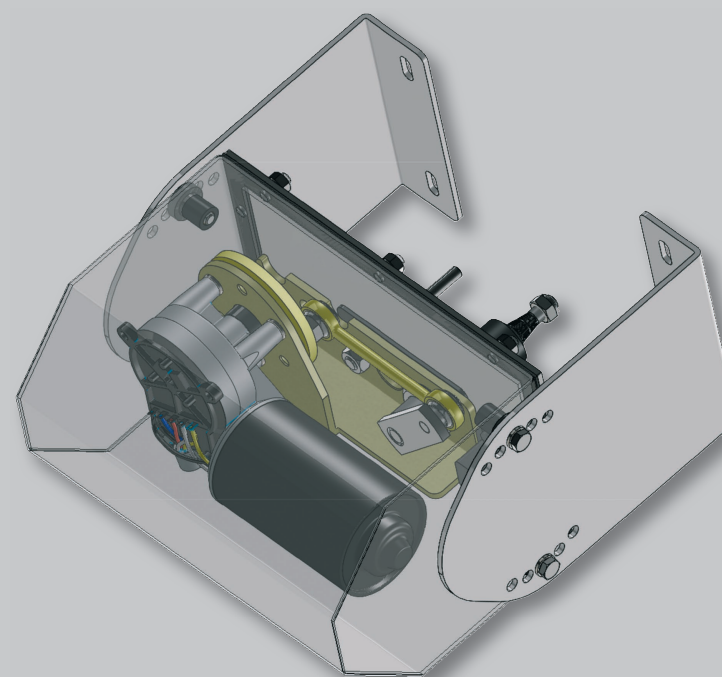


2014-05

External wiper housing

only to be used for wiper system: Exalto 223BD



Watertight, IP-x6 qualified/certified

Cat. code: 2197.300

Exalto B.V.

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Exalto
Quality Marine Equipment

USER MANUAL

Safety

Exalto windshield wipers are easy to install, yet a fair amount of technical knowledge (mechanical and electrical) is required of the installer. Please consult the manual or contact your vendor in case of doubt during installation or malfunctioning.

Safety symbols

An exclamation mark in front of the text warns you, that injury or damage can occur if a procedure is badly performed.

Dangers

The installation and use of Exalto wipers will not inflict any personal dangers or damage, provided that installation is done according to the procedures specified in the manual.

- Never remove covers or other safety provisions, unless maintenance is being performed and all safety requirements are obeyed.
- The installer must provide all necessary covers.
- Always disconnect the electrical circuit when performing maintenance.
- Prevent the installation from being started (accidentally) by others.

Safety provisions

The safety provisions will protect the user against contact with moving, electrical or hot parts. Some of them have to be provided by the installer.

There are several safety provisions:

- This wiper comes complete with a built-on cover. It prevents users from direct contact with moving parts of the motor. Never remove this safety provision.
- Make sure the wiper has enough ventilation when placing it behind a panel or cover.
- Place a fuse (see specifications) in the main cable.

Safety requirements

Before the Exalto wiper is installed, we strongly recommend the following:

- Read the entire manual before installation.

- Make sure your working environment as well as the wiper parts are clean.
- Check to be sure no parts are missing or damaged.
- Use only high quality tools and have them within reach when installing.
- Handle the parts with care.
- Never install or maintain the wiper with the electrical voltage applied, unless this is specifically mentioned in the manual.
- Clear your tools after installation.

Use of the manual

Read the entire manual before installation. In this manual you can find the following expressions and symbols:

Hint!

- Gives you advice on how to perform a task more easily.

Attention!

- Alerts you to possible problems and safety warnings.

Contents

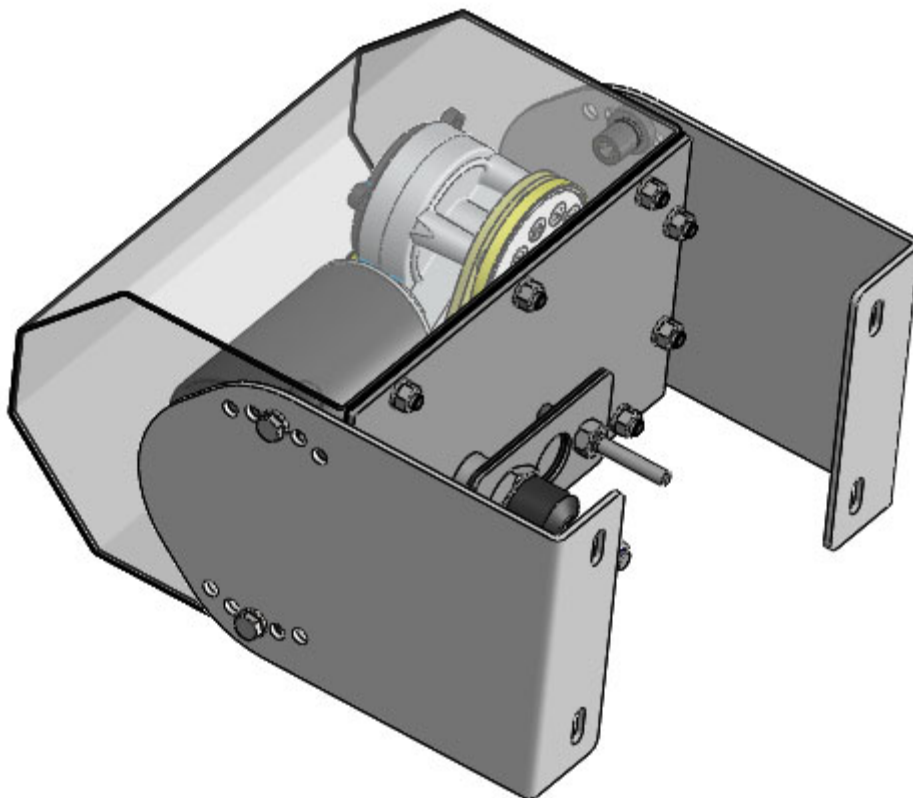
Content of package	5
Mounting	6
Plug / Connections.....	8
Electrical scheme	9
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Important before assembling:

This external wiper housing is strictly for use with **Exalto 223BD wipersystem**.

Content of package:

Wiper housing welded (2197.305)	1
Mounting leg (2197.310)	2
Gasket (2197.320)	1
Frontplate (2197.315)	1
Neopreen blind rivet locking nut M6 (2100.084)	4
Washer M6	14
Hexagon bolt M6×25mm	4
Hexagon bolt M5×12mm	2
Hexagon nut M6	10
Drilling template	1
Manual	1



Check if all parts are present in the box, if a part is missing please inform Exalto B.V. and we will send the missing parts ASAP.

General instructions for use:



Make sure that plastic and rubber parts do not come in contact with solvents or cleaning fluids with solvents. Also no chlorine containing cleaning fluids may be used.

General instructions for mounting:



- Gaskets that are used must be clean and also the corresponding faces must be clean.
- Bolts and Nuts must be a little lubricated on the thread and on the contact surface under the head and under the nut for correct tension. Standard grease or lubricant is sufficient.

A - Mounting

Step 1: Prepare the Exalto 233BD Wiper system for mounting in the external housing.

- Remove the locking nut M8, rubber Weather cap, Nut M20 and the washer plates.
- Check if the Wiper has the correct connector, for waterproof assembly a DEUTSCH connector is necessary. (for replacing the connector see chapter B page 8)

Step 2: Mount the Front plate (2197.315) on the 223BD Wiper.

- Place a washer plate Nitril (2100.491) over the spindles onto the wiper housing face
- Place a the front plate (2197.315) over the spindles in the correct orientation
- Place another washer plate Nitril (2100.491) over the spindles and onto the front plate
- Place the metal washer plate (2100.481) onto the spindles and Nitril gasket
- Mount the nuts M20 and M8 (not the lock nut) with a little lubricant as prescribed before and tighten to the correct torque*, use a calibrated torque wrench.
- Place the Weathercap over the M20 wiper axis.

- Place the M8 lock nut loose on the wiper spindle , do not damage the locking part.
- Mount the Deutsch connector with M5×12mm with the correct torque*. Use a calibrated torque wrench.

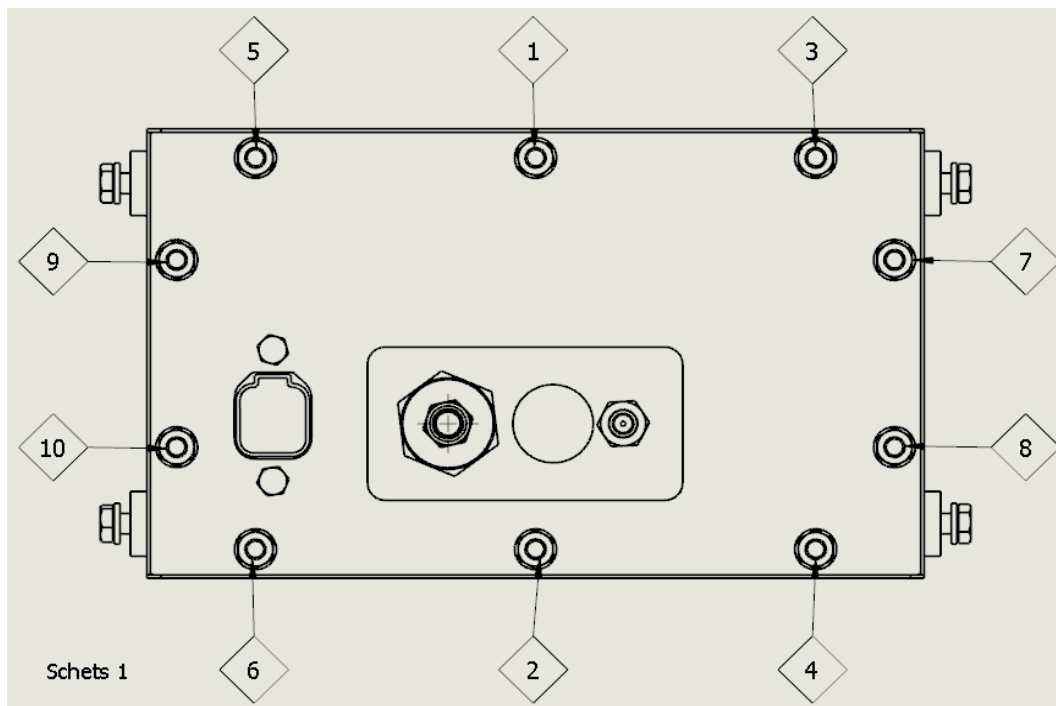
Step 3: Mount the wiper with the front plate in the external housing.

- Place the rubber gasket (2197.320) over the M6 threads of the housing
- Place the wiper with the front plate in the external housing (2197.305) so that the holes in the front plate fit the M6 threads.
- Make sure both faces are clean that the gasket sits on
- Place the washers and tighten the M6 nuts semi loose in the sequence according to picture 1 (schets 1) (from inside to outside).
- Next tighten the nuts to half the required torque in the sequence according to picture 1 (schets 1) (from inside to outside).
- Then tighten the nuts to the required torque* in the sequence according to picture 1 (schets 1) (from inside to outside). Use a calibrated torque wrench.

Step 4:

- Determine the place where the wipers need to be on the outside and drill with use of the drilling template the holes for mounting the housing.
- Mount the Mounting legs (2197.310) on the outside wall
- Place the Neopreen blind rivet (2100.084) locking nut M6 in the housing
- Mount the housing with the wiper motor between the Mounting legs using the 4 M6 Bolts with a little lubricating as described and tighten these with the correct torque*. Use a calibrated torque wrench.

Note: the mounting legs can also be placed with the mounting side pointing outwards, be aware that the drilling template included is not intended for mounting this way.



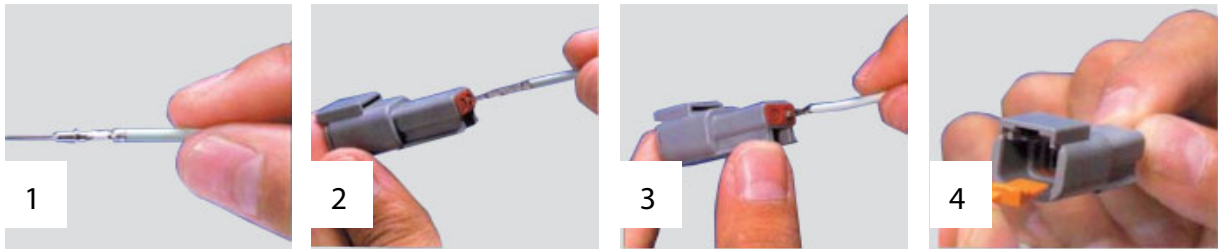
* for the correct mounting torque see the drawing on page 10

B - Deutsch connector (not included, order separately)

For a waterproof housing it is necessary that that Exalto 223BD is provided with a waterproof connector Brand Deutsch, DT series. Grease the contacts and the rubber gasket with a little Acid-free Vaseline before use.

Description	Art.Code	Quantity
Connector (female)	DT04-6P-CL09	1
Connector-wig	W6P	1
Plug (male)	DT06-6S-E004	1
Plug-wig	W6S	1
Clsosingplug	114017	1
Pin-contact 1.0-2.0mm ²	046021516141	5
Socket contact 1.0-2.0mm ²	046220916141	5
Closing plug with strain relief	1011-268-0605	1

If the existing connector needs to be replaced cut the cable just behind the old connector. Strip the wires aprox 7mm. Pinch with a correct crimping tool suited for these contacts the contacts onto the wires.



1. Grab the contact at its rear end
2. Hold the connector with the rear end towards you
3. Slide the contact straight in the connector until you feel a little click, by pulling carefully you can make sure the connector is fitted correctly
4. If all contacts are placed you must click the orange wedge in the connector.



Attention: When removing the Plug out of the Connector the sealing rubber often releases! You must remount this correctly to remain a guaranteed waterproof connection.

If parts of the housing are opened or loosened then the concerning gasket must be replaced to guarantee waterproof!

For mounting the contacts in the plug (male) you must follow the same steps as above.

C - Arm and blade

For mounting the arm and blade please read the manual of the Exalto 223BD Wiper system.

D - Electrical connection

Function	Polarity	Motorcode	Switch code	Cable 12/24V	code Deutsch connector
<i>high speed</i>	+	53b	H	white	2
<i>low speed</i>	+	53	L	yellow	1
<i>earth</i>	-	31b		black	3
<i>common leg</i>		53e	P	blue	5
<i>self parking</i>	+	53a	B	red	4

Picture 1,
Sequence tightening pos 6
M6 nuts

Tightening torque 3 Nm [2.22 ft.lbs]

Tightening torque 16 Nm [12.5 ft.lbs]

Tightening torque 25 Nm [18.5 ft.lbs]

Tightening torque 3 Nm [2.22 ft.lbs]

REV.	DESCRIPTION	DATE	NAME
1	Fillerplate 2197.325 removed	30-1-2014	RM
2	Picture1 added, Torque changed, ft.lbs recalculated	18-2-2014	RM

REVISIONS

DATE NAME

30-1-2014 RM

18-2-2014 RM

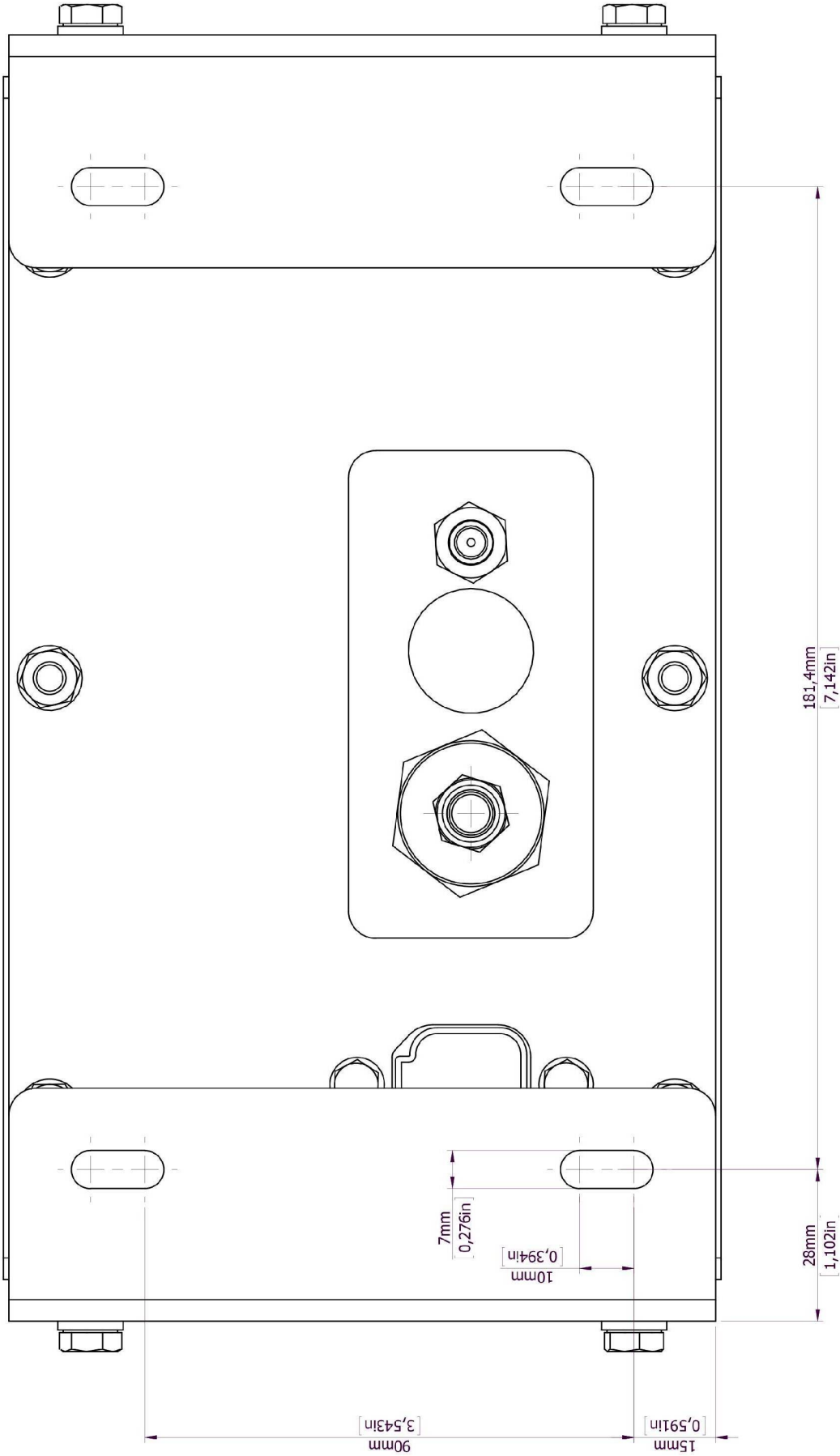
Powdercoated RAL 9010, 2 layers

External Wiper-
enclosure complete -
2197.300 (Pos. 1 - 9)

Pos.	QTY.	Description	PartNo/Note	Size
1	1	External Wiper-enclosure 223BD welded	2197.305	
2	10	Gasket	2197.320	
3	1	Blindlinkmoer Neopreen M6 As Produced	STD 2100.084	
4	4	Mounting leg External Wiper-enclosure	2197.310	
5	10	Frontplate	2197.315	
6	4	Slutring DIN 125		M Ø12xø6,4x1,6
7	14	Hexagon nut M8	STD 2100.460	
8	2	Washerplate Nitril 223BS 50mm	STD 2100.491	
9	1	SS washerplate 223BS 50mm	STD 2100.481	
10	1	Hexagon nut M20x1	STD 2100.350	
11	1	Wipermotor 223BDH-20mm	STD 2166.30	
12	1	Locknut M8 A4	STD 2100.071	
13	1	Wethercap rubber Ø26	STD 2100.361	
14	2	connector Deutsch DT04-6P-CL09		M Ø10xø5,3x1
15	2	Slutring DIN 125		
16	1	Washerplate Nitril 223BS 50mm	STD 2100.491	
17	1	SS washerplate 223BS 50mm	STD 2100.481	
18	2	Hexagon nut M20x1	STD 2100.350	
19	2	Hexagon nut M8	STD 2100.460	



Attention: This drill template is NOT in true size.



Boormal / Drill template