




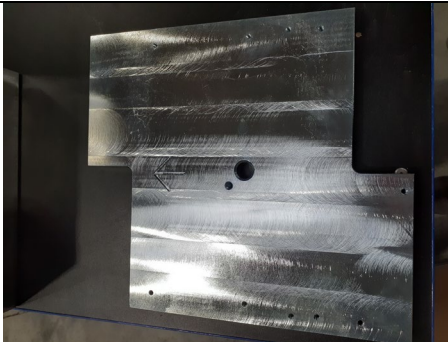

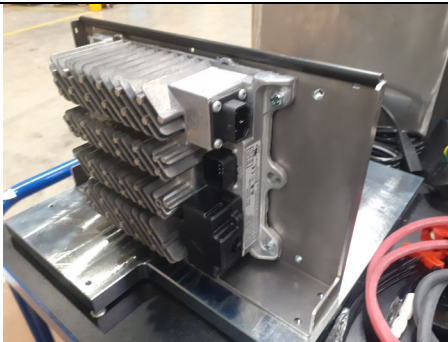

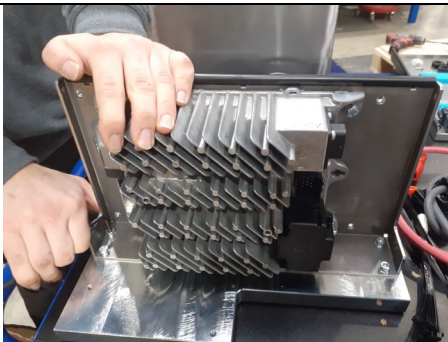
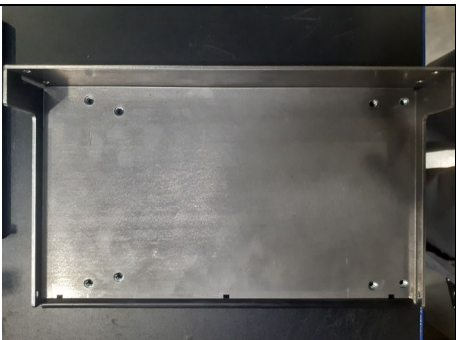

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Installation Instruction for SC500 LITHIUM ION W/ICC STANDARD KIT

The KIT contains the following items:

Mark	Part number	Description	Quantity
1	9100003089	BOX LI BATT SC500	1
2	9100003090	LID LI BATT SC500	1
3	9100003083	SLAB WEIGHT LI BATT SC500	1
4	9100003112	FOAM BEAM1 SC500	2
5	9100003087	HOLDER CHARGER LI BATT SC500	1
6	106476001	Charger, 24V/27A Li-ion, 85 to 270VAC	1
7	9100003058	HARNESS CHARGER IC650 LI COMM	1
8	9100003115	HARNESS LI BAT CHARGER IC DC	1
9	9100003056	HARNESS LI BAT MACH COMM	1
10	9100003095	HARNESS MACHINE LI BATTERY DC	1
11	9100003277	HARNESS ADAPTER WITH RELAY SC500 LI	1
12	9100003279	RELAY 24V WITH DIODE	1
13	9100003099	CABLE POWER LI CHARGER WATERPROOF	1
14	9098676000	CABLE EXTENSION EU PLUG L.2000MM	1
15	1465629000	CABLE EXTENSION UK PLUG L.2000MM	1
16	9100000715	CABLE EXTENSION US PLUG L.2000MM	1
17	9100000793	CABLE TIE PLUG	1
18	9100002220	DECAL OVERPACK	1
19	L08812661	GASKET RUBBER -SKEIN	0.7m
20	9100003088	GROMMET CROSS CUT D13.5 X2	6
21	909 6595 000	HOLDER.FLAT TIE	1
22	9100003119	LABEL LI-ION BATTERY DIAGRAM	1
23	9100003319	LABEL WARNING LIION LID	1
24	145 6094 000	PANEL BATTERY FOAM ADHES. 250X195X15MM	1
25	9100003051	REED SWITCH LI ION	1
26	9100001216	SCREW 4X16 SELF PAN HD TORX F PLASTIC	2
27	33004343	SCREW M6X12 CAP HD HEX SOCK ISO4762	6
28	33016432	SCREW M6X20 BUTTON HD HEX SOCK ISO7380	4
29	33004346	SCREW M6X20 CAP HD HEX SOCK ISO4762	4
30	33003975	SCREW M6x20 HEX HD F/THD ISO4017	4
31	33003512	TIE CABLE 3.6X200 BLACK	20
32	145 0524 000	TIE CABLE 4.8x250 BLACK	5
33	33005913	WASHER PLAIN M6X12 ISO7089	8
34	9100003093	WASHER SEALING DIN7603 ALU 6X12X1 SHAPE	10
35	9100003120	MANUAL LI ION SC500/SC2000	1
36	9100003105	INSTRUCTION INSTALL. KIT 9100003047	1

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1) The content of the KIT		6) Delta-Q IC650 battery charger (6)	
2) The opened SC500 scrubber machine from inside		7) Prepare the extra slab weight (3)	
3) Take out the sponges and find the black drain plug at the bottom of the battery compartment		8) Fix the Delta-Q IC650 battery charger (6) to the charger holder (5) with screws (30) and washers (33)	
4) Pull this plug out and be sure that nothing else has remained in the hole and it is free for flowing. Discard this plug		9) Tighten the holder (5) with the charger (6) to the slab weight (3). Use screws (29) and washers (33)	
5) Prepare the charger holder (5)		10) Take off the electric-box cover by the two opposite corners of it with a flat screwdriver	

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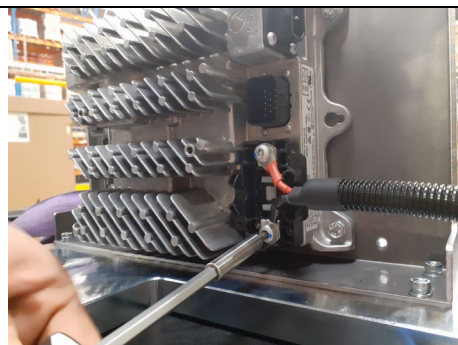
11) Prepare the charger-battery 24V DC harness (8)



16) Prepare the waterproof AC power cable (13) for the charger



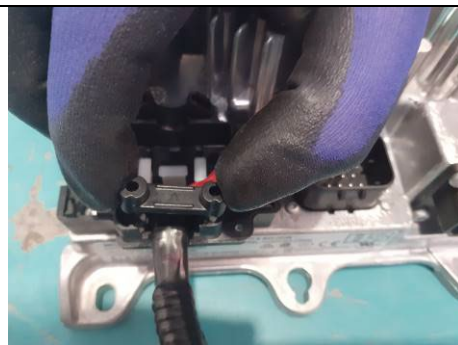
12) Fix the red and black cable lugs on the correspondent contacts of the charger with the screws (4,5Nm), take care of the polarity



17) Prepare the Li battery – charger communication harness (7)



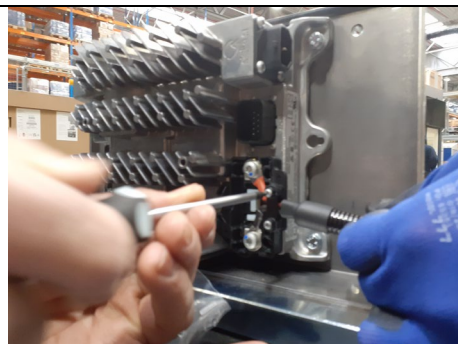
13) Put the plastic retainer/bridge with the "A" side up on its place...



18) Connect them to the charger, route the AC cable as it can be seen in the picture



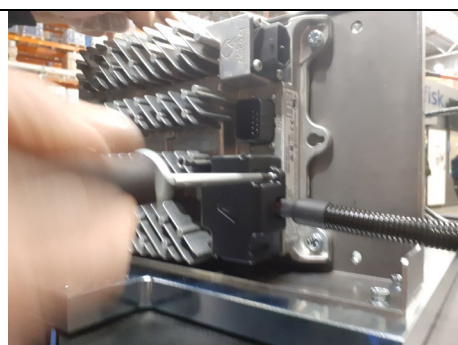
14) ...and fix it with 2 screws (0,6Nm)



19) Lift this assembly (slab weight+charger holder+charger with its cables) with a crane through the lifting eye bolt and insert it to the battery compartment of the machine.
The drain hole of the slab weight must be on the same place as the previously unplugged hole (step 3), 4))








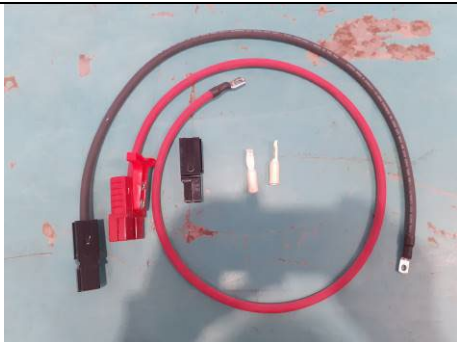
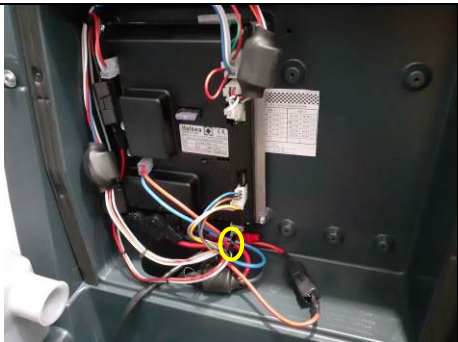

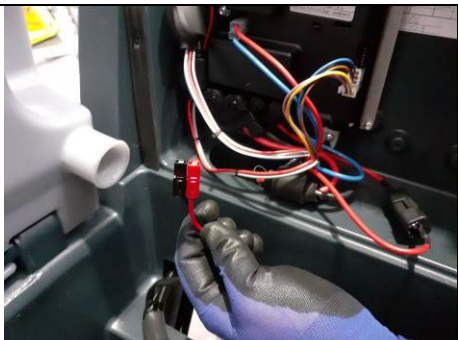

15) Put back and fix the cover of the electric-box with its screws (0,6Nm)













20) The lifting eye bolt of the slab weight (3)










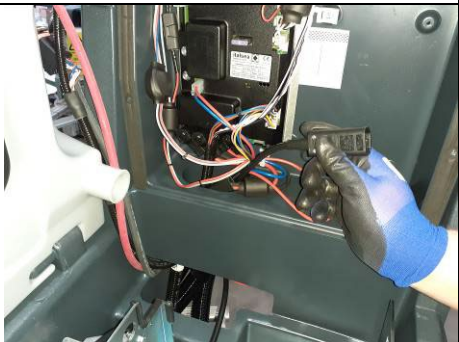


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21) Unscrew and take off the cover of the room of the Italsea main control board		26) Cut the cable tie (marked with yellow) and pull out the HARNESS BATTERY from behind the machine	
22) Unscrew the dashboard cover and turn it out		27) Removed HARNESS BATTERY	
23) Loose and pull off the 2 hoses from the recovery tank, then pull them out of the machine		28) Prepare the Li-ion battery – machine DC harness (10)	
24) The connections of the Italsea main control board. Cut this black cable tie (marked with yellow)		29) Put/push either of the separated crimps in the empty/uncrimped contact of the Anderson / Grid Power connector. There is only one good direction, take care of it	
25) Disconnect the original HARNESS BATTERY from the Italsea main control board		30) Lock it on its place with finger	

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31) From connection side you should see the contacts of the crimps in their normal position		36) Prepare the 1-pole black uncrimped free Anderson / Grid Power connector from the Li-ion battery – machine DC harness (10)	
32) Unscrew the Anderson / Grid Power connector from the back of the machine		37)	
33) Pull out a bit to be easy to mount		38) Push and lock the negative pole-crimp with the black cable in the 1-pole black Anderson / Grid Power connector. Pay attention to the direction of the contact	
34) Press the metal plate behind the contact of the crimp of the negative pole with a screwdriver...		39) Take the separate crimp from the Li-ion battery – machine DC harness (10) and...	
35) ...to be easy to pull it out from the connector		40) ...push it in the blank place of the red Anderson / Grid Power connector (from machine side)	

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41) Screw home the red connector (1,8Nm)		46) Push the cable-loop in the machine...	
42) Thread in the machine from back side the red cable of the Li-ion battery-machine DC harness (11)		47) ...and tie it to the red cable with cable tie (marked with yellow)	
43) Plug it in the red Anderson / Grid Power connector of the machine		48) Guide the AC cable (13) through the hole as in the picture...	
44) Connect the black cable of the Li-ion battery-machine DC harness (11) in the black 1-pole Anderson / Grid Power (from machine side)		49) ...thread through the hole of the machine and pull it out	
45) Thread the black cable of the Li-ion battery-machine DC harness (11) in the machine from back-below		50) Dismount the steering column, grab the male plug of the AC power cable (13) and push through the hole	

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51) Lead the cable in the groove and pull it out about 30cm from the steering column



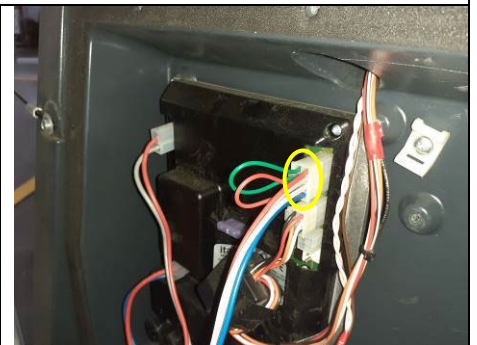
56) Plug the relay 24V (12) in its pre-mounted socket



52) Screw home the steering column



57) Disconnect the 8-way MOLEX connector with its cable from the Italsea main control board



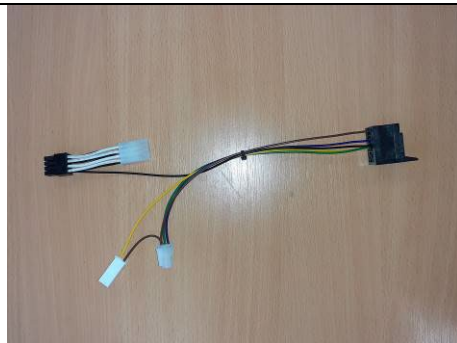
53) Grab the 4-way MOLEX female connector of the Li battery-charger communication harness (7), thread it through the hole, pull it out



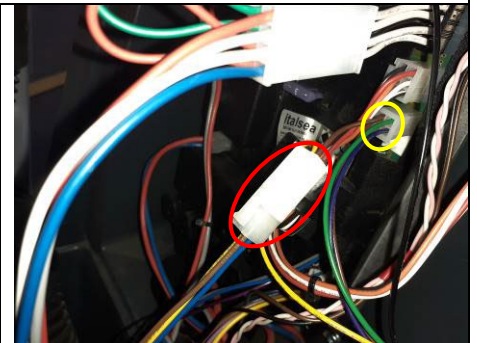
58) Connect the adapter harness (11) between the main control board and the previously disconnected cable (8-way MOLEX female-male)



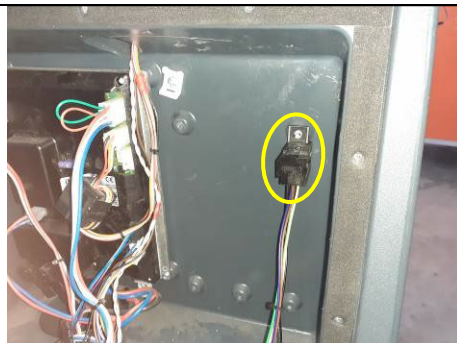
54) Search and unpack the adapter harness (11) and the external 24V relay (12) for the more stable battery charger interlock



59) Connect the 4-way MOLEX female of the adapter cable (11) to the Italsea main control board (yellow), and then plug the 4-way MOLEX male of (11) with the 4-way MOLEX female of the Li-ion battery-charger communication harness (7) (red)



55) Strengthen the relay socket of the adapter harness (11) with a screw (26) as you can see in the picture



60) Prepare the Li battery – machine communication harness (9)

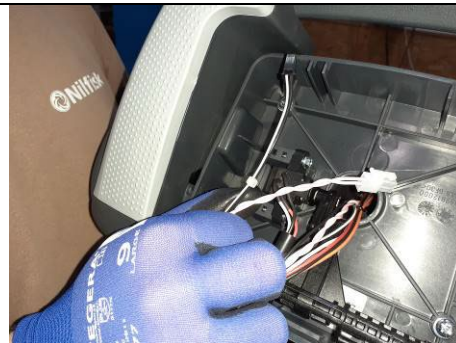


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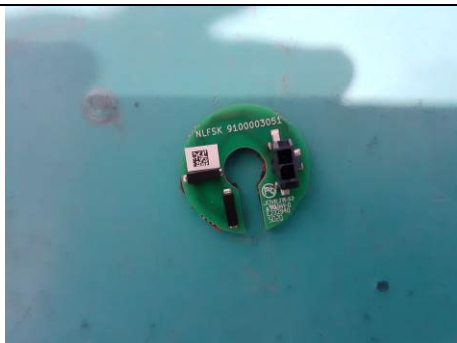
61) Connect the black 6-pin connector of the Li-ion battery – machine communication harness (9) to the Italsea main control board (see in red)



66) Pull them out a while



62) Search and prepare the Reed switch PCB (25). Remove the protective film from the double-sided adhesive



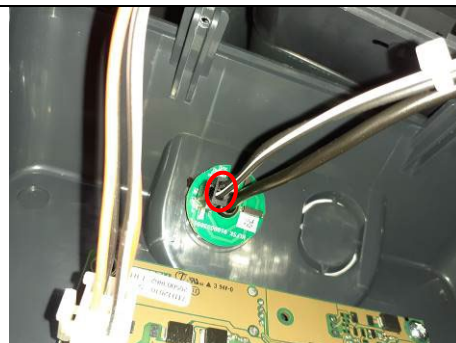
67) Connect the white connector of the CAN wires (9) to the display board (red)



63) Stick it around the I-button-cable from the back side of the I-button reader. Clean the surface of I-button reader with brake cleaner or isopropyl alcohol



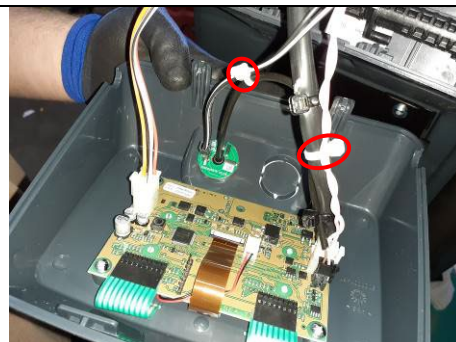
68) Connect the black connector of this harness (9) to the Reed switch PCB (25) (red)



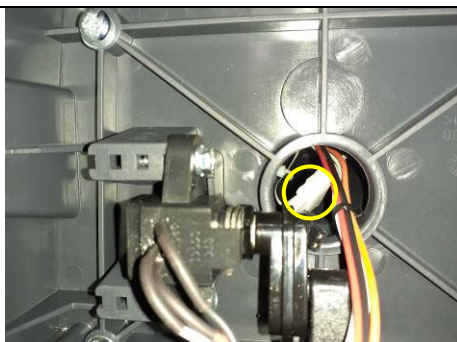
64) Grab the twisted pink-white CAN wire and the wire of the Reed switch of the Li battery – machine communication harness (9) and push them through the hole...



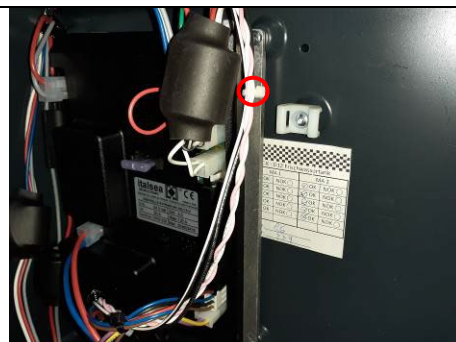
69) Tie 2 pcs of cable ties in the marked positions



65) ...towards the dashboard-display board (this photo is from inside the steering column /dashboard)



70) Tighten these wires to the metal side of the Italsea main control board with a cable tie

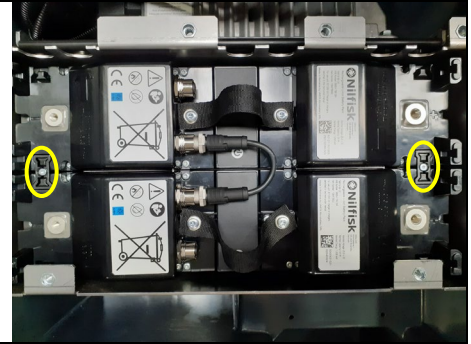


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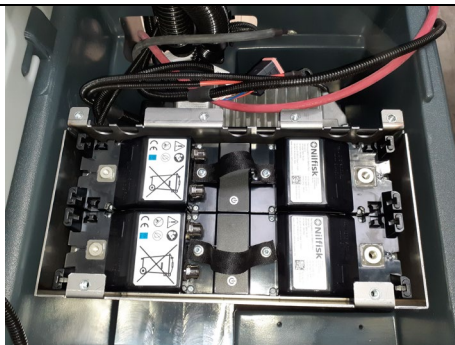
71) Insert the metal box (1) with its drain pipe through the hole of the slab weight and the machine, tighten it with screws (28) and sealing washers (34)



76) The inserted 2 Dog Bones (yellow)



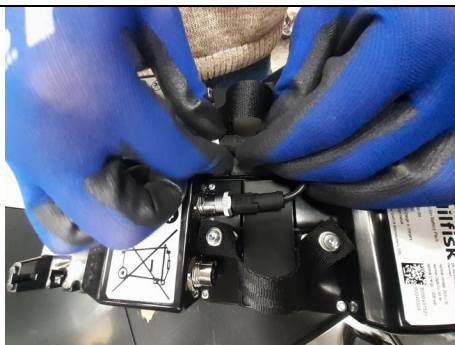
72) Insert 1 or 2 (depends on the customer's demand) Varta 24V Li-ion batteries (Nilfisk p/n: **106479002**) in the box



77) Since the standard KIT doesn't contain the TC1 module, connect the dummy, separate ITT CANNON male plug to the wired ITT CANNON female plug of the Li battery-machine communication harness (9)



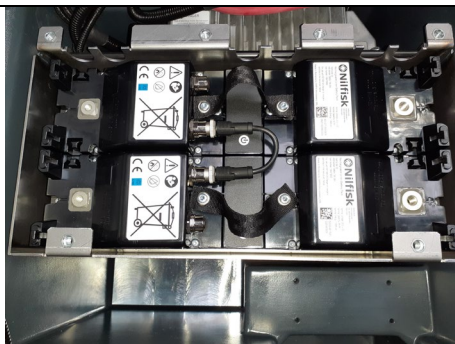
73) Connect a Control Cable (Nilfisk p/n: **106445009**) between the 2 battery modules



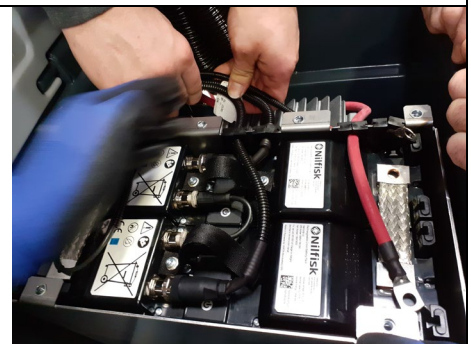
78) Prepare 1 positive braided cable (Nilfisk p/n: **106445008**) and 1 negative braided cable (Nilfisk p/n: **106445007**) and route the red cables to the + poles and the black cables (from the machine DC harness (10) and the charger DC harness (8)) to the - poles of the battery pack



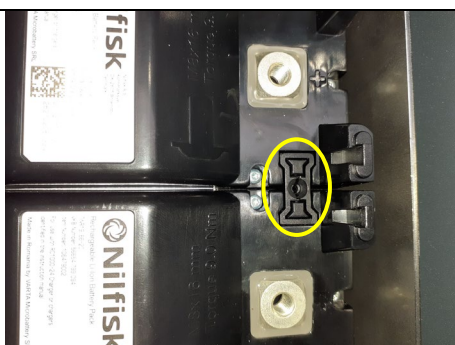
74) The connected Control Cable and the batteries in the metal box



79) Insert the 6 grommets (20) in their place on the box (1). Route the machine DC harness (10), the charger DC harness (8) through them. Connect the Li battery - charger communication harness (7) and the Li battery - machine communication harness (9) to the batteries



75) Insert 2 Dog Bones to fix the batteries to each other (yellow)

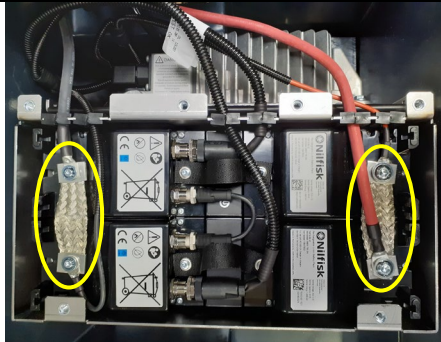


80) The routing of the harnesses, cables and grommets

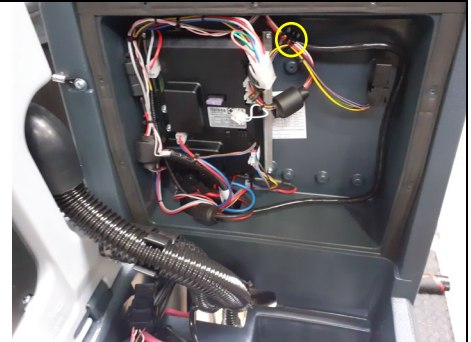


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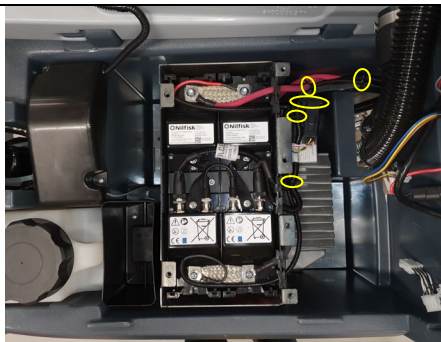
81) Tighten the positive braided cable together with the red cables of the DC harnesses (8, 10) with M8 screws and spring washer (9Nm). Tighten the negative braided cable together with the black cables of the DC harnesses (8, 10) with M6 screws and spring washer (3.9Nm)



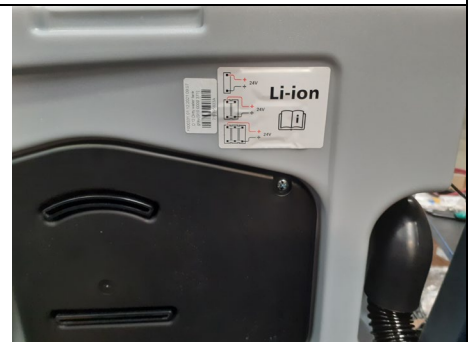
86) The cable routing in the room of the Italsea main control board. The AC cable (13) is routed on the right side, opposite to the signal cables. Fix a flat tie holder (21) with a screw (26) (yellow), thread a cable tie (31) through it and fix the cable batch. Mount back the black cover



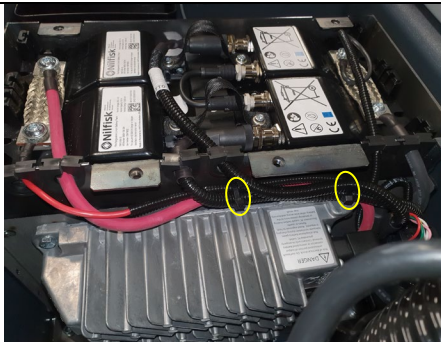
82) Arrange all the cables outside the battery box...



87) Stick the Li-ion battery diagram label (22) on this location. Before sticking use a degreaser or alcohol wipes



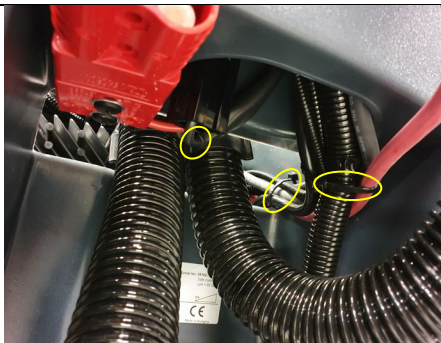
83) ...and fix them with cable ties...



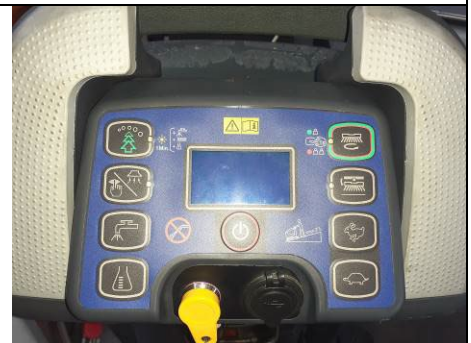
88) Stick the WARNING label (23) on the lid of the metal box. Before sticking please degrease the surface



84) ...in the marked positions



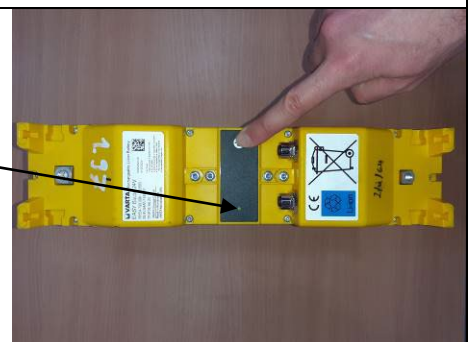
89) Mount on the front cover of the dashboard. Put the yellow "service key" on the I-button reader and switch on the machine







85) Put the lid (2) with beam foams (4) on the box (1). Tighten it with screws (27) and sealing washers (34)



90) If the machine doesn't switch on, open the recovery tank, pick up the lid (2) and look at the LED on the battery. If it is blinking and becomes green then it is OK. If not, press the ON/OFF button of the Li-ion battery for about 5s and wait until the LED becomes continuous green. (See the manual (35))



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<p>91) Push 12 times the “PARAMETER SETTINGS” button to reach the menu where you can select the battery type</p>			
<p>92) In the BAT (BATTERY TYPE) menu, select the 7 Lilon with the “rabbit” or “tortoise” buttons</p>			
<p>93) Press SAVE/NEXT or EXIT, then switch off the machine</p>			
<p>94) Replace the yellow service key with a blue user key</p>			
<p>95) If you switch on the machine again and everything is OK, after some seconds (booting) you can see this in the display</p>	