

PWC KIT - Bilge Pump

Product: **Sea-Doo_watercraft**
Project no: **487803702**
Instruction Sheet P/N: **487803702**
Revision no:
Revision date:
Item covered: **Bilge Pump**

The following symbols may be used in this document:

WARNING

Indicates a hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION: Indicates a hazard situation which, if not avoided, could result in minor or moderate injury.

NOTICE Indicates an instruction which, if not followed, could severely damage vehicle components or other property.

WARNING

- This kit is designed for specific applicable models only (authorized BRP dealers will confirm model(s)). It is not recommended for units other than the one (those) for which it was sold.
- If the installation of the kit requires a template, ensure template is to scale.
- Should removal of a locking device (e.g. lock tabs, self-locking fasteners, etc.) be required when undergoing disassembly/assembly, always replace with a new one.
- Torque wrench tightening specifications must strictly be adhered to.
- Unless otherwise specified, engine must be OFF when performing any operation on the vehicle.

WARNING

Some important safety information and/or operating instructions dedicated to the end user might be included in this instruction sheet. Make sure to give the kit part number as well as the instruction sheet included with this kit to the customer. Verify that the customer has access to all the information required for proper use of the accessory.

NOTE: USE TIGHTENING TORQUES IN THE FOLLOWING TABLE IF NOT OTHERWISE SPECIFIED.

GRADE

	5.8	8.8	10.9	12.9
M4	$1.8 \pm 0.2 \text{ N}\cdot\text{m}$ ($16 \pm 2 \text{ lbf}\cdot\text{in}$)	$2.8 \pm 0.2 \text{ N}\cdot\text{m}$ ($25 \pm 2 \text{ lbf}\cdot\text{in}$)	$3.8 \pm 0.2 \text{ N}\cdot\text{m}$ ($34 \pm 2 \text{ lbf}\cdot\text{in}$)	$4.5 \pm 0.5 \text{ N}\cdot\text{m}$ ($40 \pm 4 \text{ lbf}\cdot\text{in}$)
M5	$3.3 \pm 0.2 \text{ N}\cdot\text{m}$ ($29 \pm 2 \text{ lbf}\cdot\text{in}$)	$5 \pm 0.5 \text{ N}\cdot\text{m}$ ($44 \pm 4 \text{ lbf}\cdot\text{in}$)	$7.8 \pm 0.7 \text{ N}\cdot\text{m}$ ($69 \pm 6 \text{ lbf}\cdot\text{in}$)	$9 \pm 1 \text{ N}\cdot\text{m}$ ($80 \pm 9 \text{ lbf}\cdot\text{in}$)
M6	$7.5 \pm 1 \text{ N}\cdot\text{m}$ ($66 \pm 9 \text{ lbf}\cdot\text{in}$)	$10 \pm 2 \text{ N}\cdot\text{m}$ ($89 \pm 18 \text{ lbf}\cdot\text{in}$)	$12.8 \pm 2.2 \text{ N}\cdot\text{m}$ ($113 \pm 19 \text{ lbf}\cdot\text{in}$)	$16 \pm 2 \text{ N}\cdot\text{m}$ ($142 \pm 18 \text{ lbf}\cdot\text{in}$)
M8	$15.3 \pm 1.7 \text{ N}\cdot\text{m}$ ($135 \pm 15 \text{ lbf}\cdot\text{in}$)	$24.5 \pm 3.5 \text{ N}\cdot\text{m}$ ($18 \pm 3 \text{ lbf}\cdot\text{ft}$)	$31.5 \pm 3.5 \text{ N}\cdot\text{m}$ ($23 \pm 3 \text{ lbf}\cdot\text{ft}$)	$40 \pm 5 \text{ N}\cdot\text{m}$ ($30 \pm 4 \text{ lbf}\cdot\text{ft}$)
M10	$29 \pm 3 \text{ N}\cdot\text{m}$ ($21 \pm 2 \text{ lbf}\cdot\text{ft}$)	$48 \pm 6 \text{ N}\cdot\text{m}$ ($35 \pm 4 \text{ lbf}\cdot\text{ft}$)	$61 \pm 9 \text{ N}\cdot\text{m}$ ($45 \pm 7 \text{ lbf}\cdot\text{ft}$)	$73 \pm 7 \text{ N}\cdot\text{m}$ ($54 \pm 5 \text{ lbf}\cdot\text{ft}$)
M12	$52 \pm 6 \text{ N}\cdot\text{m}$ ($38 \pm 4 \text{ lbf}\cdot\text{ft}$)	$85 \pm 10 \text{ N}\cdot\text{m}$ ($63 \pm 7 \text{ lbf}\cdot\text{ft}$)	$105 \pm 15 \text{ N}\cdot\text{m}$ ($77 \pm 11 \text{ lbf}\cdot\text{ft}$)	$128 \pm 17 \text{ N}\cdot\text{m}$ ($94 \pm 13 \text{ lbf}\cdot\text{ft}$)
M14	$85 \pm 10 \text{ N}\cdot\text{m}$ ($63 \pm 7 \text{ lbf}\cdot\text{ft}$)	$135 \pm 15 \text{ N}\cdot\text{m}$ ($100 \pm 11 \text{ lbf}\cdot\text{ft}$)	$170 \pm 20 \text{ N}\cdot\text{m}$ ($125 \pm 15 \text{ lbf}\cdot\text{ft}$)	$200 \pm 25 \text{ N}\cdot\text{m}$ ($148 \pm 18 \text{ lbf}\cdot\text{ft}$)
M16	$126 \pm 14 \text{ N}\cdot\text{m}$ ($93 \pm 10 \text{ lbf}\cdot\text{ft}$)	$205 \pm 25 \text{ N}\cdot\text{m}$ ($151 \pm 18 \text{ lbf}\cdot\text{ft}$)	$255 \pm 30 \text{ N}\cdot\text{m}$ ($188 \pm 22 \text{ lbf}\cdot\text{ft}$)	$305 \pm 35 \text{ N}\cdot\text{m}$ ($225 \pm 26 \text{ lbf}\cdot\text{ft}$)
M18	$170 \pm 20 \text{ N}\cdot\text{m}$ ($125 \pm 15 \text{ lbf}\cdot\text{ft}$)	$273 \pm 32 \text{ N}\cdot\text{m}$ ($201 \pm 24 \text{ lbf}\cdot\text{ft}$)	$330 \pm 25 \text{ N}\cdot\text{m}$ ($243 \pm 18 \text{ lbf}\cdot\text{ft}$)	$413 \pm 47 \text{ N}\cdot\text{m}$ ($305 \pm 35 \text{ lbf}\cdot\text{ft}$)

The illustrations in this document show typical construction of the different assemblies and may not reproduce the full detail or exact shape of the parts; however, they represent parts that have the same or similar function.

Installation time is approximately 0.8 hour.

parts to be installed

NOTE: Some parts are only installed on specific models. Verify the vehicle model before proceeding to installation.

Item	Description	Part Number	Quantity
P1	Bilge pump	(Not available separately)	1
P2	Retaining strap	273000344	1
P3	3A Fuse	710001008	1
P4	Bus bar (3 pin)	278002182	1
P5	Locking tie 94 mm	293750001	1
P6	Locking tie 142 mm	293750002	4
P7	Pump support	269800956	1
P8	Support bracket	(Not available separately)	1
P9	M6 X 16 Hex. screw	207161660	2
P10	M6 elastic nut	232561200	2
P11	M8 X 30 Hex. SEMS screw	250000966	1

NOTICE The bilge pump will not be in operation unless the engine is running or the electrical system is ON.
instructions

Bilge Pump installation

NOTE: This bilge pump works properly for both 12V and 24V, even though the pump has a marking of 24V on its body. It will work normally on the 12V of your vehicle.

NOTE: If your vehicle is not equipped with a bilge support, please order part separately. Bilge support (P/N 269800816).

WARNING

Always refer to the manufacturer's instructions for mixing and applying the epoxy.

1. Remove seats.

2. Disconnect battery.

NOTICE Always disconnect battery before doing any electrical installation. Always disconnect battery in this specified order, BLACK (–) cable first. Do not place tools on battery.

3. Remove access cover to provide access to the entire engine compartment.

4. Locate the rear bilge tube on the rear right side.

1. Rear Bilge Tube

5. Cut the locking tie and remove the tube from the bilge support.

1. Locking Tie

For GTI, GTR and Wake models

6. Leave the pump support as is and go to step 11.

Parts removed for clarity

1. Pump support

For GTX, RXT, Wake PRO and Fish PRO models

7. Remove the pump support.

Parts removed for clarity

8. Install the pump support [P7] from this kit on the support bracket [P8] with M6 X 16 hex. screws [P9] and M6 elastic nut [P10]. Tighten to specifications.

1. Pump support [P7]

2. M6 X 16 hex. screws [P9]

3. Support bracket [P8]

4. M6 elastic nut [P10]

Tightening Torque

M6 elastic nut [P10] $10 \pm 2 \text{ N}\cdot\text{m} (89 \pm 18 \text{ lbf}\cdot\text{in})$

9. Install the assembly on the vehicle using M8 X 30 Hex. SEMS screw [P11]. Tighten to specifications.

1. Pump support assembly
2. M8 X 30 Hex. SEMS screw [P11]

Tightening Torque

M8 X 30 Hex. SEMS screw [P11]

$29 \pm 1 \text{ N}\cdot\text{m}$ (21 $\pm 1 \text{ lbf}\cdot\text{ft}$)

For All Models

10. Remove the white filter cap from the bilge pump.
11. Align the pump besides the bilge tube as a measuring guide and cut the tube at a distance equal to the length of the pump. Approximately 140 mm (5.51 in).
1. White filter cap
- A. = Approximately 140 mm (5.51 in)
12. Plug the bilge tube onto the bilge pump white connector besides the wires.
13. Secure the tube to the bilge pump using a locking tie 94 mm [P5].
1. Locking Tie 94 mm [P5]
14. Install the retaining strap [P2] on the bilge base.
15. Clip the bilge pump into the bilge support while orienting the bilge tube towards the center of the vehicle.
16. Route the retaining strap between the wires and the bilge tube as shown.

Step 1: Install retaining strap [P2]

Step 2: Clip the bilge pump

Step 3: Route the retaining strap

A. Bilge tube

17. Route the wiring along the right hand side of the engine to the fuse box. Secure the wiring with locking ties 142 mm [P6].

For GTX, RTX, RXT-X and Wake Pro 2018 and up

1. Bilge pump wiring
2. Locking ties 142 mm [P6]
3. Fuse box

For 900 engine

1. Bilge pump wiring
2. Locking ties 142 mm [P6]
3. Fuse box

For 1603 engine

1. Bilge pump wiring
2. Locking ties 142 mm [P6]
3. Fuse box

Electrical Connections

1. Remove fuse box cover.
2. Detach fuse box from its support.
3. Pull out seal plugs from fuse box cavities to free the remaining terminal position in bilge and ground fuse.

TYPICAL

4. Remove plug for BROWN wire in bilge position.
5. Remove plug for BLACK wire in ground position.
6. Insert BROWN electrical harness wire terminal into BILGE.
7. Insert BLACK electrical harness wire terminal into GROUND.
8. Install 3A fuse [P3].
9. Install Bus bar (3 pin) [P4].
10. Reinstall fuse box onto its support.
11. Connect positive battery cable over vehicle positive cable to positive battery post.
12. Connect negative battery cable over vehicle negative cable to negative battery post.

NOTICE Always connect RED (+) cable first then BLACK (-) cable.

13. Cover all wire terminals with their connector protective cap.
14. Install key and press start button to wake up electrical system without starting the engine. Bilge pump should start automatically. You should hear a slight whistling sound coming from the pump. This will confirm it is running.
15. Remove key to shut off the electrical system completely.
16. Reinstall all removed components.