

# Humboldt County Ambulance District

One (1)

Y\_\_N\_\_

## CAB AND CHASSIS SPECIFICATION

<b>APPLICATION:</b>	2004 Chevrolet CC4500 Regular Cab
<b>ENGINE</b>	Duramax Diesel 6600, 300 HP (223 KW) @ 3000 RMP, 520 LB-FT (702 N-M) Torque @ 1,600 RPM Maximum engine speed 3250 rpm. This Engine is 2004i Emissions Compliant (Includes KPJ Engine Shutdown)
<b>OPTION PACKAGE</b>	Fire and Rescue (Includes C60 air conditioning with rear body heater and A/C connections, TNN 700 dual batteries, VNF isolator battery, High RPM prom for automatic throttle control, and 2" (5 cm) to 2.5" (6.35 cm) seal through cab cowl for equipment/control wiring.) (Requires K65 dual 105 amp alternators, G80 limited slip differential, diesel engine) (N1B passenger side exit exhaust is recommended.) (N/A with KG4 150 amp alternator)
<b>GVWR</b>	17,000 LBS. (7938 KG) CAPACITY GCWR limited to 26,000 lb. (11,793 kg) (Requires FM7 front axle, GL8 rear axle) (With YW2 Wrecker package requires GQ2 15,000 lb. Multi-leaf suspension), (without YW2 Wrecker package requires GXA or GR4 13,000 lb. rear suspensions)
<b>EMISSION</b>	FEDERAL REQUIREMENTS (STD)
<b>ALTERNATOR</b>	DUAL, 700 CCA, DELPHI HEAVY-DUTY FREEDOM BS 31-700 12V-360-minute reserve capacity @ 27 degrees C, 700 CCA @ -18 degrees C, (With gasoline engines, VNF battery isolator is not available) (With ANQ snow plow prep and YW2 wrecker packages requires diesel engines and VNF battery isolator)  ISOLATOR, BATTERY combinations include one BS-31-700, 700 CCA, isolator battery VNF and TNN = 3 batteries VNF and TNQ = 2 batteries, (Available only with TNN Dual, 700 CCA Delphi BS-31-700 or TNQ Single, 700 CCA Delphi BS-31-700)
<b>ENGINE SHUTDOWN</b>	AUTOMATIC ENGINE SHUTDOWN WITH ALARM Includes reset feature. Activated by low or high engine oil pressure, and high coolant temperature. (Included with Duramax engines, optional with gasoline engines)
<b>EXHAUST SYSTEM</b>	SINGLE HORIZONTAL passenger side mounted inside frame rail, stainless-steel with gasoline engines, aluminized steel with diesel engines (STD)

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<b>POWER TAKE OFF</b>	ELECTRONIC ACTIVATION SWITCH, (ELECTRIC HAND THROTTLE), IP MOUNTED When activated, it adjusts engines rpms. There are two engine rpm selections available which are preset at the factory. Engine RPM settings can be modified at the dealer or body company. PTO price includes cruise control; includes power-take-gear in transmission. PTO access is available on driver side only, (Includes K34 cruise control) (N/A with UF3 high idle switch)
<b>TRANSMISSION</b>	AUTOMATIC, ALLISON 1000 SERIES with 0.71 overdrive. Torque Rating: 520 lb-ft (705 N-m). Column shift and Parking pawl. Base model does not include power take-off gear. To include PTO gear please order with RPO "PTO". Includes transmission-oil cooler located inside radiator and an air-to oil auxiliary cooler. PTO mounting location on the driver's side. With Option PTX, the truck will be equipped with the Allison 1000HS Highway Series transmission. When ordered with option PTO, the truck will be equipped with the Allison 1000RDS Rugged Duty Series transmission. When ordered with option YF2 Ambulance Package or with ANM Fire and Rescue Package, the truck will be equipped with the Allison 1000EVS Emergency Vehicle Series transmission. (STD)
<b>FRONT AXLE</b>	7000 LBS. (3175 KG) CAPACITY I-beam Wide-trac. Up to 53 degree turn angle, (Requires C7R 16,500 lbs. (7484 kg) or GZX 17,500 lbs. (7938 kg) GVWR) (Included with ANQ Snow Plow Prep package) (Includes 4-piston brake apply calipers)
<b>FRONT SUSPENSION</b>	7000 LBS. (3175 KG) CAPACITY (includes stabilizer) (STD)
<b>FRONT WHEEL</b>	19.5" X 6.0" (49.5 CM X 15.2 CM), STEEL DISC -8-hole. 7,280 lbs. (3302 kg) capacity (STD)
<b>FRONT TIRE</b>	225/70R19.5F 7280 lbs. (3302 kg) capacity, (With R4A Goodyear or R4L Michelin, requires \$3C front premium highway tread; with R4N Bridgestone requires R3M front all season tread) (STD)
<b>FRONT TIRE BRAND</b>	MICHELIN (Requires S4L Michelin)
<b>FRONT TIRE TREAD</b>	PREMIUM HIGHWAY (STD) (Requires R4A Goodyear or R4L Michelin)

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<b>SINGLE SPEED REAR AXLE</b>	SINGLE SPEED, 13,500 LBS. (6123 KG) CAPACITY full floating, includes 2-piston brake applied calipers, (Requires GZX 17,500 lbs. GVWRs)
<b>AXLE RATIO</b>	4.78:1
<b>TRACTION CONTROL</b>	REAR LIMITED SLIP DIFFERENTIAL (Required with ANC Shuttle Bus package, ANM Fire & Rescue package and YF2 Ambulance package)
<b>REAR SUSPENSION</b>	MULTI-LEAF, 13,500 LBS. (6123 KG) CAPACITY (Requires GZX GVWR, GL8 rear axle)
<b>REAR WHEEL</b>	19.5" X 6.0" (49.5 CM X 15.2 CM), STEEL DISC - 8hole.14,560 lbs. (6604 kg) capacity (STD)
<b>REAR TIRE</b>	225/70R19.5F -13,660 lbs. (6196 kg) capacity, (With S4A Goodyear, requires S3C rear premium highway tread or S3H rear traction tread; with S4L Michelin, requires S3C rear premium highway tread or S3J rear highway traction tread; with S4N Bridgestone requires S3M rear all season tread) (STD)
<b>REAR TIRE BRAND</b>	MICHELIN (Requires R4L Michelin)
<b>REAR TIRE TREAD</b>	PREMIUM HIGHWAY (STD) (Requires S4A Goodyear or S4L Michelin)
<b>WHEELBASE</b>	152" (386.1 CM) with 84" (213.4 cm) CA and 146.6" (372.4 cm) CE. Includes a 6 mm 80,000 psi (551,600 kPa) yield strength, steel frame, RBM: 610,400 Section Modulus 7.63
<b>FUEL TANK</b>	DUAL, COMBINED FUEL CAPACITY OF 40-GALLONS (151L) gas and diesel, one 25-gallon (95L) front tank midway between frame rails, one 15-gallon (56L) rear tank behind axle, with fuel fill necks located over top of frame rail, (Not available with YW2 Wrecker package) MINIMUM OVERHANG = 36" (3 FEET)
<b>BUMPER</b>	FRONT, CHROMED STEEL THICKNESS 5/32" (3.9 mm)
<b>TOWING DEVICES</b>	FRONT TOW HOOKS, FRAME-MOUNTED
<b>MISCELLANEOUS CAB EQUIPMENT</b>	INTERIOR ROOF LAMP with courtesy and dual reading lamps

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	CRUISE CONTROL, (Included with ZQ3 driver convenience package and PTO power-take-off)
	INTERIOR BACK TRIM PANEL Includes upper and lower rear panel with insulation covering from the headliner to the floor
<b>AIR CONDITIONING</b>	AIR CONDITIONING
<b>INSIDE REARVIEW MIRRORS</b>	INSIDE DAY/NIGHT REARVIEW MIRROR
<b>DRIVER SEAT</b>	HIGH-BACK BUCKET, FIXED HEIGHT, MANUAL ADJUSTER storage in the seat riser with a small lip at the front to stop contents from sliding out (STD)
<b>PASSENGER SEAT</b>	TWO-PERSON, STORAGE UNDER FOLD-UP SEAT AND IN CENTER SEAT BACK
<b>AIRBAGS</b>	SUPPLEMENTAL INFLATABLE RESTRAINTS NOT INCLUDED (STD)
<b>RADIO</b>	DELCO AM-FM STEREO RADIO with coaxial speakers in all door panels (STD)
<b>OUTSIDE REARVIEW MIRROR</b>	MANUAL, 102" (259 cm) WIDE LOAD, INTEGRAL ARM, INTEGRAL CONVEX MIRROR black molded composite 12" x 7" (30.5cm x 17.8 cm) with 6" x 7" (15.2cm x 17.8cm) convex section (STD)
<b>PAINT</b>	SOLID PAINT (STD)
<b>INTERIOR TRIM</b>	VERY DARK PEWTER (STD) (Requires 69V Very Dark Pewter Vinyl or 69C Very Dark Pewter Cloth)
<b>SEAT TRIM</b>	VINYL SEAT TRIM (STD)

## **Humboldt County Ambulance District**

### **CHASSIS ADDITIONS AND MODIFICATIONS**

One (1)

#### **BUMPER EXTENSION**

Y\_\_N\_\_

The chassis front bumper is to be extended forward approximately 12". The area between the bumper and the front of the chassis grille is to be reinforced and covered on the top and both sides with aluminum treadplate material. Aluminum fabrications are to be completely bolted in place and removable.

One (1)

#### **ELECTRIC WINCH**

Y\_\_N\_\_

A Warn, model M12000, 12-volt electric winch, with 12,000 lb. capacity shall be provided and mounted behind the front bumper of the chassis. The winch shall be secured directly to the chassis frame rails by a heavy steel support structure designed to withstand the pulling force of the winch.

The winch shall include 100 ft. 3/8" galvanized cable with clevis hook, 12 foot remote control pendant, 4-way roller fairlead through the bumper.

Access shall be provided in the top of the front bumper gravel shield to access the winch controls.

One (1)

#### **REAR MOUNT FUEL TANK**

Y\_\_N\_\_

There shall be a rear mounted fuel tank furnished with the chassis. The fuel fill shall be located on the left rear of the apparatus.

One (1)

#### **HORIZONTAL CHASSIS EXHAUST**

Y\_\_N\_\_

The chassis exhaust system shall be extended to the rear of the right rear wheel.

One (1)

#### **ALTERNATOR**

Y\_\_N\_\_

The alternator shall be of adequate size to meet the NFPA requirements and to accommodate the specific apparatus electrical load.

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Y\_\_N\_\_

### ALUMINUM BODY

The body shall be fabricated of aluminum extrusions, smooth aluminum sheet and aluminum treadplate.

The aluminum extrusion alloy shall be 6061 with a temper rating of T6, and have a tensile strength of 45,000 PSI and yield strength of 40,000 pounds. The aluminum extrusions shall 3" x 3" aluminum tubing and specially designed extrusions where applicable.

The smooth aluminum sheet material alloy shall be 5052 with a temper rating of H32, and have a tensile strength of 33,000 PSI and yield strength of 28,000 pounds.

The aluminum treadplate alloy shall be 3003 with a temper rating of H22, and have a tensile strength of 30,000 PSI and yield strength of 28,000 pounds.

The extrusions shall be designed as structural-framing members with the smooth aluminum and treadplate fabricated to form compartments, and floors. All aluminum material shall be welded together using the latest mig spray pulse arc welding system.

Compartments to be sweep out design and to be water and dust proof. All compartments shall be made to the maximum practical dimensions to provide maximum storage capacity.

All exterior compartments shall have polished aluminum drip moldings installed above the doors where necessary to prevent water from entering the compartments.

Wheel well panels shall be double break formed smooth aluminum that is welded in place. There shall be no visible bolt heads, retention nuts or fasteners on the exterior surface of the panel. To fully protect the wheel well area from road debris and to aid in cleaning, a full depth radius wheel well liner shall be provided. The frame side of the wheel well area on each side of the opening shall be attached to the frame side of the front and rear compartments. All seams on the frame side of the body shall be welded and caulked to prevent moisture from entering the compartments.

The rear wheel wells shall be radius cut for a streamlined appearance. A polished aluminum fenderette shall be furnished at each rear wheel well opening, held in place with stainless steel fasteners.

### FASTENERS

All aluminum and stainless steel components shall be attached using stainless steel fasteners.

Compartment door hinges, handrails and running boards shall be attached using minimum 1/4" diameter machine bolt fasteners.

3/16" diameter fasteners shall only be used in nonstructural areas such as; door handles, trim moldings, gauge mounting, etc.

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One (1) Y\_\_N\_\_  
**CS 1/8" ALUMINUM BODY**

The aluminum sheet material used in fabricating the body shall be a minimum of .125 (1/8") in thickness.

One (1) Y\_\_N\_\_  
**BODY DIMENSIONS**

Apparatus body shall be up to 144" long and 95" wide, reference drawing for actual body length. Body compartments shall be full depth from top to bottom. Each compartment shall be approximately twenty-three and one-half inches in depth. The area between the body sides shall be 48" wide.

One (1) Y\_\_N\_\_  
**ALUMINUM SUB-FRAME**

The main body sub-frame shall be extruded aluminum and be fully welded to the longitudinal frame rail extrusions that are mounted parallel to the chassis frame rails.

The main body sub-frame shall be constructed of no less than four (4) extruded aluminum tubes running full width of the apparatus body. A minimum of two (2) full body width tubes shall be provided ahead of and behind the rear axle forming the main body support cross members. The main cross tubes shall be fully welded to the vertical and horizontal extrusions forming the body super-structure, described elsewhere herein.

For added strength and rigidity, no less than six (6) intermediate body cross members shall be provided constructed extruded aluminum tubes.

The intermediate structural cross members shall be interconnected and welded to the main body tubular cross members forming a fully welded support grid for the body super-structure compartments.

The sub frame cross members shall be attached to the chassis frame rails using heavy "U" bolt fasteners to allow removal of the sub frame and body assembly from the chassis. There shall be a barrier provided between the sub frame and body to prevent electrolysis.

One (1) Y\_\_N\_\_  
**COMPARTMENT VENTS**

All body compartments shall have a minimum of one (1) louvered panel bolted into a wall to provide the proper airflow inside the compartment. There shall be a filter installed behind the louvered panel. The filter shall be accessible for cleaning by removing the louvered panel on the interior of the compartment.

One (1) Y\_\_N\_\_  
**WHEEL WELL PANELS AND FENDERETTES**

For ease of accessibility and maintenance, wheel well panels shall be painted smooth aluminum.

The rear wheel wells shall be radius cut for a streamlined appearance. A polished aluminum fenderette shall be furnished at each rear wheel well opening, held in place with concealed stainless steel fasteners.

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One (1)

### **REAR TOW EYES**

Y\_\_N\_\_

There shall be two tow eyes furnished under the rear of the body and attached directly to each chassis frame rail. There shall be a reinforcement spreader bar connecting the two tow eyes. Tow eyes are to be constructed of 3/8" plate steel with a 4" I.D. hole, large enough for passing through a tow chain end hook.

One (1)

### **RECEIVER HITCH**

Y\_\_N\_\_

There shall be a 2" receiver hitch assembly attached to the rear of the apparatus directly below the rear step. The receiver shall be connected to the chassis and body sub frame assembly.

One (1)

### **WINCH RECEPTACLE**

Y\_\_N\_\_

A special receptacle shall be provided at the rear of the apparatus body near the receiver hitch that will provide power to the districts portable winch. The receptacle shall be a SMH female receptacle rated at 175 Volts and 600 Amps. The receptacle shall be wired to the chassis battery system.

One (1)

Provide the standard CSFA winch power receptacle and matching plug.

### **TRAILER RECEPTACLE CONNECTION**

Y\_\_N\_\_

A Seven pin, seven way trailer receptacle shall be located at the rear of the body near the receiver hitch. The receptacle shall be wired to the chassis DOT lighting and braking system.

One (1)

### **APPARATUS COMPARTMENTATION**

Y\_\_N\_\_

There shall be large enclosed compartments on both sides of the body, starting at the front of the body and continuing to the rear of the apparatus. These compartments shall be as large as possible, using all available space.

The aluminum treadplate compartmentation tops on each side of the body shall be extended out and downwards a minimum of .50" over the compartment doors forming a drip rail. Corners shall be TIG welded.

One (1)

Lower or rear face compartments, if specified shall be provided with polished aluminum drip rails.

### **SIDE BODY COMPARTMENT ROLL-UP DOOR CONSTRUCTION**

Y\_\_N\_\_

Exterior side equipment compartments so specified shall be equipped with roll-up shutter doors to be installed as specified herein.

The drum assembly shall be fully enclosed and protected from the elements. Pendent plates supporting the door roll assembly shall be bolted in place, adjustable and capable of being removed with common hand tools. Pendent plates and supports that are welded in place do not meet the maintenance and service criteria of these specifications.

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One (1) **NATURAL FINISH ROLL UP DOORS** Y\_\_N\_\_

The roll-up doors on each side of the apparatus body shall be natural finish aluminum.

One (1) **ROLL UP DOORS** Y\_\_N\_\_

R.O.M. Robinson brand extruded aluminum shutter style doors with lift bar latch mechanisms and associated hardware shall be provided and installed as specified.

One (1) **FLAT BACK BODY** Y\_\_N\_\_

The rear vertical surface of the body shall be flat from side to side.

One (1) **THREE BODY COMPARTMENTS** Y\_\_N\_\_

Driver side compartments shall be furnished as follows:

- One compartment ahead of the rear wheels with full height roll-up door.
- One compartment above rear wheels with one roll-up door.
- One compartment behind the rear wheels with full height roll-up door.

Top of all body compartments shall be overlaid with polished aluminum treadplate.

One (1) **THREE BODY COMPARTMENTS** Y\_\_N\_\_

Passenger side compartments shall be furnished as follows:

- One compartment ahead of the rear wheels with full height roll-up door.
- One compartment above rear wheels with one roll-up door.
- One compartment behind the rear wheels with full height roll-up door.

Top of all body compartments shall be overlaid with polished aluminum treadplate.

One (1) **REAR BODY CONFIGURATION** Y\_\_N\_\_

There shall be one compartment at the rear of the body with a full height roll-up door.

One (1) **LEFT FRONT COMPARTMENT SHALL INCLUDE THE FOLLOWING OPTIONS:** Y\_\_N\_\_

One (1) **TRANSVERSE STORAGE AREA** Y\_\_N\_\_

The area above the frame rails in the front compartment behind the chassis cab shall be transverse to the passenger side of the apparatus.

One (1) **ADJUSTABLE SHELF** Y\_\_N\_\_

Compartment shelf, one-half depth of the body, shall be constructed of .188" smooth Aluminum. The shelf shall have formed edges on three sides for added strength.

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The shelf shall be fully adjustable, with extruded aluminum unistrut channels provided on the front and rear compartment walls.

One (1) shelf shall be located on the driver's side. Y\_\_N\_\_

**LEFT OVER WHEEL COMPARTMENT SHALL INCLUDE THE FOLLOWING OPTIONS:**

One (1) **NON-TRANSVERSE COMPARTMENT** Y\_\_N\_\_

The area above the frame rails in the over wheel compartment cab shall be in depth to the chassis frame rails.

Two (2) **ADJUSTABLE SHELF** Y\_\_N\_\_

Compartment shelf, as deep as the lower portion of the compartment, shall be constructed of .188" smooth aluminum. The shelf shall have formed edges on three sides for added strength. The shelf shall be fully adjustable, with extruded aluminum unistrut channels provided on the front and rear compartment walls.

Two (2) shelves shall be provided on the driver's side. Y\_\_N\_\_

**LEFT REAR COMPARTMENT SHALL INCLUDE THE FOLLOWING OPTIONS:**

One (1) **NON-TRANSVERSE COMPARTMENT** Y\_\_N\_\_

The area above the frame rails in the rear compartment shall be in depth to the chassis frame rails.

Three (3) **ADJUSTABLE SHELF** Y\_\_N\_\_

Compartment shelf, as deep as the lower portion of the compartment, shall be constructed of .188" smooth aluminum. The shelf shall have formed edges on three sides for added strength. The shelf shall be fully adjustable, with extruded aluminum unistrut channels provided on the front and rear compartment walls.

Three (3) shelves shall be provided on the driver's side. Y\_\_N\_\_

**RIGHT FRONT COMPARTMENT SHALL INCLUDE THE FOLLOWING OPTIONS:**

One (1) **TRANSVERSE STORAGE AREA** Y\_\_N\_\_

The area above the frame rails in the front compartment behind the chassis cab shall be transverse to the driver side of the apparatus.

One (1) **RIGHT OVERWHEEL COMPARTMENT SHALL INCLUDE THE FOLLOWING OPTIONS:** Y\_\_N\_\_

**OPTIONS:**

One (1) **NON-TRANSVERSE COMPARTMENT** Y\_\_N\_\_

The area above the frame rails in the over wheel compartment shall be in depth to the chassis frame rails.

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Two (2) Y\_\_N\_\_  
**ADJUSTABLE SHELF**

Compartment shelf, as deep as the lower portion of the compartment, shall be constructed of .188" smooth aluminum. The shelf shall have formed edges on three sides for added strength. The shelf shall be fully adjustable, with extruded aluminum unistrut channels provided on the front and rear compartment walls.

Two (2) shelves shall be provided on the passenger's side.

One (1) Y\_\_N\_\_  
**RIGHT REAR COMPARTMENT SHALL INCLUDE THE FOLLOWING OPTIONS:**

One (1) Y\_\_N\_\_  
**NON-TRANSVERSE COMPARTMENT**

The area above the frame rails in the rear compartment shall be in depth to the chassis frame rails.

One (1) Y\_\_N\_\_  
**SLIDE-OUT TRAY**

Slide-out tray, the depth of the lower portion of the compartment, shall be constructed of 3/16" aluminum material and installed in the compartment. Tray shall have with heavy-duty roller bearing slides with a latch to hold the tray in the "open" and "closed" positions. Tray shall have capacity of 250 pounds.

One (1) slide-out tray shall be provided. The tray shall be used by the district for the mounting of their generator.

The dimensions of the generator are: 25"Lx18"Wx18"H.

One (1) Y\_\_N\_\_  
**REAR CENTER COMPARTMENT SHALL INCLUDE THE FOLLOWING OPTIONS:**

One (1) Y\_\_N\_\_  
**REAR COMPARTMENT DEPTH**

The rear center compartment shall run from the rear of the rescue body, to the rear compartment wall of the compartment ahead of the rear wheels.

One (1) Y\_\_N\_\_  
**HEAVY DUTY SLIDE-OUT TRAY**

The transverse slide-out tray shall be constructed of 3/16" aluminum material. Tray shall have with heavy-duty roller bearing slides with a latch to hold the tray in the "open" and "closed" positions. Tray shall have capacity of 1000 pounds. The tray will extend out approximately 2/3 of the length of the tray trough, to the rear of the body.

The slide-out tray shall be located in the rear compartment.  
Note: 1000 pound capacity.

One (1) Y\_\_N\_\_  
**STOKES BASKET STORAGE**

Brackets shall be provided on the roof of the body to hold a district supplied stokes basket. Brackets shall be provided over the compartments.

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One (1) Stokes basket dimensions: 84"Lx 28"Wx 8"H. Y\_\_N\_\_

### **EXTRUDED ALUMINUM RUB RAILS**

Full body length polished aluminum rub rails shall be bolted in place on the right and left body sides and in the pump panel area. The rub rails shall extend outward beyond the body sides for protection of the compartments and doors. There shall be a bolt on aluminum corner casting on each rear corner to blend the rear tailboard assembly with the side rub rails.

One (1) The side rub rails shall be a heavy extruded aluminum "C" channel. Y\_\_N\_\_

### **SIDE AND REAR OVERLAYS**

Overlay panels shall be constructed of 3003 polished aluminum treadplate. Polished aluminum overlay shall be provided and installed in the following areas:

- The front face of each side compartment.
- The rear body face and vertical area above tailboard.

One (1) Overlay shall be installed with "Aluminized" stainless steel bolts to prevent corrosion. Y\_\_N\_\_

### **POLISHED COMPARTMENT TOP WELDS:**

One (1) The compartment top welds to be polished. Y\_\_N\_\_

### **SLIP-RESISTANT WALKWAY SURFACE**

All exterior surfaces designated as stepping, standing, and walking areas shall have an aluminum slip-resistant overlay material installed. The slip-resistant overlay material shall have a raised serrated surface that will allow moisture to drain out either side. The recessed surface shall be one piece solid material to prevent road spray and debris from entering the top surface from below. The slip-resistant overlay material shall meet the requirements of NFPA 13-7.3. The slip-resistant surface shall be installed in the following areas of the apparatus body:

- Step areas of the side running boards.
- Rear step running board step.
- Walkway and standing platforms

One (1) Y\_\_N\_\_

### **REAR STEP/RUNNING BOARDS**

The apparatus body running boards and rear step shall be constructed with slip-resistant surface and shall have bright aluminum treadplate trim around the outside edges. Side running boards and rear step shall be removable for ease of service in case of damage.

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One (1)

### **REAR STEP/TAILBOARD**

Y\_\_N\_\_

A single piece .188 rear step/tailboard shall be furnished that is a minimum of 8.00" deep and full width of the apparatus body, from rub rail to rub rail. The tailboard shall be provided with a removable casting on each corner for a pleasing appearance.

One (1)

### **HANDRAILS**

Y\_\_N\_\_

Access handrails shall be 1 1/4" in diameter extruded aluminum with rubber insert. Access rail escutcheons and brackets shall be chrome plated and attached with stainless steel bolts. Anchoring of posts and framing members for railings of all types shall be of such construction that the completed railing structure shall be capable of withstanding a load of at least 225 pounds applied in any direction at any point along the rail.

One (1)

### **REAR HANDRAILS**

Y\_\_N\_\_

Two (2) vertical access handrails shall be provided and mounted on the rear of the apparatus body, one on each side. Each rear handrail to be approximately 48" long.

Two (2)

### **FOLDING ACCESS STEPS**

Y\_\_N\_\_

Two (2) NFPA approved folding steps shall be provided and mounted at the rear of the body, on the driver's side if possible. All access steps shall have a minimum surface area of 35-square inches, and have a slip-resistant standing surface. The step shall be capable of supporting a 500-lb. load.

Two (2) steps shall be provided.

Steps shall be provided to access the stokes basket mounted on the roof. The district will be mounting telescoping tripod lights between the DOT tail lights and the rear compartment.

Location of the steps shall be approved by the district at time of inspection at the factory.

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### **ELECTRICAL**

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Electrical wiring, hydraulic lines, air system tubing, and control cables shall be fastened to the frame or body structure of the apparatus and shall be furnished with protective looms, grommets, or other devices, so that any such connector and/or wiring will be protected from shear or tear.

The body 12-Volt electrical system shall be designed specifically for the apparatus body. Automatic reset circuit breakers shall be provided and installed in all circuits.

Wiring data shall be provided with the completed apparatus.

One (1)

The following electrical equipment and lights shall be provided and installed:

Y\_\_N\_\_

### **WIRING SYSTEM**

All electrical wiring shall be 14-gauge heavy strand copper with type GXL crosslink high temperature insulation, being circuit function printed every three-inches along its entire length.

Wiring data shall be provided with the completed apparatus.

One (1)

The following electrical equipment and lights shall be provided and installed:

Y\_\_N\_\_

### **TAIL & STOP LIGHTS**

Two (2) Weldon #2010 rectangular red stop/tail lights shall be provided and mounted at the rear of the body, one on each side.

One (1)

### **DIRECTIONAL LIGHTS WELDON 2010**

Y\_\_N\_\_

Two (2) Weldon #2010, rectangular amber directional signal lights with black arrows shall be provided and mounted at the rear of the body, one on each side below the stop/tail lights.

One (1)

### **BACKUP LIGHTS WELDON 2010 (RECT)**

Y\_\_N\_\_

Two (2) Weldon #2010, rectangular clear backup lights shall be provided and mounted, one on each side at the rear of the body. The backup lights shall be mounted below the rear stop/tail and directional lights.

Note: The DOT light package, the rear mounted warning lights and the rear scene lights shall be mounted as close to the edge of the body as possible to allow room for the district to mount their telescoping tripod lights.

One (1)

### **CLEARANCE LIGHTS**

Y\_\_N\_\_

There shall be clearance marker lights installed meeting all DOT requirements. The vehicle clearance lights shall be recess mounted within the rear center tailboard step.

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One (1) **LICENSE PLATE BRACKET** Y\_\_N\_\_

A license plate mounting bracket shall be provided complete with a chrome-plated shielded indirect type light. Bracket shall be mounted at the rear of the apparatus body.

One (1) **BACKUP ALARM** Y\_\_N\_\_

An automatic, electronic reverse alarm shall be provided and installed. An alarm shall activate whenever the reverse gear is selected in the transmission.

One (1) **HIGH IDLE SYSTEM** Y\_\_N\_\_

There shall be a high idle system furnished and installed on the apparatus. The high idle system shall have an on/off switch located in the chassis on the switch console. The system shall have an interlock that will disable the solenoid if the parking brake is not completely set.

Seven (7) **COMPARTMENT LIGHTING** Y\_\_N\_\_

All side and rear exterior equipment compartments shall be provided with one (1) clear compartment light mounted to the side walls of the compartment. Compartment lights shall switch on automatically when the compartment door is opened and switch off when the door is closed.

One (1) **OPEN COMPARTMENT/HAZARD WARNING LIGHT** Y\_\_N\_\_

A red flashing, warning light shall be provided and installed in the driver's compartment to indicate an open passenger or apparatus compartment door. The hazard light shall also be attached to folding equipment racks and light towers as specified. Light shall be properly marked and identified.

One (1) **BATTERY DISCONNECT SWITCH** Y\_\_N\_\_

A master battery on/off switch shall be provided and mounted in a convenient location to the driver. The master battery switch shall disconnect the batteries from all chassis and body accessories.

One (1) A "Battery-On" pilot light shall be provided, visible to the driver. Y\_\_N\_\_

### **DASH MOUNTED EMERGENCY ELECTRICAL SWITCH PANEL**

An electrical switch panel shall be designed and mounted in the cab dash area. All switches shall be provided with back lighted snap-in legend inserts.

### **SWITCHES**

All emergency light switches shall be lighted, rocker style. Switches shall be internally lit when the switch circuit is in the on position. A plug-in identification label is to be

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provided and installed adjacent to each rocker switch with backlighting provided behind the label.

An internally lighted "master" switch shall be provided and wired through a heavy-duty relay to activate power to the emergency lights.

One (1)

Y\_\_N\_\_

### **12 VOLT TERMINAL STRIP**

A 12-volt terminal strip shall be provided behind the seat on the passenger's side. The terminal strip shall be used for power by the district when installing the radios and other 12 volt equipment. The 12-volt power shall be directly from the chassis batteries and not run through the master battery switch.

One (1)

Y\_\_N\_\_

### **REAR STEP LIGHTS**

Two (2) chrome plated lights shall be furnished and installed on the rear face of the body to illuminate the rear step area. Lights shall be wired to the panel light switch at the pump operator's panel.

One (1)

Y\_\_N\_\_

### **ENGINE COMPARTMENT WORK LIGHT**

An engine compartment work light shall be provided complete with a switch mounted on the light head.

One (1)

Y\_\_N\_\_

### **UNDER CAB LIGHTING**

There shall be two (2) lights furnished below the chassis cab, one on each side below each door. The lights shall be wired to switch on and off automatically when the cab doors are opened.

One (1)

Y\_\_N\_\_

### **UNDER BODY LIGHTING REAR STEP**

There shall be two (2) lights furnished below the rear step, one on each side. The lights shall be wired to turn on and off with a switch located in the cab.

One (1)

Y\_\_N\_\_

### **UNDER BODY LIGHTING**

There shall be two (2) lights furnished below the front compartments, one on each side and there shall be two (2) lights furnished below the rear tailboard, one each side. The lights shall be activated by a switch in the cab.

Two (2)

Y\_\_N\_\_

### **REAR SCENE LIGHT**

There shall be a Weldon Model 2010, 12-volt 50-watt Scenelight provided and mounted at the rear of the body. Light shall be mounted on an 18-degree downward angled, polished aluminum casting. The light shall be wired through a switch in the chassis cab and be labeled "Rear Scene Light".

Two (2) rear scene lights shall be provided, one on each side above the tail lights and below the rear warning light on each side.

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Two (2)

### DRIVER SIDE SCENE LIGHT

Y\_\_N\_\_

There shall be a Weldon Model 2010, 12-volt 50-watt Scenelight provided and mounted on the driver side of the body. Light shall be mounted on an 18-degree downward angled, polished aluminum casting. The light shall be wired through a switch in the chassis cab and be labeled "Driver's Side Scene Light".

Two (2) Scene lights shall be provided on the driver's side. The lights shall be located above the compartments at the front and rear of the body.

Two (2)

### PASSENGER SIDE SCENE LIGHT

Y\_\_N\_\_

There shall be a Weldon Model 2010, 12-volt 50-watt Scenelight provided and mounted on the passenger side of the body. Light shall be mounted on an 18-degree downward angled, polished aluminum casting. The light shall be wired through a switch in the chassis cab and be labeled "Passenger's Side Scene Light".

Two (2) Scene lights shall be provided on the passenger's side. The lights shall be located above the compartments at the front and rear of the body.

One (1)

### ELECTRONIC SIREN

Y\_\_N\_\_

A Code 3 Model 3692 V-CON, 200-watt electronic siren with Hi-Lo and hardwired microphone shall be provided and mounted in the cab.

One (1)

### SPEAKER

Y\_\_N\_\_

Cast Products Model GS1004, 100-watt speaker shall be provided and recess mounted in the front bumper of the chassis. The speaker shall be connected to the electronic siren control unit.

One (1)

### EMERGENCY LIGHTING

Y\_\_N\_\_

The upper and lower zones "A", "B", "C", "D" of the apparatus shall have the following emergency lighting equipment:

One (1)

### LIGHT BAR

Y\_\_N\_\_

One (1) Weldon model 9188-5403 halogen 54" light bar mounted on chassis cab roof to meet the NFPA upper zone A lighting requirement. The lights shall be activated through the master emergency light switch located on the electrical console. Light bar to have the following equipment:

- (3) Rotators
- (4) Mirrors

One (1)

### REAR LIGHTS

Y\_\_N\_\_

Six (6) Weldon model 3811 halogen lights mounted on the upper corners of the body to meet the NFPA Zone B, C, D upper level lighting requirement. The lights shall be

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One (1) activated through the master emergency light switch located on the electrical console. There shall be two (2) on rear, and two (2) on each side of the body. Y\_\_N\_\_

### **FRONT LIGHTS**

One (1) There shall be two (2) Weldon model 3811 flush mounted flashing lights furnished on the front grill to meet the NFPA Zone A lower level lighting requirement. The halogen lights shall be connected to a flasher and be activated through the master emergency light switch located on the electrical console. Each light shall have a red lens. Y\_\_N\_\_

### **ZONE B & D LOWER LEVEL SIDE LIGHTS**

One (1) There shall be three (3) Weldon model 3811 halogen flashing lights furnished on each side of the apparatus to meet the NFPA Zone B & D lower level lighting requirement. One halogen light mounted as far forward as possible, one halogen light mounted as far to the rear as possible, and one halogen light mounted between the front and rear lights. The halogen lights shall be connected to a solid state flasher and be activated through the master emergency light switch located on the electrical console. Y\_\_N\_\_

### **ZONE C LOWER LEVEL REAR LIGHTS**

One (1) There shall be two (2) Weldon model 3811 halogen, flush mounted flashing lights furnished on the rear of the apparatus body to meet the NFPA Zone C lower level lighting requirement. The halogen lights shall be connected to a solid state flasher and be activated through the master emergency light switch located on the electrical console. Each light shall have a red lens. Y\_\_N\_\_

### **12 VOLT ELECTRICAL CERTIFICATION**

The low voltage electrical system shall be tested and certified per NFPA 1901 requirements.

A certificate of compliance shall be provided with the completed vehicle upon delivery.

Minimum electrical load consists of the total amperage required to simultaneously operate the following in a stationary mode at the incident scene.

- The propulsion engine and transmission.
- All Clearance and marker lights.
- The communication radio. (Default of 5.0 amps used for testing).
- Illumination of all walking surfaces, the ground at all egress points, controls and instrument panels and 50% of the total compartment lighting load.
- Minimum warning lights required for "Blocking Right of Way" mode.
- The current to simultaneously operate any fire pump, aerial device & hydraulic pumps.
- Anything defined by the purchaser to be critical to the mission of the apparatus.

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The first test for the electrical system is the **Reserve Capacity Test**. All the above listed components operate with the engine shut off. After 10 minutes all electrical loads are shut off and the battery system must have adequate reserve power to start the engine.

The second test is the **Alternator Performance Test at Idle**. All the above listed components operate with the engine at an idle. There can be no current draw from the batteries of the apparatus.

The third test is the **Alternator Performance Test at Full Load**. All electrical components shall be activated with the engine operating at governed RPM for two hours. During the test the system voltage can not drop below 11.7-volts or have excessive battery discharge for more than 120 seconds. Any loads not listed in the minimum electrical load may be load managed in order to pass the test.

All of the above tests must be conducted with the engine compartment at approximately 200 degrees.

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One (1)

Y\_\_N\_\_

### PAINTING

All bright metal fittings if unavailable in stainless steel shall be heavily chrome-plated. Iron fittings shall be copper plated prior to chrome plating.

All seams shall be caulked both inside and along the exterior edges with an automotive sealant to prevent moisture from entering between any body panels.

The body and all parts shall be thoroughly washed with grease cutting solvents prior to any sanding. After the body has been sanded and the minor imperfections filled and sanded, the body shall be washed again with a solution to remove any contaminants on the surface. The first coating to be applied is a self-etching primer for maximum adhesion to the body metal. The next three coats shall be an acrylic, urethane, primer surfacer. The primer surfacer coat is to be hand sanded with 600-grit sandpaper to insure maximum gloss of the paint. The last step is the application of at least three coats of Concept Acrylic Urethane two component color.

The fire pump and all rigid discharge and suction plumbing shall be painted silver in color.

While constructing the truck body, all aluminum parts shall be properly fitted on the body. The backside of all aluminum parts shall be sanded smooth of any burrs and sharp edges.

All aluminum parts shall be bolted to the body using stainless steel fasteners. Cadmium plated fasteners are not acceptable.

During reassembly of the apparatus, care shall be exercised in fitting and fastening the parts back in their respective position on the vehicle.

One (1)

Y\_\_N\_\_

### NATURAL FINISH ROLL UP DOORS

The roll-up doors on each side of the apparatus body shall be a natural finish aluminum.

One (1)

Y\_\_N\_\_

### UNDERCOATING

The body sub frame shall be undercoated with a heavy-duty automotive type undercoating before the rubber backing and the compartments are attached. After the body has been attached to the sub frame and all final items have been installed the entire body assembly shall be undercoated

One (1)

Y\_\_N\_\_

### INTERIOR COMPARTMENT PAINT

The interior vertical compartment walls are to be painted white with a black colored spatter finish material.

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One (1)

### **WHEEL PAINTING**

Y\_\_N\_\_

The exterior faces of the front and rear wheels, shall be finished painted to match the apparatus body. Wheels shall be properly prepared and finished with primer coats and topcoats as specified.

The outer two-inches of each outside wheel rim shall be painted Silver in color, unless otherwise specified.

One (1)

### **PAINT BODY TO MATCH CHASSIS**

Y\_\_N\_\_

The apparatus body to be painted to match the chassis.

One (1)

### **LETTERING**

Y\_\_N\_\_

Lettering shall be done in gold leaf mylar letters, shaded in black, and encapsulated in clear mylar. Lettering to be placed on each cab door as directed by fire department. Maximum of fifty (50) letters.

One (1)

**The gold numbers on the front fenders (like in the pictures) to be 919 instead of the 916.**

Y\_\_N\_\_

**The lettering font and colors are to match the ambulance pictures. Location and wording to be as follows:**

**HUMBOLDT COUNTY** All in caps and arched (upward) below cab windows, each side.

**AMBULANCE SERVICE** All in caps and arched (downward) at bottom of the door.

Possibly run striping between HUMBOLDT COUNTY AND AMBULANCE SERVICE

**RESCUE** All in caps and as large as possible in area above compartment doors, between warning lights and scene lights.

**Lettering and striping layout to be approved prior to installation.**

One (1)

Lettering is to match the department's existing unit, see photos.

Y\_\_N\_\_

### **REFLECTIVE SAFETY STRIPE**

A custom width 3M brand Scotchlite #680-10 reflective multi-stripe shall be affixed to the perimeter of the vehicle. Striping shall be placed up to 60" above ground level and shall conform to NFPA reflectivity requirements. At least 60% of the perimeter length of each side and width of the rear, and at least 40% of the perimeter width of the front of the vehicle shall have reflective stripe.

The side stripe shall be applied in a Large "Z" design.

Gold pin stripping is 3/8 wide

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Dark blue stripe is 7 1/2 wide

Grey stripe is 2 1/4 wide

Gap between blue stripe and grey stripe (the white area) is 1/2

The design of the stripe (widths of colors and spacing) to match the ambulance pictures as closely as possible. Location of the striping (heights on chassis and body, and location of the Z) to be laid out to accommodate the GMC chassis and body. If possible, please provide design ideas for approval prior to applying.

Striping is to match the department's existing unit, see photos.

Gray striping has been approved to be non-reflective.

One (1)

Y\_\_N\_\_

### IDENTIFICATION & SAFETY LABELS

A permanent plate shall be installed in the driver's compartment to specify the quantity and type of the following fluids in the vehicle:

1. Engine oil.
2. Engine coolant.
3. Transmission fluid.
4. Pump Transmission Lubrication Fluid.
5. Pump Primer Fluid (If applicable).
6. Drive Axle Lubrication Fluid.
7. Air-conditioning refrigerant.
8. Air-conditioning lubrication oil.
9. Power steering fluid.
10. Transfer case fluid.
11. Equipment rack fluid.
12. Air compressor system lubricant.
13. Generator system lubricant.

When trucks have been UL certified, a permanent plate with pump performance data and serial numbers shall be installed on the pump panel.

A permanent plate shall be installed in the driver's compartment specifying the maximum number of personnel the vehicle is designed to carry per NFPA standards. It shall be located in an area visible to the driver.

An accident prevention sign stating "DANGER PERSONNEL MUST BE SEATED AND SEAT BELTS MUST BE FASTENED WHILE VEHICLE IS IN MOTION OR DEATH OR SERIOUS INJURY MAY RESULT". The warning sign shall be placed so it is visible from all seating positions.

An accident prevention sign stating "DANGER DO NOT RIDE ON REAR STEP WHILE VEHICLE IS IN MOTION, DEATH OR SERIOUS INJURY MAY RESULT". The warning sign shall be placed so it is visible from the rear step of the vehicle.

If an inlet located at the pump operator's position is valved, it shall be provided with a permanent label that states "WARNING SERIOUS INJURY Or DEATH COULD OCCUR IF INLET IS SUPPLIED BY A PRESSURIZED SOURCE WHEN THE VALVE IS CLOSED".

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One (1)

Y\_\_N\_\_

### **OPERATION/SERVICE MANUALS**

The following applicable documentation shall be supplied upon delivery:

- Two (2) copies of Operation/Service manual of the apparatus operations and service manuals supplied by components manufacturers.
- Certificate of compliance to Electrical Warning System Low Voltage test.
- Line Voltage Electrical System test certificate.
- (NFPA 19-14.4.1 - 19.14.4.2)

One (1)

Y\_\_N\_\_

### **WARRANTY**

We warrant each new motorized fire apparatus manufactured by CENTRAL STATES FIRE APPARATUS for a period of ONE YEAR from the date of delivery, except for chassis and other components noted herein.

Under this warranty we agree to furnish any parts to replace those that have failed due to defective material or workmanship where there is no indication of abuse, neglect, unusual or other than normal service providing that such parts are, at the option of CENTRAL STATES FIRE APPARATUS, made available for our inspection at our request, returned to our factory or other location designated by us with transportation prepaid within thirty days after the date of failure or within one year from the date of delivery of the apparatus to the original purchaser, whichever occurs first, and inspection indicates the failure was attributed to defective material or workmanship.

The warranty on the chassis and chassis supplied components, storage batteries, generators, electrical lamps and other devices subject to deterioration is limited to the warranty of the manufacturer thereof and adjustments for the same are to be made directly with the manufacturer by the customer.

This warranty will not apply to any fire apparatus that has been repaired or altered outside our factory in any way, which in our opinion might affect its stability or reliability.

This warranty shall not apply to those items that are usually considered normal maintenance and upkeep services: including, but not limited to, normal lubrication or proper adjustment of minor auxiliary pumps or reels.

This warranty is in lieu of all other warranties, expressed or implied, and all other obligations or liabilities on our part. We neither assume nor authorize any person to assume for us any liability in connection with the sales of our apparatus unless made in writing by CENTRAL STATES FIRE APPARATUS.

One (1)

Y\_\_N\_\_

### **5 YEAR ALUMINUM BODY WARRANTY**

Central States Fire Apparatus LLC (CSFA) warrants to the original purchaser only, that the all aluminum body, fabricated by Central States Fire Apparatus, under

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normal use and with reasonable maintenance, be structurally sound and will remain free from corrosion perforation for a period of FIVE (5) years.

This warranty does not apply to the following items that are covered by a separate warranty: paint finish, hardware, moldings, and other accessories attached to this body. In addition, this warranty does not apply to any part or accessory manufactured by others and attached to this body.

CENTRAL STATES FIRE APPARATUS MAKES NO OTHER WARRANTY, EXPRESS OR IMPLIED, WITH RESPECT TO THE ALUMINUM BODY AND ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE AND HEREBY DISCLAIMED.

Central States Fire Apparatus will replace without charge, repair or make a fair allowance for any defect in material or workmanship demonstrated to its satisfaction to have existed at the time of delivery or not due to misuse, negligence, or accident. If Central States Fire Apparatus elects to repair this body, the extent of such repair shall be determined solely by Central States Fire Apparatus, and shall be performed solely at the Central States Fire Apparatus factory, or at an approved facility. The expense of any transportation to or from such repair facility shall be borne by the purchaser and is not an item covered under this warranty.

Central States Fire Apparatus will not be liable for damages and under no circumstances will its liability exceed the price for a defective body. The remedies set forth herein are exclusive and in substitution for all other remedies to which the purchaser would otherwise be entitled.

Central States Fire Apparatus will be given a reasonable opportunity to investigate all claims. The purchaser must commence any action arising out of, based upon or relating to agreement or the breach hereof, within twelve months from the date the cause of the action occurred.

One (1)

Y\_\_N\_\_

### PAINT WARRANTY

The PPG paint performance guarantee will cover the areas of the vehicle finished with the specified product for a period of FIVE (5) years beginning the day the vehicle is delivered to the purchaser.

The areas as outlined on the Guarantee Certificate, will be covered for the following paint failures:

#### GUARANTEE INCLUSIONS:

FULL APPARATUS BODY MANUFACTURED AND PAINTED BY CENTRAL STATES FIRE APPARATUS:

\* Peeling or delamination of the topcoat and/or other layers of paint.

\* Cracking or checking.

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\* Loss of gloss caused by cracking, checking, or hazing.

\* Any paint failure caused by defective PPG Fleet Finishes which are covered by this guarantee.

All guarantee exclusions, limitations, and methods of claims are covered in the full certificate provided to the original purchaser.