

**Joint Base MDL Fire Department
H-1 Hummer Brush Truck Specifications**

10-30-13



1) **Chassis**

Chassis will be supplied by the department to the vendor. Chassis highlights include:

- a) 1996 AM General Hummer H-1
- b) 12 Volt Civilian Version
- c) 6.5 liter Naturally Aspirated Engine
- d) Front Axle Weight: 4100 lbs.
- e) Rear Axle Weight: 6800 lbs.
- f) Maximum GVW 10,300 lbs.
- g) New front and rear heavy duty springs
- h) New 225 amp Powermaster Alternator
- i) New LED headlights

2) **Chassis additions to be added by vendor:**

- A. Chassis shall have front-mounted Electric 16,500 lbs., Warn 16.5ti Winch. It shall have 90 feet of 7/16-inch cable, 4-inch snatch block, 2 feet of 3/8 chain and 4-way roller fairlead steel cable guide.
- B. Chassis shall have rear-mounted Electric 16,500 lbs., Warn 16.5ti Winch mounted above the rear bumper between the frame rails. Maximum use of space is to be made.
- C. Front and rear winches shall be supplied with remote controls capable of being operated while seated in the driver's seat.

3) **Pump**

Pump will be supplied to the vendor as part of modular skid pump package.

Highlights include:

- A. Darley 13V 1.5AGE pump with a 13 HP Vanguard V-Twin Engine. Maximum flow of 70 GPM and maximum pressure of 260 psi.
- B. Pump shall be installed on the skid mount in the rear of the truck.
- C. There shall be three (3) start and stop switches installed. One (1) set in the cab located on the dash board easily accessible to the driver and one (1) set in the crew area easily accessible to the crew from the well area and one (1) set at the pump. Switches shall start and stop independently of adjacent switch positions.
- D. The Darley Pump control panel shall be remotely mounted on the top of the tank close to the crew area near the manifold. Cables for the choke and throttle will need to be added the control panel to extend the distance from the side of the pump to the new location.
- E. The Darley primer assembly shall be removed from the exhaust system and replaced with an oversized muffler.
- F. Pump fuel tank will be supplied with the pump and mounted on top of the engine.
- G. All switches and/or cables mounted outside the cab shall be weather resistant / water proof.

4) Tank

- A. Tank shall be a fully baffled NFPA compliant 200-gallon polypropylene tank. Tank shall be mounted in the body a minimum of 10.0 inches from the front of the body, to allow a pass through from left crew area to right crew area.
- B. Tank shall have front and rear translucent panels to allow viewing of tank water level. Panels should be mounted on the front and rear of the tank.
- C. Tank shall have provisions for mounting for an Akron 16-28 hose reel.
- D. All piping and wiring will be run underneath of the tank and no discharge piping should be mounted above the surface of the tank except the discharge manifold.
- E. Tank must mount in the center of the body.
- F. Tank skid will be mounted on a ¼ inch 60 Durometer rubber and mounted secured to the body
- G. Non Skid tread plate shall be mounted on the horizontal surface of the tank
- H. Tank shall have a standard pumper style fill tower on the top of the tank, right side, accessible from the crew compartment maximum height to be 3.0 inches. This will have a flip top cover and removable grate.
- I. Tank shall have a 2.0 inch round overflow pipe vented through the floor.
- J. Tank shall have a 1 ½ inch top fill on the top of the tank. This shall be placed in the center of the tank with a Galvanized T that will extend to both sides of the vehicle. Vehicle will be capable of being filled from either passenger or driver side. The fills shall have a 1 ½ inch Pyrolite fitting with NST Female threads and swivel/chained cap.
- K. No tank level lights will be required. Use of a translucent panel in the front and rear of the tank shall serve as a tank level gauge.
- L. All fill pipes and vent pipe shall be galvanized and painted black.
- M. Tank should have a “6 inch by 14 inch step in” to the left of the pump to accommodate the storage of the spare tire.

5) Plumbing

- A. All plumbing shall be galvanized steel piping, except where flex pipe is used
- B. All Valves shall be ¼ turn, brass, full flow, ball style valves.
- C. Pump shall have a 2.0 inch suction inlet. Piped to the lowest point of the tank.
- D. Pump shall have a 1.5 inch discharge with Pyrolite NST Male threads with a ¼ turn ball valve, Pyrolite cap and chain.
- E. Pump shall have a 2.0 inch gate valve for the tank to pump.
- F. Plumbing shall have a drain installed at the lowest point in the piping after the tank to pump valve.
- G. Plumbing shall have two (2) 1.0 inch blowout adapters one installed after the tank to pump valve and after the valve near the hose reel for ease of draining the system and hose reel with compressed air.
- H. Plumbing shall be piped to a 2.5 inch manifold located on the front top of the tank. Manifold shall have a ¼ turn shut-off valve between the manifold and the pump. Pipe shall have a union installed for easy removal.
- I. Manifold shall have One (1) 1.5-inch discharge location at the left side of the manifold.
- J. Two (2) 1.0-inch discharge located on each side of the manifold.
- K. Manifold to be equipped with two (2) 10-foot lengths of ¾ inch red booster line and one (1) 12-foot length of 1 ½ inch red booster style line.
- L. All discharges shall face the rear of the vehicle with ¼ turn, brass, full flow, ball style shut off valves.
- M. A 1.0-inch discharge shall run from the manifold to the tank mounted booster reel. A ¼ turn ball valve shall be installed near the reel with flex line or a union to allow easy removal of the hose reel.
- N. All ¼ turn, brass full flow style shut off valve shall have appropriate size adapters on them to allow NST hoses to be attached to them. A union shall be installed to allow easy replacement of the valves.
- O. Hose reel shall be an Akron Hose reel with electric rewind, Model 16-28 mounted on top of the tank, so the hose pulls off towards the sides. Reel shall have a removable manual crank handle back up.
- P. Rewind button shall be marine grade and be installed in the rear inside wall area on both sides of the truck.
- Q. Hose reel to be supplied with three (3) 50 foot sections of ¾ inch booster hose with NST fittings.
- R. Hose reel shall have rollers on each side of reel to allow hose to be pulled to the side without snagging on the tank or body.

6) Bar Package/Brush Protection

- A. Unless specified separately, all piping shall be 1.25-inch schedule 40 steel.
- B. **Front Bumper** shall be constructed of steel and attached directly to the chassis frame. The front bumper is to be constructed of 4.0 inch steel channel and to be mounted with 4.0 inch steel channel extending out from the front of the chassis frame. The top of the bumper shall be 10-gauge steel diamond plate. The bumper is to be kept as short as possible. The front bumper shall have 45-degree deflection angles on each end. The front bumper shall have a 1" steel pipe welded on the front/bottom edge. The front bumper shall be manufactured to accept the 16,500LB, Warn winch and also have two (2) tow hooks on the top of the bumper on each side of the winch.
- C. **Tie Rod Protection.** Piping shall be installed under the front bumper running from side to side as so to protect the front tie rods
(Due to the unique construction of the Hummer if the vendor determines this is not needed it may be deleted)
- D. **Rear Bumper** shall be constructed of steel and attached directly to the chassis frame. The rear bumper is to be constructed of 3.0 inch steel channel and extended with 3.0 inch steel channel. The rear bumper shall have two (2) D-rings installed on the rear bumper. Rear bumper should be kept as short as possible for best angle of departure.
- E. **Two (2) vertical reinforced bars** will be mounted to the rear bumper to allow the vehicle to be pushed from the rear without damaging the winch or body.
- F. **Main Rub Rails.** Piping shall run along both sides of the vehicle, running along the bottom of the body. Starting at the rear bumper over the rear wheels to the rear of the cab, along the rocker panels over the front wheels to the front bumper.
- G. **Front Brush Cage** Piping extending vertically from the front bumper to the height of the hood. These uprights will be made of two (2) 1.25 inch pipes and a minimum of ten (10) 0.75 inch pipes. Piping running along the side of the hood and connecting to the vertical members from the front bumper, running down to connect on to the front of the rocker panels. ½ inch steel rods running horizontally across the front from the height of the bumper and the piping at the top of the hood attached to the uprights. Hood tilts forward and needs to clear the bars.
- H. **Front Fender Protection.** Piping running vertically on both sides from the front of the running boards to the top of the fenders. Piping running horizontally on both sides along the top of the fender from the front vertical piping to the running board piping. Piping shall not interfere with the hood release hold downs.
- I. **Front Grill Protection.** In the area of the grill between the inner posts on the front bumper, piping spaced to afford maximum protection to the radiator. A steel mesh plate shall be installed on the brush cage in front radiator area

between the inner posts on the front bumper. Grill protection needs to fully clear hood in the tilted position.

- J. **Skid Plates.** A skid plate fabricated from adequate strength steel or aluminum shall be fabricated to protect the fuel tanks.
- K. **Under carriage protection:** A Predator Corp H1-EXT-194 (or OEM type equivalent) under carriage protection package shall be installed to protect the driveline, exhaust, transfer case, and linkage.
- L. **Cab Protection.** Piping running on both sides from the top of the fenders, alongside the windshield to the front roofline of the cab, from the front to back on both sides along the roof. Then down vertically to the back of the cab connecting to the frame at the rear of the running boards. Pipes will also run from side to side at the front and rear of the roofline. This shall allow hood the hood to be tilted without interference.
- M. **Top Cab & Light Bar Protection.** Four (4) 0.75 inch schedule 20 piping sections shall be manufactured with a curve running from the cross pipe at the top front of the cab to the cross pipe at the rear of the cab. This curve must be great enough not to interfere with a light bar, but shall provide protection for the light bar. Due to the unique construction of the Hummer if the vendor deems additional roof protection is needed, then the additions shall be made minimizing additional weight.
- N. **Crew Protection** Piping shall run from each side of the rear cross pipe at the top rear of the cab back towards the rear on the truck passed the crew area and then curve down on a 45 degree angle to the rear of the bumper.
- O. **Booster reel Protection.** A 0.75 inch schedule 20 pipe shall run between the rear crew area piping in front and to the rear of the booster reel.
- P. **Body Protection.** The top side edges of the body shall have 0.75 inch schedule 20 steel piping running front to back
- Q. **Wheel House protection.** The front wheel house / cab corner shall have 10 gauge steel plate mounted in a way to prevent spearing through wheel house into cab. This shall also serve as a mud guard.
- R. **Piping in Crew Area.** Any piping that will come into contact with the crew will be covered with foam impact protection and wire tied into place and covered with a heavy tape.
- S. **Lighting** shall be protected with mesh or piping or a combination of both.
- T. All piping shall be painted black.

7) Emergency Warning Lights & Equipment (*will be supplied by the department to the vendor for installation*)

- A. The light bar shall be a **Whelen Edge Ultra Freedom lightbar**, 28-inch LED light bar. There shall be two (2) alley lights, each controlled by separate switches. The color of the light bar shall be red, except for the alley lights, which shall be clear. There lightbar should be wired to the Whelen switch position number 1.
 - B. The stock sealed beam headlights shall be replaced with **Truck-Lite Model 27270C** 7" Round LED Headlamps. (already installed)
 - C. There shall be two (2) **Rigid Industries 11031 E-Series** 10" LED Spotlight/Floodlight Combo Work lights flush mounted on the inside of the brush cage, above the headlights angled outboard to provide maximum lighting to the sides of the truck. 15 x 9 x 6 inches and 4,200 raw lumens at only 40 watts, the lights produce both a spot and flood pattern. These lights will be wired to the Whelen switch box..
 - D. There shall be two (2) **Whelen 700 Series Linear Super-LED** Light heads mounted behind the front brush guard in front of the grill. Lights will be all red and alternate left/right.
 - E. There shall be a **Whelen Siren, Model: 295SLSA6** installed in the cab.
 - F. There shall be two (2) **Whelen, Whelen 700 Series Super-LED®** Light heads Red for emergency Lights White for auxiliary back-up / scene lights, installed on each upper rear corner of the body, facing the rear of the vehicle. Red lights shall be wired to come on with Whelen Switch box. Clear mode shall be wired to the reverse lights and also capable of coming on manually by turning on Whelen Switch box.
 - I. There shall be two (2)) **Whelen 700 Series Linear Super-LED** Light heads, LED Amber, installed on each upper rear corner of the body, below the above listed red lights, facing the rear of the vehicle lights shall be wired to come on with Whelen Siren Switch box.
- II. All warning lighting and equipment shall meet NFPA 1901 compliance for zone A,B,C,D specifications as per the standard for electrical systems and warning devices

8) **Miscellaneous.**

- A. Vehicle shall have a six inch black **reflective stripe** running from front to back on both sides and across the rear mounted on thin aluminum and secured to body with screws or rivets. Door emblems shall be supplied to the vendor to be applied to the center of each door. The truck number shall appear on each door in line with the 6 inch stripe. The top of the windshield shall have a 4 inch unit number in reflective white lettering. Unit number should be on the roof of the vehicle in the largest possible size in black reflective material.
- B. Predator H1-INT-197 Hood sound deadening pads shall be installed on the inside of the hood to reduce interior engine noise.
- C. Bed, tailgate, inside of rear doors, front and rear bumpers shall be sprayed with black Rhino Liner protectant or equivalent

9) **Items to be supplied by the Vendor:**

- A. **4 Good Year Wrangler 37X13X16.5**
- B. **Whelen 295SLSA6 Siren**
- C. **Predator H1-EXT-194 Under carriage protection system**
- D. **Predator Hood Sound deadening pads H1-INT-197**

Reference:



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- Model: 295SLSA6

The Whelen 295SLSA6 Siren & Light Controller is a rugged, compact, self-contained unit, that is totally plug-in compatible with the 295HFSA6 unit that it replaces. This siren is designed for under-dash or console mounting.

The Master Power switch is programmable for On/Off operation of the siren only, or siren and switch functions. The four position slide switch activates up to three 20 amp circuits. The six push buttons are programmable momentary switches that activate six 15 amp circuits for auxiliary control of lightbar functions or auxiliary lighting. All seven positions of the rotary switch serve a primary function plus programmable override tones. Primary functions are: Radio Repeat, Manual 1, Manual 2, Hands-Free, Tone 1, Tone 2, Tone 3. There are 16 Scan-Lock siren tones to choose from.

This model comes with Si-Test, a silent self-diagnostic feature which provides real time indication of proper siren/speaker operation. Two different diagnostic tests include: Continuous dynamic testing during normal siren operations and silent testing while in "Radio" mode with the "manual" button depressed. The two speaker LEDs serve as Si-Test's diagnostic indicators. This siren supports one or two 100 watt speakers. Comes with hard-wired microphone. An adjustable bail bracket allows mounting in a variety of positions. Meets SAE J1849 and California Title 13 requirements.

Features:

- Master Power switch is programmable for On/Off operation of the siren only, or siren & switch functions.
- Four position slide switch activates up to three 20 amp circuits.
- Six push buttons are programmable momentary switches that activate six 15 amp circuits.
- Six push buttons can be programmed for Push-On/Push-Off, Momentary, Flashing or Timed
- LED backlighting.
- Over/under voltage protection.
- Short circuit protection.
- Input polarity protection.
- Voltage: 12.8 VDC (+/-20%)
- Polarity Protection: Diode/Fuse
- Amps Draw: 16 Amps Max.
- Weight: 4.6 Lbs.
- Size: 3-5/16" H x 6" W x 7" D.



Whelen Edge® Ultra Freedom™ all Linear-LED® lightbars feature the next generation of ultra-bright, ultra wide-angle Super-LED® technology, in a warning package that rivals strobe in impact. Designed for rough treatment, providing heavy-duty, long life operation with low current draw. Lenses and lamp modules are of equal size so that they can be placed anywhere in the lightbar. Most Whelen lightbars are easily upgraded with new Super-LED LR11 LED take-down or alleys for steady-burn or flashing operation, with field-proven reliability so you may never need to service these lamps ever again! Now you have the "Freedom" to easily build the exact lightbar you've been looking for.

Features:

- Four corner Linear Super-LED modules provide full 360 degree coverage.
- All models meet or exceed SAE Class 1 and California Title XIII requirements.
- Rugged extruded aluminum I-Beam housing and all modular construction.
- Only 28-1/4" long with four corner Linear-LED modules standard.
- Low current draw, only 2.5 amps @13.6 VDC.
- Easy access to internal components utilizing snap in brackets. Components change easily using only a screwdriver.
- Blue, red, amber and/or white Super-LEDs.
- Optional take-downs and alley lights.
- A maximum of four Linear-LED modules fit in the magnet and permanent mount models, two halogen lamps fit in the permanent mount models.
- Permanent mount models with 15' passenger side cable.
- Size: 3-3/4" (95mm) H x 28-1/4" (717mm) W x 12" (304mm) D.

BAR COMES WITH 4 DUAL CORNER MODULES, OPTIONAL TAKEDOWN AND ALLEY LIGHTS AVAILABLE ON PERMANANT MOUNT BAR ONLY.



Whelen 700 Series has a newly designed gasket for mounting directly into a hole cut-out on the vehicle without using a housing or a flange. Split LED models available.

FEATURES

These LED's are brighter and more effective at wide angles than ever before. • Encapsulated modules shrug off moisture, salt, chemicals and road shock.

Rated for 100,000 hours of low current, operation.

Exceed SAE specifications for the brightest, most effective signaling capability available.

LED light heads have a five year unconditional HDP heavy duty professional warranty.

Mounting options are purchased separately

12 diode models are comparable in intensity to existing halogen scene lights.

24 diode models compare to H.I.D. models.

Lower operating temperature.

700 Series use standard optional mounting flanges.

Conformal coated internal electronics.

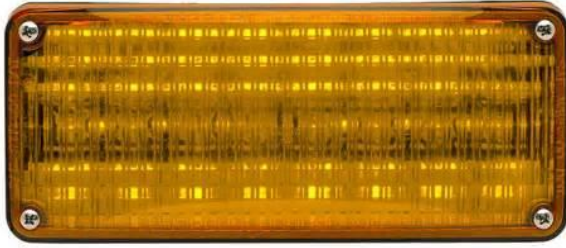
LED lights do not emit ultra-violet radiation that attracts insects during night operation like H.I.D. lights do.

HDP® Heavy-Duty Professional 5 year warranty.

Optional chrome plated or black flanges 700 Series.

SPECIFICATIONS

7-1/4" Long x 3-1/16" High, Protrudes 1-1/16".



Whelen 700 Series has a newly designed gasket for mounting directly into a hole cut-out on the vehicle without using a housing or a flange. Split LED models available.

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Rigid E Series Work Lights

Since its introduction in 2006, the E-Series light bar has set the standard in the industry through continuing advances in technology and superior engineering. Available in a wide range of lengths and configurations, our flagship is the light bar of choice for everything from light truck / car applications and vehicle race teams to farming equipment and police / fire rescue vehicles. The E-Series light bar is designed to project light at extreme distances while consuming very little power. This 10 inch version features an extruded aluminum housing with 20 LED's that together produce an industry-leading 4,200 raw lumens at only 40 watts. Hybrid Optics - Our patented Hybrid optics system is the most powerful, most efficient LED optics system on the market. Utilizing a combination of lens and reflector, our patented optics capture the maximum amount of light emitted from the LED and projects it exactly where you want it. Spot / Flood Combo - This light bar features both the Spot and Flood versions of our Hybrid optics system. The Spot version of our Hybrid optics system projects light over great distances in a concentrated beam. It's the most powerful spot-style LED light in the industry. This light is perfect for high speeds or any situation where you need extreme distance. While offering just over half the distance of the Spot version, the Flood provides twice the area coverage. This light incorporates both using our Spot optics in the middle and our Flood optics in the outer sections to provide the perfect combination of distance and area. Quality Construction - Our circuitry is designed in-house to be more powerful, be more efficient, and generate less heat. Our durable aluminum housings feature custom, over-sized heat sinks which keep the temperature down and allow our LED's to run cooler and brighter. All Rigid Industries LED lights receive a high quality powder coat finish, a custom-molded rubber seal, and an unbreakable, scratch resistant lens.



16.5ti SPECS

Motor: 12V 4.6 hp, Gen II, Series Wound

Electrical Control: Solenoid Control Pack

Remote control: Remote switch, ti, with LED indicator 12 ft. (3.7m) lead

Gear train: 3-stage planetary

Gear ratio: 315:1

Clutch (free spooling): Rotating ring gear

Brake: Automatic direct drive cone

Wire rope: 90 ft., 7/16 in diameter (27m, 11mm diam.)

Fairlead: Roller

Recommended battery: 650 CCA minimum for winching

Battery leads: 2 gauge, 72 ft. (1.83m)

Finish: High-gloss powder coat over primer undercoating

Drum diameter/length: 3.5 in /8.2 in (9cm/21cm)

Weight: 138 lbs. (63 kgs.)

Predator Hood Sound Deadening Pads



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Your Price: \$299.95

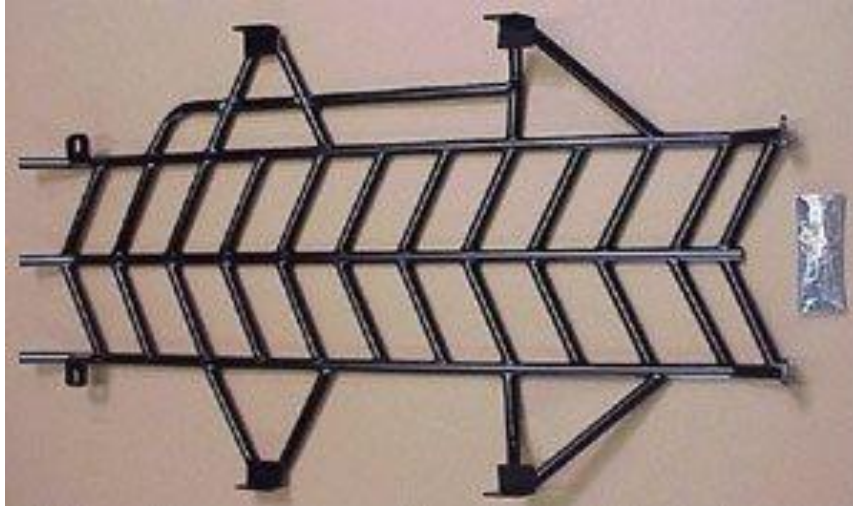
Item Number: **H1-INT-197**

Installs under the hood for improved engine sound deadening. This high quality kit is composed of 1" thick fiberglass pad covered with gray silicon impregnated fiberglass cloth. Drastically reduces engine sound!

PREDATOR INC.

877-733-2867

HEAVY DUTY UNDER CARRIAGE PROTECTION EXTENDER



Your Price: \$799.00
Item Number: **H1-EXT-194**

Available for both the H1 and Alpha H1.

Coupled with your existing under carriage protection, our new UCP Extender will give you complete protection of your exposed drive line, exhaust system, transfer case and fuel tank. Our extension covers the exposed area left by the factory. It is manufactured from Heavy Duty Steel to far exceed the factory UCP. With nine contact points, you are sure to have unsurpassed strength and quality. All Extenders are Heavy Duty Dupont Powder Coated and include grade 8 hardware.

