensure a compatible system capable of severe duty service.
- The unit shall be fitted with a system to eliminate boom creep and to lock cylinder in case of line failure.
- The unit shall be an Altec Model AT30G arm lift AF-TEL34FB/PT or HiRanger T292 or prior to bid approved equal. (There shall be an internal, within boom, tool circuit. External reel is unacceptable.)
- 180° platform rotator is acceptable if supplied with no loss in bucket lift capacity.

SAFETY:

- The cab shall have conspicuity tape as Per EQN-127A.
- Alternating Red / Yellow Reflective sheeting shall be mounted diagonally (45 degree angle) on the rear of body as per EQN-120K.
- The body shall have conspicuity tape as Per EQN-483, sheet 4, and 5.
- Any area likely to be stepped on shall be covered with non-skid paint, tape is unacceptable.

DRAWINGS:

EQN-80A	Revised	11-12-09	sheet 1 of 1	WIRING DIAGRAM
EQN-115	Revised	07-03-12	sheet 1 of 1	GRILL WARNING LIGHTING
EQN-120K	Revised	09-28-11	sheet 1 of 1	TYPICAL REFLECTIVE SHEETING
EQN-120M	Revised	09-28-11	sheet 1 of 1	CREW CAB BODY LIGHTING
EQN-127A	Revised	01-02-09	sheet 1 of 1	CONSPICUITY TAPE
EQN-202B	Revised	11-03-06	sheet 1 of 1	HITCH: WEIGHT DISTRIBUTING
EQN-351A	Revised	10-20-06	sheet 1 & 2 of 2	FAST LUBE OIL CHANGE SYSTEM
EQN-483	Revised	09-28-11	sheet 1 – 7 of 7	SIGN TRUCK-STANDARD CAB

Oct 16, 2012 JF

Truck-Sign, 17K, 2WD, Diesel, Cab and Chassis With Automatic Transmission

Truck, Sign, Regular Cab, Diesel (064305) Truck, Sign, With Crane, Regular Cab, Diesel (064405) Truck, Sign, With Aerial Bucket, Regular Cab, Diesel (064505) Truck, Sign, Extended Cab, Diesel (064525) Truck, Sign, With Crane, Extended Cab, Diesel (064535) Truck, Sign, With Aerial Bucket, Extended Cab, Diesel (064545)

This dual-rear wheel model chassis shall be a manufacturer's standard cab model, which is engineered, certified and capable of towing a trailer, without brakes. 17,000 Lb GVWR minimum with the manufacturer's rating certified on door. Chassis shall accommodate the specific body options referenced within this specification.

Unit Shall Include The Following Optional Equipment:

	ang optional Equipment.
Alternator:	Manufacturers largest / heaviest duty available.
Air bags:	Driver and passenger.
Air Conditioning:	Standard.
Am/Fm Radio:	Standard.
Manual Windows/Lock	
Seats:	Shall be equipped with Vinyl 40/20/40 seats with center work console, Foam Padded with Seatbelts. (Cloth is Unacceptable)
	ts: (Aftermarket acceptable)
Electrical:	
1 - R10PADOT Light E	I, Turn lights
2 - 11-486152-000 Ve lights shall be mounted	rtical black flange housing assembly. Above warning, STT, and back up d within housing per EQN – 120M.
2 - LINZ6AD Amber w	arning lights, grommet mounted, grill mounted per EQN-115 arning lights, grommet mounted, mounted 1 to each side of bed per rning lights are to be wired in conjunction with above light bar. ts
8 - W441D Harness si	de mating Deutch connectors.
The above lights are s	upplied with male and female Deutsch connectors that shall be utilized supplied harness to each light source.
Work Light receptacle	destal work light with coiled cord and plug to be supplied in the cab. shall be wired and mounted in the rear of the truck. Work light
receptacle shall have a have a chassis ground	a constant 12 volt power supply, circuit to be properly protected and I.
	remaining marker and ICC lighting, they shall be protected against be shock mounted. Connections shall be water tight. All Body lighting
	ight bar shall have a lighted, permanently labeled toggle switch located
	rote, Trucklite, or Prior Approved Equal. ces outside of a sealed box or fixture.
There shall be a sever	n-way trailer (Pin Type) receptacle mounted on rear. Per EQN - 80A al wiring chart and schematic shall accompany each body.

Option: Power windows, Power Locks, Power and heated mirrors with manual extendable arms.

Option: FLOCS System per EQN-351A.

ENGINE

Diesel Engine:	Manufacturer's highest available horsepower and torque rating, standard or optional diesel engine, to include, immersion in- block type engine heater for water cooled engines, with water-proof plug and flush mounted in front sheet metal, engine oil cooler.
Front Bumper:	Chrome, Black, or Argent.
Fuel Tank:	Manufacturer's highest capacity standard tank, frame mounted (Tank filler positioned to ensure that filler nozzle can be set on automatic and nozzle will support itself, with unrestricted flow).
License Plate Bracket:	Rear (Lighted).
Limited Slip Differential:	Standard.
Lubricants:	Shall be synthetic where available, with drain plugs identified or painted red. (Engine oil excluded).
Mirrors:	Mirrors shall be manufacturer's standard heavy duty convex mirrors (aftermarket convex spot mirror acceptable) with extendable arms.
Paint:	Manufacturer's standard safety or school bus yellow.
OPTION:	Yellow, Ref: Dupont F9885 for shade. If aftermarket, paint shall be OEM quality, including but not limited to door jams and under hood etc. Warranty shall be the same as OEM manufactures warranty.
Rear Axle Ratio:	Shall be 4.88.
Rearview mirror:	Manual day/night
Tinted Windshield:	Manufacturers standard

Tires: Truck and Body Company shall ensure that proper sized tires and wheels for GVWR are supplied. Tires shall be radial, all season mud and snow type tread.

Transmission: Automatic with auxiliary oil cooler.

Trailer and Handling Package: To include rear stabilizer bar if available from the manufacturer as standard or optional equipment.

Unit Shall Also Include The Following Equipment:

- There shall be installed, a step bar (Westin part # 251335 or equal) in black, must be length of cab entry area on both sides.
- There shall be an ECCO model 450 back-up alarm, shock mounted.
- There shall be a 7 inch dome light, with switch, installed and centered over the front seat that is capable of operating with the ignition switch in the off position. (Ref: Truck-Lite #80354, or approved equal).
- All switches shall be permanently labeled and backlit.
- There shall be two (2) front tow hooks, installed.
- There shall be an emergency triangle warning kit, with storage box, mounted in cab.
- There shall be a minimum 5 LB. ABC type fire extinguisher, rechargeable with vehicle mount, installed in the cab for easy and quick access.
- Manufacturer's standard heavy-duty rubber floor covering.

HITCH:

• There shall be a hitch, as per EQN-202B. The upper portion of hitch shall be painted with non-skid paint if extending to or outside body perimeter and is likely to be stepped on. All below components shall be supplied within the cab.

	Buyers Products	<u>OR</u>	Wallace Forge Company
Combo ball hitch with	-		
2 inch hard chrome ball:	BH8-2000		23071911
Pintle mounting plate:	PM-87		2200170 PADOT
Bolt kit:	8520		2117240
Hitch pin:	HP6253 WC		HP58412

(064305), & (064525): SIGN BODY: Sign body shall be furnished as per EQN-483, Type I and the specification below.

- The body and compartments shall be comparable to the Stahl model 129 or Warner S129MDWSP (dual wheel) 11foot sign body (steel).
- The bulkhead shall be reinforced for severe duty.
- Compartment tops and rear of body shall be a minimum of 14 gauge, zinc coated.
- The load-bed floor shall be a minimum 12 gauge tread-plate floor, zinc coated, or Electra-life coating.
- Compartment doors shall be double paneled with reinforcement and automotive type rubber door seals around the entire perimeter. Hinges shall be stainless steel or have nylon bushings rivited to body. Piano type hinges are unacceptable.
- Compartments shall have paddle lock handles of stainless steel. Handles shall be in a recessed section of minimum galvanneal material.
- All vertical doors shall have a positive locking system to ensure doors will not blow closed on the operator due to wind. All horizontal doors shall be fitted with a limiting device to ensure that the door will not contact the body when open.
 - Compartment A (front) approx. 18 x 37 x 21 with (2) adjustable material tray with dividers.
 - Compartment B approx. 18 x 42 x 21 with (1) adjustable material tray with dividers.
 - Compartment C approx. 18 x 42 x 21 with (1) adjustable material tray with dividers.
 - Compartment D approx. 15 x 51 x 18.
 - Compartment A shall have 2 locking stainless steel paddle handles. Compartments B, C, D & E will have (1) each.
 - Compartment E approx. 13.50 x 20 x 14.
 - Post bin shall be approx. 129" x 21" x 8" with a reinforced front bin wall. The door shall be bottom hinged. There shall be a second post in approx. 4" x 24" x 48" located in the center of the rear body, below the cargo area.
- There shall be a grab handle extending approx. 12" above the catwalk and mounted to both sides.
- There shall be a grip strut step bumper approx. 14" deep. Receiver (2" square) mounted in or under bumper, in either case; it shall be a Class III hitch. There shall be "D" rings (2) for safety chain connection.
- There shall be two grip strut steps on each side of the rear body to allow access to the grip strut catwalk that extends the width and length of the lower rear right side compartment top.
 - Compartment G approx. 33 x 55.75 door opening and be 35" deep with (1) front hinged door. There shall be vertical sign holders on 2" centers to fit the entire width and height throughout the compartment.
 - Compartment H approx. 15" x 45" door opening, approx. 35" deep, minimum. There shall be a shelf mounted 16" from the top
 - Compartment J approx. 26" x 49" door opening, 35" deep. There shall be three (3) pull-out material trays mounted in the rear half of compartment. Trays shall be evenly spaced. The forward half of the compartment shall have vertical sign holders on 4" centers covering the entire height and depth of compartment.
 - Compartment K approx. 20" x 42.75" door opening, 37" deep.

OR

- Compartment A (front) approx. 18.88 x 48.50 x 21 with (2) adjustable material tray with dividers
- Compartment C1 approx. 18.88 x 25.18 x 21 with (1) adjustable material tray with dividers
- Compartment C2 approx. 18.88 x 25.18 x 21 with (1) adjustable material tray with dividers
- Compartment D approx. 15.38 x 27 x 18

- Compartment A shall have 2 locking stainless steel paddle handles. Compartments C1, C2, D &E will have (1) each.
- Compartment E approx. 13.50 x 20 x 14
- Post bin shall be approx. 100" x 21" x 8" with a reinforced front bin wall. The door shall be bottom hinged. There shall be a second post in approx. 4" x 24" x 48" located in the center of the rear body, below the cargo area.
- There shall be a grab handle extending approx. 12" above the body and mounted to both sides.
- There shall be a grip strut step bumper (not installed) approx. 14" deep. Receiver (2" square) mounted in or under bumper, in either case it shall be a Class III hitch. There shall be "D" rings (2) for safety chain connection.
- There shall be two grip strut steps on each side of the rear body to allow access to the grip strut catwalk that extends the width and length of the lower rear right side compartment top.
 - Compartment G approx. 26 x 55.75 door opening and be 37" deep with (1) front hinged door. There shall be vertical sign holders on 2" centers to fit the entire width and height throughout the compartment.
 - Compartment J approx. 26.88ⁱ x 49ⁱ door opening, 37ⁱ deep. There shall be three (3) pull-out material trays mounted in the rear half of compartment. Trays shall be evenly spaced. The forward half of the compartment shall have vertical sign holders on 4ⁱ centers covering the entire height and depth of compartment.

(064405) & (064535) : SIGN BODY WITH CRANE: Sign body shall be furnished as per EQN-483, Type II and the specification below.

• Same as Type I except unit shall be fitted with a minimum 3,200 lb crane, mounted on a reinforced compartment on the load bed front. Autocrane 3203PRX or IMT 1015 or equal.

(064505) & (064545) : SIGN BODY WITH AERIAL BUCKET: Sign body shall be furnished as per EQN-483, Type III and the specification below.

- Same as Type I except unit shall be fitted with a telescopic fiberglass upper boom hydraulic aerial lift.
- Height shall be a minimum of 30 feet ground to bottom of bucket.
- Reach from centerline of rotation shall be a minimum of 20 feet. Rotation shall be 370 degrees (non-continuous).
- Platform bucket capacity shall be a minimum of 300 LBS.
- Platform bucket shall be fiberglass with a minimum of one step.
- Bucket shall be minimum 24 inch x 24 inch x 42 inch high.
- There shall be a bucket platform cover for inclement weather.
- There shall be hydraulic feather able controls located in/on the bucket to allow 1) up/down, 2) rotate, 3) extend/retract, 4) tilt, 5) engine speed control for hydraulic tool circuit, 6) engine start/stop.
- There shall be override protection provided at the lower control station.
- Platform bucket shall have a tool tray and safety harness.
- There shall be a hydraulic power tool outlet at the bucket platform. The hydraulic power tool circuit shall be capable of operating tools rated at 7 to 9 GPM.
- The hydraulic tank and circuits shall be properly sized to allow the hydraulic tools to be operated with the telescoping boom at full extension.
- There shall be an emergency electric operating system with DC pump and motor and all necessary hardware and fittings.
- Hydraulic system shall have a clutch mount engine pump (daweeze or equivalent) or a transmission driven PTO pump. Regardless of design, hydraulics shall be on demand live hydraulics at all times.
- The pedestal/mainframe, turntable/turret and lower boom shall be steel weld-ment or tube/s formed into box structures. All pins and fasteners used in conjunction with the lift shall be plated. Only graded bolts are acceptable.

- All necessary structural adaptability shall be material and labor with the truck chassis made to ensure a compatible system capable of severe duty service.
- The unit shall be fitted with a system to eliminate boom creep and to lock cylinder in case of line failure.
- The unit shall be an Altec Model AT30G arm lift AF-TEL34FB/PT or HiRanger T292 or prior to bid approved equal. (There shall be an internal, within boom, tool circuit. External reel is unacceptable.)
- 180° platform rotator is acceptable if supplied with no loss in bucket lift capacity.

SAFETY:

- The cab shall have conspicuity tape as Per EQN-127A.
- Alternating Red / Yellow Reflective sheeting shall be mounted diagonally (45 degree angle) on the rear of body as per EQN-120K.
- The body shall have conspicuity tape as Per EQN-483, sheet 4, and 5.
- Any area likely to be stepped on shall be covered with non-skid paint, tape is unacceptable.

DRAWINGS:

EQN-80A	Revised	11-12-09	sheet 1 of 1	WIRING DIAGRAM
EQN-115	Revised	07-03-12	sheet 1 of 1	GRILL WARNING LIGHTING
EQN-120K	Revised	09-28-11	sheet 1 of 1	TYPICAL REFLECTIVE SHEETING
EQN-120M	Revised	09-28-11	sheet 1 of 1	CREW CAB BODY LIGHTING
EQN-127A	Revised	01-02-09	sheet 1 of 1	CONSPICUITY TAPE
EQN-202B	Revised	11-03-06	sheet 1 of 1	HITCH: WEIGHT DISTRIBUTING
EQN-351A	Revised	10-20-06	sheet 1 & 2 of 2	FAST LUBE OIL CHANGE SYSTEM
EQN-483	Revised	09-28-11	sheet 1 – 7 of 7	SIGN TRUCK-STANDARD CAB

Oct 16, 2012 JKF

Truck-Tow, 17,950 lb, Standard Cab and Chassis With Automatic Transmission

Truck, Tow, 17,950 lb (064900)

This dual-rear wheel model chassis shall be a manufacturer's standard cab model, which is engineered, certified and capable of towing. 17,950 lb GVWR minimum with the manufacturer's rating certified on door. Chassis shall accommodate the specific body options referenced within this specification.

Unit Shall Include The Following Optional Equipment:

Alternator:	Manufacturers largest / heaviest duty available.		
Battery:	Manufacturers largest / heaviest duty, dual unit configuration.		
Air bags:	Driver and passenger.		
Air Conditioning:	Standard.		
Am/Fm Radio:	Standard.		
Power Windows/Locks:	Standard.		
Bench Seat:	Foam padded bench seat, with seat belts. (Cloth unacceptable).		
Daytime Running Lights: (Aftermarket acceptable)			

ENGINE

Diesel Engine:	Manufacturer's highest available horsepower and torque rating, standard or optional diesel engine, to include, immersion in-block type engine heater for water cooled engines, with water- proof plug and flush mounted in front sheet metal, engine oil cooler.
Option:	FLOCS System per EQN-351A.
Fuel Tank:	Manufacturer's highest capacity standard tank, frame mounted (Tank filler positioned on body side panel to ensure that filler nozzle can be set on automatic and nozzle will support itself, with unrestricted flow and clear top deck ob body).
License Plate Bracket:	Mounted on wrecker light bar with light. There shall also be provisions made for a front license plate.
Limited Slip Differential	Standard.
Lubricants:	Shall be synthetic where available, with drain plugs identified or painted red. (Engine oil excluded).
Mirrors:	Mirrors shall be manufacturer's standard heavy duty convex mirrors (aftermarket convex spot mirror acceptable) with extendable arms. Mirrors shall be heated with a switch mounted conveniently to the operator. OEM or aftermarket acceptable. (Reference: Power Vision Mirrors, www.powervisionmirrors.com.)
Paint:	Hot lime green, Ref: PPG color 46973.
Rear Axle Ratio:	Shall be determined at pre-build meeting, from manufacturers standard available ratios.
Suspension:	Multi-leaf design-tapered. 13,680 lb rear with helper springs and 7,000 lb front axle. Additional load suspension must be added. Timbren load boosters or equivalent.
Rearview mirror:	Manual day/night.
Tinted Windshield: Tires:	Manufacturers standard Truck and Body Company shall ensure that proper sized tires and wheels for GVWR are supplied. Tires shall be radial, all season mud and snow type tread on drive axle and highway all season on steer axle.
Transmission:	Automatic with auxiliary oil cooler and tow/haul mode included.

Unit Shall Also Include The Following Equipment:

- There shall be installed, a step bar (Westin part # 251335 or equal) in black, must be length of cab entry area on both sides.
- There shall be an ECCO model 450 back-up alarm, shock mounted.
- There shall be a 7 inch dome light, with switch, installed and centered over the front seat that is capable of operating with the ignition switch in the off position. (Ref: Truck-Lite #80354, or approved equal).
- All switches shall be permanently labeled and backlit.
- There shall be two (2) front tow hooks, installed.
- There shall be an emergency triangle warning kit, with storage box, mounted in cab.
- Manufacturer's standard heavy-duty rubber floor covering.
- Full length clear hood mounted bug deflector (must be able to accommodate lettering).
- Dual horns.
- Heavy-duty cooling system.
- Hour meter that only registers when the engine is operating. (Ref: Datacon or equal).
- Lug wrench and handle.
- Standard jack and hydraulic jack (2 U.S. ton, Matco part number AM200FJM or equal)
- Spare wheel and balanced tire shipped loose with truck.
- Must have tow bar attachment device capable to be installed as needed on hydraulic crossbar for moving vehicles with no wheel/tires and have Grade 70 chains with hooks and T-hooks.
- Three (3) 5 GAL plastic cans (mounted).
- Plug-in jump start kit with 25 foot cables.
- 110 volt inverter for frequent use.
- Mud flaps, front and rear, unmarked, total length of rubber shall be in accordance with PA state laws. Rear mud flaps shall cover both rear tires.
- One (1) pair snatch blocks.
- Safety chains shall be mounted to the wrecker body.

(064900): TOW TRUCK BODY: Tow truck body shall be furnished as per EQN-140, and the specification below.

- Min RBM 280,000 in-lbs, frame height to be 37" = + / − 1"
- Body construction to have min 12" deep fabricated sill channels to be mounted to truck frame.
- Body sides, tool box to be of carbon steel or stainless design.
- Body to be color matched to cab (base coat /clear coat or urethane)
- Hydraulic tank to be part of subrame and to be located near front of body for additional weight ballast. Oil Capacity to be 10 gal or greater with dipstick or sight gauge, clean out cover or spin on filter, breather and heavy-duty magnetic drain plug(s).
- Must have easy access to hydraulic controls from top of body for repairs and or inspection.
- All side compartment tool boxes must have full perimeter weather seal and employ hinges with lanyards for support and be of heavy duty design to except weight loads of 200Lbs or more. All tool boxes to have water drains. Latches must be of stainless steel rotary design.
- 24" tunnel tool box shall be affixed to chassis for wheelbase configuration. 24" Tunnel design tool box shall be of carbon or stainless steel design. All tool box doors to be keyed alike.
- Body must have outside dual controls and also an electronic lanyard remote control inside cab with 10' long cable for complete wheel lift operation while in motion. Must also have provisions for add-on wireless controls without changing existing valving.
- The boom of the truck needs to be of integrated design and have recovery capabilities, capacity to be min 8,000LBS.

- A dual cable hydraulic winch with 9,000lbs capacity or greater shall be installed. 3/8" X 100 ft cable minimum standard with approved tensioner device and free wheel capabilities.
- Boom must have Hydraulic telescoping capabilities of 63" or greater. Boom lift cylinders must have a min bore of 3.50" with chrome shaft of 1.75" min STD and to be of dual lift design.
- Hydraulic system must employ clutch mount engine pump (daweeze or equivalent) with a pump rating of 9 gpm or greater at 1250rpm.
- Truck chassis must have high idle control from cruise control or other approved electronic devices.
- Hydraulic system must use counterbalance valves to provide smooth operation and load holding when not in use.
- Wheel lift crossbar must employ hydraulic style "L" arms for attachment to the towed vehicle wheels or frame with a gear driven flow divider valve keeping arms synchronized under use. The wheel lift crossbar must be no higher than 3" and of setback design to provide maximum durability and clearance of towed vehicle components. Crossbar width shall be a min of 84" wide. All hydraulic hoses for under each must be <u>totally concealed</u> in a flexible track system and must <u>not be exposed to the work area or under the motor vehicle when in use</u>.
- L Arms must be of 155 degree rotation design to allow hook up of flat tires, and must be capable of clamping tires from 0" to 22" wheels. Wheel lift crossbar must include additional adapter package for using crossbar as a tow bar/sling for recovery work and to include all approved grade 70 chains and attachments. The under lift extension cylinder must have a min reach of 70" and employ cushioned type hydraulics to allow self centering of the crossbar after use and returning to idle position for traveling in a vertical stored position. Crossbar must have full tilt capabilities as well as negative tilt of 10 deg should conditions prevail use. Body should employ dual safety chains attached to body by grade 8 bolts and fasteners or greater. Wheel lift must be able to accommodate trailer tow capabilities. Safety straps or basket straps for wheel lift will be required to handle all wheels to 22' diameter.
- All pivot points to wrecker body and crossbar shall have independent lubrication points and have a reference manual enclosed in the delivery package for lubrication points.
- Truck chassis shall be equipped with wrap around rubber coated push bumper w/ grille guard painted to mach cab.

LIGHTS:

- Light bar pylon, with an antenna mounting plate, sufficient to support light assembly.
- One (1) Federal Signal LED amber Legend Series with built in Directional Display (arrow Stick) and in cab controller.
- Work lighting shall be of LED configuration and be in two locations, underbody lighting for hook up and top of deck on pylon with adjustable housings, two lights at each location. (REF: Grote 63741 or equal).
- Switch panel to operate and control lights
- Magnetic tow lights with plug-in connector. Four prong plug shall be mounted in the rear of the wrecker body.
- All lights shall be LED, if possible.

LABELING:

- Boom "PARKWAY SERVICE PATROL"
- Doors "PARKWAY SERVICE PATROL"
- Bug screen "PARKWAY SERVICE PATROL"
- Stinger "PENNDOT"

SAFETY:

- All lighting to be FMVSS 108 Lighting standard specification.
- The body and cab shall have conspicuity tape as Per EQN-140, sheet 1.
- The rear of wrecker body shall have conspicuity tape in an inverted "V" pattern. Exact location decided at pre-bid meeting.
- Any area likely to be stepped on shall be covered with non-skid paint, tape is unacceptable.
- The exhaust shall be diverted away from driver when connecting a downed vehicle to avoid asphyxiation of the operator; system shall not interfere with the operation of the body and equipment mounted on the chassis.
- First aid kit with vehicle mount (10 person).
- There shall be a minimum 5.0 LB. ABC type fire extinguisher, rechargeable with vehicle mount, installed in the cab for easy and quick access.
- There shall be 2A:10B: C fire extinguisher, rechargeable and mounted on body.
- There shall be a towing and hauling information decal or plate affixed to inside of cab, as per EQN 303.
- Counterbalance holding valves on both tilt & lift cylinders.
- Load check in all control valve work ports.
- Lifting boom safety chain.
- 10 micron hydraulic filter installed in the return line with "service filter" over 25 psi pressure indicating gauge.

MANUALS:

- The successful vendor shall furnish all <u>applicable</u> manuals at time of unit delivery:
- The manuals listed shall be official O.E.M. publications supplemented with technical manuals for all components as published by sub-vendors/manufacturers.
- Parts Manual presented must be a relative to "<u>all</u>" items utilized to build these units, with appropriate part numbers.
- Operator's manual per unit
- The following manuals shall be supplied as listed below
 - Parts
 - Service
 - Engine
 - Transmission (Automatic or Manual)
 - Body and Sub-frame (Parts and Service)
 - Complete set of manuals for any additional items/equipment added to a piece of equipment.
- Manuals may be supplied alone or in any combination as listed below
 - Online @ Manufacturers website.
 - Unprotected CD/s that may be installed on PennDOT's Intranet

TRAINING:

Mechanic:

The successful vendor shall provide services of qualified factory trained technicians for not less than <u>1</u> training sessions of not less than <u>7.0</u> hours at <u>1</u> PENNDOT location to train personnel for in-depth preventive maintenance, overhaul and review of the proper usage of parts and service manuals, as well as component/system adjustments that need to be monitored at specified service intervals.

Operator:

The successful vendor shall provide services of qualified factory trained technicians for not less than $_1_$ training sessions of not less than $_7.0_$ hours at $_1_$ PENNDOT locations to train personnel in the proper operation, safety and servicing of the equipment.

The successful vendor shall submit a training plan to the Equipment Division for approval within 45 days after receipt of the Purchase Order. The training plan shall consist of course outline and class schedule.

All training must be completed within 60 days after the dates established in the approved training plan unless an extension is mutually agreed to in writing by the Chief of the Equipment Division.

All training shall be coordinated with the District Equipment Managers, with the exception of Asphalt related training, which must be coordinated with the Statewide Training Coordinator (717) 787-4836, Fax (717) 783-4438.

DRAWINGS:

EQN-104	Revised	08-07-08	sheet 1 of 3	TOW TRUCK
EQN-303	Revised	11-03-06	sheet 1 of 1	DECAL TOWING AND HAULING
EQN-351A	Revised	10-20-06	sheet 1 & 2 of 2	FAST LUBE OIL CHANGE SYSTEM

Oct 16, 2012 JF

	Page 1 of 3
SPECIFICATION	
066200 - Van, Cutaway, Cargo Box, 2WD, Gasoline Engine, Automat	tic Transmission, Dual Rear Wheels

This Dual Rear Wheel Model, Shall Be A Manufacturer's Standard Model Vehicle, Capable Of Carrying Two (2) Passengers. 14,200 Lb GVWR Minimum. Manufacturer's Rating Certified On Door. Chassis to accommodate A 14 Foot Cargo Box Body.

Reference: Supreme Spartan Body

Note: " Refer to PCID 1075 for <u>Delivery</u>, and <u>Warranty</u> Requirements".

The following additional items shall be supplied

Air Bags : Shall be equipped with manufacturers standard air bags.

Air Conditioning : Shall be equipped with manufacturers standard air conditioning.

Alternator : Shall be manufacturers largest / heaviest duty available.

Cruise Control : Shall be equipped with manufacturers standard Cruise Control.

Daytime Running Lights : Shall be equipped with manufacturers standard Daytime Running Lights. (Aftermarket Acceptable)

Differential : Shall be equipped with manufacturers standard Limited Slip Differential. Ratio to be selected at time of order from manufacturer's standard available ratios.

Engine : Shall be Manufacturer's highest available horsepower and torque rating, standard or optional gasoline engine, to include, engine oil cooler, and largest available engine cooling capacity.

Exhaust : Shall be capable of being extended by the body up fitter to the outer most edge of the installed body

Front Bumper : Shall be Chrome, Black, or Argent.

Fuel Tank : Manufacturer's highest capacity standard tank frame mounted (Tank filler positioned to ensure that filler nozzle can be set on automatic and nozzle will support itself, with unrestricted flow.)

Lubricants : Shall be synthetic where available, with drain plugs identified or painted red. (Engine oil excluded)

Mirrors : Shall be manufacturers standard heavy duty outside mirrors with convex mirror (aftermarket convex spot mirror acceptable) and extendable arms, driver and passenger sides. Shall be equipped with manufacturers standard manual day / night rearview mirror.

Paint : Manufacturer's standard safety or school bus yellow.

Seats: Shall be equipped with Vinyl Bucket Seats, Foam Padded with Seatbelts. (Cloth is Unacceptable)

Suspension : Shall be equipped with trailer and handling package, to include front stabilizer bar, heaviest available front and rear suspension, and heaviest available differential.

Tires : Truck and Body Company shall ensure that proper sized tires and wheels for GVWR are supplied. Tires shall be radial, OEM's most aggressive / severe duty tire available from manufacturer.

Transmission : Shall be automatic with largest available auxiliary oil cooler.

Windshield : Shall be equipped with manufacturers standard tinted windshield.

Windows and Locks : Shall be equipped with manufacturers standard manual windows and door locks.

Cargo Box Requirements

Dimensions : Shall be a square front box measuring 14 feet in length, outside width shall be 96 inches, and the interior height shall be 78 inches.

Construction : Shall be constructed using 3/8 inch Fiberglass Reinforced Plywood.

Curb Side Door : Shall be a roll up design that is capable of being securely locked. Shall be full length and 48 inches in width. There shall be a step provided under curb side door to gain access to cargo box safely and to have three points of contact when entering.

Rear Door : Shall be a roll up design that is capable of being securely locked. Shall be full length and full width.

Cargo Access Door : There shall be an access door between the cab and cargo box. Shall be properly sealed and capable of being secured in place from either compartment.

	Page <u>2 of 3</u>
Exhaust : All tool boxes above any exhaust tailpipe or within close proximity of muffler,	DPF, etc. shall receive a heat shield plate to the box

in order to protect it. Exhaust shall be extended to the outer most edge of the installed body.
Grab Handles : There shall be a stainless steel grab handle on each side of the rear and side access doors to assist the operator in

entering and exiting the bed area, Non-skid paint or rubber shall be utilized, (non-skid tape is unacceptable). Ref: Non skid paint, Gamma Laboratories (Tel. 304-489-2828.)

Floor : Shall be as low as possible, wheel wells protruding into floor area is acceptable. Shall be constructed of 2 inch by 6 inch Shiplap Pine, Minimum.

E Track : There shall be an E Track Cargo securing system. There shall be 2 rows, evenly spaced, full length, on both side walls.

Rear Step Bumper : The heavy-duty rear bumper shall be constructed with a minimum of 1/8 inch reinforced steel. The size and strength shall be in accordance with the truck manufacturer's step design. The platform on top of the bumper shall be Bustin aluminum No. NST4 full size, or Bustin 628 steel, or Ohio Grating or IKG Industries serrated swage lock, with end band. The outer step edge must be serrated in lieu of plain, smooth metal edge. All edges shall be banded (skirting) on the outer perimeter. Overlay is not acceptable.

Paint:

Body priming and painting to ensure full coverage to all areas of the body

Color of the body, including inside and outside of compartments, and the bed, shall be cab manufacturer's standard safety or school bus yellow, or optional PennDOT yellow DuPont F9885 for shade. (Powder Coat, if available from factory.) It will be the responsibility of the successful vendor to ensure color of the body matches the cab.

All metal surfaces to be painted shall be cleaned and prepared by abrasive blasting to 1-1/2 mil profile in accordance with Steel Structure Painting Council Standard SSPC-SP-6.

A rust preventative treatment shall be applied.

Conspicuity tape on body as per EQN-127A. Red/white on sides of body and cab.

ICC Rear Under ride Protector, hitch and grip strut ladders shall be painted black.

Front lower leading edge of body shall have a minimum 12 inch high aluminum diamond plate for chip resistance.

Safety : Alternating Red / Yellow Reflective sheeting shall be mounted diagonally (45 degree angle) on the entire rear door as per EQN-120P.

Electrical

Warning Lights shall be (8) Whelen model M6AD Lights with M6 Brush Guards, Mounted (2) per sides, Front & Rearward facing, in the upper most outside corners of cargo box. The Warning lights shall have a lighted, permanently labeled toggle switch located in the dash. 1 - Whelen PFP1PA Tripod pedestal work light with coiled cord and plug to be supplied in the cab. Work Light receptacle shall be wired and mounted in the rear of the truck. Work light receptacle shall have a constant 12 volt power supply, circuit to be properly protected and have a chassis ground.

Body builder to supply remaining Stop Tail Turn, Back Up, Marker and ICC lighting, they shall be protected against damage and shall also be shock mounted. Connections shall be water tight.

All Body lighting shall be LED.

Body wiring shall be Grote, Trucklite, or Prior Approved Equal.

There shall be no splices outside of a sealed box or fixture.

There shall be a seven-way trailer (Pin Type) receptacle mounted on rear. Per EQN - 80A

A color-coded electrical wiring chart and schematic shall accompany each body.

There shall be 2 LED lights, mounted inside cargo box, evenly spaced to illuminate cargo box area, lights shall be on a separate switch located within the cargo box.

Mud Flaps:

Mud flaps rear of rear tires, unmarked, full width of tires.

Length shall be consistent with the unloaded rear axle height, And in accordance with the PA State Inspection Laws.

The following equipment shall be supplied / installed

There shall be an ECCO Model 450 backup alarm, shock mounted. (Installed)

There shall be a seven-way trailer light receptacle, "Pin Type", securely mounted near rear trailer hitch area. Wired per EQN - 80A. Connections shall be sealed and water tight.

All switches shall be permanently labeled and backlit.

There shall be two (2) front tow hooks, installed.

There shall be an emergency triangle warning kit in each unit, in storage box and mounted in cab. EQN - 66A

There shall be a 5 LB. minimum ABC type fire extinguisher rechargeable with vehicle mount. Securely mounted in the cab for easy and guick access.

Page 3 of 3 There shall be a trailer hitch installed, as per EQN - 202B, the upper portion of hitch shall be painted with non-skid paint if extending to or outside body perimeter and is likely to be stepped on. (Tape is not acceptable.)

All the following shall be supplied and delivered in the cab. Buyers Products - Combo Ball Hitch W/2 inch Hard Chrome Ball BH8-2000, Pintle Mounting Plate PM-87, Bolt Kit 8520, Hitch Pin HP6253 WC. Or approved equal.

Safetv

The cab shall have conspicuity tape as Per EQN-127A

Any area likely to be stepped on shall be covered with non-skid paint, tape is unacceptable

All handrails, ladders, and step configurations shall be built for three points of contact.

Anti-slip paint is required on all handholds, for the entire length, (tape is unacceptable)

Options

Option : To be equipped with Power windows, Power door locks, and Power / Heated mirrors with manual extendable arms.

Option : Install FLOCS system as per EQN: 351A.

Option : Bidder must provide option pricing for "one" of the following

Factory: Having unit bid painted PennDOT yellow. Reference DUPONT F9885 shade only. Unit shall be painted PennDOT yellow in lieu of the OEM's original color. Using the same process as with OEM paint.

Aftermarket: Having unit bid painted PennDOT yellow. Reference DUPONT F9885 shade only. All surfaces shall be properly cleaned and prepared prior to paint. Paint shall be the same quality as factory paint. To include all areas of the unit including interior.

Drawings

Drawings:				
EQN-66A	Revised	07-20-09	sheet 1	TRIANGLE STORAGE BOX AND BRACKET
EQN-80A	Revised	11-12-09	sheet 1	WIRING DIAGRAM
EQN-120P		11-03-11	sheet 1	CARGO BOX REAR DOOR REFLECTIVE SHEETING
EQN-127A	Revised	01-02-09	sheet 1	CONSPICUITY TAPE
EQN-202B	Revised	11-03-06	sheet 1	HITCH: WEIGHT DISTRIBUTING
EQN-351A	Revised	10-20-06	sheet 1 & 2	FAST LUBE OIL CHANGE SYSTEM OVERVIEW AND PARTS LIST

Note : All up fitting shall be in accordance with the chassis manufacturers body builders up fitter manual.

Installation Practices:

All lights shall meet all Federal and State regulations.

All wire splices shall be insulated with heat shrink materials or removable connectors that create a water tight connection.

All wires shall be securley fastened with no wires hanging or protruding where they are exposed to the risk of damage.

All junction boxes shall be located for easy accecability and shall not be blocked by any means for access.

All electrical connections shall be treated with di-electric grease.

All wiring shall be secured using "P" type clamps at intervels not to exceed 12" between securment.

All wires shall be in a protective covering and protected from chaffing, rubbing and getting pulled or torn from external sources.

Any alterations / relocation to fuel fill, DEF tank, exhaust, Etc. to allow installation of body shall be made in a professional manner using new materials.

Any place steel and aluminum contact each other Mylar or an approved equal shall be used as a buffer. Laminate rubber is unacceptable.

All vertical and horizontal seams of the body sides shall utilize full penetration welds in accordance with standard welding practices as set forth by the American Welding Society and sealed water tight to create one integral body.

All corners shall be angled or rounded for safety.

All mounting procedures shall be in accordance with NTEA standards.

The use of any of the following items or practices WILL NOT BE ACCEPTED. Non-steel fittings on hydraulic pressure lines. Excessive use of elbows on hydraulic lines. Use of thread tape on hydraulic fittings. Use of galvanized fittings or components on hydraulic system. Improper hydraulic line size. Use of high-pressure hose for hydraulic suction line. Scotchlok-type wire splices. Non-insulated wire splices. Improper hose or wire routing near exhaust, over-sharp edges or through holes without grommets, or sharp edges. Improperly prepared, primed and painted surfaces. Non-fused electric circuits. Hydraulic circuits without pressure relief protection. Laminated Rubber Oct 16,2012 JKF