

BRAUN NORTHWEST, INC.
REMOUNT SPECIFICATIONS
FOR
LARAMIE FIRE DEPARTMENT
LARAMIE, WYOMING
BNW #1766-1, 2013 GMC 3500 HD, 151”L MODULE
VIN: 1GB3K0C85DF222503

1 CHASSIS

1.01 OEM CHASSIS

- 2025 Ford F-450 XLT, Regular Cab 4 x 4, meeting all the specifications of Section 1.01 (**Note: Chassis is subject to model year changes**)
 - Ambulance Prep. Package with EPA Special Emergency Vehicle Emissions (47L)
 - 3-year/36,000 mile “Bumper to Bumper” warranty
 - Dual rear wheels
 - Provided by Braun Northwest

1.01.01 SPECIFIC RATINGS

- Drive – 4 x 4
- G.V.W.R. – 16,500 lb
- Front Axle – 7,000 lb
- Rear Axle – 12,880 lb
- Wheelbase – 169”
- Cab to Axle – 84”
- Front Spring Capacity – 7,000 lb
- Rear Spring Capacity – 12,880 lb
- Rear Differential – 4.10 ratio, limited slip wide track rear axle

1.01.02 POWER TRAIN

- Engine
 - 6.7L Power Stroke V8 turbo diesel B20
 - Diesel Emission Fluid (DEF) system with operator-commanded regeneration
 - External oil cooler
 - Factory diesel package
 - Engine block heater
 - Heavy duty dry type air cleaner with flow restriction indicator
 - Exhaust brake
- Engine Cooling System
 - Heavy duty, closed-air, free-liquid state type
 - Coolant recovery system
 - 50/50 solution Permanent type antifreeze to –34 degrees F

- Transmission
 - TorqShift 10-speed automatic transmission with selectable drive modes (Normal, Eco, Slippery Roads, Tow/Haul)
 - External oil cooler in chassis grille area
 - Electronic Shift on the Fly with auto-locking wheel hubs
- Exhaust System
 - System complies with Federal Motor Carrier Safety Regulations, Part 393.83
 - Suspended using three hangers, excluding manifold attachment
 - Discharge at right rear side of module
 - Tailpipe shall not terminate within twelve inches of the vertical axis of the fuel tank filler opening.

1.01.03 STEERING

- Power assisted
- Manual Tilt and telescoping steering wheel/column

1.01.04 SHOCK ABSORBERS/STABILIZER BARS

- Heavy-duty shock absorbers front and rear
- OEM front and rear stabilizer bars

1.01.05 BRAKES

- Heavy duty power-assisted four wheel ABS; front and rear disc
- Front 15.39" diameter; Rear 15.75" diameter
- Trailer Brake Controller

1.01.06X TIRES AND WHEELS

- Seven OEM LT 225-70R-19.5G all-purpose steel belted radials
- Seven OEM 19.5" Argent-painted steel wheels
- Spare tire and wheel shipped loose
- OEM jack and tire changing tools
- OEM stainless steel wheel simulators with braided valve extenders (945)

1.01.07 ELECTRICAL

- Alternators – OEM Dual rated at 410 Amps total
- Batteries – OEM Dual 750CCA 68AH/Group 65 AGM
- Stationary Elevated Idle Control

1.01.08X INSTRUMENT PANEL AND CONTROLS

- Gauges
 - Speedometer
 - Tachometer
 - Engine Coolant Temperature
 - Transmission Fluid Temperature
 - Turbocharger Boost
 - Fuel Level
 - Indicator lights
 - Odometer/Trip Odometer
- Cruise Control, with steering mounted controls
- Audio – OEM AM/FM with MP3
- SYNC 4 - 8" touchscreen in center stack
- 4.2" LCD Productivity Screen in IP Cluster with compass display

- Ford Pass® Connect 5G Wi-Fi Modem
- Ford Co-Pilot 360
 - Audible Lane Departure Alert
 - Pre-collision Assist with Automatic Emergency Braking
- Rearview Camera and Prep Kit (**872**)

1.01.09

CAB EXTERIOR

- Trim Level – XLT
- Bumper – Chrome
- Tow Hooks –Two Front
- Mud Flaps – Two Front
- Horn – OEM dual electric
- Windows – Solar Tinted
- Windshield wipers – Two-speed electric, washer, and intermittent speed control
- Mirrors
 - Two black manually telescoping trailer tow
 - Power, heated glass, upper portion
 - Turn indicators and clearance lights on outside edge
 - Lower portion convex
- Lights
 - Headlamps – Auto High-Beam, Quad-beam halogen
 - Roof clearance lights
 - Daytime running lamps
- Fuel – OEM 40 gallon tank

1.01.10

CAB INTERIOR

- Trim Level – XLT
- Seats – OEM
 - Cloth 40/20/40
 - Combination lap and shoulder harness
 - Side door armrest
- Flooring – Black Vinyl
- Climate Control – OEM
 - Heavy duty, fresh air, high capacity heater/defroster
 - Dehumidifying air conditioning system
- Airbags
 - Driver and Passenger frontal and side airbag/curtain
 - Passenger side airbag deactivation switch
- Other
 - Dome light, with dual map lights
 - Auxiliary Power Point
 - Interior hood release
 - Power door lock & windows
 - Remote keyless entry w/Anti-Theft

1.01.11

COLORS

- Exterior – Race Red (PQ)
- Interior – Medium Dark Slate

1.02 CHASSIS MODIFICATIONS

The following modifications shall be made to the chassis by Braun Northwest.

1.02.04 EXHAUST HEAT SHIELD

Shall be formed from 20 ga. galvanized sheet metal with stamped reinforcements and formed edges. Access openings shall be provided for shock absorber, mounting bolts, etc. Heat shields shall be bolted to chassis frame and extend from back of cab to the frame cross member just behind the rear axle.

1.02.05G RUNNING BOARDS

Running boards made of 0.125" bright aluminum diamond plate with Grip Strut inserts embedded in the step surfaces for a Ford F-450 Regular cab shall be securely mounted on both sides of the chassis with OEM fasteners.

1.02.07B AUTO THROTTLE

The OEM high idle feature shall be configured to automatically adjust the throttle for changes in electrical and AC/heater loads.

1.02.09A MUD FLAPS

Mud flaps with the "NORTH STAR" logo shall be installed behind each rear wheel.

1.02.14A SUSPENSION

A LiquidSpring rear suspension system shall be installed, with a kneeling feature to activate when the rear streetside patient compartment entrance door opens within 60 minutes of the chassis ignition being turned off. An override switch labeled "DUMP OVERRIDE" shall be installed on the curbside rear wall, accessible from rear curbside door. The LiquidSpring control panel shall be installed on the chassis dash to the left of the steering wheel.

1.02.17A CHASSIS FRAME EXTENSIONS

A 10"H frame extension shall be welded to each OEM frame rail to provide rear lateral and bumper support and to provide a step height of 13.5" from the bumper to the module floor.

1.02.31X STATION EXHAUST

Existing Plymovent adapter shall be removed and returned to customer (Section 8.03 related, to be confirmed at preconstruction meeting).

A Plymovent adapter shall be installed on the chassis exhaust for customer's station exhaust system.

1.02.36B AUXILIARY COMPRESSOR

A TM-21 auxiliary air conditioning compressor kit shall be added to the OEM engine (Section 5.17 related).

1.03A**MODULE-TO-CHASSIS MOUNTING SYSTEM**

Existing module shall be transferred, utilizing existing module mounting points. New isolator pads and bolts shall be installed.

1.03.02C**CAB-TO-MODULE ATTACHMENT**

The module shall be connected to the cab with a flexible watertight boot to allow cab-body flex as designed by the chassis manufacturer. The chassis back shall be replaced by an aluminum insert with integral walk-thru frame covered with black-painted polyurea thermoplastic elastomer (Section 3.04.01 related). The insert shall be installed with 0.25" stainless steel bolts. A stainless steel threshold shall be installed protect the bottom of the walk-thru (Section 2.13 related).

1.04A**USED CHASSIS**

Trade in (Section 8.02 related). Chassis is drivable.

Vehicle title required to be present with vehicle upon delivery to Braun Northwest (Section 8.02 related).

Existing license plates shall be removed and returned to customer (Section 8.03 related).

2

MODULAR CONSTRUCTION

Disclaimer: Module shall be inspected at preconstruction meeting. If damage is discovered, scope of work shall be detailed, and customer authorization is required before repairs are made.

- Existing forward fuel/DEF fill shall be removed and welded closed before repainting.
- Existing antennas shall be transferred, and locations shall be marked before repainting.

2.08

EXTERIOR COMPARTMENTS

Compartment #1

Location: Streetside, forward

Items to be transferred:

- Two SCBA brackets, one forward and one aft (Section 4.10 related)
- One fire extinguisher bracket (Section 4.32 related)
- One LED strip light (Section 6.26 related)

Changes:

- Existing power box shall be replaced with new BNW-design power box (Section 6.21 related).

Compartment #2

Location: Streetside, aft of wheel well

Items to be transferred:

- One LED strip light (Section 6.26 related)

Changes: None

Compartment #3

Location: Streetside, aft

Items to be transferred:

- Oxygen storage with three ratcheting straps (Section 4.10 related)
- Ferno stair chair storage with restraining strap (Section 4.27 related)
- One LED strip light (Section 6.26 related)

Changes: None

Compartment #4

Location: Curbside, aft

Items to be transferred:

- One rubber bumper on door (Section 2.09.04 related)
- One LED strip light (Section 6.26 related)
- Two backboard restraining straps
- One adjustable divider
- Two adjustable shelves

Changes:

- A new stainless steel gasket cover shall be installed (Section 2.09.01 related).
- New foam tape shall be installed on the aft wall and aft face of divider.

Compartment #5

Location: Curbside, aft of wheel well

Items to be transferred:

- One LED strip light (Section 6.26 related)

Changes: None

Compartment #6 – Inside/Outside Access

Location: Curbside, forward, upper

Items to be transferred:

- One LED strip light (Section 6.26 related)

Changes: None

Compartment #7 – Battery Drawer

Location: Curbside, forward, lower

Items to be transferred: None

Changes:

- Existing battery shall be removed and returned to customer (Sections 6.24 and 8.03 related).
- One new aftermarket Group 31 battery shall be installed (Section 6.24 related).

2.09A

MODULE DOORS

Existing doors shall be transferred.

2.09.01B

DOOR SEAL

Door gaskets shall be installed for all doors. A stainless-steel gasket protector shall be installed in Compartment #4.

2.09.02A

DOOR HINGES

Existing hinges shall be transferred.

2.09.03A

DOOR LATCHES

All existing compartment and passage door latches shall be transferred, lubricated, and adjusted for proper operation.

2.09.04X

COMPARTMENT DOOR CONTROLS

Existing double spring door hold open devices shall be transferred and lubricated on all compartments.

Existing rubber bumper on Compartment #4 door shall be transferred.

2.09.05A

CURBSIDE DOOR CONTROL

Existing double spring door hold open device shall be transferred and lubricated.

2.09.06A

REAR DOOR CONTROLS

Two existing grabber-type door hold open devices and rubber inserts shall be transferred.

2.09.07A

COMPARTMENT DOOR SKINS

Existing compartment door skins shall be transferred.

New red/white 1.5" conspicuity tape shall be installed on the outboard vertical edge of each door

2.09.08A

ENTRANCE DOOR SKINS

Existing passage door skins shall be transferred.

New red/white 1.5" conspicuity tape shall be installed on the top, bottom, and vertical edges of the side passage door and rear curbside door.

2.09.10X

THRESHOLDS

Stainless-steel thresholds shall be installed at all doors with a polyurethane adhesive.

Grip-tape shall be installed on the rear door thresholds.

2.10B

MODULE INTERIOR CABINETS

Existing sliding acrylic doors shall be replaced with sliding clear 0.25" polycarbonate with interlocking aluminum trim, felt-lined anodized aluminum track, and full extruded aluminum door pulls with integral door latches.

Cabinet #1

Location: Streetside, upper, forward

Items to be transferred:

- One LED under cabinet strip light (Section 6.14 related)
- One Motorola speaker, radio, and mic on underside of cabinet (Section 6.18 related)
- One 12 VDC fluid warmer (Section 6.35 related)
- One adjustable shelf

Changes:

- Existing slider door shall be replaced with new sliding clear 0.25" polycarbonate with interlocking aluminum trim, felt-lined anodized aluminum track, and full extruded aluminum door pulls with integral door latches.

Cabinet #2

Location: Streetside, upper, forward

Items to be transferred:

- One adjustable shelf

Changes:

- Existing slider door shall be replaced with new sliding clear 0.25" polycarbonate with interlocking aluminum trim, felt-lined anodized aluminum track, and full extruded aluminum door pulls with integral door latches.

Cabinet #3

Location: Streetside, upper, above CPR Seat

Items to be transferred:

- One adjustable shelf

Changes:

- Existing slider door shall be replaced with new sliding clear 0.25" polycarbonate with interlocking aluminum trim, felt-lined anodized aluminum track, and full extruded aluminum door pulls with integral door latches.

Cabinet #4

Location: Streetside, upper, aft

Items to be transferred:

- One adjustable

Changes:

- Existing slider door shall be replaced with new sliding clear 0.25" polycarbonate with interlocking aluminum trim, felt-lined anodized aluminum track, and full extruded aluminum door pulls with integral door latches.

Cabinet #5

Location: Streetside, aft, below Cabinet #4

Items to be transferred:

- One oxygen window aft of cabinet, aisle-facing (Section 5.29 related)
- One adjustable shelf

Changes:

- Existing slider door shall be replaced with new sliding clear 0.25" polycarbonate with interlocking aluminum trim, felt-lined anodized aluminum track, and full extruded aluminum door pulls with integral door latches.

Cabinet #6

Location: Streetside, upper, forward

Items to be transferred: Streetside, below Cabinet #2

- One adjustable shelf

Changes:

- Existing slider door shall be replaced with new sliding clear 0.25" polycarbonate with interlocking aluminum trim, felt-lined anodized aluminum track, and full extruded aluminum door pulls with integral door latches.

#7 – Action Area

Location: Streetside

Items to be transferred:

- Three oxygen outlets and one LED display (Section 5.11 related)
- One Rico suction regulator and wall-mount bracket for Bemis collector (Section 5.13 related)
- One sharps container bracket (Section 5.26 related)
- One Narc box (Section 5.36 related)
- One upper six-switch control panel (Section 6.13 related)
- Two 120 VAC GFCI duplex receptacles (Section 6.21 related)
- One 12 VDC power point receptacle with cover (Section 6.25 related)

Changes:

- Existing thermostat shall be replaced (Section 5.17 related).
- Existing lower six-switch attendant control panel shall be removed and discarded; hole shall be covered with a gray ABS panel (Section 6.13 related).
- Existing inverter status panel shall be removed and returned to customer (Sections 6.31 and 8.03 related).
- A new inverter status panel shall be installed on a gray ABS panel in existing location (Section 6.31 related).

Cabinet #8 – Radio Cabinet

Location: Left front stack, upper, aisle facing

Items to be transferred:

- One Motorola transceiver (Section 6.18 related)
- Three antenna cables (Section 6.19 related)

Changes:

- Existing inverter shall be removed and returned to customer (Sections 6.31 and 8.03 related).
- A new inverter shall be installed in existing location (Section 6.31 related).

Cabinet #9

Location: Left front stack, lower, aisle facing

Items to be transferred:

- One adjustable shelf

Changes: None

Cabinet #10

Location: Streetside, center, aft

Items to be transferred:

- One adjustable shelf

Changes:

- Existing slider door shall be replaced with new sliding clear 0.25" polycarbonate with interlocking aluminum trim, felt-lined anodized aluminum track, and full extruded aluminum door pulls with integral door latches.

Cabinet #11

Location: Streetside, lower, aft

Items to be transferred:

- One adjustable shelf

Changes:

- Existing slider door shall be replaced with new sliding clear 0.25" polycarbonate with interlocking aluminum trim, felt-lined anodized aluminum track, and full extruded aluminum door pulls with integral door latches.

Cabinet #12 – CPR Seat with Storage

Location: Streetside

Items to be transferred:

- One set of seat belts (Section 5.14 related)
- One flip-down back pad with latch

Changes: None

Cabinet #13

Location: Streetside, below Action Area #7, lower

Items to be transferred:

- One adjustable shelf

Changes:

- Existing slider door shall be replaced with new sliding clear 0.25" polycarbonate with interlocking aluminum trim, felt-lined anodized aluminum track, and full extruded aluminum door pulls with integral door latches.

Cabinet #14 – Under Attendant Seat Storage

Location: Under attendant seat

Items to be transferred:

- Attendant seat (Section 5.10 related)

Changes:

- Cabinet shall be modified to accommodate a Webasto heater (to be confirmed at preconstruction meeting).
- A new Webasto Air Top Evo 55 diesel-fired air heater shall be installed (Section 6.37 related, to be confirmed at preconstruction meeting).

Cabinet #15

Location: Curbside, upper, aft

Items to be transferred: As is

Changes:

- Existing slider door shall be replaced with new sliding clear 0.25" polycarbonate with interlocking aluminum trim, felt-lined anodized aluminum track, and full extruded aluminum door pulls with integral door latches.

Cabinet #16

Location: Curbside, upper, forward

Items to be transferred: As is

Changes:

- Existing slider door shall be replaced with new sliding clear 0.25" polycarbonate with interlocking aluminum trim, felt-lined anodized aluminum track, and full extruded aluminum door pulls with integral door latches.

Cabinet #17 – Glove Cabinet

Location: Curbside, above passage door

Items to be transferred:

- Storage for three glove boxes (Section 5.32 related)

Changes: None

Cabinet #18 – Curbside Squad Bench

Location: Curbside

Items to be transferred:

- One grab bar, aft of bench (Section 5.05 related)
- One oxygen outlet (Section 5.11 related)
- Three sets of seat belts with three lower receivers (Section 5.14 related)
- One tip-out sharps/waste storage in bench (Section 5.26 related)
- One dual SCBA bracket with strap inside bench (Section 5.35 related)
- One 120 VAC GFCI duplex receptacle (Section 6.21 related)
- Two aircraft cables with footman loops

Changes:

- Existing rotary dome timer shall be removed and discarded (Section 6.16 related).
- A new dome timer switch shall be installed on a gray ABS panel in existing location (Section 6.16 related).

Cabinet #19 – HVAC Cabinet

Location: Right front stack, upper

Items to be transferred:

- One suction pump (Section 5.12 related)

Changes:

- Existing HVAC unit shall be replaced with a new HVAC unit (Section 5.17 related).
- Existing closeout shall be replaced with a new painted closeout (Section 5.17 related).

Cabinet #20 – Electrical Cabinet

Location: Front above walk-thru

Items to be transferred:

- Electrical component module (Section 6.01 related)
- One automatic cabinet light (Section 6.14 related)
- One Whelen siren amplifier (Section 6.30.09 related)

Changes: None

Cabinet #21

Location: Left front stack, aft-facing

Items to be transferred:

- Three adjustable shelves

Changes: None

Cabinet #22 – Inside/Outside Access

Location: Right front stack, lower

Items to be transferred:

- Two 120 VAC GFCI duplex receptacles (Section 6.21 related)
- One 12 VDC power point receptacle with cover (Section 6.25 related)
- Two adjustable shelves

Changes:

- Existing door shall be replaced with two new clear 0.375" polycarbonate side-hinged doors, each with a 20 ga stainless steel brace, 0.375"D steel rods, slam latch and a paddle latch handle.

2.11A SIDE DOORSTEP

Existing stepwell shall be transferred and cleaned.

2.13D CAB TO MODULE PASSAGE

A new clear 0.375" polycarbonate sliding door with hinged aluminum side rails and handle on the cab side shall be installed, to slide behind the driver's seat. The door shall latch in the open and closed positions.

2.15 CORROSION REDUCTION/ PREVENTION

Corrosion inhibitor shall be applied to all newly installed screws, bolts, etc.

3

COATINGS AND FINISHES

Disclaimer: Module shall be inspected at preconstruction meeting. If damage is discovered, scope of work shall be detailed, and customer authorization is required before repairs are made.

- Existing forward fuel/DEF fill shall be removed and welded closed before repainting.
- Existing antennas shall be transferred, and locations shall be marked before repainting.

3.01 MODULE FINISH PREPARATION

Module shall be sanded smooth to remove imperfections on aluminum surfaces. The entire exterior shall be mechanically etched and washed with wax-and-grease-remover to ensure proper primer/sealant adhesion.

3.02X MODULE PRIMER

Module shall be sealed with a two-component, low VOC, direct-to-metal epoxy primer/sealant prior to applying the finish coat of acrylic urethane paint.

An additional coat of primer/sealant shall be applied.

3.03 PAINT TYPE

Shall be Sherwin Williams acrylic urethane.

3.04X COLOR SCHEME

Base color: to match Pierce Fire Engine Red GB-309067.

An additional coat of clear coat shall be applied.

Stripe #1: Color: White #680CR-10
Size: 4"H
Style: Beltline
Material: Scotchlite
Location: Sides, and front of module and rear passage doors

Stripe #2: Color: Ruby Red #680CR-82
Gold #680CR-64
Size: 6"H
Style: Diagonal stripes alternating between the two colors, Chevrons
Material: Scotchlite
Location: Rear of module, below drip rail, **wrapping corner radius**, outboard of rear passage doors only (Excludes doors and header above doors)

3.04.01 CHASSIS COLOR

Chassis including door jambs and underside of hood shall be painted to match module: Pierce Fire Engine Red GB-309067.

Back-of-cab insert shall be coated with black-painted polyurea thermoplastic elastomer.

Stripe #1: Color: White #680CR-10
Size: 4"H
Style: Beltline
Material: Scotchlite
Location: Sides of chassis, meeting stripe on module

3.05 LETTERING/DECALS

**Streetside
Item #S1**

Decal: Custom Star of Life
Color: Gold #680CR-64 with Black #680CR-85 border and Rod of Asclepius
Size: 17"H
Material: Scotchlite
Location: Side of module, forward, below flasher

Item #S2

Lettering: "AMBULANCE"
Font: Fritz Quadrata
Color: Gold #680CR-64 with Black #680CR-85 outline
Size: 6.79"H x 57"W
Material: Scotchlite
Location: Centered, directly above Stripe #1

**Rear
Item #R1**

Decal: Custom Star of Life
Qty: Two
Color: Gold #680CR-64 with Black #680CR-85 border and Rod of Asclepius
Size: 7"H
Material: Scotchlite
Location: Rear of module, one each streetside and curbside, centered at window height between door grabber and flasher

**Curbside
Item #C1**

Decal: Custom Star of Life
Color: Gold #680CR-64 with Black #680CR-85 border and Rod of Asclepius
Size: 17"H
Material: Scotchlite
Location: Side of module, Compartment #6 door, upper

Item #C2

Lettering: "AMBULANCE"
Font: Fritz Quadrata
Color: Gold #680CR-64 with Black #680CR-85 outline
Size: 6.79"H x 57"W
Material: Scotchlite
Location: Side of module, centered above stripe, aft of side passage door

**Front
Item #F1**

Decal: Star of Life
Qty: Two
Color: Gold #680CR-64 with Black #680CR-85 border and Rod of Asclepius
Size: 4"H
Material: Scotchlite
Location: Hood of chassis, one on each side of Item #F2.

Item #F2

Lettering: "AMBULANCE" (mirrored)
Font: Fritz Quadrata

Color: Gold #680CR-64 with Black #680CR-85 outline
Size: 4.69"H x 38.1"W
Material: Scotchlite
Location: Hood of chassis, centered

Roof

Item #T1

Decal: Star of Life
Color: Blue #680CR-75
Size: 32"H
Material: Scotchlite
Location: Roof, centered, forward

3.06A

COMPARTMENT FINISH

Existing compartment interiors shall be cleaned from the gasket inward.

3.07A

INTERIOR CABINETS FINISH

Existing interior cabinets shall be cleaned.

3.08A

MODULE UPHOLSTERY

All existing upholstered pads shall be transferred with existing covering.

3.09A

MODULE FLOORING MATERIAL

Existing module sub-floor and flooring shall be transferred.

3.10A

COMPARTMENT LINING

Existing exterior compartment flooring shall be transferred.

3.11A

CABINET LINING

Existing cabinet lining shall be transferred.

4 MODULE EXTERIOR

- Existing antennas shall be transferred, and locations shall be marked before repainting.

4.01A STEP/BUMPER

Existing rear step bumper shall be transferred.

4.01.01A DOCK BUMPERS

Existing dock bumpers shall be transferred.

4.02B RUB RAILS

New bright finished anodized aluminum rub rails 2.5"H x 0.75"D custom extruded design shall be installed along the lower streetside and curbside edges of the module with a 0.5"H red/white conspicuity reflective tape shall be installed in the center insert area.

4.03B FENDER RINGS

New extruded aluminum fenderettes shall be installed.

4.04B DRIP RAILS

New drip rails shall be installed full length on the module's four sides, and above all compartment and passage doors.

4.05B ROCK GUARDS

New aluminum diamond plate rock guards shall be installed.

4.06X REAR KICK PANEL

New aluminum diamond plate rear kick panel shall be installed.
New recessed license plate holder shall be installed in rear kick panel (Section 4.16 related).

4.07X FUEL FILL

Existing aft fuel fill shall be transferred as it exists.
Existing forward fuel/DEF fill shall be removed and welded closed.
The OEM DEF tank fill is located between the cab and module, streetside.

4.08A MODULE WINDOWS

Existing windows shall be transferred.

4.09B FUEL SPLASH GUARD

New stainless-steel splashguard shall be installed below the fuel fill.

4.10A EXTERIOR CYLINDER STORAGE

Two existing SCBA brackets in Compartment #1 shall be transferred.
Existing oxygen cylinder storage in Compartment #3 shall be transferred.

4.16C REAR LICENSE PLATE

New recessed license plate holder with dual Optronics #LPL11CB LED lights shall be installed in the rear kick panel, centered below rear doors.

4.17A STEP

Existing manual step below curbside passage door shall be transferred.

4.21A

EXTERIOR GRAB BAR

Existing grab rail aft of curbside passage door shall be transferred.

4.27A

STAIR CHAIR STORAGE

Existing stair chair storage in Compartment #3 shall be transferred.

4.32A

EXTERIOR FIRE SUPPRESSION

Existing fire extinguisher bracket in Compartment #1 shall be transferred.

4.33

BELOW FLOOR INSULATION

Heater hoses between the engine and module shall be insulated with closed cell foam insulation.

4.34

AUTOMOTIVE UNDERCOATING

The chassis cab underbody shall be sprayed, per manufacturer's specifications, with undercoating for reduced corrosion and added sound deadening. Touch-up bare metal, holes and any new fasteners.

5 MODULE INTERIOR

- 5.01A UPPER WALL COVERING**
Existing wall covering shall be transferred.
- 5.02A HEADLINER**
Existing wall covering shall be transferred.
- 5.03A HEAD PADS/CUSHIONS**
Existing head pads with existing upholstery shall be transferred.
- 5.04A LOWER WALL COVERING**
Existing covering shall be transferred.
- 5.05A GRAB RAILS**
Existing grab rail aft of Curbside Squad Bench #18 shall be transferred.
Existing grab rail in ceiling shall be transferred.
- 5.06A ACCESS DOOR GRAB RAILS**
Existing door grab rails shall be transferred.
- 5.07A IV HANGERS**
Four existing IV hangers in ceiling shall be transferred.
- 5.08X COT MOUNT**
Existing cot mount shall be transferred in the same position.
Transfer existing rear rail floor plate to allow use of non-Power-LOAD, X-frame cots with the Power-LOAD system (to be confirmed at preconstruction meeting).
A new plastic cover for rear rail floor plate shall be provided and shipped loose (Section 8.01 related).
- 5.09B COT PLATES**
Two new 7" wide full-length stainless-steel plates shall be installed with a polyurethane adhesive sealant system.
- 5.10A ATTENDANT SEAT**
Existing attendant seat shall be transferred, with existing upholstery, seatbelt, and Cabinet #14 base.
- 5.11A OXYGEN SYSTEM**
Existing oxygen system shall be transferred and low-pressure tested.
- 5.12A SUCTION PUMP**
Existing suction pump in HVAC Cabinet #19 shall be transferred.
Existing on/off switch labeled "ASPIRATOR" shall be transferred in the attendant control panel (Section 6.13 related).
- 5.13A SUCTION COLLECTOR**
Existing suction system shall be transferred.

- 5.14A SEATBELTS**
Existing seatbelts shall be transferred.
- 5.17X MODULE CLIMATE CONTROL SYSTEM**
Existing HVAC system including closeout shall be removed and discarded.
New module HVAC system shall incorporate a new combination heating/air conditioning unit with 43,300 BTU/hr. heating and 32,000 BTU/hr. cooling capacity. The unit shall have a 580 CFM fan and controls independent of the cab system. A new 12 VDC booster pump shall be installed to optimize the heating capacity in the module.
A new painted aluminum closeout with two horizontal adjustable air condition discharge louvers and a punched air return with open area equal to at least twice the blower outlet area shall be installed.
Existing thermostat shall be replaced on Action Area #7 wall.
Existing auxiliary dual fan condenser and bracket on front of module shall be transferred.
Existing bracket shall be painted to match module.
An auxiliary engine mounted compressor with bracket shall be installed.
- 5.18 EXTERNAL AIR INTAKE**
Existing air intake shall be transferred.
- 5.19B AIR RETURN**
New return air path with an open area equal to at least twice the blower outlet area shall be incorporated into the new evaporator closeout.
- 5.20A EXHAUST VENT**
Existing exhaust system shall be transferred and tested.
Existing exhaust fan switch labeled "VENT HI-OFF-LO" shall be transferred in the attendant control panel to control the exhaust fan speed (Section 6.13 related).
- 5.21A NO SMOKING/FASTEN SEAT BELTS SIGNS**
Existing module signs shall be transferred, new signs shall be installed in the chassis.
- 5.24A CLOCK**
Existing clock in head pad above rear passage doors shall be transferred.
- 5.26A SHARPS/HAZARDOUS WASTE CONTAINERS**
Customer shall be responsible for removing any biohazardous sharps/waste containers from the vehicle before delivery to Braun Northwest.
Existing sharps/waste storage area on Action Area #7 wall and in Curbside Squad Bench #18 shall be transferred.
- 5.29A OXYGEN WINDOW**
Existing oxygen window aft of Cabinet #5 shall be transferred.
- 5.32A GLOVE BUTLERS**
Existing glove butler storage in Cabinet #17 shall be transferred.
- 5.35A INTERIOR OXYGEN CYLINDER STORAGE**
Existing oxygen cylinder storage in Curbside Squad Bench #18 storage shall be transferred.

5.36A

MEDICATION SAFE

Existing Narc box medication safe on Action Area #7 wall shall be transferred.

6 **ELECTRICAL**

Existing module electrical system shall be function tested upon arrival at Braun Northwest. Customer shall be contacted for change order authorization to replace non-functional components. Upon completion, electrical system shall be function tested and vehicle electrical system certified to AMD 005 requirements.

6.01A **ELECTRICAL LOAD DEVICES**

All relays shall be replaced as needed to meet current BNW electrical standards. Replace or add circuit breakers as required to meet new circuit requirements. Modify or replace electrical wiring as required to accommodate new or revised electrical circuits or to address damaged, spliced, or poorly routed or inadequately protected conductors.

6.02B **VOLTMETER/AMMETER**

A new single digital voltmeter/ammeter shall be installed in the driver's console, which simultaneously displays voltage and alternator current when the ignition is on (Section 6.09 related). Display flashes to indicate low voltage.

6.04A **IGNITION CONTROL**

Existing 100-amp solenoid shall be transferred for auxiliary chassis related functions.

6.05B **MODULE POWER**

Existing module power control unit (CDR-357) shall be transferred.

A new "MODULE DISC." switch shall be installed on the driver's console (Section 6.09 related).

6.07A **BACK-UP ALARM**

Existing back-up alarm shall be transferred.

A new "BACK-UP DISABLE" switch installed on the driver's console (Section 6.09 related).

6.09B

DRIVER'S CONSOLE

A new Type 1 driver's console made of black-powder-coated formed aluminum shall be installed between the seats. It shall have:

- A new map light in the upper right corner (Section 6.11 related)
- Transfer existing Motorola auxiliary speaker on front of console (Section 6.18 related)
- Transfer one antenna cable (Section 6.19 related)
- A **custom** cup holder plate with armrests
- A map holder with six mill-finished aluminum dividers
- A custom faceplate with the following layout and new switches and inserts:

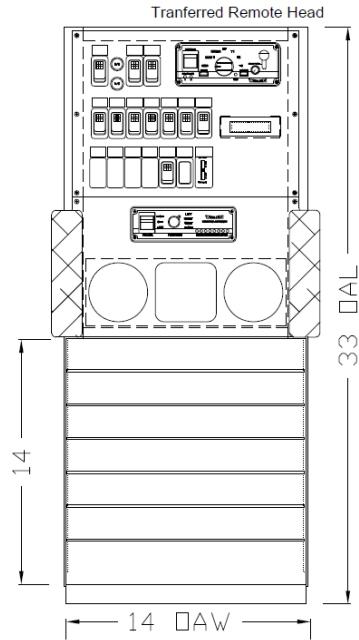
Transfer Motorola remote head and mic (Section 6.18 related)

1.	Passage Compt. D/O Lights	2.	3.	Transfer Whelen siren (Section 6.30.09 related)
Module Disc.	Emerg. Master	Pri. / Sec.		

4.	5.	6.	7.	8.	9.	10.	New Digital Amm/voltmeter
Left Scene	Right Scene	Rear Scene	Front Scene	Rumbler	Hi/Lo	White Lights	

11.	12.	13.	14.	15.	16.	17.	Blank
Blank	Blank	Blank	Blank	Back-up Disable	Spare	Dual USB A/C	

Blank	Transfer Traffic Advisor Controller (Section 6.30.14 related)	Blank
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CONSOLE
PROPOSAL
DRAWING

6.10X

SWITCHES

Existing switches in attendant control panels shall be transferred, and defective switches shall be replaced.
New rocker type switches with inserts shall be installed in the driver's console.

6.11B

MAP LIGHT

New map light with a 19" flexible neck shall be installed on the driver's console.

6.12B

DOOR AJAR WARNING LIGHT

New warning light system shall be installed on the driver's console. A flashing LED light with a red lens shall warn the driver of an open module passage door, and a flashing LED light with an amber lens shall warn the driver of an open module compartment door.

6.13X

ATTENDANT CONTROL PANELS

Existing lower attendant control panel on Action Area #7 wall shall be removed and discarded, hole shall be covered with a gray ABS panel.

Existing upper attendant control panel on Action Area #7 wall shall be transferred, replacing defective switches and inserts.

1.	2.	3.	4.	5.	6.
Dome Hi-Off-Lo	Dome Hi-Off-Lo	Vent Hi/Off/Lo	Aspirator	Attendant Light	Blank

6.14A

CABINET LIGHTING

Existing LED under cabinet strip light below Cabinet #1 shall be transferred.
Existing automatic cabinet light in Electrical Cabinet #20 shall be transferred.

6.15A

STEP LIGHT

Existing step light shall be transferred.

6.16X

MODULE INTERIOR LIGHTING

Existing dome lights shall be transferred. Dome switches in the attendant control panel shall be transferred.

Existing rotary timer switch shall be removed, and a momentary switch with gray ABS panel shall be installed to cover opening. Pressing the switch once shall initiate 15-minute timed operation of the lights. Pressing the switch again shall cancel the timed operation.

6.17A

BASIC EXTERIOR LIGHTING

Existing brake, turn, back-up lights, and clearance lights shall be transferred.

Four existing Whelen 600 Series turn arrow lights shall be transferred: two on the front of module, out board and two on the rear at window height, below flasher.

Existing third brake light on rear of module shall be transferred with the rear upper flashers (Section 6.30.02 related).

6.18A COMMUNICATIONS EQUIPMENT

The repowering and tuning of the radios shall be the responsibility of the vehicle owner.

Transfer Item #1

Description: Existing Motorola with one transceiver, dual remote heads, dual auxiliary speakers and dual mic shall be transferred.

Location(s):

- One remote head, mic, and auxiliary speaker on the underside of Cabinet #1
- Transceiver in Radio Cabinet #8
- One remote head and mic on driver's console
- One auxiliary speaker on the front of driver's console

Additional Instructions: All connections shall be made, including antenna, antenna cables, battery power, ignition power, and grounds. Prior to powering up of the module, all in-line fuses of radio equipment shall be removed and secured to their fuse holders.

6.19A ANTENNA MOUNTS AND CABLES

Four existing antennas, antenna bases and cables shall be transferred: three antenna cables in Radio Cabinet #8 and one in driver's console.

6.20A BLOCK HEATER

New block heater shall be wired to the 120 VAC shorepower system. Block heater shall have a circuit breaker in 120 VAC power box.

6.21X 120 VAC/SHORELINE CIRCUIT BOX

Existing shoreline connection and interior 120 VAC GFCI receptacles shall be transferred. New white shoreline cover shall be installed.

Existing power box shall be replaced with new BNW-design power box.

6.22 BATTERY GROUNDS

In addition to OEM chassis grounds, the following ground circuits shall be added to reduce RF interference:

- A minimum 4 ga. ground cable from the power component panel to the chassis frame.
- Two braided ground straps from the module body to the chassis frame.

6.23C BATTERY CHARGER

New 60 amp battery charger shall be provided as part of the Samlex Pure Sine 1200 watt inverter system (Section 6.31 related).

6.24X BATTERY MODIFICATION

Two new OEM batteries shall be utilized as provided with the chassis, located under hood. Two existing batteries shall remain in the trade-in chassis.

One existing battery in Compartment #7 shall be removed and returned to the customer (Section 8.03 related).

In addition to the new OEM chassis batteries, one new Group 31 battery shall be installed in Compartment #7.

The new OEM and new module batteries shall be interconnected to provide maximum cold cranking amps and reserve capacity at all times.

6.25X**12 VDC POWER SUPPLY**

Existing power point receptacles with covers shall be transferred.

A new Kussmaul dual USB-A/C switch insert style charging port shall be installed on the driver's console.

6.26A**COMPARTMENT LIGHTING**

Six existing compartment lights shall be transferred, one in each compartment excluding Compartment #7.

6.27A**EXTERIOR DOOR SWITCHES**

All existing compartment and passage 1/2" mechanical door switches shall be transferred.

6.30X EMERGENCY WARNING SYSTEMS

A "Hi-Lo" switch shall be installed in the driver's console to control the intensity of all LED warning lights, except the Whelen WION-series grille and intersection flashers. Front lightbar and all emergency flashers shall activate in Primary mode. Front lightbar, intersection lights, and grille lights shall disable in Secondary mode.

6.30.01A FRONT LIGHTBARS

Existing Whelen 94"L lightbar on front of module shall be transferred and lenses cleaned. Existing pattern curbside to streetside:

Location	Lens Color	Model	Light Color	Type	Light	Flash Pattern	Additional
Curbside	Red	700 Series	Red	LED	Flasher	Signal Alert	
	Clear	700 Series	Clear	LED	Flasher	Signal Alert	
	Red	700 Series	Red	LED	Flasher	Signal Alert	
Center	Clear	700 Series	Clear	LED	Flasher	Signal Alert	
Streetside	Red	700 Series	Red	LED	Flasher	Signal Alert	
	Clear	700 Series	Clear	LED	Flasher	Signal Alert	
	Red	700 Series	Red	LED	Flasher	Signal Alert	

Five existing Whelen 900 Series light heads with chrome flanges on front of module, below light bar shall be transferred and lenses cleaned. Existing pattern curbside to streetside:

- Curbside: Red Lens Red LED flasher
LED Scene light (Section 6.03.04 related)
- Center: Red Lens Red LED flasher
LED Scene light (Section 6.03.04 related)
- Streetside: Red Lens Red LED flasher

Front lightbar and lights shall be controlled by the "PRI/SEC" switch on the driver's console.

White lights shall be controlled by the "WHITE LIGHTS" switch on the driver's console and shall disable when the vehicle is shifted into park.

6.30.02A REAR UPPER FLASHERS

Five existing flashers with chrome flanges on upper rear of module shall be transferred and lenses cleaned. Existing pattern curbside to streetside:

- Curbside: 900 Series Red Lens Red LED flasher
700 Series LED Scene light (Section 6.03.04 related)
- Center: 70BTT Red Lens Red LED third brake light
700 Series LED Scene light (Section 6.03.04 related)
- Streetside: 900 Series Red Lens Red LED flasher

Lights shall be controlled by the "PRI/SEC" switch on the driver's console.

6.30.03A FLASHERS

Six existing Whelen 900 Series flashers with chrome flanges shall be transferred and lenses cleaned. Existing locations:

- Two Red Lens Red LED flashers on each side of module, in upper corners, outboard
 - Two Clear Lens Red/Amber split LED flashers on the rear of module at window height
- Flashers shall be controlled by the "PRI/SEC" switch on the driver's console.

- 6.30.04X SCENE LIGHTS**
Four existing Whelen 900 Series LED scene lights with chrome flanges shall be transferred and lenses cleaned. Two on each side of module, in upper corners, out board.
The curbside passage door shall activate the curbside scene lights. The scene lights shall also be controlled by the respective switches on the driver's console.
Two existing Whelen 900 Series LED scene lights with chrome flanges shall be transferred with the front flashers. The front scene lights shall be controlled by the "FRONT SCENE" switch on the driver's console.
Two existing Whelen 700 Series LED scene lights with chrome flanges shall be transferred with the rear upper flashers. The rear scene lights shall be controlled by the "REAR SCENE" switch on the driver's console and shall activate when the rear curbside passage door is opened or when the vehicle is placed in reverse.
- 6.30.05X SPOTLIGHT**
Existing GoLight and controller shall be removed and returned to customer (Section 8.03 related).
- 6.30.06A INTERSECTION LIGHTS**
Existing chassis and module flashers with chrome housings shall be transferred one above each wheel well and one on each fender. Flashers shall be controlled by the "PRI/SEC" switch on the driver's console.
- 6.30.08X GRILLE LIGHTS**
Two existing grille flashers with chrome flanges shall be removed and returned to customer (Section 8.03 related).
Four new Whelen WION Series LED flashers with chrome housings shall be installed on OEM grille: two #WIONSMCR Clear Lens Red LED flashers above and two #WIONSMCC Clear Lens Clear LED flashers below
The clear lights shall be controlled by the "WHITE LIGHTS" switch and the red by the "PRI/SEC" switch, with both switches located on the driver's console.
- 6.30.09A SIREN**
Existing Whelen 295-HFSA7 electronic siren shall be transferred on the driver's console.
Existing Whelen siren amplifier in Electrical Cabinet #20 shall be transferred.
- 6.30.10X SIREN SPEAKERS**
Two existing siren speakers shall be removed and returned to customer (Section 8.03 related).
Two new Federal Signal DynaMax speakers and brackets with stainless steel North Star grilles shall be installed in the OEM bumper.
New Federal Signal Rumbler low frequency siren system, including two speakers and mounting brackets and one amplifier shall be installed. The speakers shall be installed behind the bumper and be controlled by a momentary switch labeled "RUMBLER" on the driver's console.
- 6.30.11B SEQUENTIAL SWITCHING SYSTEM**
Existing sequential switching system shall be removed and returned to customer (Section 8.03 related).

- 6.30.14A** **TRAFFIC ADVISOR**
Existing Whelen traffic advisor shall be transferred above the rear passage doors, and controller shall be transferred on the driver's console.
- 6.31X** **INVERTER**
Existing 120 VAC inverter in Radio Cabinet #8 and control panel on Action Area #7 wall shall be removed and returned to customer (Section 8.03 related).
New Samlex 1200-watt inverter with a 60-amp battery charger shall be installed in Radio Cabinet #8. The inverter shall be configured to turn on and off with ignition. The remote status panel shall be installed on a gray ABS panel on Action Area #7 wall.
- 6.34X** **PATIENT STATUS LIGHT SYSTEM**
Existing patient status system including camera shall be removed and discarded. Remove the lower existing attendant control panel on the Action Area #7 wall and cover hole with a gray ABS panel.
- 6.35A** **FLUID WARMER**
Existing warmer in Cabinet #1 shall be tested and transferred, if functional. If not functional, contact customer for authorization before installing new 120 VAC warmer.
- 6.37B** **120 VAC HEATER**
New Webasto Air Top Evo 55 diesel-fired air heater shall be installed in Cabinet #14 (exact location to be determined at preconstruction meeting).
- 6.40A** **ELECTRIC DOOR LOCKS**
Existing electric door locks shall be utilized as they exist.
New hidden unlock switch shall be installed behind the license plate on the rear of the module.
- 6.46A** **AUDIO/VIDEO/RECORDING EQUIPMENT**
Existing Rostra back-up camera shall be transferred.
Existing rearview mirror monitor shall be transferred.
Camera shall display in the rearview mirror.

7 SUPPORTING DOCUMENTATION

7.01 OWNER'S MANUAL

- Chassis owner information packet.
- Second OEM key.
- Remount warranty.
- Factory Chassis warranty.
- 1-year/24,000 mile limited electrical warranty.
- Electrical load test.
- Alternator maintenance information.
- Schematics for individual options.
- Warranty and parts list for lightbar, etc.

7.03 LABELS

The following labels shall be provided:

Label Description	Location
Braun Northwest Paint Label	Inside of the electrical cabinet door
FMVSS Certification Label	Adjacent to the chassis OEM stickers, typically on the B pillar (or inside of the electrical cabinet door if there is not room on the B pillar)
Tire and Loading Information Label (for under 10k GVWR only)	
Overall Height and GVWR	Visible to the driver while seated
Medical Gas Test Certification	Near the medical gas cylinder
Shorepower Inlet Rating	Near the shorepower inlet
Line Voltage Receptacle Rating	At each receptacle

8 MISCELLANEOUS EQUIPMENT

8.01 LOOSE EQUIPMENT

The following equipment shall be shipped loose with vehicle:

- Touch-up paint, one bottle to match Pierce Fire Engine Red GB-309067
- Spare tire & wheel
- One plastic cover for rear rail floor plate

8.02 CUSTOMER SUPPLIED EQUIPMENT

The customer shall provide the following equipment and have delivered to Braun Northwest within 30 days of the preconstruction meeting:

- Used chassis vehicle title, upon delivery

8.03 EQUIPMENT TO BE RETURNED

The following equipment shall be returned to the customer, if not transferred or reused. Customer is responsible for taking all returned equipment.

- Old license plates
- Old Plymovent adapter
- One old battery
- Old 120 VAC inverter and controller
- Old Sequential switching system
- Two old siren speakers
- Two old grille flashers with chrome flanges
- Old GoLight and controller

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