COBRA MAX™

Installation, Operating, & Maintenance Instructions

98634000, Rev A

1-574-295-8330
www.elkhartbrass.com

ELKHART BRASS
A **Clarience Technologies** Company

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CobraMax™ Kit – 81910

The CobraMax is a combination shroud cover and lighting kit that gives a sleek and sophisticated look to the Cobra EXM2 monitor. The attractive thermoformed shroud cover is not only visually appealing, but also hides and adds a layer of protection over much of the otherwise exposed wiring typical of the standard Cobra EXM2 monitor. The lighting modules of the CobraMax Kit can be changed to a number of in-field selectable colors to fit a particular installation or occasion. The Back Light Module displays the CobraMax Logo while the Side Light Modules display the Elkhart Brass Elk and Heart logo (standard). The optional Custom-Etched Side Lenses allow customers to personalize the look of the Side light modules with their own logo such as a department emblem, station number, or other desired image. With the superior aesthetic of the CobraMax Kit the Cobra EXM2 monitor becomes a focal point of any installation.

The CobraMax shroud covers come in a choice of Matte Black, Gloss Black, Gloss Red, or Gloss Gray. The lighting modules can be user-set to a range of colors including Blue, Green, Yellow, Red, and White.

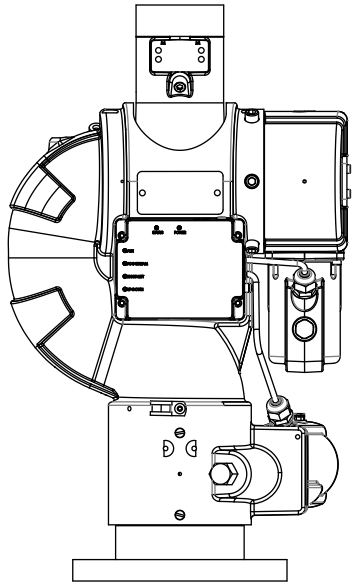
The CobraMax Kit is compatible with any combination of Cobra monitor version that has received the CobraMax-Ready mounting bosses (Any monitor sold after 11/1/2019 should include these bosses). CobraMax compatible combinations include both 7200 and 7250 designations, both SD or HD motor options, both ¾" Nut or Handwheel Overrides, any currently available base option, and both NHT or BSPP discharge thread options.

Side Light Modules
Back Light Module
Shroud Cover
CobraMax-Ready Mounting Bosses

CobraMax Installation

Reference the CobraMax Kit Parts Drawing on Pages 10-11 for more detail on parts used.

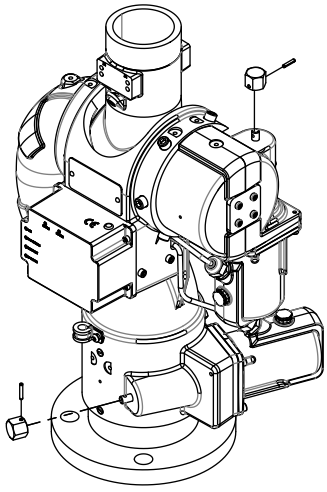
1. Position the monitor so that the discharge is pointed straight up away from its base as shown. Power off the monitor and disconnect its main power harness. Collect the following tools that will be required to perform the CobraMax installation.



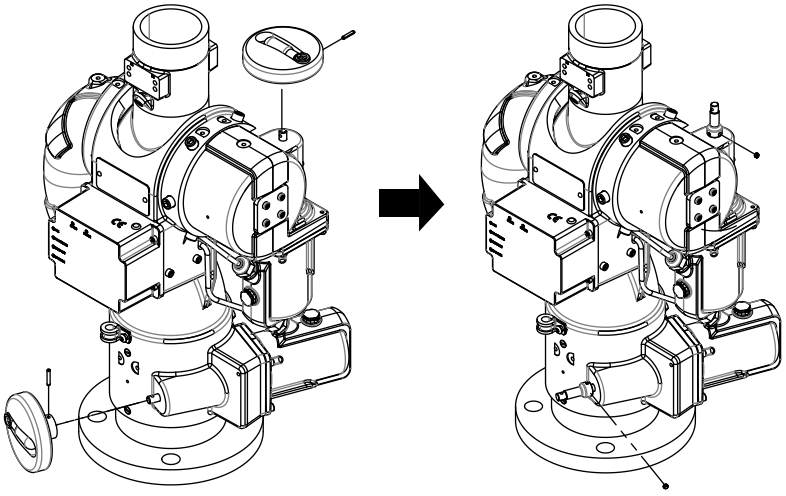
Tools Required for Assembly:

- 1/8" Diameter punch
- Hammer
- Channellock Pliers
- 1/8" Allen or T-Handle Wrench
- 9/64" Allen or T-Handle Wrench
- Torque Wrench or Screwdriver w/ #2 Phillips
- 3/8" or Adjustable Wrench
- Loctite #243, or equivalents
- O-Ring Compatible Grease

2. Remove the spring pins and either the override nuts or handwheels from the Cobra Assembly. Save these parts in a place where they will not be lost or damaged, they will be used again later. Use Channellock pliers to attach the CobraMax override shaft extensions with the provided 1/8" diameter, 5/8" long spring pins. Further secure the override shaft extensions in place by installing the provided #10-32 set screws into the override shaft extensions. Apply blue Loctite #243 or an equivalent thread locker to the screw threads.



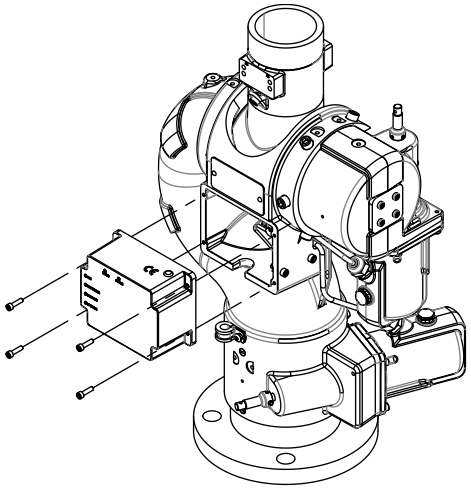
¾" Nut Override Removal



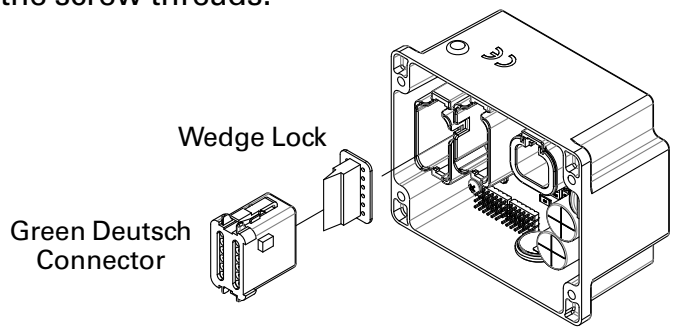
Handwheel Override Removal

Attach Override Extensions and Set Screws

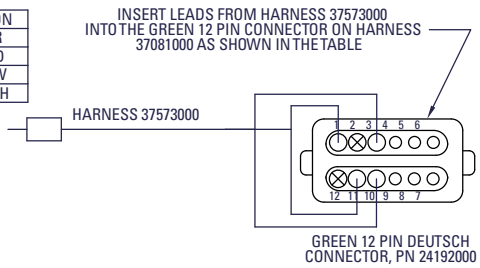
3. Remove the EXM2 Module by removing the four #8-32 screws holding it in place. Disconnect the Green Deutsch connector and remove its wedge lock. Remove the pin plugs from the appropriate holes and insert the wires of harnesses 37573000 as shown here. Reinsert the wedge lock into the Deutsch connector and connect it back to the EXM2 module. Reattach the EXM2 module with the same four #8-32 screws. Route the wires down through the cutout in the inlet body with the main power harness. Apply blue Loctite #243 or an equivalent thread locker to the screw threads.



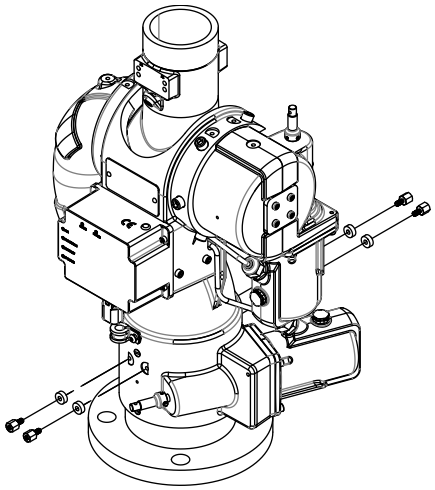
EXM2 Module Removal



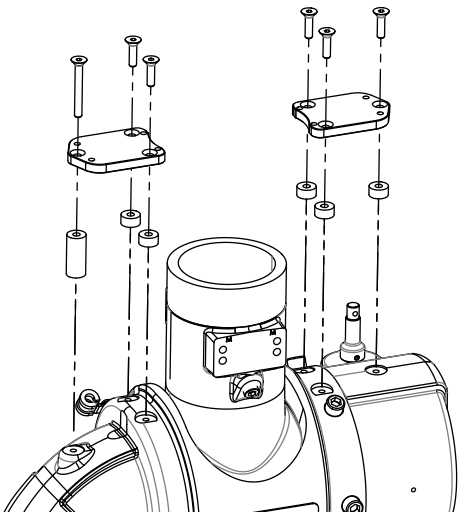
WIRE COLOR	PIN LOCATION	FUNCTION
RED	1	POWER
BLACK	11	GROUND
YELLOW	3	CAN LOW
GREEN	10	CAN HIGH



4. Install the provided standoffs and spacers onto the monitor body in the four locations shown. Install the upper brackets and spacers onto the monitor body using the provided flat head screws as shown. Apply blue Loctite #243 or an equivalent thread locker to the flat head screws. Apply red Loctite #272 or an equivalent thread locker to the standoffs.

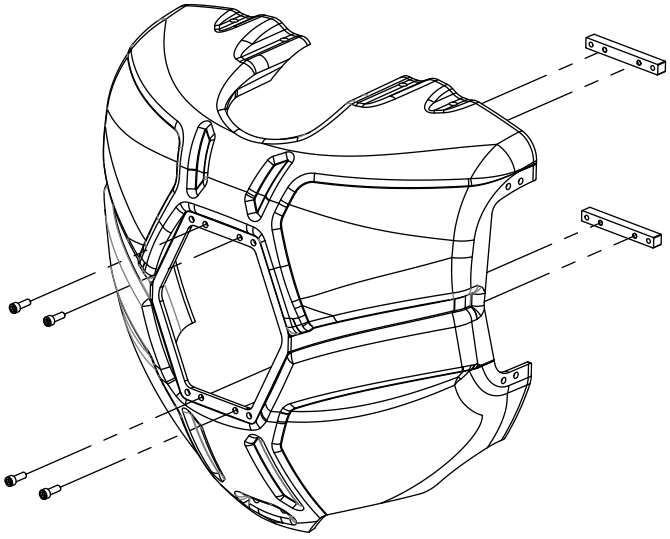


Attach Standoffs and Spacers

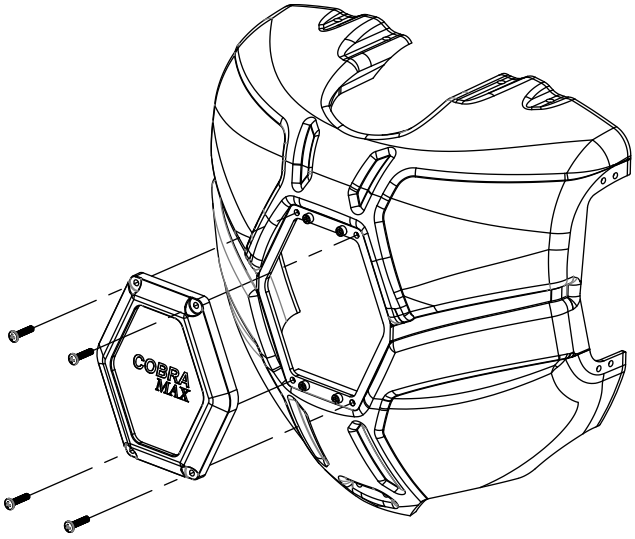


Attach Upper Brackets and Spacers

5. Attach two Light Module Support brackets onto the back half of the monitor shroud with four of the provided Socket Head #8-32 screws as shown. Attach the Back Light Module to the back half of the shroud with the four Pan Head #8-32 screws provided (Insert the Light Module wires through the cutout in the shroud). Orient the Back Light Module as shown. Apply blue Loctite #243 or an equivalent thread locker onto the female threaded holes of the brackets before assembling.

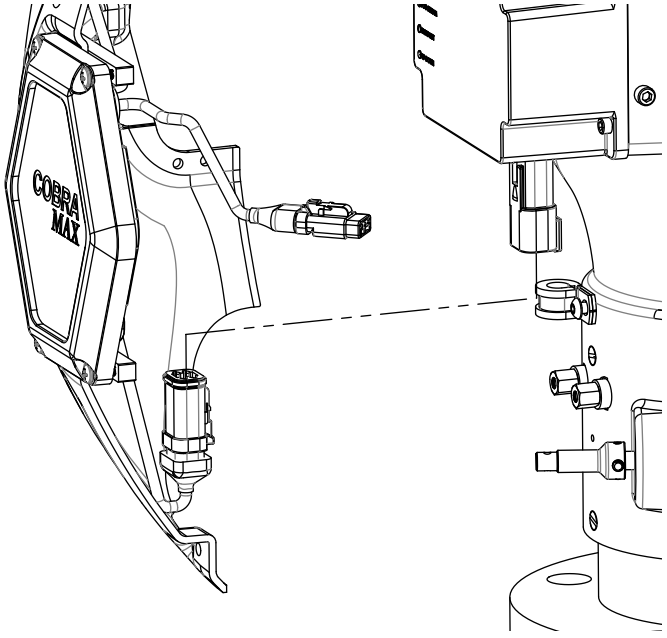


Attach Light Module Support Brackets

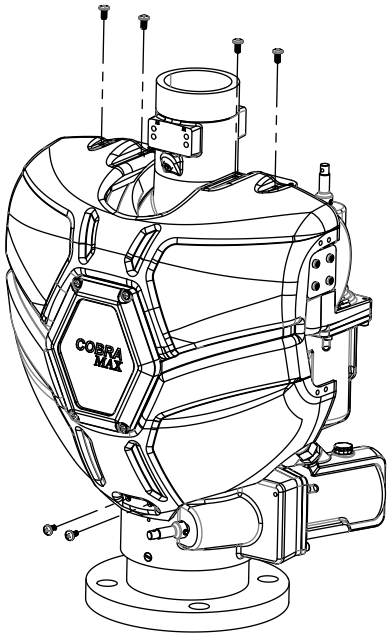


Attach Back Light Module

6. Connect the Back Light Module to the EXM2 Module using the appropriate Deutsch connector. Attach the Back Shroud to the monitor using six of the #10-32 Pan Head screws provided. Apply blue Loctite #243 or equivalent thread locker onto the female threaded holes of the brackets and standoffs before assembling.

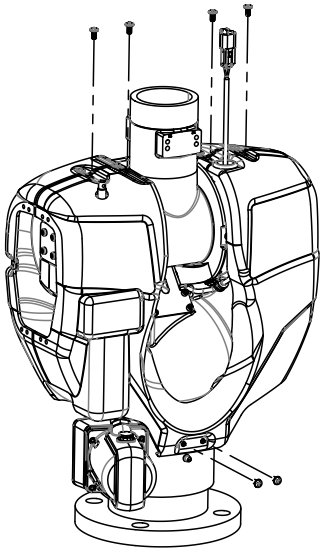


Connect Module Wires

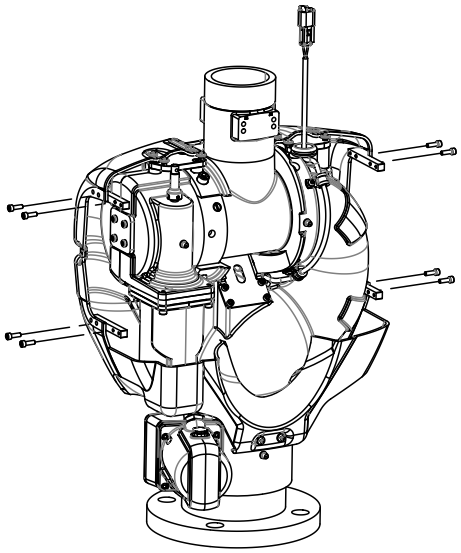


Attach Back Shroud

7. Attach the Front Shroud onto the monitor as shown with six of the #10-32 Pan Head Screws provided. Insert the nozzle wire harness through the shroud and install the rubber grommet in the hole as shown. Attach four of the Light Module Support Brackets into the locations shown using the provided #8-32 screws. Apply blue Loctite #243 or equivalent thread locker onto all the female threaded holes in the various brackets and standoffs before assembling.

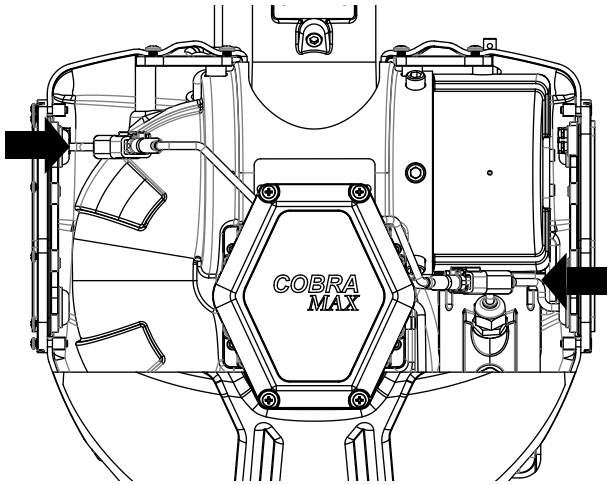


Attach Front Shroud

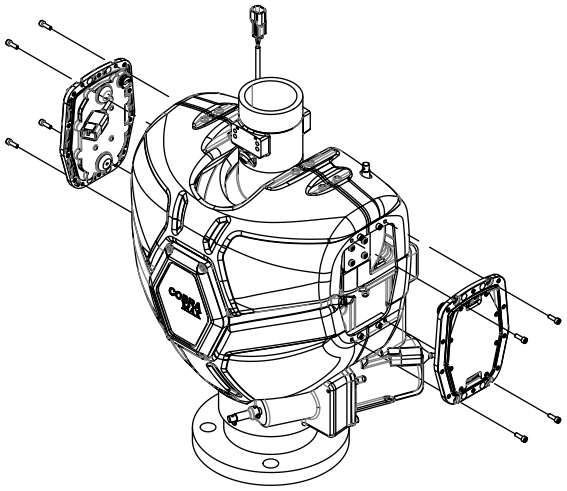


Attach Light Module Brackets
(A Portion of the Front Shroud is Hidden in This View)

8. Connect the Left and Right Light Module cables to the respective cables coming from the Back Light Module as shown. Mount the Left and Right Light Modules to the Shroud Covers as shown with the provided #8-32 Socket Head Screws (Tuck the Side Light Module wires inside the Shroud Assembly). Blue Loctite #243 or an equivalent thread locker should be applied to the female threaded holes of the brackets.

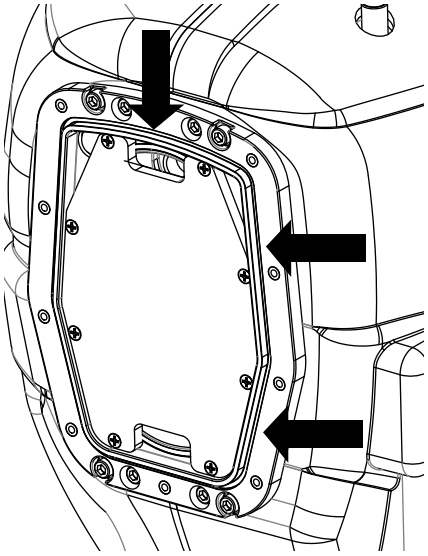


Connect Side Light Module Cables
(A Portion of the Back Shroud is Hidden in This View)

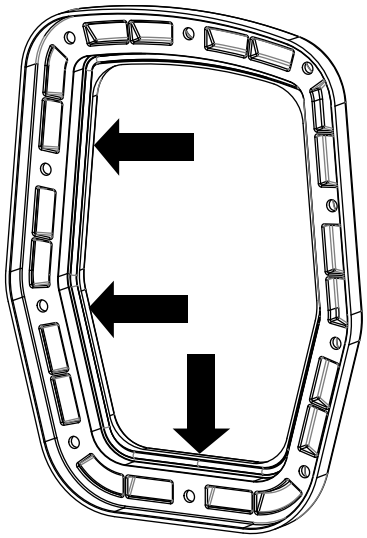


Attach Side Light Modules

9. Apply a generous amount of Mobilux EP2 Lithium Grease or an appropriate O-ring compatible grease to the provided AS-568-048 and AS-568-049 O-Rings. Install the AS-568-049 O-Ring onto the Right and Left Light Module housings as shown. Install the AS-568-048 O-Rings into the Light Module Bezels as shown.
(Reference: The -049 O-ring is larger than the -048 O-Ring)

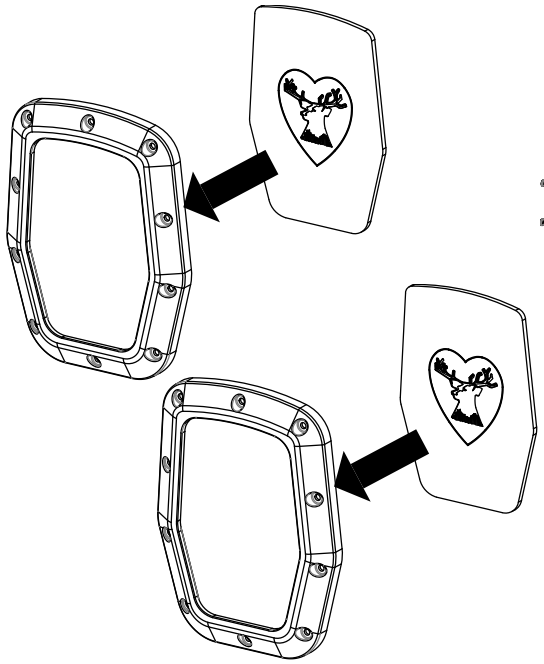


AS-568-049 O-Ring
In Light Module Housing

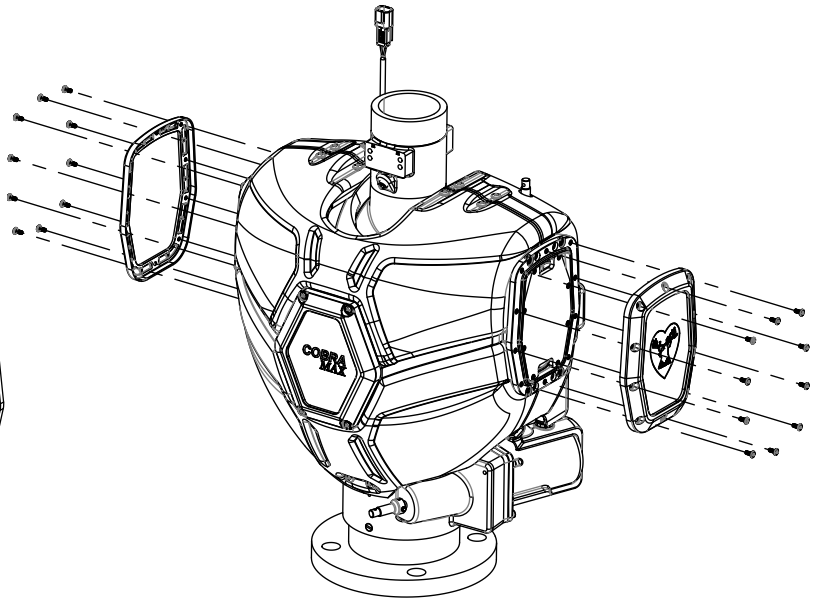


AS-568-048 O-Ring
In Light Module Bezel

10. Install the Side Light Module lenses into the Bezels as shown. Then attach the Bezels and Lenses to the Side Light modules with the provided #6-32 Pan Head screws. Apply blue Loctite #243 or an equivalent thread locker to all screw threads. Torque the screws to 10 In-Lbs. The Lenses should be installed so that the coated surface is on the inside of the Light Module assembly and the image is displayed correctly.

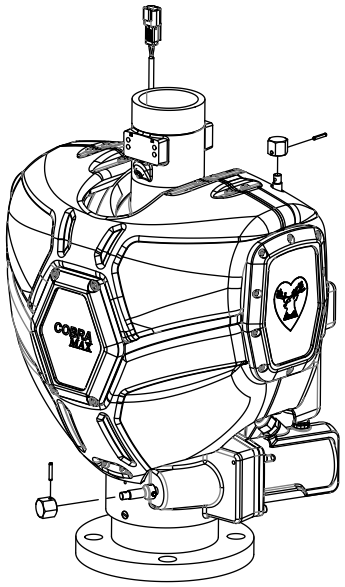


Install Lenses into Bezels

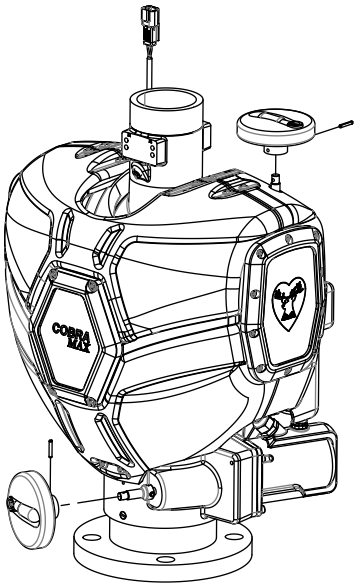


Attach Bezels with Lenses to
Light Modules

11. Use Channellock pliers to attach the override ¾" Nut or Handwheels removed previously to the override extensions. Use the same spring pins that were removed previously to hold them in place.

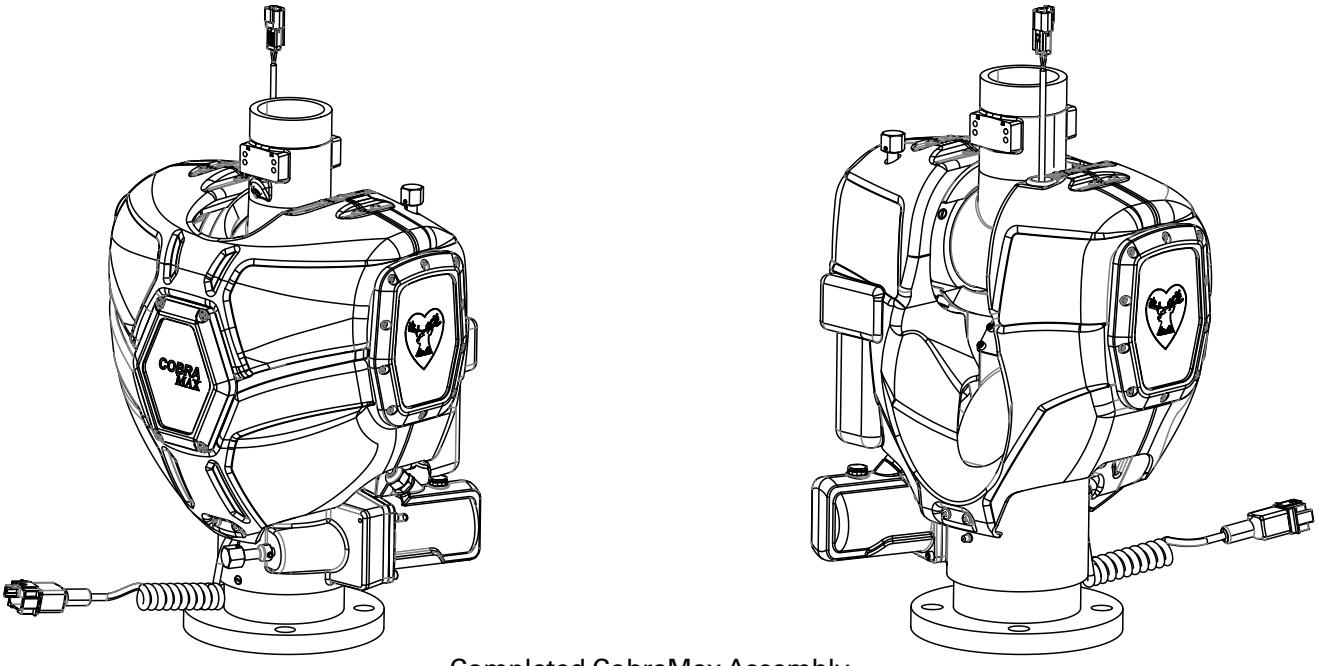


Attach ¾" Nut Overrides



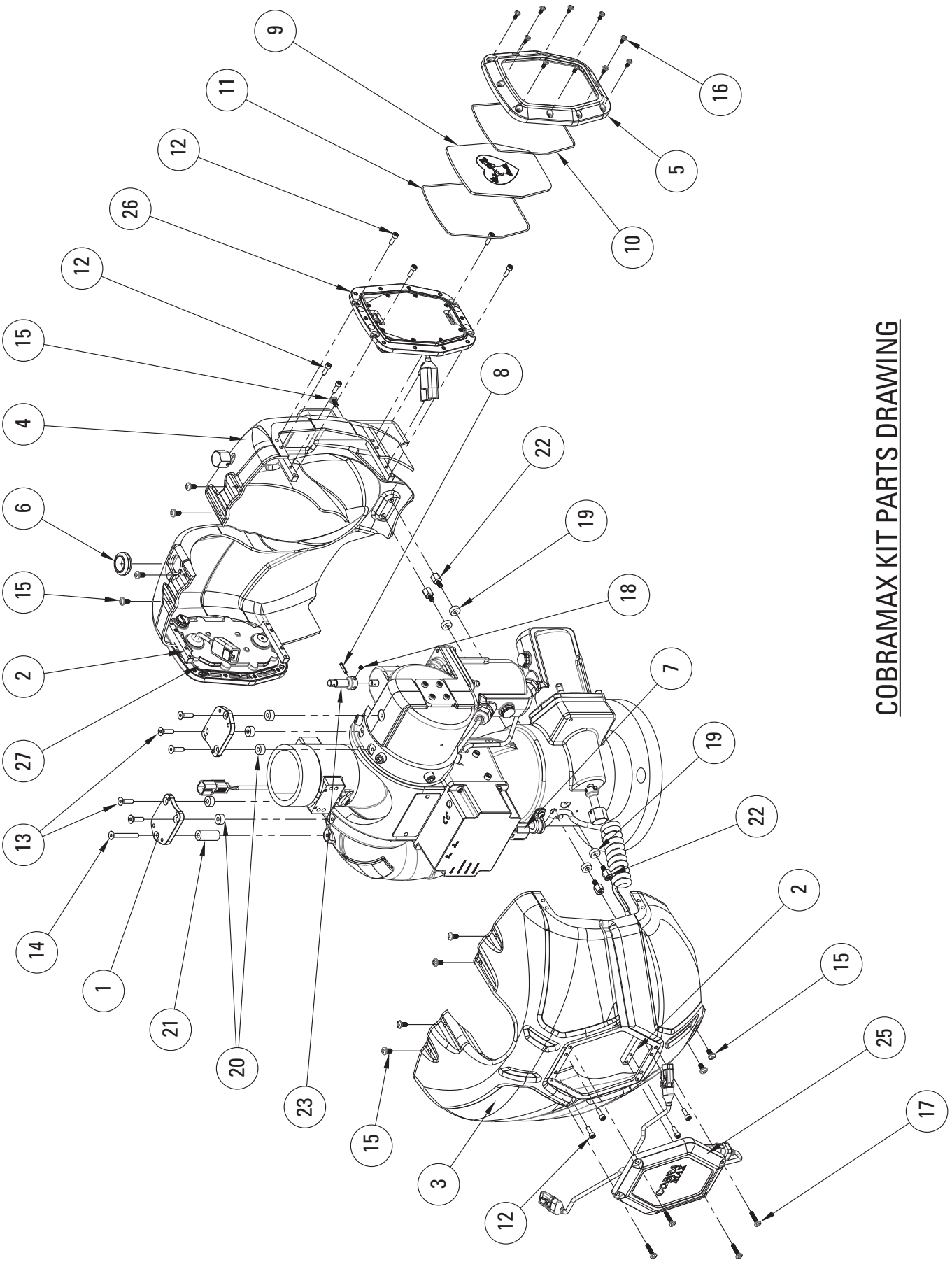
Attach Handwheel Overrides

12. Reconnect the main power harness to the monitor and power on the monitor. Rotate the monitor and ensure that the monitor does not contact the shroud covers in a way that will cause damage to the shroud covers. View the three Light modules and ensure that they light up as intended.



Completed CobraMax Assembly

CobraMax Parts Drawing



COBRAMAX KIT PARTS LIST

ITEM NO.	PART NUMBER	DESCRIPTION	
1	18559001	BRACKET - COBRAMAX UPPER SUPPORT	2
2	18582001	BRACKET - CMAX LIGHT SUPPORT	6
3	2473100X	COVER - 7200/7250 SHROUD (BACK)	1
4	2473300X	COVER - 7200/7250 SHROUD (FRONT)	1
5	28509000	ENCLOSURE - CMAX (SIDES) BEZEL	2
6	33759000	GROMMET - 7/8HOLE 1/8PANEL 3/4ID	1
7	37573000	HARNESS - CMAX LIGHT	1
8	51248000	PIN ROLL 79-028-125-0.625	2
9	5287500X	LENS - SIDE MODULE (ETCHED)	2
10	57552000	O-RING AS-568-048	2
11	59231000	O-RING AS-568-049	2
12	64103000	SCREW 8-32X0.500 SOC CAP SS	20
13	64334000	SCREW-#10-32X0.750 LFT HD ALLEN	5
14	64335000	SCREW-#10-32X0.750 FLT HD ALLEN	1
15	64336000	SCREW-#10-32X0.375PAN PHILLIPS	12
16	64337000	SCREW-#6-32X0.312 PAN HD PHILLIPS	20
17	65164000	SCREW - 8-32 X 0.750 PAN HD	4
18	65233000	10-32 x 0.125 SOC SET SCREW FL PT SS	2
19	65634000	SPACER - #10SCR 1/2 ODX0.188TALL	4
20	65635000	SPACER - #10SCR 1/2 ODX0.250TALL	5
21	65636000	SPACER - #10SCR 1/2 ODX1.125TALL	1
22	65637000	STANDOFF - #10-32 X 0.375 TALL	4
23	67559001	SHAFT - CMAX OVERRIDE EXTENSION	2
24	81915000	LIGHT MODULE - CMAX BACK	1
25	81916000	Light Module - CobraMax (Right)	1
26	81917000	Light Module - CobraMax (Left)	1

SHROUD COLOR OPTIONS

PART NUMBER	DESCRIPTION
24731000	SHROUD BACK - MATTE BLACK
24733000	SHROUD FRONT - MATTE BLACK
24731001	SHROUD BACK - RED
24733001	SHROUD FRONT - RED
24731002	SHROUD BACK - GLOSS BLACK
24733002	SHROUD FRONT - GLOSS BLACK
24731003	SHROUD BACK - GRAY
24733003	SHROUD FRONT - GRAY

SIDE MODULE LENS OPTIONS

PART NUMBER	DESCRIPTION
52875001	LENS - DEFAULT 'ELK & HEART' LOGO
52875002	LENS - CUSTOMER SUPPLIED ARTWORK

Changing Light Module Colors

1. On any connected EXM2 input device, press and hold AUX + OSC. All three light modules will begin flashing approximately 1 time every second.
2. Press either AUX or OSC to cycle between colors. Color choices are Blue, Green, Yellow, Red, and White.
3. Once the desired color is displayed, wait 10 seconds.
4. When the light modules stop flashing, the color is set.

Wi-Fi Mode Indication

When the CobraMax shroud and lighting assembly has been assembled to a Cobra EXM2 monitor and the monitor Wi-Fi is turned on, the CobraMax light modules will turn blue and begin flashing in an alternating (Back, Sides, Back, Sides) pattern to signal that Wi-Fi is on. This light operation will continue until the Cobra EXM2 monitor turns off Wi-Fi. Once Wi-Fi is turned off, the CobraMax light modules will stop flashing and will return to whatever color they were previously set to.

Custom Etched Lenses (Side Light Modules)

The Custom Lens option for the CobraMax shroud and lighting assembly provides customers the ability to display a chosen text, number, or image on their CobraMax monitor assembly. This custom artwork will be displayed and illuminated on both of the two Side Light Modules of the CobraMax assembly. Upon ordering custom CobraMax Lenses and providing artwork meeting the requirements, the customer will be provided all the parts needed to replace the standard 'Elk & Heart' lenses received as standard with their CobraMax assembly with their chosen design. The Side Lighting Modules of the CobraMax have been designed to allow customers to easily switch out the lenses in order to display their created image. To purchase custom CobraMax lenses, contact an Elkhart Brass representative at (574) 295-8330 and complete the CobraMax Custom Lens Order Form which can be obtained at www.elkhartbrass.com.

Standard 'Elk & Heart' Lens

Custom Etched Lens

CobraMax Specifications –

- Shroud Cover Material –
  - Matte Black: UV Resistant Acrylic Capped ABS
  - Gloss Black, Gloss Red, Gloss Gray: UV Resistant Paint Film Covered ABS
- Light Module Enclosure Material – Glass Filled Nylon
- Additional Weight: 4 Lbs Approx.
- Swing Radius – 7.5" (190.5 mm)
- Seal Rating (Light Modules): NEMA 4

FCC Statement:
Note:This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Modifications made to this equipment not expressly approved by Elkhart Brass Mfg. Co., Inc., could void the users authority to operate the equipment.

Innovation, Science and Economic Development Canada (ISED) Statements:

RSS-Gen and RSS-210 statement:
This device complies with Industry Canada license-exempt RSS standard(s), Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le present appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorlsée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouiliage, et (2) l'utilisateur de l'appareil doit accepter tout brouiliage radioélectrique subi, meme si le brouiliage est susceptible d'en compromettre le fonctionnement.

CE Statements:
Elkhart Brass declares the product conforms to Machinery Directive 2006/42/EC. In addition to the above mentioned directive, the products conform to the following European Directives:

Electromagnetic Compatibility Directive 2014/30/EU

Pressure Equipment Directive 2014/68/EU

Low Voltage Directive 2014/35/EU

The following harmonized standards and specifications are applied:

EN ISO 12100:2010 Safety of Machinery

See our website at www.elkhartbrass.com for more information.

RF Immunity for CE
When subjected to strong RF radiation, the light panel may experience intermittent color changes that will resolve when Strong RF field is removed.This behavior is expected and normal, and will not cause any lasting damage to the device.

NOTES

NOTES

ELKHART BRASS

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