The Dinghy Davit

Installation manual

Version: with extension plate

Read the instructions carefully before starting the installation.

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Required tools for installation:

- ☐ Tape measure
- ☐ Drill
- ☐ Drill bit 1/8”, 5/32’’,11/64'', 3/16’’, 1/2’’
- ☐ Drill bit 3/8’’ for stainless steel
- ☐ Hole saw 1 1/4’’
- ☐ Caulking gun
- ☐ White Sikaflex™-291 LOT sealant tube
- ☐ Allen wrench 5/16’’
- ☐ Ratchet and socket 9/16’’ et 3/4’’
- ☐ Bit for hexagonal head screw 1/4’’
- ☐ Bit for hexagonal head screw 3/8’’
- ☐ Adjustable wrench
- ☐ Star screwdriver
- ☐ Square screwdriver (Robertson #2)
- ☐ Wrenchs 9/16 et 11/16
- ☐ Red thread locker
- ☐ Marker
- ☐ Level
- ☐ Pliers
- ☐ Funnel
- ☐ Hydraulic oil AW32 (1 gallon)

Included parts list:

Reference	Description	Quantity
10	Frame assembly	1
11	Swivel deck	1
20	Extension plate	1
30	Fixing plate	4
40	Round tube (male)	2
41	Round tube (female)	2
42	Square tube (male)	2
43	Square tube (female)	2
44	Round tube support	2
45	Square tube support	2
50	Hydraulic pump	1
51	Hydraulic pump bracket	2

52	Negative batterie cable 1.2 m (4’) (black)	1
53	Positive batterie cable 1.2 m (4’) (red)	1
54	Safety switch	1
55	Wired control	1
60	Hydraulique hose 3 m (10’)	2
61	Through-hull fitting	1

Installation kit for Ski-doo Spark

Reference	Description	Quantity
70	Back plate	2
71	Ring	2
72	Bolt 3/8''	2
73	Washer 3/8'' OD: 1.5''	2
74	Washer 3/8'' OD: 0.875''	2

Included hardware:

Reference	Description	Quantity
A	Flat head bolt 1/2’’ x 1.25''	6
B	Flat head bolt 1/2’’ x 2.5''	8
C	Hexagonal head bolt 1/2’’ x 1.25''	2
D	Hexagonal head bolt 1/2’’ x 2.5''	2
E	Hexagonal head bolt 1/2’’ x 3.5''	2
F	Washer 1/2’’	12
G	Nylon locknut 1/2’’	18
H	Hexagonal head bolt 3/8’’ x 2''	4
I	Hexagonal head bolt 3/8’’ x 2.5''	4
J	Hexagonal head bolt 3/8’’ x 0.75''	2
K	Nylon locknut 3/8’’	6
L	Flanged hexagonal head screw 3/8'' #14 x 1.5''	8
M	Flanged hexagonal head screw 1/4'' #8 x 1''	4

Important note

Apply red thread locker on every bolts during installation

1. Transportation box opening instruction

Required tools :

- Square screwdriver (Robertson #2)
- Wrench 3/4’’
- Ratchet and socket 3/4’’

Required parts :

- Transportation box

Step 1

Remove all screws from the box cover and put it aside.

Step 2

Remove the cardboard boxes and other individually wrapped items from the transportation box and keep them nearby.

Step 3

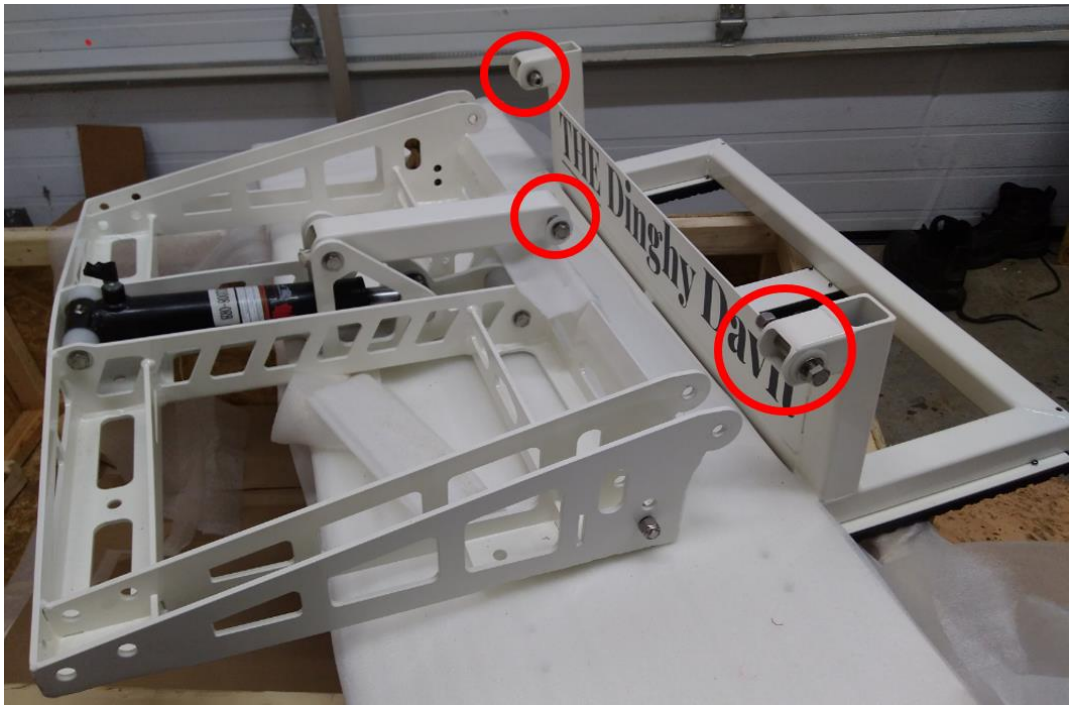
Remove the wooden blocks screwed against the inner wall of the box.

Step 4

Remove the frame assembly (10) and the swivel deck (11) from the box by lifting it at an angle. Put the assembly on top of the box.

Step 5

Unbolt the frame (10) from the swivel deck (11) by removing the three bolts indicated.



2. Frame installation underneath the extension plate

Required tools :

- Ratchet and socket 3/4’’
- Allen wrench 5/16’’

Required parts:

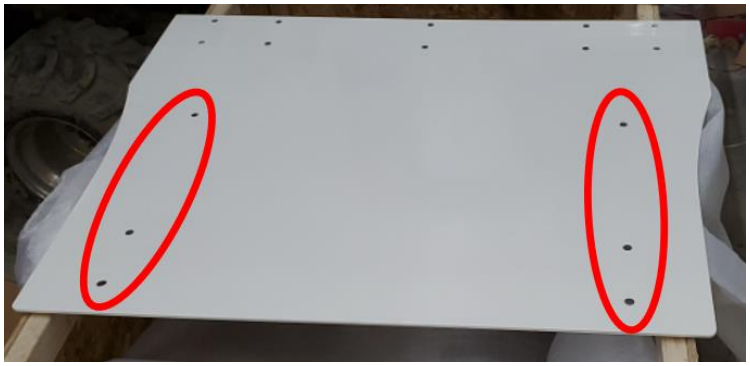
- 1x Frame assembly (10)
- 1x Extension plate (20)
- 6x Bolt (A)
- 6x Washer (F)
- 6x Nut (G)

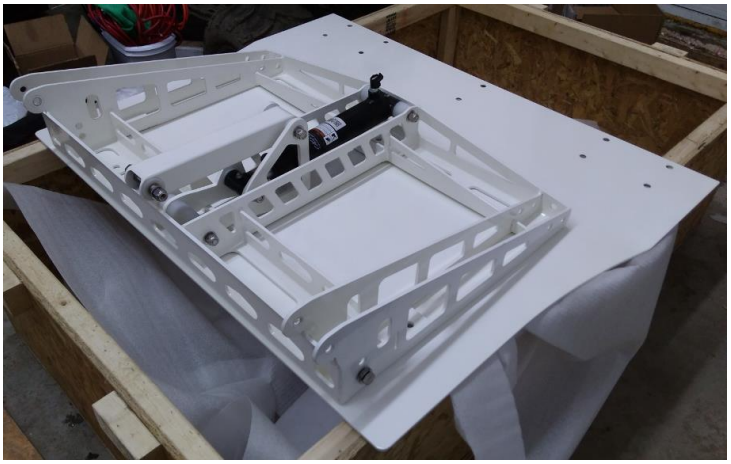
Step 1

Put the frame (10) and the swivel deck (11) aside. Remove the extension plate (20) from the bottom of the box and put it on top. Make sure the chamfered edge is facing down.

Step 2

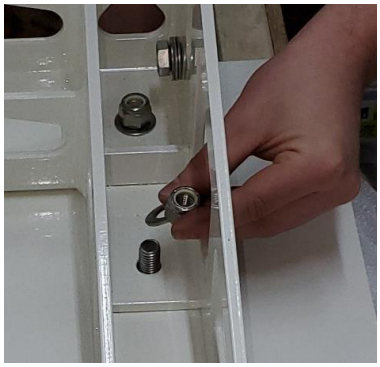
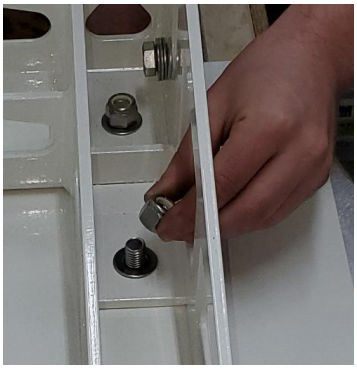
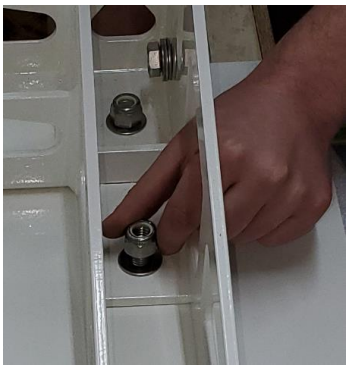
Position the frame (10) over the extension plate (20), taking care to align the corresponding holes.





Step 3

Bolt the frame (10) to the extension plate (20) using the bolts (A). Insert a washer (F) between the frame (10) and the nut (G). Tighten all bolts (A) to 5 lb-ft once and then repeat the sequence with a torque of 44 lb-ft (60 Nm).

44 lb-ft (60 Nm)

3. Extension plate installation

Required tools :

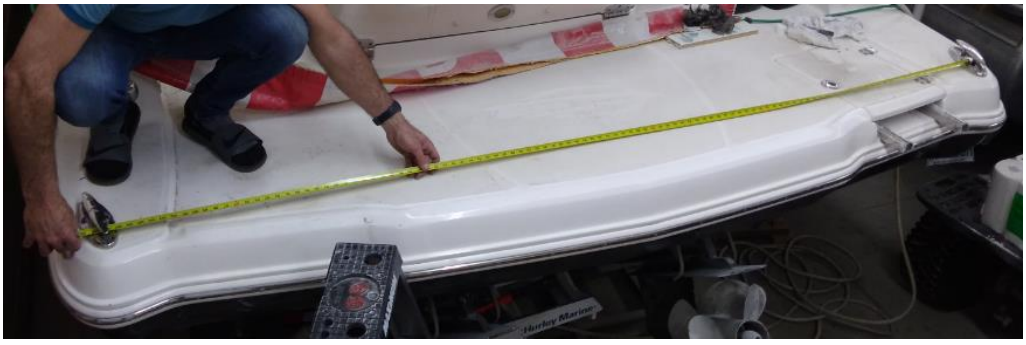
- Tape measure
- Marker
- Drill
- Drill bit 1/2’’
- Wrench 3/4’’
- Allen wrench 5/16’’
- Caulking gun
- White Sikaflex™-291 LOT sealant tube

Required parts:

- 1x Extension plate (20) assembled to frame (10)
- 4x Fixing plate (30)
- 8x Bolt (B)
- 8x Nut (G)

Step 1

Determine the center of the swim platform crosswise and identify it using a marker.



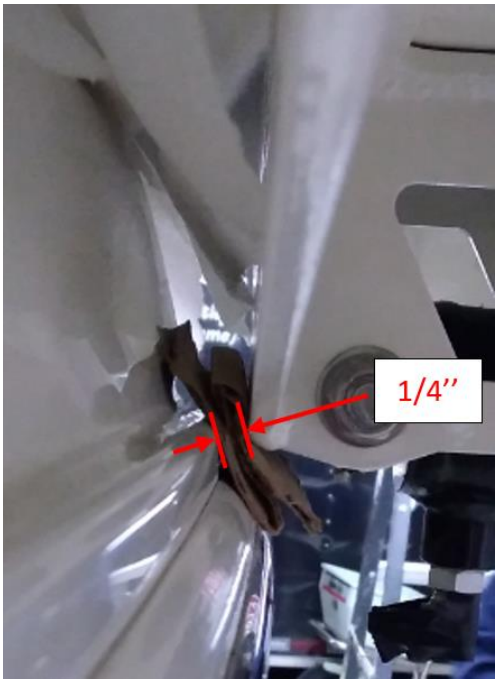
Step 2

Insert a protective film between the extension plate (20) and the swim platform in order to protect the surfaces. Align the center of the extension plate (20) with the center of the swim platform. The center of the extension plate can be identified with the series of two holes in the center.

In order to hold the extension plate (20) in place, it is recommended to install temporary posts under the frame (10). If needed, the angle of the extension plate can be adjusted by moving the posts.

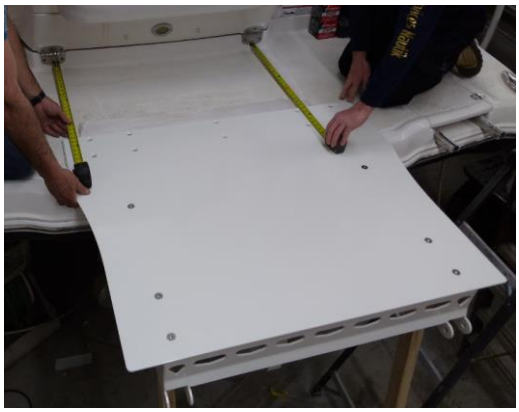
Step 3

Move the extension plate (20) in order to position the underneath reinforcements to approximately 1/4'' (6 mm) of the platform edge. It is recommended to insert a 1/4 '' shim between the frame (10) and the platform in order to keep the space for the next steps.



Step 4

Align the extension plate (20) using two fixed parallel points located at the back the boat. If needed, recenter the extension plate (20). This position will be its final location.

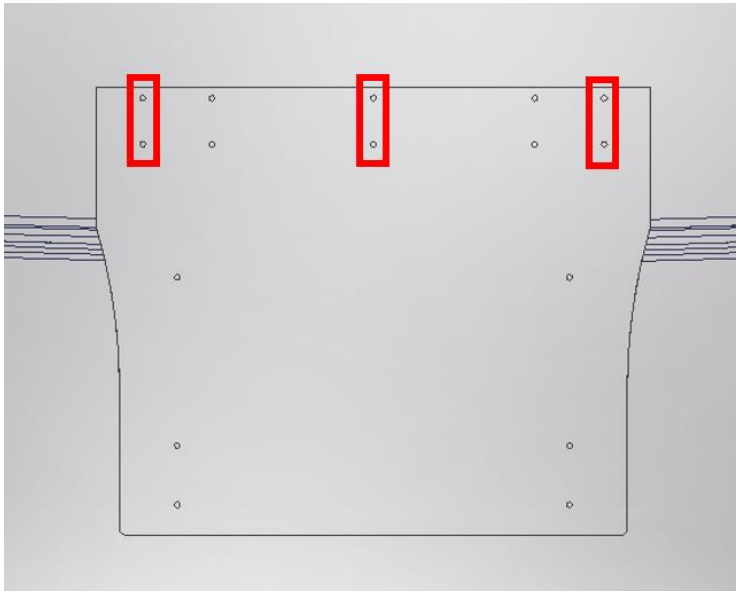


Step 5

Two mounting options are available in order to adapt to the different configurations of swim platforms.:

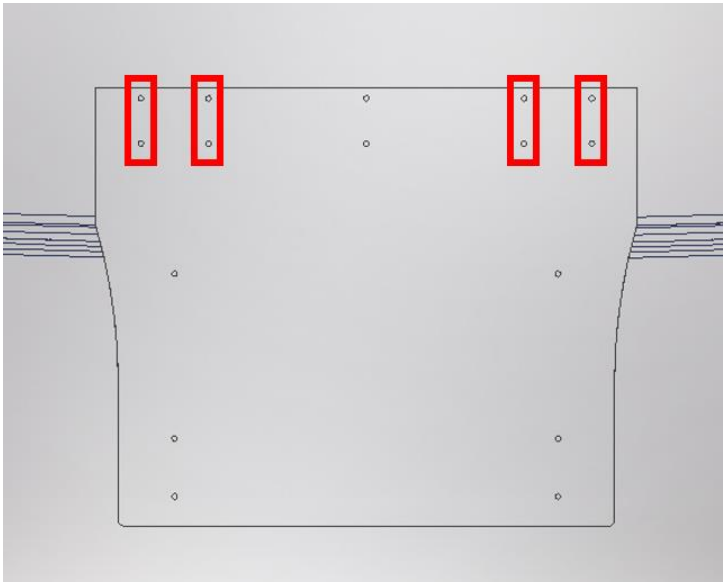
Option #1

Use 3 fixing plates (30), each containing two bolts: one on each side and one in the center.



Option #2

Use 4 fixing plates (30), each containing two bolts: two on each side and none in the center.



Step 6

Before choosing the option, inspect underneath the swim platform and look for obstacles that could interfere with the installation of the fixing plates (30).

The **plates must be laid on a flat surface** in order to provide optimal reinforcement.

In the case of closed platforms, it may be necessary to access the inside of the platform through the engine room in order to position the plates and bolts.

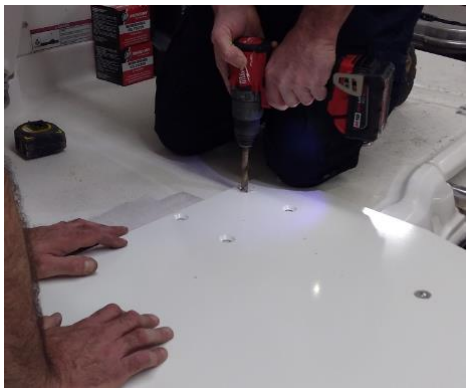
Steps 7

Once the positioning of the fixing plates (30) is determined according to the chosen mounting option, drill the holes in the platform with a 1/2 '' drill bit and the extension plate (20) as a positioning template.

The holes should be perpendicular to the surface of the extension plate (20).

Start by drilling a hole in the end of the extension plate (20) and insert a bolt (B) into it.

Before drilling the second hole at the opposite end of the extension plate (20), ensure that the plate is well aligned. Drill a hole and Insert a bolt (B).



The extension plate (20) now being held in its final position, proceed with the drilling of the other holes.
Make sure to drill only the holes that are required by the chosen mounting option.

Step 8

When the holes are drilled, remove the extension plate (20) and clean the surface of the platform. The surface must be free of dust, grease or liquid in order to promote adhesion of Sikaflex ™.

Step 9

Before repositioning the extension plate (20), apply some Sikaflex™ sealant around each drilled hole, on top, and, if needed, underneath the swim platform.

Apply a bead of sealant in between the holes and over the area of the platform which will be in contact with the extension plate (20).

Step 10

Reposition the extension plate (20) over the swim platform using the bolts (B) as guides, in order to help position the plate at the right location on the first try.

Step 11

Attach the extension plate (20) to the swim platform using the bolts (B).

Position the fixing plates (30) underneath the platform, add the nuts (G) to the end of each bolt (B) and tighten all bolts once to 5 lb-ft. Repeat the sequence with a torque of 44 lb-ft (60 Nm).

44 lb-ft (60 Nm)

4. Installation of round tube support to transom

Required tools :

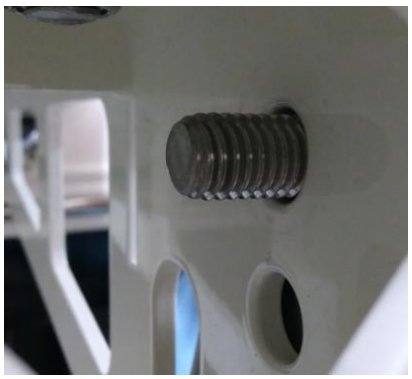
- Level
- Marker
- Drill
- Drill bit 11/64'' or 3/16''
- Drill bit 3/8'' for stainless steel
- Wrench 9/16''
- Ratchet and socket 9/16''
- Caulking gun
- White Sikaflex™-291 LOT sealant tube
- Bit for hexagonal head screw 3/8''

Required parts:

- 2x Round tube (40)
- 2x Round tube (41)
- 2x Round tube support (44)
- 2x Bolt (C)
- 4x Bolt (H)
- 6x Washer (F)
- 2x Nut (G)
- 4x Nut (K)
- 8x Screw (L)

Step 1

Attach the flat end of the female tubes (41) to the frame (10). Two holes can be used for this purpose. Choose the one that offers maximum clearance. **Make sure to use 3 washers (F) per bolt (C)**.



Step 2

Attach the round tube supports (44) to the end of the tubes (40) using bolts (H) and nuts (K). **Do not tighten, they will be disassembled later.**

Step 3

Insert the male round tubes (40) inside the female round tubes (41).

Step 4

Position the supports for round tubes (44) on the transom of the boat. They must be positioned as low as possible and open at least 24" more than the top section or close inward by at least 24 " more than the top sextion, while taking into account the clearance for the sterndrive.

Step 5

Once the position of the support is determined, use a marker to draw their outlines. **Ensure they are laid flat against the transom.**

Step 6

Disassemble the supports from the tubes. Drill 11/64'' holes in the transom at 1.5'' deep.
It is recommended to use the support for round tube (44) as drilling templates.

Step 7

Apply Sikaflex ™ around each hole and under the support, then screw the supports (44) to the transom using the screws (L).

Reinstall the male round tubes (40) on the round tube supports (44) using bolts (H) and nuts (K).

Step 8

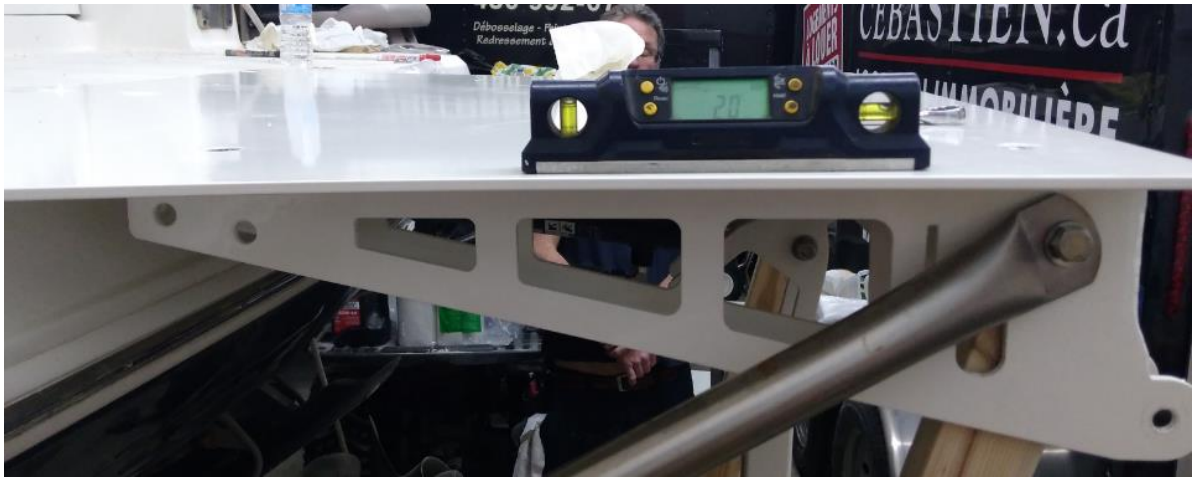
Tighten the bolts (C) and (H) at each ends of the support tubes, observing the torques indicated.

44 lb-ft (60 Nm)

22 lb-ft (30 Nm)

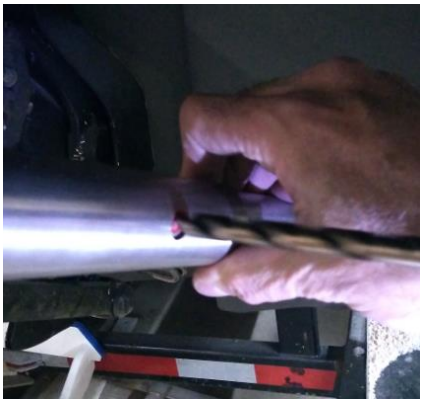
Step 9

Adjust the angle of the extension plate (20) using the temporary posts**. It is recommended to position the extension plate (20) parallel to the water level**. **Check the angle on both sides of the plate to make sure it is straight.** Once the desired angle is reached, hold the plate into position.



Step 10

Drill a hole in the male round tube (40) through the pre-drilled hole on the female round tube (41) using a 3/8 "drill bit**. It is recommended to drill one side at a time in order to get a well-centered hole.**



Step 11

Use the bolts (H) and nuts (K) to keep the tubes (40 and 41) in their final position. Tighten with a torque of 22 lb-ft (30 Nm).

22 lb-ft (30 Nm)

5. Installation of square tube support to transom

Required tools :

- Level
- Marker
- Drill
- Drill bit 11/64'' or 3/16''
- Wrench 9/16''
- Ratchet and socket 9/16''
- Caulking gun
- White Sikaflex™-291 LOT sealant tube
- Bit for hexagonal head screw 3/8''

Required parts:

- 2x Square tube (42)
- 2x Square tube (43)
- 2x Square tube support (45)
- 2x Bolt (D)
- 2x Bolt (E)
- 4x Bolt (I)
- 4x Washer (F)
- 4x Nut (G)
- 4x Nut (K)
- 8x Screw (L)

Step 1

Secure the end of the female square tubes (43) between the frame reinforcements (10) using bolts (E), nuts (G) and washers (F). Two holes may be used for that purpose. Choose the one that offers maximum clearance. Make sure to use 2 washers (F) per bolt.

Step 2

Attach the supports for square tube (45) to the end of the tubes (42) using bolts (D) and nuts (G). **Do not tighten, they will be disassembled later.**

Step 3

Insert the male square tubes (42) inside the female square tubes (43).

Step 4

Position the supports for square tube (45) on the transom. They should be positioned as low as possible.

Step 5

When the position of the square tube support (45) is determined, use a marker to indicate the position of the holes. **Make sure that the support sits flat against the transom.**

Step 6

Drill 11/64'' holes in the transom at 1.5'' deep**. It is recommended to use the brackets (45) as drilling templates**. Draw the outline of the brackets.

Step 7

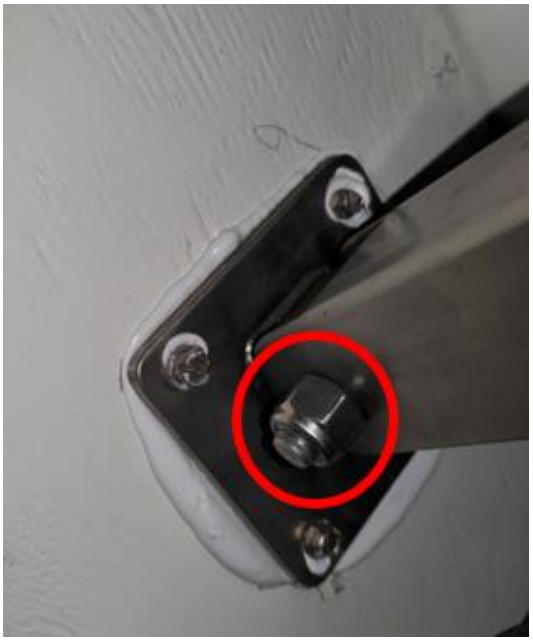
Apply Sikaflex ™ around each hole and under the support, then screw the supports for square tube (45) to the transom of the boat using the screws (L).

Reinstall the square male tubes (42) on the square tube supports using bolts (D) and nuts (G).

Step 8

Tighten the bolts (D) and (E) at both ends of the support tubes, observing the torques indicated.

44 lb-ft (60 Nm)



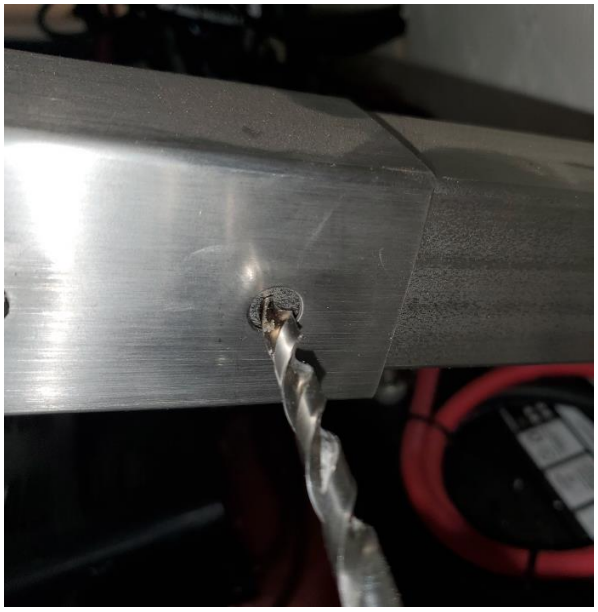
22 lb-ft (30 Nm)

Step 9

Adjust the angle of the extension plate using temporary posts**. It is recommended to position the extension plate parallel to the water level. Check the angle on both sides of the plate to make sure it is straight**. When the desired angle is reached, hold the plate into position.

Step 10

Drill a hole in the male square tube (42) through the pre-drilled hole on the female square tube (43) using a 3/8 "drill bit. **It is recommended to drill one side at a time in order to get a well-centered hole.**



Step 11

Use the bolts (I) and nuts (K) to keep the tubes (42 and 43) in their final position. Tighten with a torque of 22 lb-ft (30 Nm).

22 lb-ft (30 Nm)

6. Hydraulic pump installation

Required tools :

- Wrench 1/2'', 9/16''
- Funnel
- 1x Gallon of hydraulique oil AW32

Required parts:

- 1x Hydraulic pump (50)
- 1x Hydraulic pump support (51)
- 1x Negative batterie cable (52)
- 1x Positive batterie cable (53)
- 2x Bolt (J)
- 4x Screw (M)

Step 1

Determine the location where the hydraulic pump (50) will be installed (near a battery should be considered in order to facilitate the connection). **The electric motor of the pump is not ''explosion proof'' certified. Good ventilation is necessary to eliminate flammable vapors build-up.**

Step 2

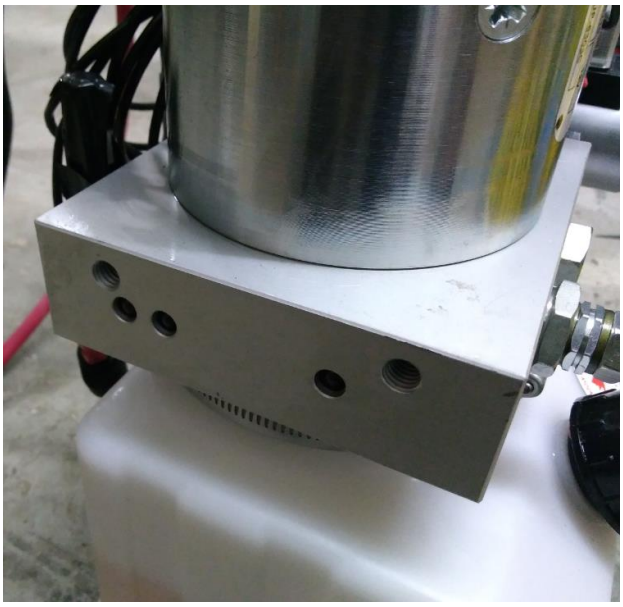
Attach the hydraulic pump support (51) to a vertical wall using the screws (M). Use the support most suited to your environment.

Step 3

Before installing the hydraulic pump (50) in the boat, fill the pump tank with AW32 hydraulic oil.
Pay special attention when filling so as not to contaminate the oil.

Step 4

Attach the hydraulic pump (50) to the pump support (51) using the two bolts (J).



Step 5

Connect the negative cable (52) to the negative pole of the nearby battery.

Step 6

Connect the positive cable (53) to the positive pole of the nearby battery.
Disable the relay on the pump when connecting.

Step 7

Install the hydraulic pump (50) safety switch (54). It should be positioned inside the boat towards the back. 10’-0'' of wire is included. This switch activates the wired control and the remote control (optional).
It is recommended <u>not to</u> install it in a place easily accessible to children.

Make sure to respect the order in which the wires are reconnected in the event connectors have to be disconnected from the safety switch.

Step 8

Connect the wired control's cable (55) to the corresponding connector on the hydraulic unit.
It is recommended to install the control bow in the stern area of the boat in order to facilitate the use of ''The Dinghy Davit''. **Warning: the control is not water resistant.**

7. Hydraulic hoses installation

Required tools :

- Market
- Hole saw 1 1/4''
- Drill
- Drill bit 5/32''
- Wrench 9/16'', 5/8'', 11/16''
- Caulking gun
- White Sikaflex™-291 LOT sealant tube
- Star screwdriver
- Pliers

Required parts:

- 2x hydraulique hose (60)
- 1x Through-hull fitting (61)

Step 1

Use a marker to identify both ends of <u>one</u> of the two hydraulic hose (60). Both hoses (60) are identical and measure 3 m (10'-0'') each. They will be used to connect the hydraulic pump to the fame cylinder (10).
Do not remove the plugs at the end of the hoses before the pump connection step.

Step 2

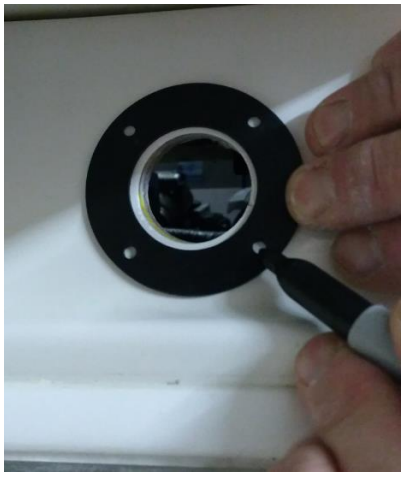
Determine the location where to drill a hole in the hull to insert the hoses so they easily reach the pump: center of the boat under the swim platform, near the transom. A thru-hull fitting (61) is included to provide a watertight installation.

Step 3

Drill a hole in the hull at the location determined to pass the hydraulic hoses (60). Use a 32 mm (1 1/4'') hole saw.

Step 4

Use the rubber washer included with the thru-hull kit to identify the location of the screw holes. Use a 5/32'' drill bit to pre-drill.



Step 5

Pass the two hydraulic hoses (60) through the hull.

Step 6

Thread all the thru-hull components (61) onto the hydraulic hoses (60).

Step 7

Connect the identified hose (60) at the base of the hydraulic cylinder and the other hose (60) on top of the cylinder. **Do not tighten the connectors.**

Connector # 1 can be rotated 90 ° by unscrewing the lock nut. **Always unscrew the connector to place it at the desired angle.**

Step 8

Apply a generous amount of Sikaflex ™ sealant around the thru hole. Position the rubber washer and apply sealant to it as well.

Step 9

Position the retaining washer and fix it to the hull using the screws provided. Tighten enough to see the sealant come out around the retaining washer.

Step 10

Place the rubber plug on the hydraulic hoses so that the cone formed by the outside wall points outwards. Apply sealant on the hoses and cap.

Step 11

Adjust the length of the hydraulic hoses (60) outside the boat. They should not be tight nor too loose to the point of hanging. It is possible to fix them to the frame (10) using clips. Position the retaining ring on the rubber plug and secure it with the bolts provided.

Step 12

Tighten the hose connectors (60) to the hydraulic cylinder. Hold the hose (60) with pliers and tighten the ring with an 11/16 "wrench.

Step 13

Once the thru-hull fitting is properly installed, bring the other end of the hydraulic hoses close to the pump to make the connection. **Avoid any tight radius in the hydraulic hoses (60).**

Step 14

Connect the hoses to the hydraulic valve on the pump.

Connect the identified hose on port A of the valve.

Connect the other hose to port B of the valve.

8. Swivel deck installation

Required tools :

- Wrench 3/4’’
- Ratchet and socket 3/4’’

Required parts:

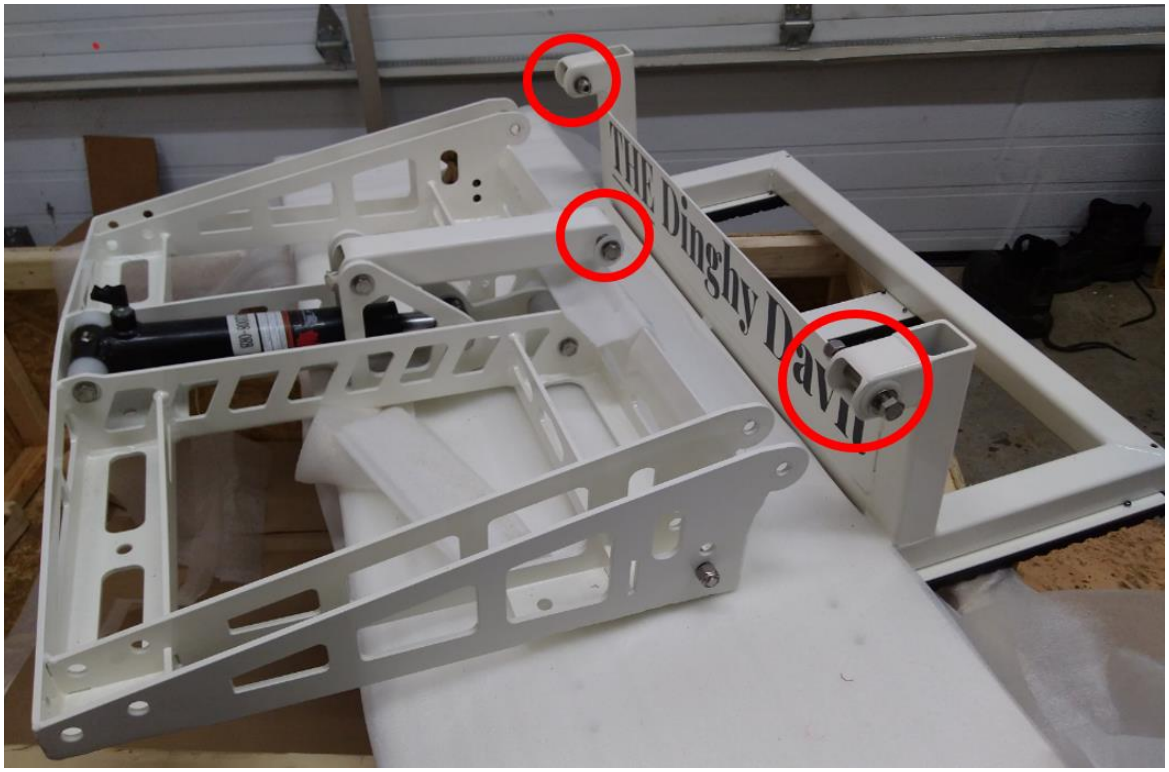
- Swivel deck (11)

Step 1

Put the swivel deck (11) in the ‘’closed position’’ over the extension plate (20). Insert a 1.5'' thick piece of wood between the extension plate (20) and the swivel deck (11) to facilitate the alignment of the pivot holes.

Step 2

Attach the swivel deck (11) to the frame (10) by inserting the provided bolts into the pivot holes, as well as those at the end of the actuating arm. Make sure to use a washer with the bolt and the nut and to insert the nylon washers between the pivot points. Tighten with a torque of 44 lb-ft (60 Nm).



44 lb-ft (60 Nm)

9. Rings installation for Sea-doo Spark

Required tools :

- Drill
- Drill bit 3/8’’
- Allen wrench 5/16’’

Required parts:

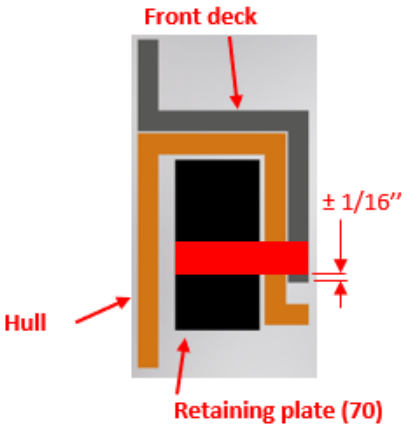
- 2x back plate (70)
- 2x Ring (71)
- 2x Bolt (72)
- 2x Washer (73)
- 2x Washer (74)

Step 1

Locate the junction between the hull and the junction of the decks.

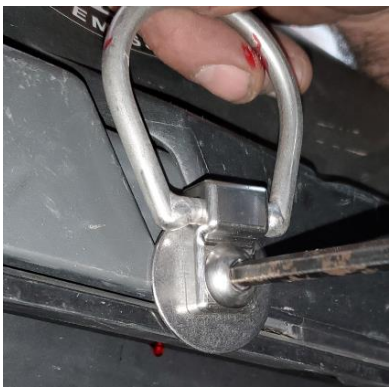
Step 2

Drill a hole using a 3/8 '' bit in the outer wall of the gasket. Use the threaded hole in the retaining plate (70) to determine the exact height of the hole. The retaining plate (70) must be positioned inside the seal and firmly pressed towards the top of the slot. **Caution not to pierce the inner wall.**



Step 3

Slide the back plate (70) inside the seal and screw the bolt (72) along with the ring (71) and the washers (73 and 74). The pivot of the ring (71) must be on the top part of the bolt. **Apply thread locker around the bolt**. Tighten with a torque of 22 lb-ft (30 Nm).



Step 4

Repeat steps 1 to 3 at 35 ¾'' behind the location of the first ring. The exterior of the drill bit must be at 1/16'' of the lower wall. Position the pivot point of the ring on the top part of the bolt (72).