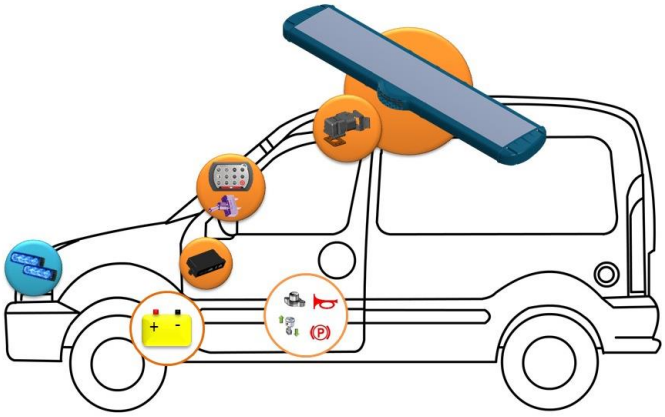
GENERAL TECHNICAL GUIDE
VEGA LIGHTBARS CLASS 2 SIREN / SPA HANDY WITH ROOF CONNECTOR



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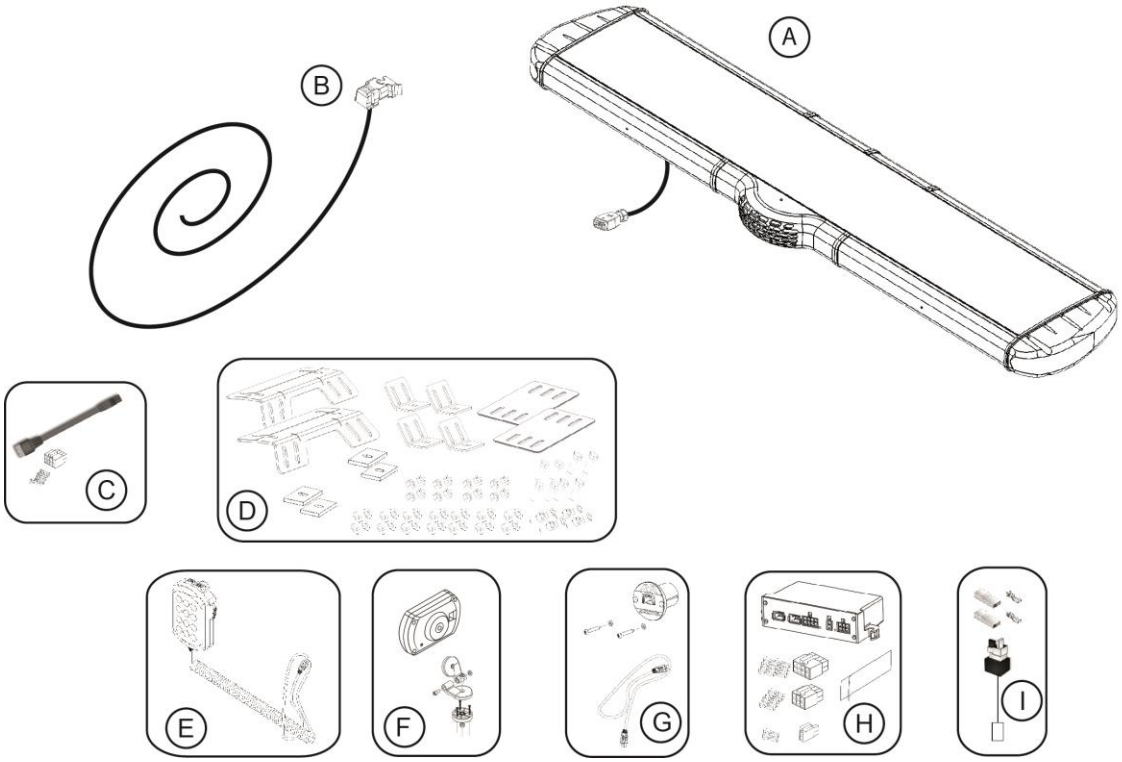
WARNING CONCERNING THE MOUNTING OF MERCURA'S EQUIPMENT

The installer is fully responsible for the mounting of equipment on a vehicle.

The installer must define the means and the material necessary for mounting of equipment in order to deliver the vehicle equipped according to the regulations.

MERCURA is not responsible for failures occurring due to incorrect definition of the type of mounting system, reinforcements, drilling holes in roof panel, state and quality of mounting system, use of vehicle manufacturer anchoring points and the system power supply and protection definition in accordance with the vehicle energy source.

1. KIT COMPOSITION



A. VEGA lightbar with siren equipped with wiring harness (see available versions §2)
B. Vehicle's harness with 18-point roof connector
C. BUS-wired adaptor kit
D. Adjustable mountings

Options

E. SPA Handy control box
F. Multiplexed control box
G. Dashboard Interface
H. CCS BLL module for traditional controls (via switches)
I. Hand brake module (For controls depending on the condition of the hand brake: grill lights, flashing scrolling...)

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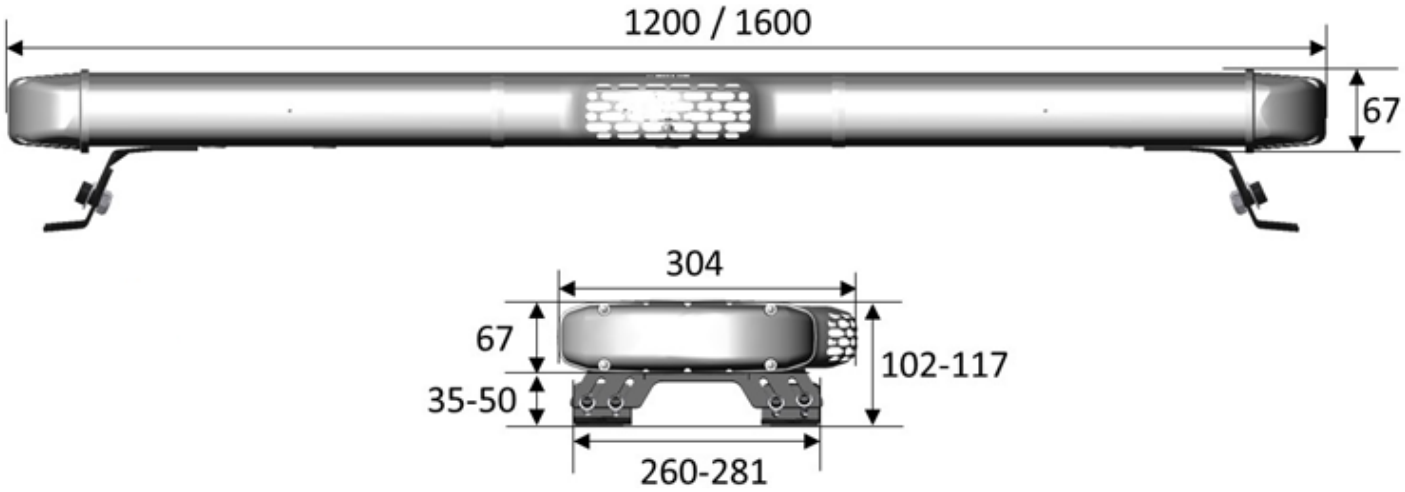
2. AVAILABLE VERSIONS

Length	Side	Front	Rear	Alley lights	Reference
1200	Blue	Blue	x	x	29243
1600					29245
1200	Blue	Blue	Blue	x	29247
1600					29249
1200	Blue	Blue	Amber	Yes	29251
1600				x	29253
1200 SPA	Blue	Blue	Amber	Yes	29260

3. DIMENSIONS



4. WEIGHT DEPENDING ON VERSIONS

NON-EXHAUSTIVE LIST

29243	29245	29247	29249	29251	29253	29260
12.5 kg	14 kg	13 kg	14.5 kg	13 kg	14.5 kg	13 kg

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5. ELECTRICAL CHARACTERISTICS

Operating voltage: 10.5-30 Volts

CONSUMPTION (1.20 m & 1.60 m LIGHTBARS)

The 1.20 m and 1.60 m lightbars of identical configurations have the same number of lights.

Blue Lights

Flash R65 function

- 6.3 A peak for 13.5 volts / 3.2 A peak for 27 volts
- 2.2 A average for 13.5 volts / 1.3 A average for 27 volts

Alley lights left and right: 1 A for 13.5 volts

Amber Warning Lights

Flash Mode

- 2.1 A peak for 13.5 volts / 1.3 A peak for 27 volts
- 1.1 A average for 13.5 volts / 0.7 A average for 27 volts

Left Scrolling Mode

- 0.6 A peak for 13.5 volts / 0.4 A peak for 27 volts
- 0.35 A average for 13.5 volts / 0.25 A average for 27 volts

Right Scrolling Mode

- 0.6 A peak for 13.5 volts / 0.4 A peak for 27 volts
- 0.35 A average for 13.5 volts / 0.25 A average for 27 volts

Flash set with alley lights and amber warning bar in flashing mode

- 9.8 A peak for 13.5 volts / 5 A peak for 27 volts
- 4.3 A average for 13.5 volts / 2.3 A average for 27 volts

Siren

- 4.2 A for 13.5 volts
- 2.1 A for 27 volts

Examples of fuse values* (*not supplied)

VEGA lightbars with siren, front and rear lights with or without alley lights:
- 30 A for 12 volts
- 15 A for 24 volts

VEGA lightbars with siren and only front lights:
- 20 A for 12 volts
- 10 A for 24 volts

VEGA lightbars with siren and without front or rear lights:
- 20 A for 12 volts
- 10 A for 24 volts

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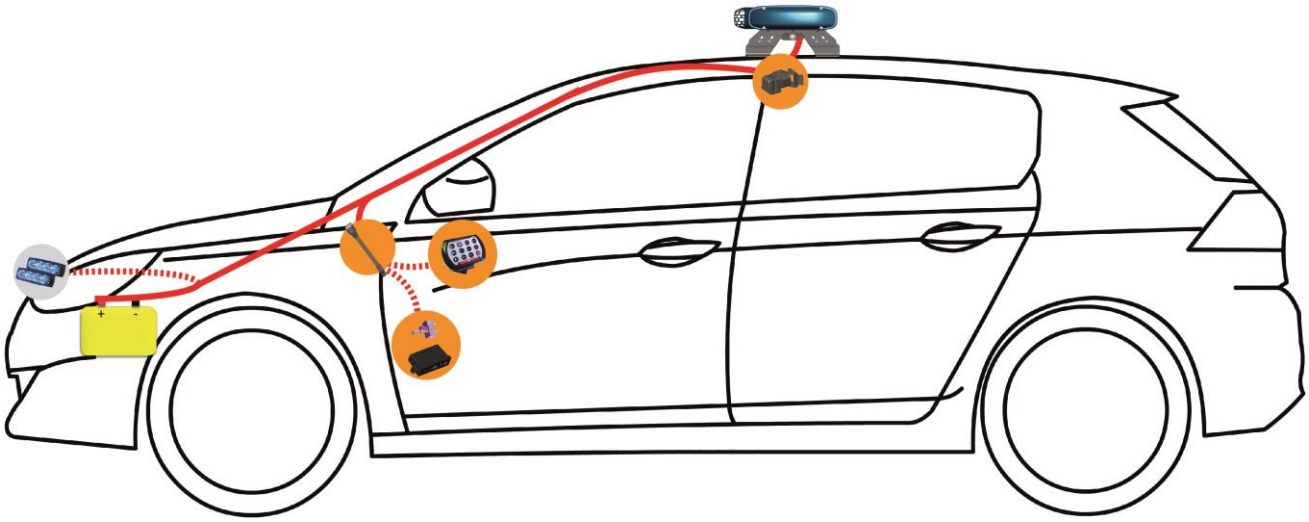
6. INSTALLATION

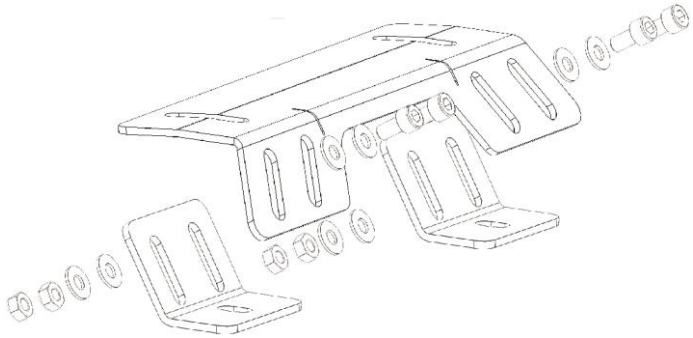
6.1. GENERAL LAYOUT

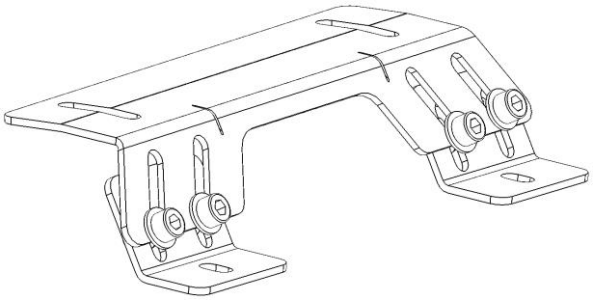


6.2. INSTALLATION OF MOUNTINGS

Assembly of upper and lower mountings

- 8 x CHC M06x12 INOX screws
- 16 x Ø6x14x1.2 IN A4 flat washers
- 8 x H M06 IN A4 locking nuts





Installation of mountings on base

- 4 x H M06x20 IN screws
- 4 x Ø6x14x1.2 IN A4 flat washers
- 4 x H M06 IN A4 locking nuts

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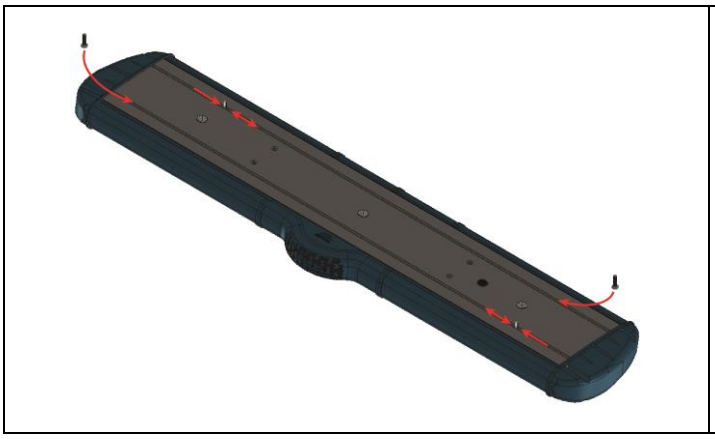
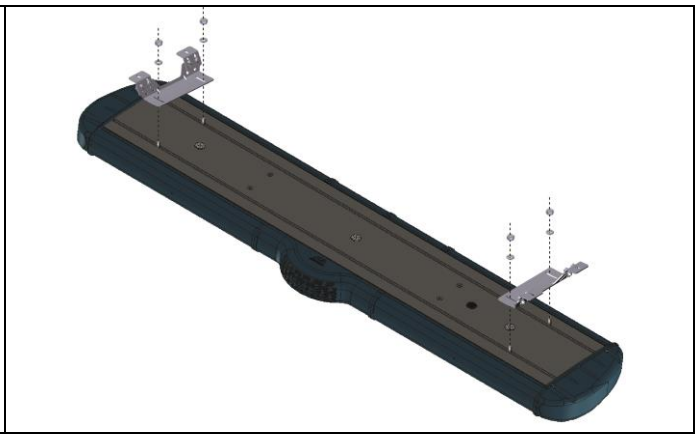
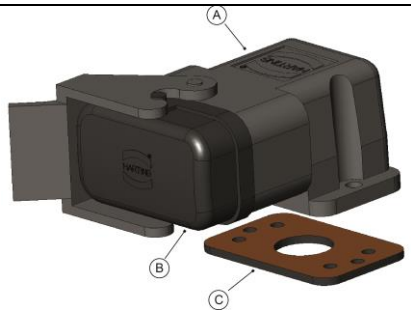


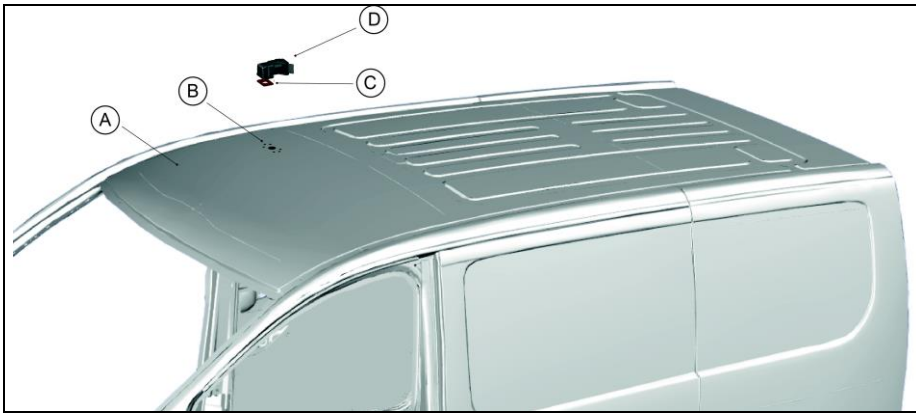


6.3. 18-POINT ROOF CONNECTOR



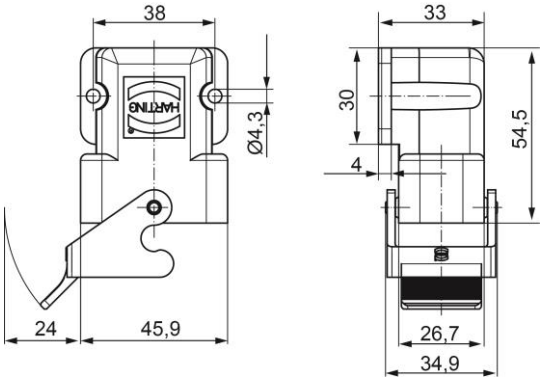
A. Roof connector base
B. Protective cap of the roof connector
C. Roof connector gasket

6.4. ROOF MOUNTING



A. Vehicle's roof
B. Vehicle's 2 drilling points
C. Roof connector gasket
D. 18-point roof connector base

6.5. BASE DIMENSIONS



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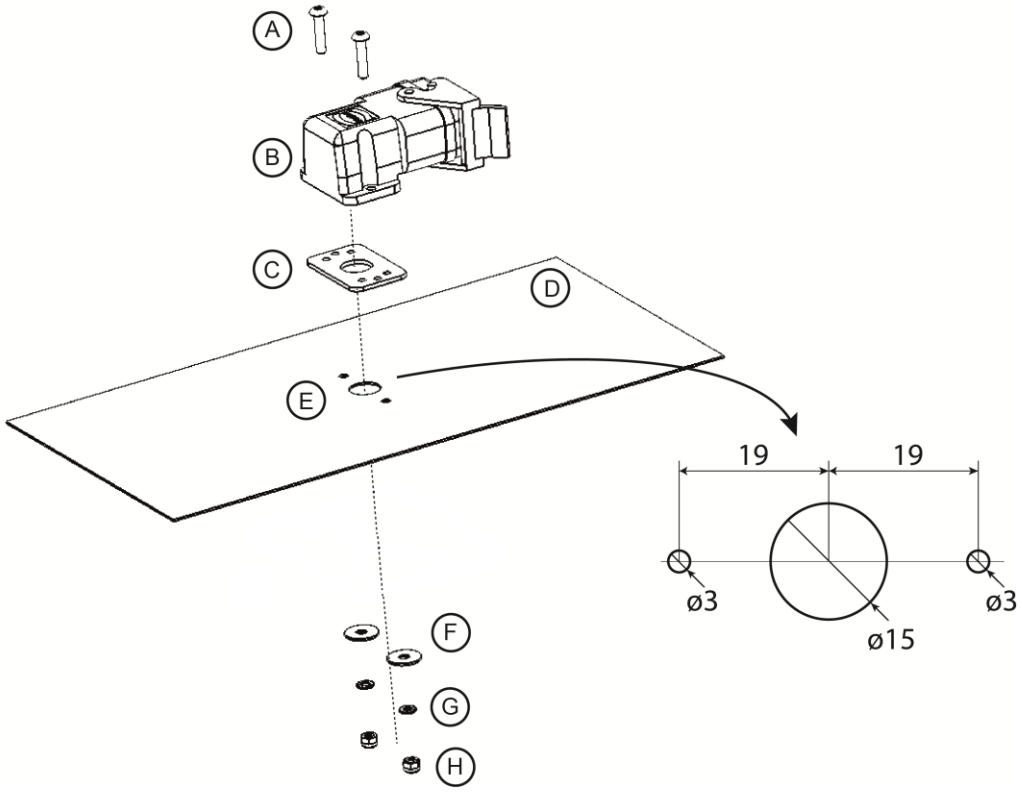
6.6. ROOF DRILLING DIAGRAM

2 fixing points



A. 2 base fixing screws
B. 18-point Harting base
C. Roof connector gasket
D. Vehicle's roof
E. Roof drilling (refer to the template)
F. 2 inox washers
G. 2 star washers
H. 2 locking nuts

6.7. MOUNTING EVALUATION

IMPERATIVELY CLEAN THE ROOF BEFORE INSTALLATION TO PRESERVE IT FROM DEGRADATION DURING INSTALLATION AND TO FACILITATE POSITIONING OF THE LIGHTBAR.

Temporarily place the lightbar on the roof to assess its position and inclination on the vehicle. This pre-installation operation should also enable to evaluate harness routing inside the vehicle.

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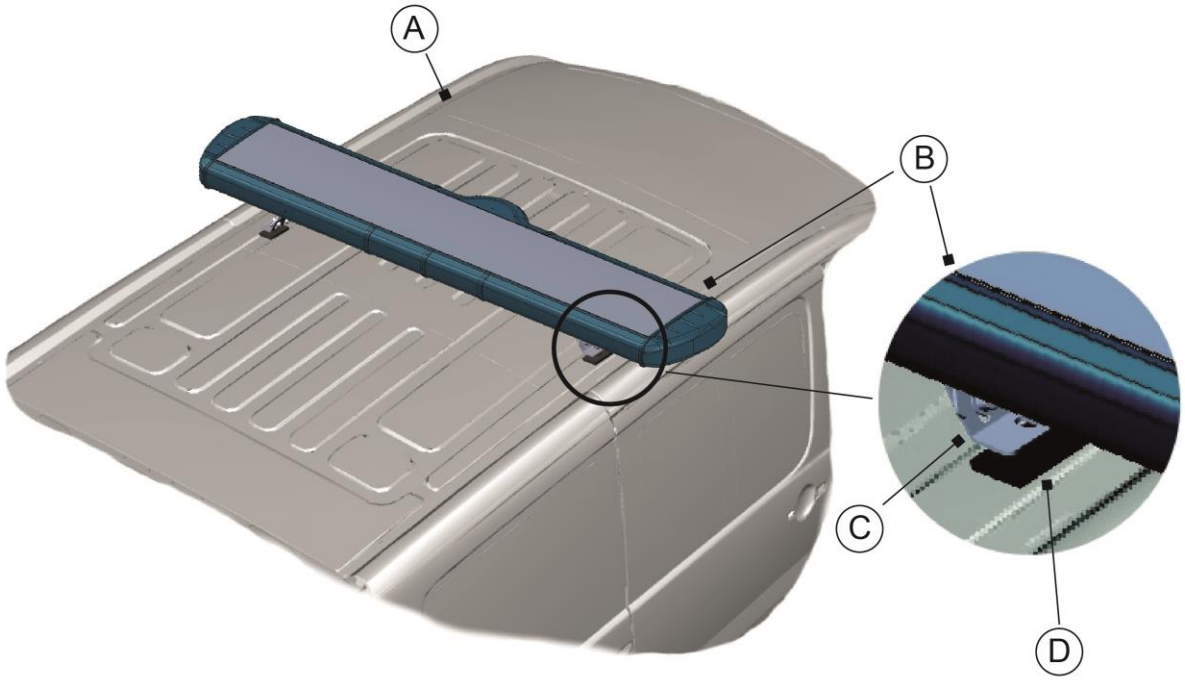
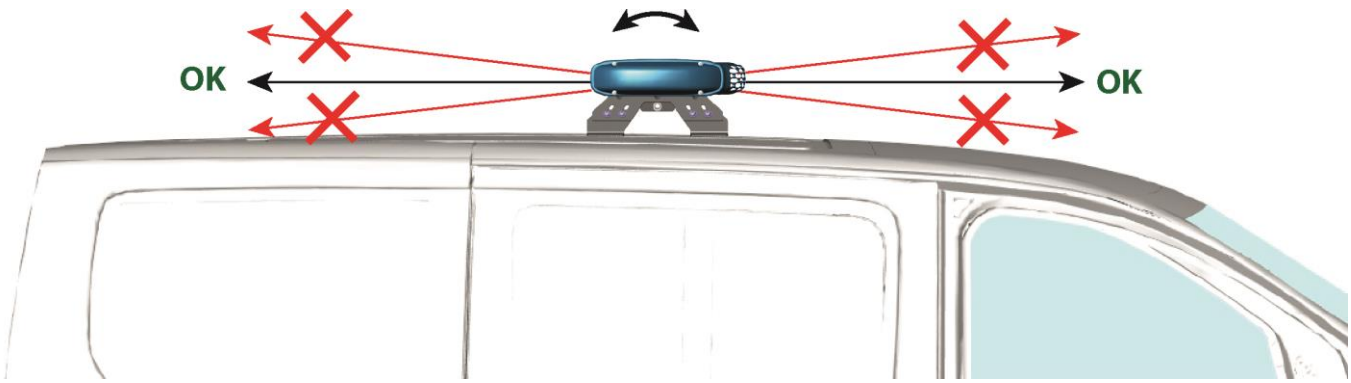
GENERAL WARNINGS



A. Vehicle's roof
B. VEGA lightbar with siren
C. Adjustable mounting pad
D. Rubber pad

THE SPEAKER OUTPUT IS ORIENTED FORWARD



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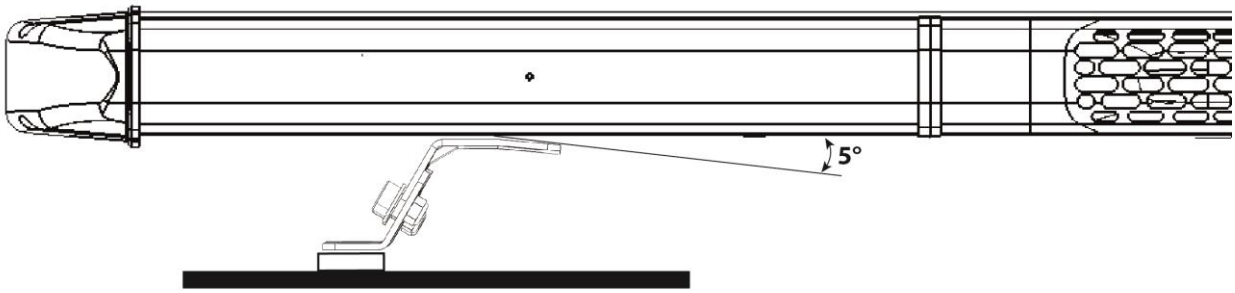

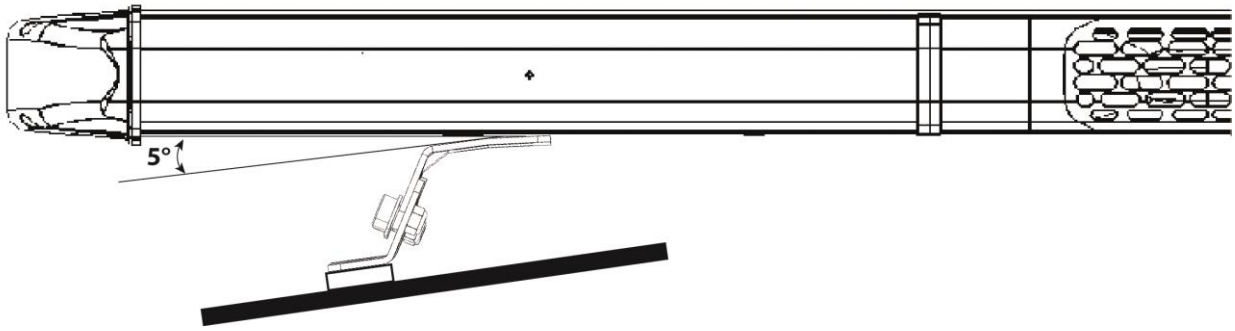

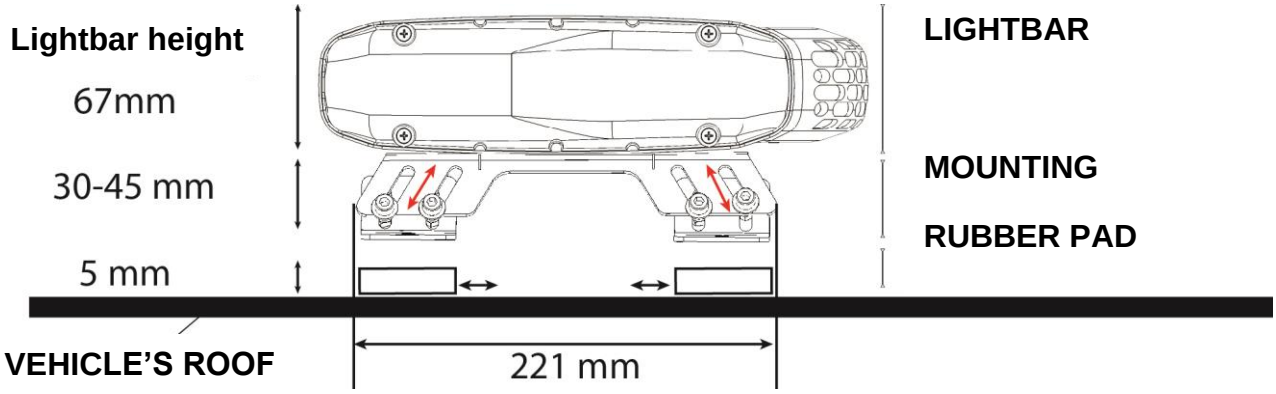

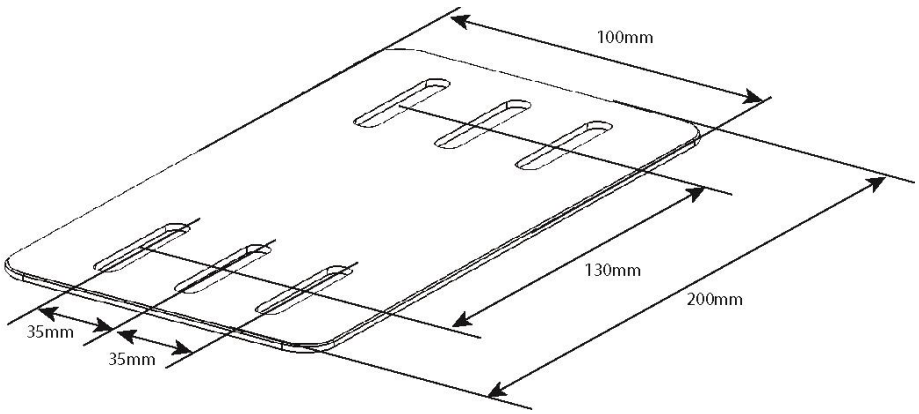

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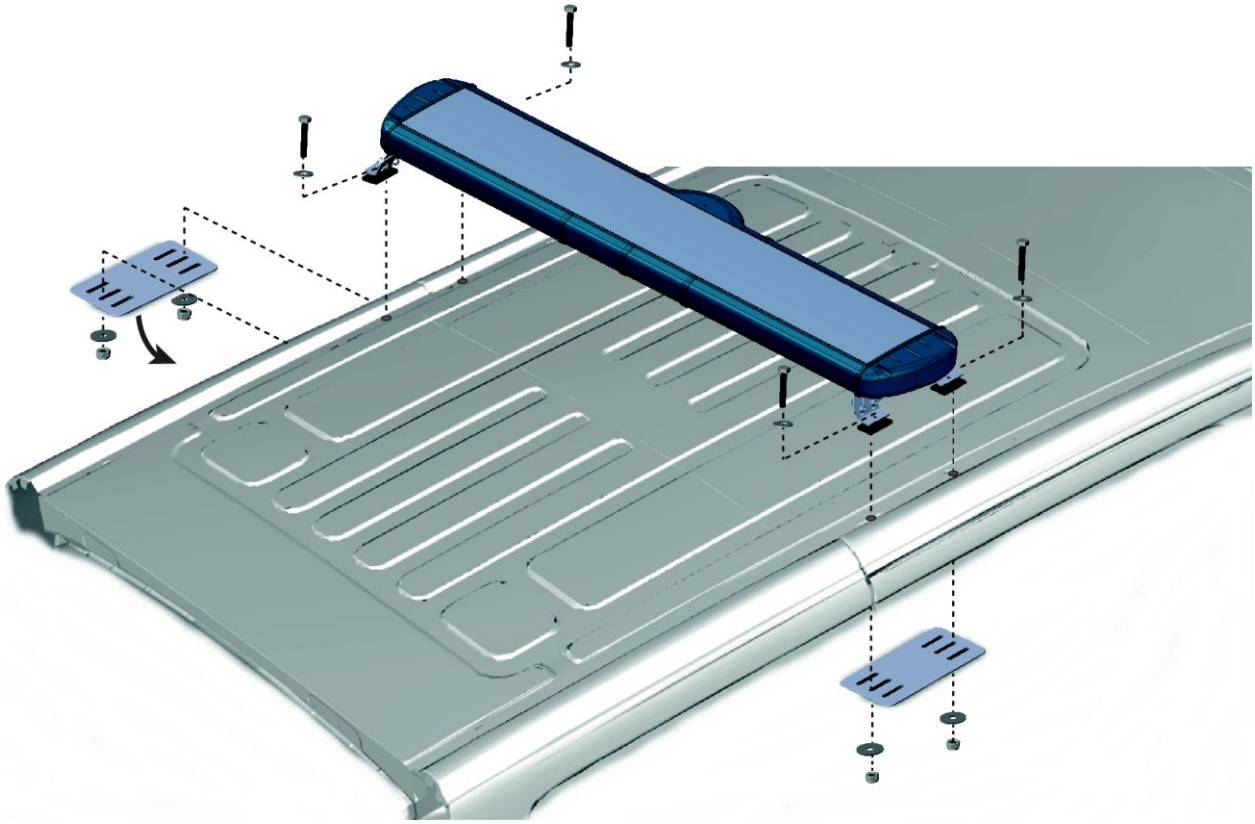
6.8. LIGHTBAR INSTALLATION

4 x H M06x16 IN A4 screws
8 x Ø6x14x1.2 IN A4 flat washers
4 x H M06 IN A4 locking nuts

- Position the lightbar on the roof by inserting the neoprene wedges between the bindings and the roof.
- Adjust the horizontality of the lightbar by adjusting the levels of the fixing screws of the upper and lower legs
- Locate and mark the piercing points.
- Drill the roof at the locations defined at Ø 6.5 mm.
- Deburr the holes.
- Apply corrosion protection at the holes (product not supplied)
- Apply silicone sealant (not supplied) to the holes to seal the roof passages.
- Place the lightbar, equipped with its fixings on the neoprene holds, on the roof.
- Insert the screws and washers.
- Place the fastening plywood under the roof and screw with the washers and nuts to a torque of 3NM (aluminum roof).



Tighten the fixing screws on the base of the lightbar to a torque of 3NM

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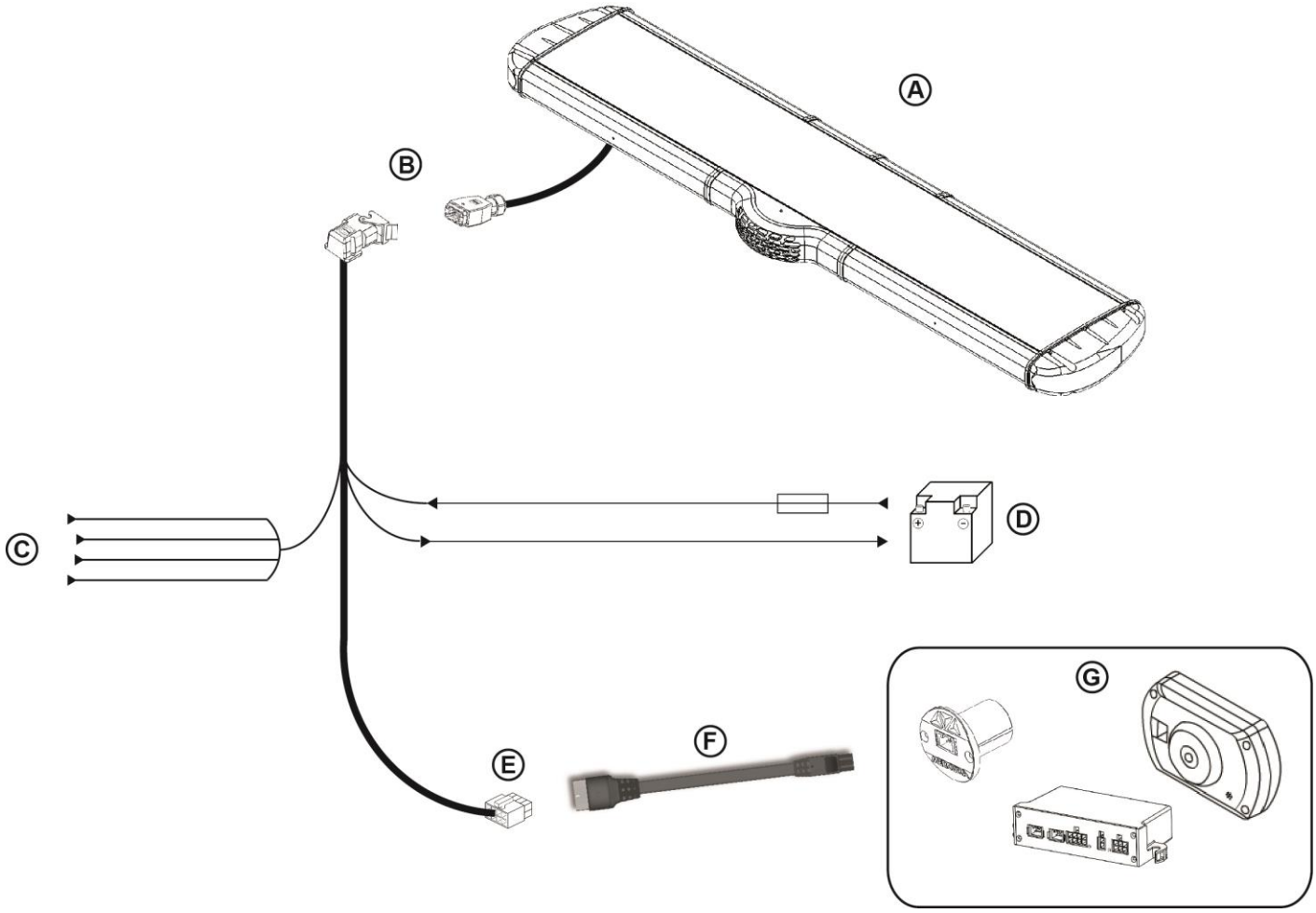
7. GENERAL WIRING DIAGRAM (DEPENDING ON MODEL)

7.1. GENERAL WIRING LAYOUT



A. VEGA lightbar with siren
B. 18-point roof connectors
C. Various variables vehicle's control inputs depending on options.
D. Vehicle's charging circuit
E. 8-way connector
F. BUS-wired interface
G. Control modules depending on options:
   - Dashboard Interface of SPA Handy Control Box
   - Multiplexed control box
   - CCS BLL module for traditional controls

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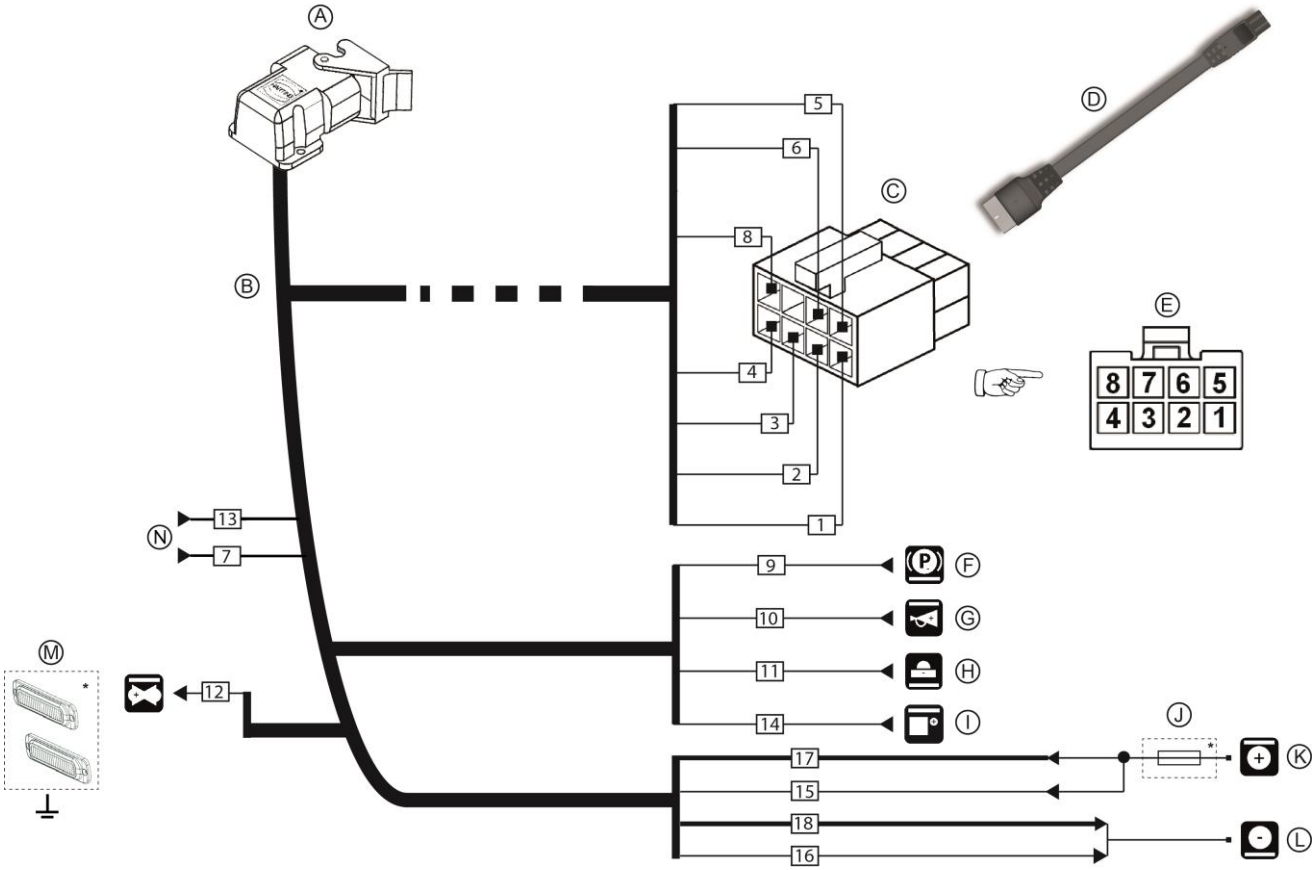
7.2. VEHICLE'S HARNESS GENERAL WIRING DIAGRAM

All the wires of the vehicle harness are indicated by the number in the white rectangles. These numbers correspond to the pin assignment of the 18-point connector.



*(*Not supplied)*

A. 18-point roof connector
B. Vehicle harness
C. 8-way connector
D. BUS-wired interface to Control Box or CCS BLL Module
E. Identification of the connector tracks on the wire side
F. Information input HANDBRAKE tightened from the MERCURA handbrake module: information to the ground
G. KLAXON impulse input: "+ Battery" information
H. Information input CREW MANAGER PEDAL: Information to the mass
I. Information input ROTATING ENGINE or "+ AFTER IGNITION": Information to "+ Battery"
J. Fuse (Different value depending on the lightbar reference to be calculated according to its components (see Chapter 5)
K. "+ Battery" power supply. Wire n ° 17 is a 2.5 mm² red wire. Wire n° 15 is a 1.5mm² red wire.
L. Ground battery. Wire n° 18 is a 2.5 mm² black wire. Wire n° 16 is a black wire of 1.5mm² black wire.
M. To GRILL LIGHTS (not supplied).
N. BROADCASTING

CORRESPONDENCE ASSIGNMENT OF THE 8-WAY CONNECTOR		
0.5mm² wire number of vehicle's harness 18-point connector	Functions	8-way pin connector
1	Signal BF+	1
2	After ignition	2
3	Control panel power supply / Interface	3
4	CAN Low	4
5	Signal BF-	5
6	Ground	6
8	CAN High	8

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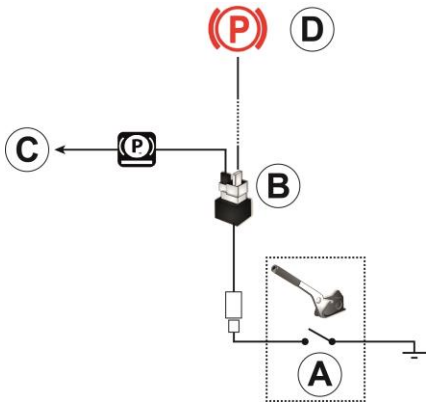
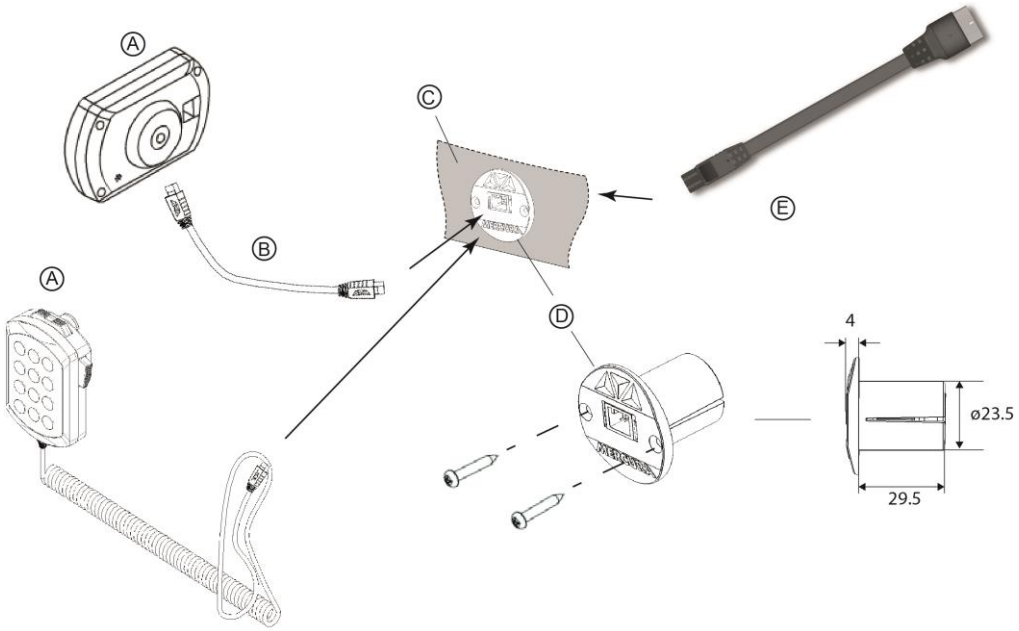
7.3. HANDBRAKE MODULE OPTION

The HANDBRAKE module is an option that enables obtaining the information on the handbrake status from the ignition switch of the vehicle without disturbing the original circuit of the vehicle. It must imperatively be inserted between the contactor of the vehicle and the information line connecting it to the dashboard indicator circuit.



A. Vehicle's HANDBRAKE contactor
B. MERCURA's HANDBRAKE module
C. HAND BRAKE status information output to MERCURA system to be wired on wire n° 9 of the vehicle's harness of the VEGA lightbar with siren.
D. HANDBRAKE LED circuit of the vehicle dashboard

7.4. DASHBOARD INTERFACE OPTION



A. Control box or SPA Handy
B. 8-way Bus CAN CPT
C. Vehicle's dashboard
D. Dashboard interface
E. BUS-wired adaptor

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