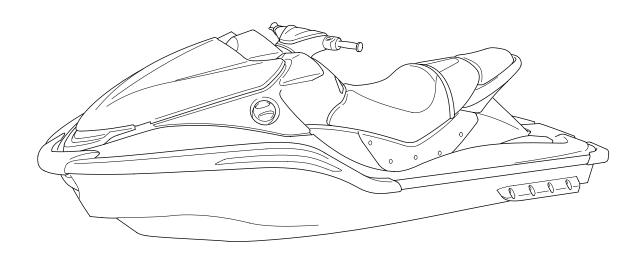
2009 Honda ARX1500T3DX/T3/N3 AQUATRAX F-15X with GPScape/F-15X/F-15 OWNER'S MANUAL



#### Introduction

Congratulations on choosing your Honda personal watercraft (PWC).

When you own a Honda, you're part of a worldwide family of satisfied customers — people who appreciate Honda's reputation for building quality into every product.

Your Honda was designed as a recreational PWC for use by one operator, and one or two passengers.

Before riding, take time to get acquainted with your PWC and how it works. To protect your investment, we urge you to take responsibility for keeping your PWC well maintained. Scheduled service is a must, of course. But it's just as important to observe the break-in guidelines, and perform all preride checks and post-ride maintenance detailed in this manual.

We also recommend that you read this owner's manual before you ride. It's full of facts, instructions, safety information, and helpful tips. To make it easy to use, the manual contains a table of contents, a detailed list of topics at the beginning of each section, and an index at the back of the book.

As you read this manual, you will find information that is preceded by a NOTICE symbol. This information is intended to help you avoid damage to your Honda, other property, or the environment.

#### Introduction

### Introduction

Read the Warranties Booklet (page 263) thoroughly so you understand the coverages that protect your new Honda and are aware of your rights and responsibilities.

As a PWC owner, you have joined a larger community of riders who want to ensure that there are places to ride. So when you ride, be considerate of other boaters, swimmers, and people on shore. Keep noise levels down, don't jump wakes, and only ride in areas where it's legal to ride PWCs.

If you have any questions about your PWC, or if you ever need special service or repairs, remember that your Honda PWC dealer knows your PWC best and is dedicated to your complete satisfaction.

Please report any change of address or ownership to your Honda PWC dealer so we will be able to contact you concerning important product information. You may also want to visit our website at www.honda.com.

For a list of authorized Honda PWC dealers, please refer to the following website: http://powersports.honda.com/, or call Customer Support at 1-866-784-1870 (USA only).

Happy riding!

California Proposition 65 Warning WARNING: This product contains or emits chemicals known to the State of California to

cause cancer and birth defects or other

reproductive harm.

Introduction

### A Few Words About Safety

Your safety, and the safety of others, is very important. And operating this PWC safely is an important responsibility.

To help you make informed decisions about safety, we have provided operating procedures and other information on labels and in this manual. This information alerts you to potential hazards that could hurt you or others.

Of course, it is not practical or possible to warn you about all hazards associated with operating or maintaining a PWC. You must use your own good judgement.

You will find important safety information in a variety of forms, including:

- **Safety Labels** on the PWC.
- Safety Messages preceded by a safety alert symbol ♠ and one of three signal words : DANGER, WARNING, or CAUTION.

These signal words mean:

**Safety Messages** 

### A Few Words About Safety

**A DANGER** 

You WILL be KILLED or SERIOUSLY HURT if you don't follow instructions.

**A WARNING** 

You CAN be KILLED or SERIOUSLY HURT if you don't follow instructions.

**A** CAUTION

You CAN be HURT if you don't follow instructions.

- Safety Headings such as Important Safety Reminders or Important Safety Precautions.
- **Safety Section** such as PWC Safety.
- **Instructions** how to use this PWC correctly and safely.

This entire manual is filled with important safety information — please read it carefully.

**Safety Messages** 

#### **Contents**

These pages give an overview of the contents
of your owner's manual. The first page of
each section lists the topics covered in that
section.

#### 

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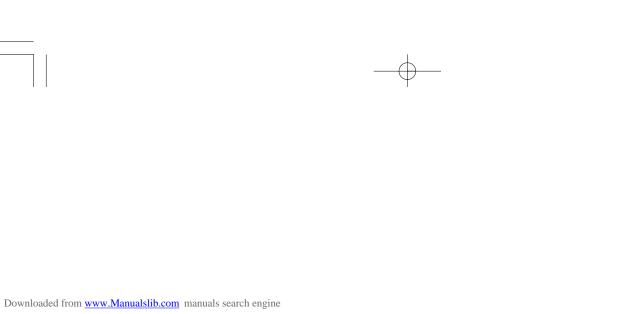
#### Basic Operation & Riding · · · · · · · · · 107 How to start and stop the engine, and operate the PWC. Also, riding precautions and important information about launching your PWC and riding with passengers.

Contents

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Contents



## **PWC Safety**

This section presents some of the most important information and recommendations to help you operate your PWC safely. Please take a few moments to read these pages. This section also includes information about the location of safety labels on your PWC.

mportant Safe	ty	In	fo	rr	na	tic	n						.2
Safety Labels	٠.												.6

Your Honda PWC is a high performance boat, not a toy. Honda recommends that it be operated by someone at least 16 years old.

Your PWC can provide many years of service and pleasure – if you take responsibility for your safety and understand the challenges you can meet while riding.

There is much that you can do to protect yourself when you ride. You'll find many helpful recommendations throughout this manual. The following are a few that we consider to be most important.

#### **Avoid Collisions**

The most common type of PWC mishap is colliding with another vessel. In addition, collisions result in more injuries and deaths than any other type of PWC mishap.

Understanding how your PWC operates is key to avoiding collisions. Your PWC does not have brakes, so you must plan ahead if you are slowing to a stop. Your PWC is propelled by jet thrust (page 109), so the engine must be on with throttle applied to accelerate or turn. Without jet thrust, you will not be able to steer (page 128).

#### **Ride Defensively**

Watching out for other water users around you and knowing the rules of the waterway can help keep you out of trouble (page 110). Keep a safe distance away from people, objects, and other watercraft. Remember that if you are on a collision course, it's your responsibility to avoid the collision. For other riding tips, see the *Personal Watercraft Rider's Handbook* that came with your PWC.

#### Wear a PFD and Protective Clothing

When you ride your PWC, you must wear a Coast Guard-approved Type I, II or III PFD (personal flotation device). It's the law in all states, and it could save your life. In addition, you should wear appropriate protective clothing, including a wet suit bottom or equivalent, footwear, gloves and eye protection (page 90).

#### **Get Training**

According to the Coast Guard, more than 85% of all fatalities involved people who did not have boating instruction. You can receive boating and PWC instruction from a number of different agencies (page 93).

Even if you have ridden other PWCs, take time to become familiar with how this PWC works and handles. Practice in a safe area, away from boats and swimmers, until you build your skills and get accustomed to the PWC's size and handling.

#### **Ride within Your Limits**

Pushing limits can increase the risk of loss of control and collision. Never ride beyond your personal abilities or faster than conditions permit. Remember that alcohol, drugs, fatigue, and inattention can significantly reduce your ability to make good judgements and ride safely.

#### Don't Drink and Ride

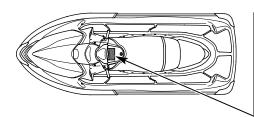
Alcohol and boating don't mix. Even one drink can reduce your ability to respond to changing conditions, and your reaction time gets worse with every additional drink. So don't drink and ride, and don't let your friends drink and ride either.

#### **Keep Your Honda in Safe Condition**

It's important to keep your PWC properly maintained and in safe riding condition. To help avoid problems, inspect your PWC before every ride and perform all recommended maintenance. Never exceed load limits (page 99), and do not remove any original equipment or modify your PWC in any way that would change its design or operation.

Safety labels on your PWC either warn you of potential hazards that could cause serious injury or they provide important safety information. Read these labels carefully and don't remove them.

If a label comes off or becomes hard to read, contact your Honda PWC dealer for a replacement.



### WARNING

To reduce the risk of SEVERE INJURY or DEATH:

To reduce the risk of SEVERE INJURY or DEATH:

WEAR A PERSONAL FLOTATION DEVICE (PFD). All ridgers must wear a Coast Guard approved PFD that is suitable for personal watercraft (PWC) use.

WEAR PROTECTIVE CLOTHING. Severe internal injuries can occur if water is forced into body cavities as a result of falling into water or being near jet thrust nozzle Normal swimwear does not adequately protect against forceful water entry into lower body cavities. All ridgers must wear a wet suit bottom or clothing that provides equivalent protection (See Owner's Manual). Footwear, gloves, and goggles/glasses are recommended.

KNOW BOATING LAWS. Honda recommends a minimum operator age of 16 years old. Know the operator age and training requirements for your state. A boating safety course is recommended and may be required in your state.

ATTACH ENGINE SHUT-OFF CORD (LANYARD) to wrist and keep it free from handlebars so that engine stops if operator falls off. After riding, remove cord from PWC to avoid unauthorized use by children or others.

RIDE WITHIN YOUR LIMITS AND AVOID AGGRESSIVE MANEUVERS to reduce the risk of loss of control, ejection, and collision. This is a high performance boat - not a toy. Sharp turns or jumping wakes or waves can increase the risk of back/spinal injury (paralysis), facial injuries, and broken legs, andles, and other bones. Do not jump wakes or waves.

DO NOT APPLY THROTTLE WHEN ANYONE IS AT REAR OF PWC - turn engine off or keep engine at idle. Water and/or debris exiting jet thrust nozzle can cause severe injury.

KEEP AWAY FROM INTAKE GRATE while engine is on. Items such as long hair, loose clothing, or PFD straps can become entangled in moving parts resulting in severe injury or drowning.

NEVER RIDE AFTER CONSÚMING DRUĞS OR ALCOHOL

READ AND FOLLOW OWNER'S MANUAL



Collisions result in more **INJURIES AND DEATHS** than any other type of accident for personal watercraft (PWC).

TO AVOID COLLISIONS:

SCAN CONSTANTLY for people, objects, and other watercraft. Be alert for conditions that limit your visibility or block your vision of others.

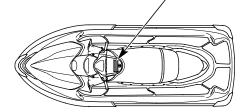
OPERATE DEFENSIVELY at safe speeds and keep a safe distance away from people, objects, and other watercraft.



- Do not follow directly behind PWCs or other boats.
  Do not go near others to spray or splash them with water.
  Avoid sharp turns or other maneuvers that make it hard for others to avoid you

AVoid snarp turns or other maneuvers that make it hard for others to avoid you or understand where you are going.
 Avoid areas with submerged objects or shallow water.
 TAKE EARLY ACTION to avoid collisions. Remember, PWCs and other boats do not have brakes.
 DO NOT RELEASE THROTTLE WHEN TRYING TO STEER away from objects - you need throttle to steer.
 Always check throttle and steering controls for proper operation before starting PWC.
 Follow navigation rules and state and local laws that apply to PWCs.

See Owner's Manual for more information.

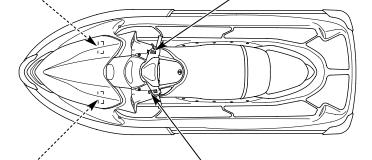




Storing fuel in this compartment can be a fire or explosion hazard which can result in injury or death. Do not store fuel or other flammable liquids in this unventilated compartment.

### **A** WARNING

Starting the engine without ventilating the engine compartment can cause a fire or explosion. See Owner's Manual.

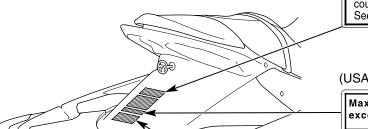


### **A WARNING**

Overloading or improperly loading the PWC can make it difficult to control and could result in an accident. See Owner's Manual for loading information.

## **A WARNING**

Shifting to reverse while moving forward can cause abrupt deceleration. You and your passengers can be seriously injured. See Owner's Manual.



### **WARNING**

Towing a skier, another watercraft, or other heavy items can make the PWC difficult to control and could result in an accident.
See Owner's Manual for towing information.

#### (USA only)

Maximum capacity is 3 persons but do not exceed a maximum weight of 525lbs (238.5kg).

#### (ARX1500T3DX only)

### **WARNING**

The boarding step is intended only for boarding the PWC in water. Improper use can result in serious injury or death.

- Do not use the step when the PWC is in motion.
  Do not use the step to pull anyone or anything.



### **Instruments & Controls**

This section shows the location of all gauges, indicators, and controls you would normally use before or while riding your PWC.

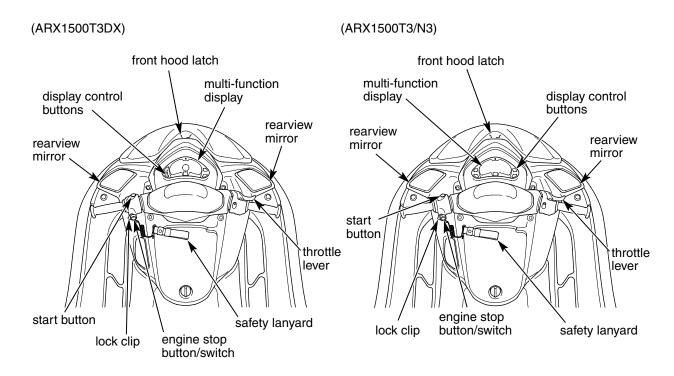
The items listed on this page are described in this section. Instructions for other components are presented in other sections of this manual where they will be most useful.

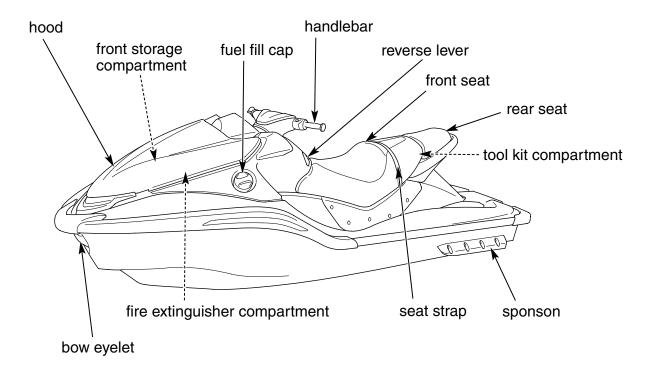
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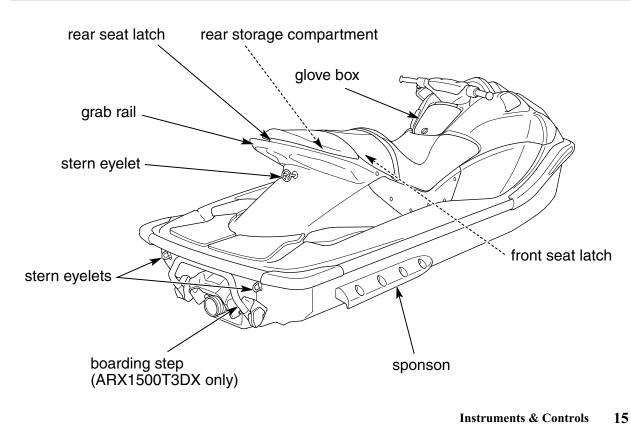
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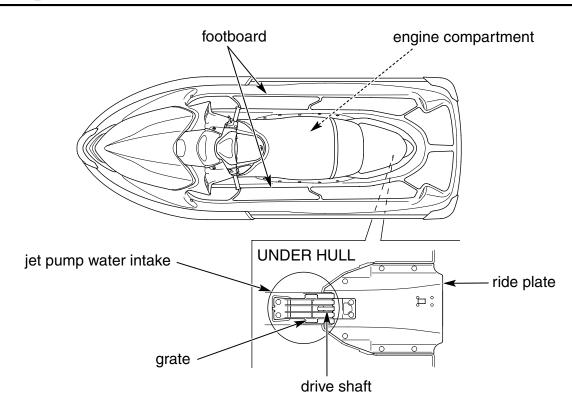
## **Instruments & Controls**

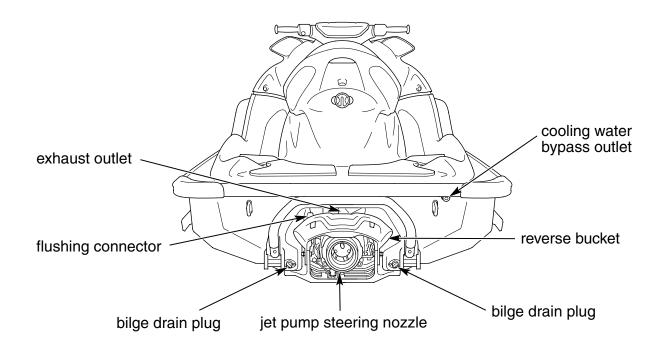
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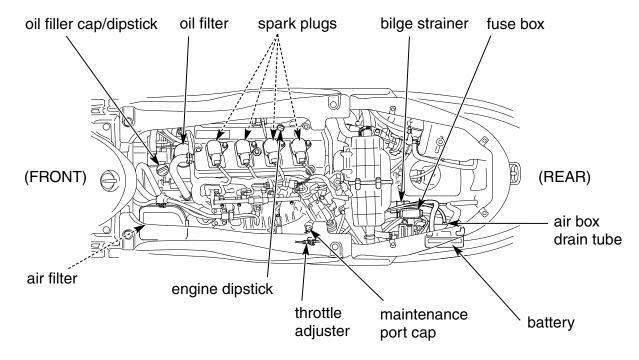






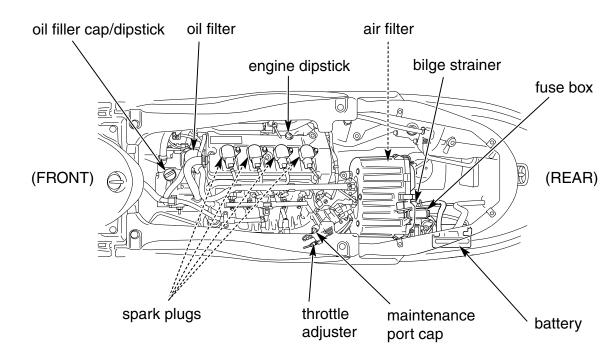


#### ARX1500T3DX/T3



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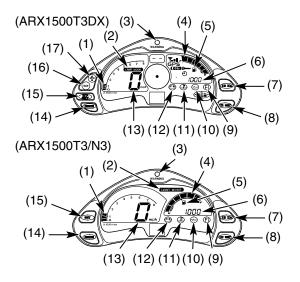
#### ARX1500N3



**Instruments & Controls** 

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The multi-function display and beeper on your PWC keep you informed, alert you to possible problems, and make your riding more enjoyable. Refer to the display frequently. Its functions are described on the following pages.



- (1) tachometer
- (2) LIMIT MODE indicator
- (3) WARNING lamp
- (4) fuel gauge
- (5) low fuel indicator
- (6) multi-function meter
- (7) ID No. button
- (8) ID SET button
- (9) PGM-FI malfunction indicator lamp (MIL)
- (10) low oil pressure indicator
- (11) high engine cooling water temperature indicator
- (12) low battery voltage indicator
- (13) speedometer
- (14) MODE button
- (15) WP SET button (ARX1500T3DX) SET button (ARX1500T3/N3)
- (16) (minus) button (ARX1500T3DX)
- (17) + (plus) button (ARX1500T3DX)

USA: Speedometer, tripmeter and mileage to a

waypoint read in miles.

Canada: Speedometer, tripmeter and mileage to a

waypoint read in kilometers.

20 Instruments & Controls

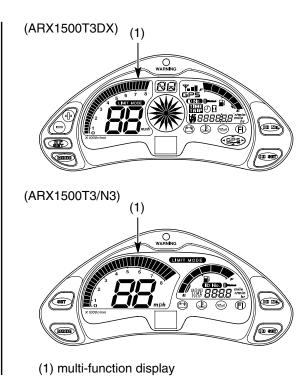
#### Display Check

After inserting the lock clip in the engine stop button/switch or after releasing the ID lock system. the beeper sounds twice and all the segments (except the hundreds digits) of the multi-function display will appear in sequence.

The beeper sounds twice and all the segments of the multi-function display will appear in sequence (Canada only).

After the check is complete, you will see the normal displays.

If any part of these displays does not come on when it should, have your Honda PWC dealer check for problems.



**Instruments & Controls** 

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1	tachometer	Shows engine speed in revolutions per minute (rpm).
2	LIMIT MODE indicator	Comes on when the limit mode is set and continues to flash while the mode is active (page 48).  This indicator is usually off.
3	WARNING lamp	Flashes under the following conditions:  (1) The remaining fuel is low.  (2) There is a fault in the fuel system.  (3) The engine oil pressure is low.  (4) The engine cooling water temperature is high.  (5) The engine oil temperature is high.  (6) There is any abnormality in the PGM-FI system.  (7) The battery voltage is low (below approx. 11.5 V).  (8) The engine charging pressure and intake pressure is excessive. (ARX1500T3DX/T3)  If the indicator flashes, immediately take the shortest route to land.

4	fuel gauge	Shows approximate fuel supply available (page 35).
		When segment F goes on, the fuel tank capacity is:
		18.49 US gal (70.0 ℓ )
		When segment E flashes while riding, fuel remaining
		in the tank is about:
		4.10 US gal (15.5 ℓ )
5	low fuel indicator	Flashes when the fuel remaining in the tank is about:
		4.10 US gal (15.5 ℓ )

6	multi-function meter	The meter includes the following functions:
	digital clock (*)	Shows hour and minutes (pages 37, 39).
	time meter (*)	Shows the hours and minutes of engine operation
		since you last reset the meter. To reset the time meter
		to zero (0), press and hold the SET (WP SET) button
		for more than 2 seconds.
	available cruising hour meter (*)	Shows the available cruising hour (page 36).
	tripmeter (*)	Shows the number of miles (USA) or kilometers
		(Canada) ridden since you last reset the meter.
		To reset the tripmeter to zero (0), press and hold the
		SET (WP SET) button for more than 2 seconds.
	mileage to a waypoint	Shows the mileage to a waypoint.
	(ARX1500T3DX)	,,
	tachometer	Shows the engine speed in revolutions per minutes
		(rpm).
	hourmeter	Shows the total hours of engine operation.
		Check the hourmeter to determine when the next
		scheduled maintenance is due.
	tripmeter (*)  mileage to a waypoint (ARX1500T3DX) tachometer	Shows the available cruising hour (page 36).  Shows the number of miles (USA) or kilometers (Canada) ridden since you last reset the meter.  To reset the tripmeter to zero (0), press and hold the SET (WP SET) button for more than 2 seconds.  Shows the mileage to a waypoint.  Shows the engine speed in revolutions per minutes (rpm).  Shows the total hours of engine operation.  Check the hourmeter to determine when the next

<sup>\*</sup> If the battery is disconnected, the digital clock, time meter, available cruising hour meter, and tripmeter, will reset.

7	ID No. button	Selects or changes the ID number (page 41).
		Also used to switch the display to the set up
		condition of the ID number (page 41).
8	ID SET button	Enters or cancels the ID number.
		Also used to activate the ID lock system.
9	PGM-FI malfunction indicator	Flashes when there is some abnormality in the
	lamp (MIL)	PGM-FI (Programmed Fuel Injection) system.
		Occasionally, depending on the abnormality, engine
		revs may be limited to less than 3,000 rpm. In
		extreme cases, the engine will stop.
		If the indicator flashes, immediately take the
		shortest route to land.
		If the engine stops, tow your PWC to land.
		This indicator is usually off.

10	low oil pressure indicator	Flashes when the engine oil pressure is low enough to cause engine damage.  If the indicator flashes, immediately take the shortest route to land, then see page 226 for
		instructions and cautions.
		This indicator is usually off.
11	high engine cooling water	Flashes when the engine cooling water temperature
	temperature indicator	is high enough to cause engine damage.
		If the indicator flashes, immediately take the
		shortest route to land, then see page 224 for
		instructions and precautions.
		This indicator is usually off.
12	low battery voltage indicator	Flashes when the battery voltage is below
		approx. 11.5 V.
		If the indicator flashes, immediately take the
		shortest route to land.
		This indicator is usually off.

13	speedometer	Shows approximate riding speed in miles (USA) or
13	specdometer	
		kilometers (Canada) per hour.
14	MODE button	Selects the mode of the multi-function meter: digital
		clock, time meter, available cruising hour meter,
		tripmeter, mileage to a waypoint (ARX1500T3DX),
		tachometer and hourmeter.
		Selects ON or OFF for the limit mode.
15	WP SET button	This button is used to set the digital clock (page 37)
	(ARX1500T3DX)	and input a waypoint or to erase a waypoint.
		Resets the tripmeter, time meter and mileage to a
		waypoint to zero (0) (page 28).
	SET button	This button is used to set the digital clock (page 39).
	(ARX1500T3/N3)	Resets the tripmeter and time meter to zero (0)
		(page 28).
16	– (minus) button	Advances the latitude and longitude when in the GPS
	(ARX1500T3DX)	mode. Also used to set the digital clock (page 37).
17	+ (plus) button	Advances the latitude and longitude when in the GPS
	(ARX1500T3DX)	mode. Also used to set the digital clock (page 37).

#### WP SET Button (ARX1500T3DX)

The WP SET button is used to set the digital clock (page 37) and input a waypoint or to erase mileage to a waypoint.

The WP SET button is also used to reset zero (0) the tripmeter, time meter and mileage to a waypoint. To reset the tripmeter, time meter and mileage to a waypoint, press and hold the button for more than 2 seconds.

When the rpm reading on the tachometer exceeds 3,000 rpm, the display will not respond to the WP SET button if you press it.

#### SET Button (ARX1500T3/N3)

The SET button is used to set the digital clock (page 39).

The SET button is also used to reset zero (0) the tripmeter and time meter. To reset the tripmeter and time meter, press and hold the button for more than 2 seconds.

When the rpm reading on the tachometer exceeds 3,000 rpm, the display will not respond to the SET button if you press it.

## **MODE Button (ARX1500T3DX)**

The MODE button is also used to switch between 7 displays (digital clock, time meter, available cruising hour meter, tripmeter, mileage to a waypoint, tachometer and hourmeter). To switch from one display to another, push the button.

The MODE button is also used to select the limit mode. To select the limit mode, press and hold the button for more than 5 seconds with the engine off (page 48).

When the rpm reading on the tachometer exceeds 3,000 rpm, the display will not respond to the MODE button if you press it.

digital clock	⊕ 1 <b>000</b>
time meter	0 ¢30
available cruising hour meter	E #00
tripmeter	30 mile
mileage to a waypoint	WP 10-000 mile
tachometer	1200 <sup>c/min</sup>
hourmeter	8 20

**Instruments & Controls** 

20 m

## MODE Button (ARX1500T3/N3)

The MODE button is also used to switch between 6 displays (digital clock, time meter, available cruising hour meter, tripmeter, tachometer and hourmeter). To switch from one display to another, push the button.

The MODE button is also used to select the limit mode. To select the limit mode, press and hold the button for more than 5 seconds with the engine off (page 48).

When the rpm reading on the tachometer exceeds 3,000 rpm, the display will not respond to the MODE button if you press it.

digital clock	10:00
time meter	TIME[] #3[]
available cruising hour meter	E #DO
tripmeter	TRIP <b>3.0</b> mile
tachometer	1200r/min
	HOUR — —

hourmeter

## **ID SET Button**

The ID SET button is used to enter the ID number. To enter the number, push the button (page 41).

The ID SET button is also used to activate and deactivate the ID lock system.

#### ID No. Button

The ID No. button is used to select an ID number. To select a number, push the button (page 41).

The ID No. button is also used to switch the display to the set up condition of the ID number. To switch, press and hold the button for more than 2 seconds.

#### **Low Oil Pressure Indicator**

The low oil pressure indicator (1) and the WARNING lamp (2) flash and the warning beeper sounds when engine oil pressure is low enough to cause engine damage. The engine automatically slows to prevent damage.

## (ARX1500T3DX)

To stop the warning beeper, press and hold any one of the six control buttons (WP SET, MODE, ID SET, or ID No., +, or –) for more than 2 seconds.

#### (ARX1500T3/N3)

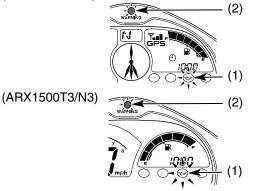
To stop the warning beeper, press and hold any one of the four control buttons (SET, MODE, ID SET, or ID No.) for more than 2 seconds.

If this occurs, head for shore and turn the engine OFF. See page 226 for instructions and cautions.

## NOTICE

Continuing to ride with low oil pressure can cause serious engine damage.

(ARX1500T3DX)



(1) low oil pressure indicator (2) WARNING lamp

## **High Engine Cooling Water Temperature Indicator**

The high engine cooling water temperature indicator (1) and the WARNING lamp (2) flash and the warning beeper sounds when the engine cooling water is over the specified temperature. The engine automatically slows to prevent damage.

#### (ARX1500T3DX)

To stop the warning beeper, press and hold any one of the six control buttons (WP SET, MODE, ID SET, ID No., +, or –) for more than 2 seconds.

#### (ARX1500T3/N3)

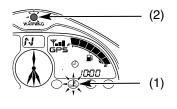
To stop the warning beeper, press and hold any one of the four control buttons (SET, MODE, ID SET, or ID No.) for more than 2 seconds.

If this occurs, head for shore and turn the engine OFF. See page 224 for instruction and precautions.

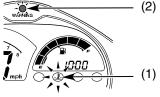
## **NOTICE**

Continuing to ride with an overheated engine can cause serious engine damage.

(ARX1500T3DX)



(ARX1500T3/N3)



(1) high engine cooling water temperature indicator (2) WARNING lamp

## **Low Battery Voltage Indicator**

If the battery voltage is low (below approx. 11.5 V), the low battery voltage indicator (1) and the WARNING lamp (2) flash and the warning beeper sounds.

#### (ARX1500T3DX)

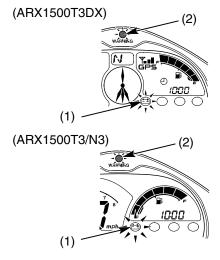
To stop the warning beeper, press and hold any one of the six control buttons (WP SET, MODE, ID SET, ID No., +, or –) for more than 2 seconds.

#### (ARX1500T3/N3)

To stop the warning beeper, press and hold any one of the four control buttons (SET, MODE, ID SET, or ID No.) for more than 2 seconds.

If the low battery voltage indicator and the WARNING lamp flash before leaving shore, charge the battery (page 204). If the indicator still flashes after charging, see your Honda PWC dealer.

If the indicator and WARNING lamp flash and the beeper sounds while riding, immediately head for shore and see your Honda PWC dealer as soon as possible.



- (1) low battery voltage indicator
- (2) WARNING lamp

# Fuel Gauge, Low Fuel Indicator and Available Cruising Hour Meter

The fuel gauge display (1) shows the approximate fuel supply available. The fuel tank capacity is:

18.49 US gal (70.0 ℓ)

When segment E (2), the low fuel indicator (3) and WARNING lamp (4) flash and the warning beeper sounds, you should refill the tank as soon as possible.

The amount of fuel remaining when the flashing starts is approximately:

4.10 US gal (15.5 ℓ)

beeper, your PWC will not provide you with another low fuel warning sound, so it is important to refill the fuel tank as soon as possible. Otherwise, you risk running out of fuel.

#### (ARX1500T3DX)

To stop the warning beeper, press and hold any one of the six control buttons (WP SET, MODE, ID SET, ID No., +, or –) for more than 2 seconds.

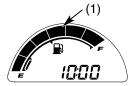
Or tap any one of these control buttons. (ARX1500T3/N3)

To stop the warning beeper, press and hold any one of the four control buttons (SET, MODE, ID SET, or ID No.) for more than 2 seconds. Or tap any one of these control buttons.

(ARX1500T3DX)

(ARX1500T3/N3)

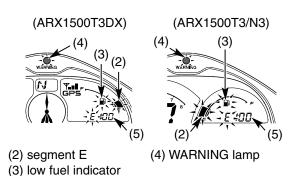




(1) fuel gauge display

(cont'd)

35



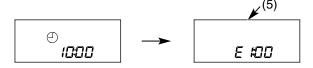
Your PWC is equipped with an available cruising hour meter (5).

WARNING lamp flash, and the warning beeper sounds, the available cruising hour meter is automatically indicated. When the amount of remaining fuel becomes less than 4.10 US gal (15.5  $\ell$ ), the estimated available cruising hour is indicated. Or select to push the MODE button (page 29, 30).

When segment E, the low fuel indicator and

The indicated available cruising hour is calculated based on the cruising conditions, and the indicated figure may not always be the actual available hour.

When the fuel gauge nears E or when the E segment flashes, promptly refuel your PWC.



(5) available cruising hour meter

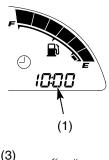
The available cruising hour meter shows E-:-if the battery is connected. To recover the available cruising hour meter, refuel your PWC, and start the engine.

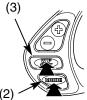
**NOTICE** The available cruising hour meter may not be recovered if the fuel level remains low.

## Digital Clock (ARX1500T3DX)

Shows hour and minute. To adjust the time, proceed as follows:

- 1. Insert the lock clip in the engine stop button/switch to turn on the display. If necessary, enter the ID number after this operation (page 44).
- 2. Switch the multi-function meter (1) to the digital clock mode by pushing the MODE button (2).
- 3. Press and hold the WP SET button (3) for more than 2 seconds. The clock will be set in the adjust mode with the hour display flashing.



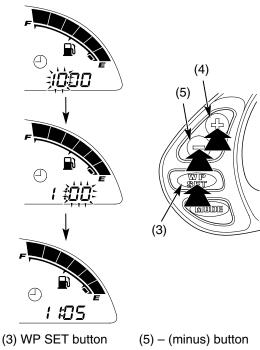


- (1) multi-function meter
- (2) MODE button
- (3) WP SET button

(cont'd)

- 4. To set the hour, push the + (plus) button (4) or – (minus) button (5) until the desired hour appears.
  - Quick setting press and hold the + (plus) button or – (minus) button until the desired hour appears.
- 5. Push the WP SET button (3). The minute display will start flashing.
- 6. To set the minute, push the + (plus) button or – (minus) button until the desired minute appears.
  - Quick setting press and hold the + (plus) button or – (minus) button until the desired minute appears.
- 7. To end the adjustment, press the WP SET button or pull the lock clip out of the engine stop button/switch.

The display will stop flashing automatically and the adjustment will be cancelled if the button is not pressed within 30 seconds.

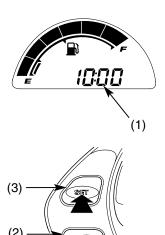


- (4) + (plus) button

## Digital Clock (ARX1500T3/N3)

Shows hour and minute. To adjust the time, proceed as follows:

- 1. Insert the lock clip in the engine stop button/switch to turn on the display. If necessary, enter the ID number after this operation (page 44).
- 2. Switch the multi-function meter (1) to the digital clock mode by pushing the MODE button (2).
- 3. Press and hold the SET button (3) for more than 2 seconds. The clock will switch to the adjust mode with the hour display flashing.

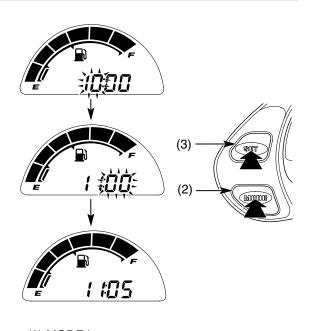


- (1) multi-function meter(2) MODE button
- (3) SET button

(cont'd)

- 4. To set the hour, push the MODE button (2) until the desired hour appears.
  - Quick setting press and hold the MODE button until the desired hour appears.
- 5. Push the SET button. The minute display will start flashing.
- 6. To set the minute, push the MODE button until the desired minute appears.
  - Quick setting press and hold the MODE button until the desired minute appears.
- 7. To end the adjustment, press the SET button or pull the lock clip out of the engine stop button/switch.

The display will stop flashing automatically and the adjustment will be cancelled if the button is not pressed within 30 seconds.



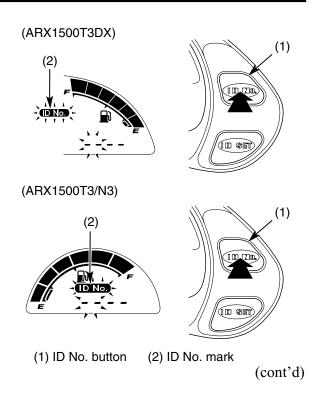
- (2) MODE button
- (3) SET button

## **ID Lock System**

Your PWC is equipped with an ID lock system that prevents the engine being started by anyone who doesn't have the ID number.

#### To Create an ID Number

- 1. Insert the lock clip in the engine stop button/switch to turn on the display.
- 2. Press and hold the ID No. button (1) for more than 2 seconds. The display will switch to the entry mode with the ID No. mark (2) and the first and second digits of the ID number flashing. The beeper will sound once.

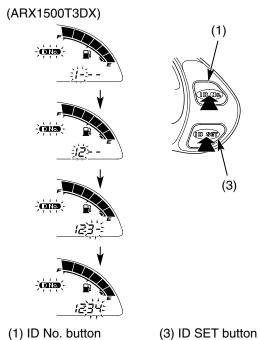


- 3. To fix first digit of ID number.
  Press and hold the ID No. button (1) until the desired number is displayed.
- 4. To fix second digit of ID number.

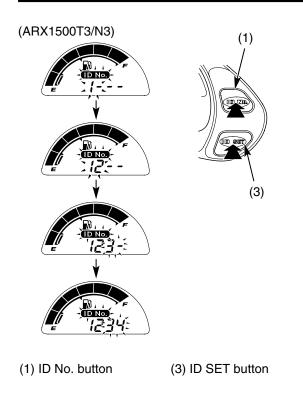
  Tap (do not hold) the ID No. button until the desired number is displayed.
- 5. Push the ID SET button (3) the third and forth digits of ID number display will start flashing.
- 6. To fix third digit of ID number.
  Press and hold the ID No. button until the desired number is displayed.
- 7. To fix forth digit of ID number. Tap (do not hold) the ID No. button until the desired number is displayed.
- 8. Push the ID SET button.

The beeper will sound once after entry is completed.

"0000" cannot be used as an ID number.

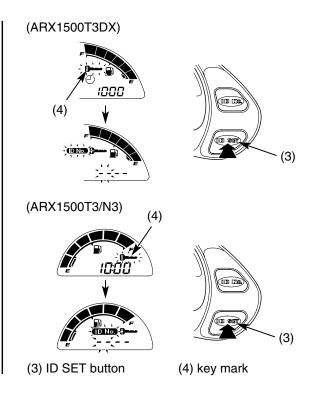


#### . ,



## To Activate the Lock System

- 1. With the engine OFF, press and hold the ID SET button (3) for more than 2 seconds when the multi-function display goes on. The key mark (4) will start flashing.
- 2. Push the ID SET button once. The key mark will go on, the first and second digits of the ID number and ID No. mark will start flashing, and the beeper will sound once.
- 3. Pull the lock clip out of the engine stop button/switch.



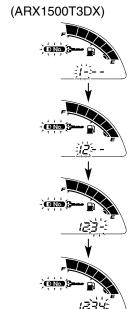
## To Deactivate the Lock System

- 1. Insert the lock clip in the engine stop button/switch to turn on the display.
- 2. Follow steps 3-8 under *To Create an ID Number* (page 42).

If the number you entered is correct, the beeper will sound twice, and the engine can be started. If you enter the wrong number, you are allowed two more attempts. After three failures to enter the correct number, the display will turn off.

In order to try again, remove and insert the lock clip.

If you forget the ID number and have not recorded it elsewhere, contact your Honda PWC dealer.





(cont'd)

# (ARX1500T3/N3)





## To Change the ID Number

- 1. Insert the lock clip in the engine stop button/switch to turn on the display.
- 2. Press and hold the ID No. button for more than 2 seconds. The display will switch to the change mode with the ID No. mark and first and second digits of the ID number flashing.
- 3. Enter the current number. Follow steps 3-8 under *To Create an ID Number* (page 42).
- 4. Enter the new number. Follow steps 3-8 under *To Create an ID Number* (page 42).
- 5. To register the new number, wait for more than 2 seconds while the new number lights.

After steps 3 and 4 are completed, the beeper will sound once.

"0000" cannot be used as an ID number.

#### **Limit Mode**

The limit mode restricts the speed of your PWC ARX1500T3DX/T3 (approx. 42 mph (67 km/h))

ARX1500N3 (approx. 40 mph (64 km/h)) to allow new riders to become accustomed to its operation. Anyone riding this PWC for the first time should use this mode and practice basic operation of the PWC to become familiar with the behavior of the PWC.

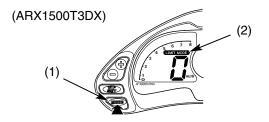
#### To Activate the Limit Mode

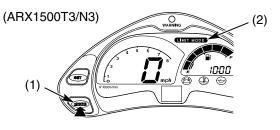
• With the engine off, press and hold the MODE button (1) for more than 5 seconds until the LIMIT MODE indicator (2) goes on.

When this mode is active while riding, the LIMIT MODE indicator flashes. When the indicator flashes, release the throttle slightly.

#### To Cancel the Limit Mode

 With the engine off, press and hold the MODE button for more than 5 seconds until the LIMIT MODE indicator goes off.





- (1) MODE button
- (2) LIMIT MODE indicator

## **Start Button**

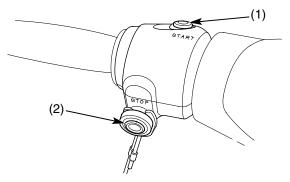
The green start button (1) is used for starting the engine. See Starting Procedure, page 115.

The engine will not start if the ID lock system is active.

## **Engine Stop Button/Switch**

The red engine stop button/switch (2) is used to stop the engine. To operate, push the button. See How to Stop the Engine, page 118.

#### LEFT HANDLEBAR



- (1) start button(2) engine stop button/switch

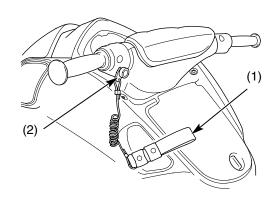
## Safety Lanyard & Lock Clip

The safety lanyard (1) should be worn around the operator's left wrist. Before starting the engine, insert the lock clip (2) in the engine stop button/switch.

If the operator falls overboard or away from the controls, the engine will stop immediately when the lock clip is pulled away from the engine stop button/switch.

To prevent theft or accidental starting, remove the lock clip from the engine stop button/switch and take the safety lanyard with you when you leave your PWC.

#### LEFT HANDLEBAR



- (1) safety lanyard
- (2) lock clip

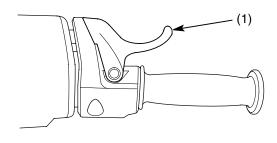
## Handlebar

The handlebar is used to steer your PWC. (Turning the PWC also requires applying some throttle.)

## **Throttle Lever**

The throttle lever (1) is used to control engine rpm (speed). To go faster, pull the lever toward you. To go slower, reduce pressure to allow the lever to move away from you. The throttle lever will automatically return to the closed position (engine idle) when you let go of the lever.

#### RIGHT HANDLEBAR

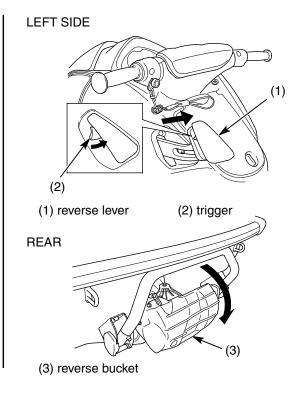


(1) throttle lever

## **Reverse Lever**

The reverse lever (1) is used to select reverse operation. Squeeze the trigger (2) and pull the reverse lever toward you to lower the reverse bucket (3) over the jet pump steering nozzle. This reverses the direction of the water thrust. To cancel reverse operation, push the lever forward until the trigger locks.

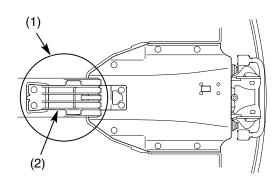
See Reverse Operation, page 131.



## Jet Pump Water Intake

The jet pump water intake (1) draws water into the propulsion system. A grate (2) helps to screen out debris.

#### **UNDER HULL**



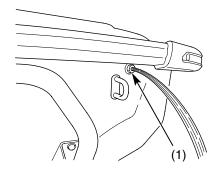
- (1) jet pump water intake
- (2) grate

## **Cooling Water Bypass Outlet**

The cooling water bypass outlet (1) is used to check that water is circulating properly in the engine cooling system while the engine is running. If you don't see water flowing out of the outlet, stop the engine.

Check for possible causes of the problem (page 238).

#### **REAR**



(1) cooling water bypass outlet

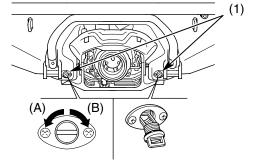
**Instruments & Controls** 

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## **Bilge Drain Plugs**

The bilge drain plugs (1) are used to drain water from the engine compartment. This operation should be performed with your PWC out of the water and the engine off. The plugs must be secured before returning your PWC to the water to avoid possible engine damage.





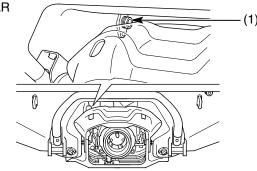
(1) bilge drain plugs

(A) open (B) close

## **Flushing Connector**

The flushing connector (1) is used for attaching a garden hose to flush the engine cooling system (page 193).

**REAR** 

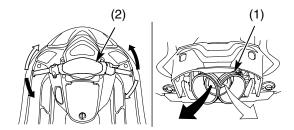


(1) flushing connector

## **Jet Pump Steering Nozzle**

The jet pump steering nozzle (1) directs the water thrust that propels and turns your PWC. Turning the handlebar (2) turns the nozzle.

#### FRONT/REAR



(1) jet pump steering nozzle(2) handlebar

**Instruments & Controls** 

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## **Bow & Stern Eyelets**

The bow (front) and stern (rear) eyelets are used for mooring your PWC or securing it on its trailer.

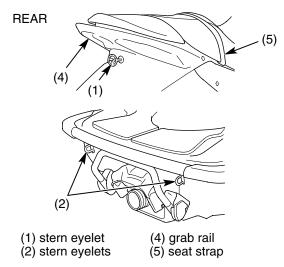
The stern eyelet (1) (2) can also be used to pull a water skier or, in an emergency situation, may be used for towing another PWC. The bow eyelet (3) may be used if your PWC requires towing on water.

#### **Grab Rail**

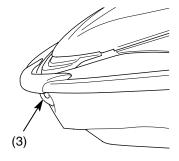
The grab rail (4) is used to assist boarding or as a handhold for the spotter for a water skier. The grab rail should not be used for towing, lifting the PWC, or for attaching tie downs.

## **Seat Strap**

The seat strap (5) may be used to assist boarding or may be held by a passenger while riding.



FRONT

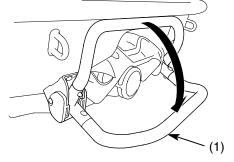


(3) bow eyelet

## **Boarding Step (ARX1500T3DX)**

The spring-loaded, pull down boarding step (1) may be used to assist boarding in deep water. The boarding step should not be used for any other purpose.

#### **REAR**



(1) boarding step

# **GPScape System (ARX1500T3DX only)**

This section explains the GPScape navigation system. Instructions for the topics listed on this page are included.

Introduction
Important Safety Information
System Information
System Limitations
System Start-up
Position Fix
System Failure to Display a Position Fix67
Satellite Status
GPS Mode
GPS Mode Display74
Waypoint Number Display
Direction to Waypoint Display76
Distance to Waypoint
Basic Waypoint Selection79
Advanced Waypoint Selection 81
Determining the Coordinates of Your
Current Position
Compass Direction Indicator86
Automatic Clock Adjustment88

GPScape system 59

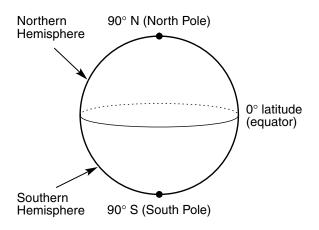
## Introduction

Any location on Earth may be described by two positioning coordinates. These two coordinates, measured by degrees, minutes, and seconds, are:

- latitude
- longitude

Latitudes are horizontal circles drawn around the Earth. The zero degree latitude (the equator) divides the globe into the Northern and Southern hemispheres.

#### **LATITUDE**



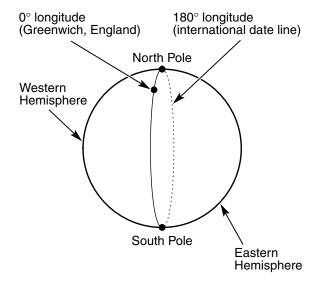
Each circle contains 360° (degree) Each degree contains 60' (minutes) Each minute contains 60'' (seconds)

## **60** GPScape System

## Introduction

Longitudes, also called meridians, are vertical circles extended from the North Pole to the South Pole. The zero degree longitude, which passes through Greenwich, England, divides the Earth into the Eastern and Western hemispheres. The 180 degree longitude, half way around the planet, is the international date line.

#### **LONGITUDE**



Each longitude is 69 miles (111 km) wide Each time zone equals  $15^{\circ}$  longitude

GPScape System 61

## Introduction

Your PWC GPScape System receives signals from the Global Positioning System (GPS), a U.S. government network that orbits the Earth, then uses those signals to calculate your current position as well as the distance and direction to other locations (destinations).

In addition to latitude and longitude, GPScape also calculates altitude (above sea level).

The primary uses of your GPScape System are:

- marking your current location for future use as a waypoint (navigating position)
- inputting the latitude and longitude of a destination as a waypoint
- using the system to guide you to a waypoint

We're sure you'll enjoy using your GPScape System. It is an excellent navigation aid, but successful navigation also requires your careful attention to the water surface you are riding and your good judgement.

If you plan to use nautical charts to aid your navigation, be aware that positions plotted using highly accurate GPS information on older, less accurate charts may not be accurate. Safety may be a concern when navigating by hazards. Correction factors can be applied to charts that were not constructed using WGS84 (World Geodetic System 1984), the default for most GPS receivers.

The U.S. Department of Transportation has established the Navigation Information Service (NIS) as an informational contact for GPS users.

This service is operated by the U.S. Coast Guard.

Phone: <703> 313-5900 (7 days/24 hours).

Internet: <u>www.navcen.uscg.gov.</u>

#### **62** GPScape System

## **Important Safety Information**

The GPScape System is designed to provide information to help you reach selected destinations. While this system provides the direction and distance to a destination, you must use your own observation and good judgement in deciding how to safely reach the destination.

Also, be aware that the system can distract your attention from operating your PWC if you focus too much on the display or operate the system's controls while riding. Do not look at the display unless you decide you can do so safely.

## **A WARNING**

Using the GPScape System while you are riding can take your attention away from the water surface, other watercraft and possible hazards, causing a crash in which you could be seriously injured or killed.

- Do not look at the display for more than a second or so at a time while riding.
- Stop your PWC if you need more time to look at the display or operate the system controls.

**GPScape System** 

63

## **System Information**

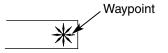
There are two situations in which the direction to a waypoint indicator (activated with speeds of 2 mph (3.2 km/h) or faster) will provide an inaccurate display.

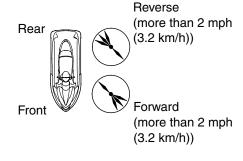
1st Situation: When riding in a current flowing in a different direction than your PWC, at an actual speed greater than the indicated speed of your PWC.

Front
Rear

Current

2nd Situation: When operating in reverse, because the sensing mechanism only works while operating in a forward direction. (The direction to a waypoint indicator will rotate 180 degrees.)





64 GPScape System

## **System Limitations**

Your GPScape System uses signals from the Global Positioning System operated by the U.S. Department of Defense. For security reasons, certain inaccuracies are built into GPS that your navigation system must constantly compensate for. This can cause occasional positioning errors of up to several hundred feet.

Since GPScape receives information from satellited orbiting the Earth, your system's receiver requires a relatively unobstructed view of the sky. Obstructions that will limit your system's sky view include (but are not limited to) stormy weather, heavy rain, snow or fog.

# **System Start-up**

### **Position Fix**

The GPScape System uses satellite information to compute your present position (called a position fix).

Depending on the elapsed time since the ignition was last switched OFF, there are three approximate response times for the system to acquire your position fix.

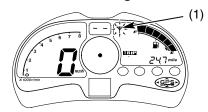
Time Elapsed Since Ignition Switched OFF	Approximate Time for System to Acquire Position Fix After Turning Ignition ON
less than 2 hours.	25 seconds
more than 2 hours less than a month	2 minutes
more than a month	8 minutes

If your PWC is transported for over 60 miles (100 km) or if your PWC is not started for at least three months, we recommend that you reset your system by following the procedure on the following page, *System Failure to Display a Position Fix*.

# **System Start-up**

### System Failure to Display a Position Fix

If the receiver does not get a position fix within about 8 minutes (flashing antenna mark (1) as shown in the illustration), make sure there are no overhead obstructions and then perform the following.

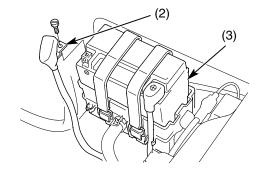


- (1) antenna mark
- 1. Remove the safety lanyard lock clip from the engine stop button/switch.
- 2. Remove the front and rear seats (page 158), and rear storage box (page 229). Wait a few minutes for the engine to ventilate.

3. Disconnect the negative (–) terminal lead (2) from the battery (3) and wait 1 minute.

Do not disconnect the positive (+) cable. A spark could ignite fuel vapors that may be present in the engine compartment.

### **ENGINE COMPARTMENT**



(2) negative (-) terminal lead (black cover)

(3) battery

(cont'd)

# **System Start-up**

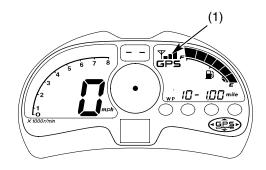
4. Reconnect the negative (–) terminal lead and install in the reverse order of removal.

If you cannot obtain a position fix after performing this procedure, see your Honda PWC dealer.

# **Satellite Status**

The satellite status (1) indicates the amount of information received from GPS satellites in one of three possible categories:

Display	Status	
洪	Not Usable	The system is signaling (flashing antenna mark) that your position fix is not available.
<b>Y.</b>	2D Navigation	The system has determined latitude and longitude, but is unable to determine altitude. 2D Navigation is not as accurate as 3D Navigation.
TI	3D Navigation	The system has determined latitude, longitude, and altitude. The receiver is ready to provide navigational information.



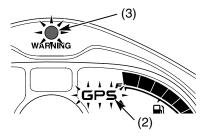
- (1) satellite status (signal strength indicator)
- If there are large obstacles nearby or overhead, move to a new location with a clear view of the sky.

(cont'd)

## **Satellite Status**

If the GPS mark (2) and WARNING lamp (3) flashes as shown in the illustration and the warning beeper resounds, see your Honda PWC dealer to check and restore the GPScape System.

To stop the warning beeper, press and hold any one of the six control buttons (WP SET, MODE, ID SET, ID No., +, or –) for more than 2 seconds.



- (2) GPS mark
- (3) WARNING lamp

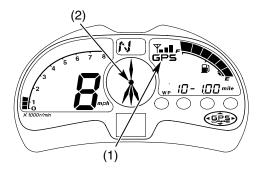
A waypoint is a geographical position (location) on the surface of the Earth. GPScape allows you to log up to 100 positions as navigational waypoints. You may then use GPScape to show you the direction of any selected waypoint, and how far you are from that waypoint via straightline travel.

You may mark such waypoints as your dock (launching point), your favorite riding, fishing or water sports areas, as well as locations of marine wildlife sightings. Because you have 100 waypoints available, you may mark several recognition points or turns as waypoints during a ride.

(cont'd)

The GPS mode (1) shows the shortest distance to your selected waypoint. And, when your PWC is moving (2 mph (3.2 km/h) or faster), the GPS mode also displays an electronic arrow (2) to indicate the direction to the selected waypoint.

GPS mode (compass direction, and direction and mileage to a waypoint)



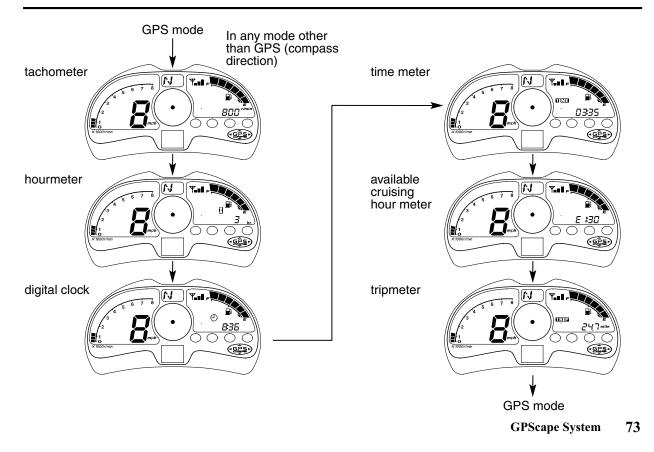
(1) GPS mode(2) electronic arrow

Push the MODE button (3) to switch between the GPS mode and the other six modes: digital clock, time meter, available cruising hour meter, tripmeter, tachometer, and hourmeter

The compass direction indicator (4) will function in all modes while your PWC is moving (2 mph (3.2 km/h) or faster) (page 86).



- (3) MODE button
- (4) compass direction indicator

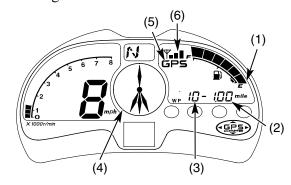


## **GPS Mode Display**

The GPS mode display (1) includes the following functions:

GPS Function	Digital Readout
distance to waypoint (2)	"" 3 digits for miles (USA) or kilometers (Canada), and if applicable, tenths and hundredths, with a floating decimal
waypoint number (3)	0–99
direction to waypoint (4)	

The GPS mark (5) appears in the display while the GPS mode is selected. The signal strength indicator (6) appears as long as the GPS signal is active.



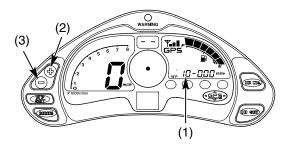
- (1) GPS mode display(2) distance to waypoint(3) waypoint number
- (4) direction to waypoint
- (5) GPS mark
- (6) signal strength indicator

### **Waypoint Number Display**

A waypoint number appears in the display when the GPS mode is selected. You can store up to 100 waypoints, numbered from 0-99. To mark a waypoint, see page 79.

To select a waypoint number (1):

- To select a higher waypoint number, press and release the + (plus) button (2).
- To select a lower waypoint number, press and release the (minus) button (3).
- To fast scroll: press and hold the + (plus) button or (minus) button until the desired waypoint number appears.



- (1) waypoint number (2) + (plus) button
- (3) (minus) button

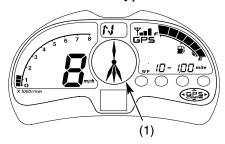
**GPScape System** 

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### **Direction to Waypoint Display**

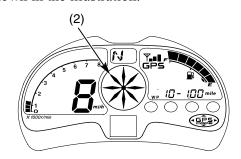
The direction to a waypoint display (1) uses an electronic arrow to point to your destination – provided your PWC is moving forward (2 mph (3.2 km/h) or faster). The system requires this minimum speed to calculate direction and distance. The display has 16 possible directions.

While operating in reverse, the system will not calculate distance or display a direction arrow to the selected waypoint.



(1) direction to waypoint display

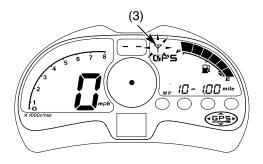
When your PWC approaches within about 33 feet (10 m) of the waypoint, the direction to a waypoint display will change from a directional arrow to an eight-point star (2) as shown in the illustration.



(2) eight-point star

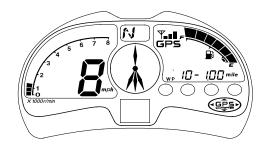
If the receiver loses a position fix (because of a large obstacle nearby or overhead), the direction to waypoint display will disappear as shown in the illustration and the antenna mark (3) will flash.

• The distance to a waypoint display will continue to display the last value shown before the loss of the position fix. While less than 2 mph (3.2 km/h).



(3) antenna mark

If the receiver reacquires a position fix, the direction to waypoint display will appear as shown in the illustration.



## Distance to Waypoint

The distance to waypoint (1) display shows the straight line distance from your present location to the waypoint.

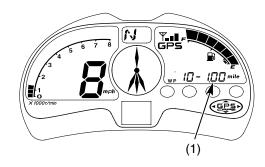
The distance range display shows three numerals with a "floating" decimal:

### USA

Range	Display
Less than 10 miles	0.00 - 9.99
10 miles up to 1,000 miles	10 – 999

### Canada

Range	Display
Less than 10 km	0.00 - 9.99
10 km up to 1,000 km	10 – 999



(1) distance to waypoint

There are two methods for marking waypoints.

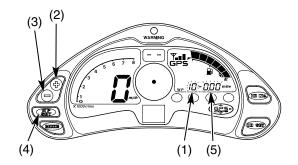
- Basic (to select your current position)
- Advanced (to input desired destinations)

### **Basic Waypoint Selection**

To Mark Your Present Position:

- 1. You may mark your position with the engine ON or with the engine off and the safety lanyard lock clip inserted in the engine stop button/switch.
- 2. Use the mode select button to select the GPS mode.
- 3. To select a higher waypoint number (1), press and release the + (plus) button (2). To select a lower waypoint number, press and release the (minus) button (3). To fast scroll, press and hold the + (plus) button or (minus) button until the desired waypoint number appears.
- 4. Press and hold the WP SET button (4) for

about 1.5 seconds, until the waypoint number and distance to waypoint (5) flashes. Then release the button.



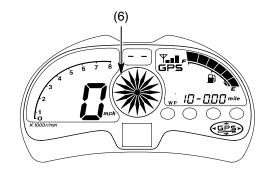
- (1) waypoint number
- (2) + (plus) button
- (3) (minús) button
- (4) WP SET button
- (5) distance to waypoint

(cont'd)

5. Within 5 seconds, to mark your present position, tap (do not hold) the WP SET button. (The waypoint will not be set unless the WP SET button is pressed a second time. Do not hold the WP SET button down. This will cause the system to transition to the advanced waypoint entry procedure.)

The direction to waypoint display (6) will light briefly as shown in the illustration.

• In the 2D Navigation status, the calculated waypoint location may not be as accurate as 3D Navigation.



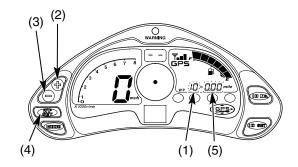
(6) direction to waypoint display

As soon as you start moving (2 mph (3.2 km/h) or faster), the direction to waypoint arrow will appear, pointing toward the selected waypoint location.

## **Advanced Waypoint Selection**

Advanced Latitude & Longitude Entry Sequence					
latitude	1	° (degrees)	longitude	1	° (degrees)
	2	' (minutes)		2	' (minutes)
	3	 (seconds)		3	 (seconds)
	4	" (tenths of second)		4	" (tenths of second)

To input a waypoint value using latitude and longitude coordinates:

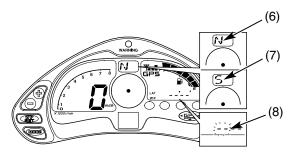


- (1) waypoint number(2) + (plus) button(3) (minus) button

- (4) WP SET button
- (5) distance to waypoint
- 1. Insert the safety lanyard lock clip in the engine stop button/switch.
- 2. Use the mode select button to select the GPS mode.

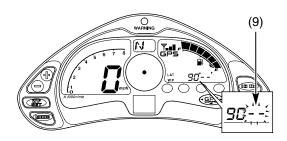
(cont'd)

- 3. To select a higher waypoint number (1), press and release the + (plus) button (2). To select a lower waypoint number, press and release the (minus) button (3). To fast scroll, press and hold the + (plus) button or (minus) button until the desired waypoint number appears.
- 4. Press and hold the WP SET button (4) for about 1.5 seconds, until the waypoint number and distance to waypoint (5) flashes. Then release the button.
- 5. Within 5 seconds, press and hold the WP SET button again for about 1.5 seconds until LAT appears above the WP mark. The compass direction indicator will flash Northern Latitude (6) or Southern Latitude (7), indicating the hemisphere. (To switch to the other hemisphere, press either the + (plus) button or (minus) button.)
- 6. Tap (do not hold) the WP SET button. The compass direction indicator will stop flashing and the degree (8) will begin flashing.



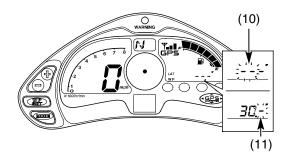
- (6) Northern Latitude (8) degree(7) Southern Latitude
- 7. To select your entry:
  - To increase, tap the + (plus) button
  - To decrease, tap the (minus) button.
  - To fast change in units of 10, press and hold the + (plus) button (to increase) or the (minus) button (to decrease) until the desired entry appears.

- 8. To enter the displayed value into the system, tap (do not hold) the WP SET button. The next level in the entry sequence will begin flashing.
- 9. To select and enter the minutes (9) follow the same procedure used in steps 7-8.



(9) minutes

- 10.To select and enter the seconds (10) follow the same procedure used in steps 7-8.
- 11. To select the tenths of a second (11):
  - To increase, tap the + (plus) button.
  - To decrease, tap the (minus) button.

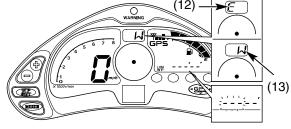


(10) seconds

(11) tenths of a second

(cont'd)

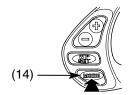
12.To enter the displayed tenths of a second in the system, tap (do not hold) the WP SET button until LON appears above the WP mark. The compass direction indicator will flash Eastern Longitude (12) or Western Longitude (13). (To switch to the other hemisphere, press either the + (plus) button or – (minus) button.)



- (12) Eastern Longitude(13) Western Longitude
- 13.To enter the longitude coordinates, follow the same procedure used in steps 6-11.

To Correct Input:

Push the MODE button (14). This reverses the sequence so you can back up and make a correction.



(14) MODE button

Once the 1/10 second longitude entry is completed, you can no longer back up in the sequence to make a correction.

To Change the Coordinates for an Existing Waypoint Number:

Follow steps 1-4 under *Advance Waypoint Selection* (page 81) and "overwrite" your previous waypoint.

# **Determining the Coordinates of Your Current Position**

- 1. If your current position is not already marked, mark it (page 79).
- 2. Press and hold the WP SET button until the display begins flashing.
- 3. While the display is still flashing, press and hold the WP SET button again until the display shows LAT degrees and minutes.
- 4. Tap (do not hold) the WP SET button repeatedly to sequence through the coordinates display.
- 5. Tap the WP SET button again to return to the distance to waypoint display.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

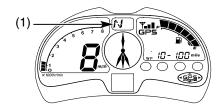
**GPScape System** 

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# **Compass Direction Indicator**

The compass direction indicator (1) shows the direction of your PWC in any mode – provided your PWC is moving (2 mph (3.2 km/h) or faster).

Your PWC must be moving to allow GPScape to calculate your present direction compared to your previous location. At less than 2 mph (3.2 km/h), the compass direction indicator display will show two dashes. (And the direction to waypoint will disappear).



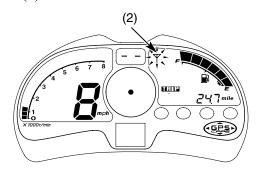
(1) compass direction indicator

The compass direction indicator displays 8 possible directions:

N	North	NW	North west
S	South	NE	North east
E	East	SW	South west
W	West	SE	South east

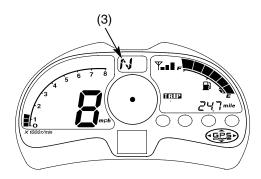
# **Compass Direction Indicator**

If the receiver loses a position fix (because of a large obstacle nearby or overhead), the compass direction indicator will disappear as shown in the illustration and the antenna mark (2) will flash.



(2) antenna mark

If the receiver reacquires a position fix, the compass direction indicator (3) will appear as shown in the illustration.



(3) compass direction indicator

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# **Automatic Clock Adjustment**

Your PWC digital clock has an automatic adjustment function when the system's satellite status is 3D Navigation (page 69).

The system will adjust the digital clock display after receiving the basic UT (universal time, formerly referred to as Greenwich Mean Time) and then calculate your local time.

The automatic digital clock adjustment will start to function after your PWC's battery is connected and the initial manual clock adjustment is completed.

In addition, the automatic digital clock adjustment will start to function after one minute, manual clock adjustment is completed.

The automatic time adjustment should be accurate within plus-or-minus 5 minutes. To switch between standard and daylight saving time, adjust the clock manually (page 37).

# **Before Riding**

Before each ride, you need to make sure you, your passengers and your Honda are all ready to ride. To help get you prepared, this section discusses how to evaluate your riding readiness, what items you should check on your PWC, and adjustments to make for your comfort, convenience, or safety. This section also includes important information about loading.

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Protective Apparel90
Operator Training93
Is Your PWC Ready to Ride?94
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Load Limits
Loading Guidelines 100
Cargo Compartments 101
Glove Box
Front Storage Compartment 102
Fire Extinguisher Compartment 104
Rear Storage Compartment 105

Before you ride your PWC for the first time, we urge you to:

- Read this owner's manual.
- Make sure you understand all the safety messages.
- Know how to operate all the controls.
- Know local boating and PWC laws.

Before each ride, be sure:

- You feel well and are in good physical and mental condition.
- You are wearing a PFD (personal flotation device) and a wet suit bottom or clothing that provides equivalent protection.
- You don't have any alcohol or drugs in your system.

Make sure your passengers are ready to ride, and that they are wearing proper protective clothing and a PFD.

Check with local authorities to find out what local boating laws apply to the area you'll be riding in. You'll want to find out things like whether it's legal to operate your PWC in a certain body of water, what the minimum PWC operator age is, and whether or not you need proof of training in order to operate a PWC. Honda recommends that operators are at least 16 years old before operating this PWC.

### **Protective Apparel**

For your safety, we strongly recommend that you and your passengers always wear an approved PFD, eye protection, footwear, gloves, and a wet suit bottom whenever you ride. Although complete protection is not possible, wearing proper gear can reduce the chance of injury when you ride. Following are suggestions to help you and your passengers choose the proper gear.

### **PFDs**

Any time you board your PWC, you should wear a Coast Guard-approved Type I, II or III PFD. Your PFD is your most important piece of safety apparel because it offers the best protection against drowning.

A PFD should fit you properly and securely. A bright colored PFD can make you more noticeable in the water.

## **A WARNING**

Not wearing a PFD increases the chance of drowning if you fall overboard.

Be sure you and your passengers always wear a PFD and other protective apparel when you ride.

### Additional Riding Gear

In addition to a PFD, we also recommend:

- A wet suit bottom to protect yourself against severe internal injuries caused by strong streams of water from the jet nozzle forced into body cavities.
- Eye protection to keep water spray and wind out of your eyes.
- Foot protection to give better grip on the floorboards.
- Neoprene gloves to give better grip on the handlebar.

### Helmets

A helmet can offer some head protection in a collision or impact, but it can also cause severe injuries in other situations.

PWC helmets are designed to provide some head protection, and could reduce your risk of injury if you collide with another vessel or object while riding.

However, if you fall into water while riding and the helmet catches the water's surface as you fall, that helmet could cause choking, severe neck injuries or death. You should decide for yourself whether or not to wear a helmet when riding your PWC. Think about the conditions and environment in which you'll be riding. Will the water be crowded or open? Smooth or choppy? Shallow and rocky or deep? Each time you ride, you'll need to decide if a helmet is necessary.

### **Operator Training**

Developing your riding skills is an on-going process. Even if you have ridden other PWCs, take time to become familiar with how this PWC works and handles.

Practice riding the PWC in calm water close to shore to build your skills. Do not ride farther out until you get accustomed to the PWC's controls and feel comfortable with the way it handles.

We urge all riders to take a certified course approved by the U.S. Coast Guard or U.S. Power Squadron, or by your state. For boating safety course information in your area, call your nearest U.S. Coast Guard Auxiliary, U.S. Power Squadron, Red Cross, or state boating law enforcement office, or call the Boat/U.S. Foundation Course Hotline, 1-800-336-BOAT.

You can find more boating safety information on-line:

- the U.S.C.G. Office of Boating Safety: www.uscgboating.org
- the U.S. Power Squadron: www.usps.org

Other riding tips can be found in the *Personal Watercraft Rider's Handbook* booklet that came with your PWC.

Before each ride it's important to inspect your PWC and make sure any problem you find is corrected. A pre-ride inspection is a must, not only for safety, but because having a problem on the water can be a major inconvenience.

### **A WARNING**

Improperly maintaining this personal watercraft or failing to correct a problem before riding can cause a crash in which you can be seriously hurt or killed.

Always perform a pre-ride inspection before every ride and correct any problems.

Before inspection, make sure the lock clip is not inserted in the engine stop button/switch. Check the following items before putting your PWC in the water.

### **Pre-ride Inspection**

Check the following items before starting the engine:

Engine Compartment Remove both seats and the front storage box to vent gasoline fumes. (Reinstall both seats and the front storage box before launching.)

### **A WARNING**

Starting the engine without ventilating the engine compartment can cause a fire or explosion and you or others could be seriously injured or killed.

Always vent the engine compartment before starting the engine.

Bilge Look for water, oil or fuel in

the engine compartment.

Drain, if necessary.

Leaks Look for signs of leaking fuel

or oil in the engine

compartment.

*Fire* Check the fire extinguisher is Extinguisher

properly secured in its compartment. Check for

damage. Make sure the locking pin and sealing wire are in place. Check the

pressure gauge and expiration

date.

Steering Check that there is no

> sticking or looseness when turning the handlebar.

*Throttle* Check the freeplay and adjust

> if necessary. Pull the throttle lever to make sure it moves smoothly without sticking, and snaps shut automatically when it is released, in all

steering positions.

Safety Check that the lanyard is in Lanyard good condition and the lock

clip is securely attached. Replace if necessary.

Fuel Level Insert the lock clip in the

engine stop button/switch and

check the fuel gauge.

Remove the lock clip. Add fuel, if necessary (page 161).

Reverse Pull the reverse lever to make

System sure it moves smoothly without sticking. Check that

the bucket drops over the jet pump steering nozzle.

Hull Inspect for cracks or damage.

Remove any marine growth.

Bilge Drain Check that the plugs are

Plugs secure.

Jet Pump Check that nothing is Water Intake obstructing the intake

obstructing the intake grate of the jet pump, driveshaft,

cooling water filter, or

impeller. Remove any debris.

Loose Parts, Latches Look for anything that appears unusual. Check that

all latches (including the seats) are secure.

Check these items, which require starting and flushing the engine on shore (see *Flushing Procedure*, page 193. If necessary, these procedures may be performed with your PWC on calm water):

Engine Start & Stop

Insert the lock clip in the

engine stop switch. Push the start button after

ventilating the engine

compartment.

Stop the engine by pushing the engine stop button. Start the engine again and stop it by removing the lock clip.

Engine Cooling System Check the water comes out

from the cooling water

bypass outlet.

Engine Oil Check the level and add oil if

needed (page 167).

Off-throttle Check that the OTS activates properly (page

*System (OTS)* 198).

If you are carrying passengers or cargo, also check the following:

Load Limits Make sure you do not exceed

the load limits (page 99).

Cargo Check that all cargo is

secured in compartments.

If you will be towing a water skier, also check the following:

- The loop end of the tow rope is properly secured to the stern eyelet.
- The rest of the tow rope is properly secured so it does not get dragged behind the craft or drawn into the jet pump water intake while riding out to the water skiing area.

Remember, be sure to take care of any problem you find, or have your Honda PWC dealer correct it before you ride.

## **Load Limits & Guidelines**

Your PWC has been designed to carry you and up to two passengers. When you carry passengers, you may feel some difference during acceleration, turning and slowing. But so long as you keep your PWC well-maintained, you can safely carry loads within the given limits and guidelines.

However, exceeding the weight limit can seriously impair your PWC's handling and stability. Non-Honda accessories, improper modifications, and poor maintenance can also reduce your safety margin.

### **Load Limits**

Following are the load limits for your PWC:

# maximum number of people onboard: 3 persons

### maximum weight capacity:

525 lbs (238.5 kg) includes the weight of the operator, all passengers, all cargo.

## maximum storage compartment weights:

Glove box

= 6.6 lbs (3 kg)

Front storage compartment

= 22 lbs (10 kg)

Rear storage compartment

= 1 lbs (0.5 kg)

## **Load Limits & Guidelines**

### **Loading Guidelines**

Your PWC is primarily intended for transporting you and one or two passengers.

Do not carry more cargo than the maximum weight capacity allows.

Improperly loading your PWC can affect its stability and handling.

## **A WARNING**

Overloading or improper loading can make the personal watercraft difficult to control and could result in an accident.

Follow all load limits and other loading guidelines in this manual.

Follow these guidelines whenever you carry passengers or cargo:

- Do not place cargo on the seat, deck, or any where else other than the storage compartments or a glove box.
- Do not attach any items to the handlebar.

### **Glove Box**

The glove box (1) is used for storing the owner's manual and small, light articles. Breakable objects should never be stored in this compartment.

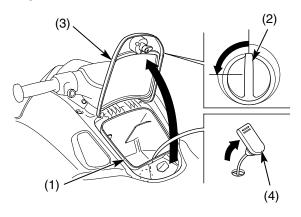
To open the glove box, turn the knob (2) counterclockwise and raise the glove box lid (3).

To close the glove box, lower the glove box lid and turn the knob clockwise.

Cargo in the glove box should not exceed: 6.6 lbs (3 kg)

If the compartment is flooded, remove the rubber grommet (4) on the bottom of the compartment to drain the water.

#### **FRONT**



- (1) glove box
- (2) knob
- (3) glove box lid
- (4) rubber grommet

### **Front Storage Compartment**

The front storage compartment may be used to store safety equipment such as towing rope, signal flares, or other small articles. Breakable objects should never be stored in this compartment.

Fuel and other flammable liquids should never be stored in this compartment.

## **A WARNING**

Storing fuel in the front storage compartment can cause a fire or explosion that can result in injury or death.

Do not store fuel or other flammable liquids in this unventilated compartment.

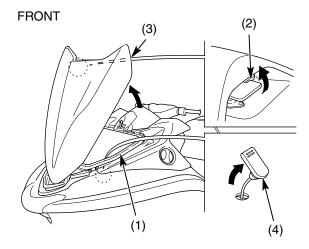
To open the front storage compartment (1), pull the hood latch (2) and lift the hood (3).

To close the front storage compartment, lower the hood. Check that the latch is secure.

Cargo in the front storage compartment should not exceed:

22 lbs (10 kg)

If the compartment is flooded, remove the rubber grommet (4) on the bottom of the compartment to drain the water.



- (1) front storage compartment
- (2) hood latch
- (3) hood
- (4) rubber grommet

### **Fire Extinguisher Compartment**

The fire extinguisher compartment (1) is located in the front storage compartment (page 102).

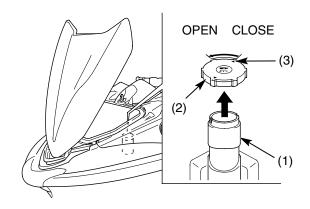
Your PWC is classified as a Class A inboard boat. The Coast Guard requires that you carry a B-1 classification fire extinguisher. Many local and state boating laws also require a U.S. Coast Guard-approved fire extinguisher.

Your PWC is not delivered with a fire extinguisher as standard equipment. To obtain a suitable fire extinguisher, consult your Honda PWC dealer, a marine supply store or a fire extinguisher manufacturer in your area.

To access the fire extinguisher compartment, open the cap (2) and turn it counterclockwise until the index mark (3) on the cap aligns with the OPEN position.

To close the cap, set the mark at OPEN and turn the cap clockwise to CLOSE position.

#### **FRONT**



- (1) fire extinguisher compartment
- (2) cap
- (3) index mark

### **Rear Storage Compartment**

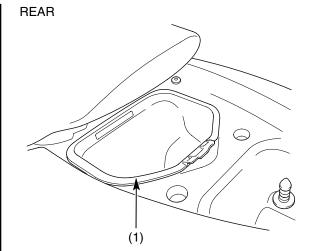
The rear storage compartment (1) may be used to store small and light articles. Breakable objects should never be stored in this compartment.

To open the rear storage compartment, remove the rear seat (page 158).

To close the rear storage compartment, install the rear seat (page 159).

Cargo in the rear storage compartment should not exceed:

1 lbs (0.5 kg)



(1) rear storage compartment



# **Basic Operation & Riding**

This section gives basic riding instructions, including how to start and stop your engine, and how to use the throttle. It also provides navigation rules and important information on riding with passengers or cargo.

To protect your new engine and enjoy optimum performance and service life, refer to Break-in Guidelines (page 249).

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## **Safe Riding Precautions**

Before riding your PWC for the first time, please review the *PWC Safety* section beginning on page 1, and the *Before Riding* section beginning on page 89.

Even if you have ridden other PWCs, take time to become familiar with how your PWC works and handles. Practice in a safe area, away from boats and swimmers, until you build your skills and get accustomed to the PWC's size and handling.

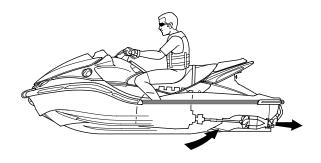
Your PWC is not equipped with lights. Do not ride at night.

# **PWC Propulsion**

Your PWC is water-jet propelled. The engine is connected to a driveshaft that rotates an impeller, located within the jet pump housing underneath the PWC. Water drawn through the intake grate by the spinning impeller reaches a venturi in the jet pump steering nozzle, which accelerates its flow to increase thrust. Because of this direct-drive design, your PWC will move slowly when the engine is on.

Pulling the throttle lever increases thrust which increases speed. Turning the handlebar turns the jet pump steering nozzle and allows you to turn.

Releasing pressure on the throttle lever slows the PWC. Without the engine running and without the throttle, there is no propulsion and you cannot steer. Your PWC does not have brakes.

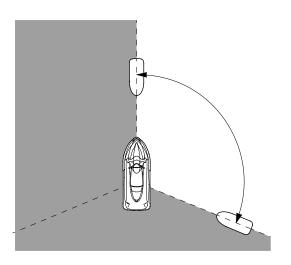


Your PWC is classified as a Class A inboard boat. Because of this, you need to know and obey the rules of the waterway. They're like traffic rules, and establish who has the right-of-way on the water. These rules are used internationally and are enforced by the U.S. Coast Guard and other local agencies.

The information in this section provides the basic rules. We highly recommend that you get more information about navigation from your state when you register your personal watercraft. Take a boat handling and seamanship course from the Coast Guard Auxiliary, the U. S. Power Squadron, or a volunteer organization. These groups can provide you with detailed training on navigation rules and other important information.

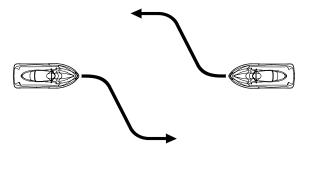
On to the basics: When two boats are on the water, one boat has the right-of-way and is called the "stand-on" vessel; the other boat must yield or give way and is called the "give-way" vessel.

In the illustration, you are the larger PWC in the center. You must yield to any vessel shown in the white area (you are the giveway vessel). Any vessels in the shaded area must yield to you (you are the stand-on vessel). If you meet head on, you must both give way.

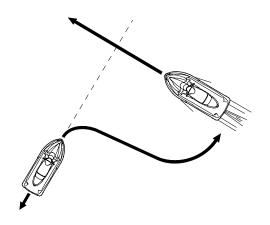


The illustrations on the following pages show stand-on and give-way responsibilities.

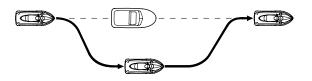
Meeting: If you are approaching another vessel head-on and are close enough to risk collision, neither of you has the right-of-way. Both of you should change course to avoid a collision. Keep the other vessel to your left (port) side. This rule does not apply if you will be clear of one another if you continue on your set course and speed.



Crossing: If you and another vessel are crossing paths close enough to risk collision, and the other vessel is on your right (starboard), you should yield or stay out of the way. If the other vessel is on your left (port) side, you must maintain your course and speed, as long as the other vessel gives you the right-of-way as it should.



Overtaking or Passing: If you are passing another vessel, you are the give-way vessel. The other vessel is expected to maintain its course and speed. You must stay out of its way until you are clear of it. If another vessel is passing you, you should maintain your course and speed so that the other vessel can steer around you.



Non-motorized Vessels: Non-motorized vessels such as sailboats and canoes always have the right-of-way except:

- 1) When the sailing vessel is overtaking a power vessel, the power vessel has the right-of-way.
- 2) Sailing vessels should keep clear of fishing vessels.
- 3) In a narrow channel, non-motorized vessels cannot interfere with the safe passage of a power vessel.

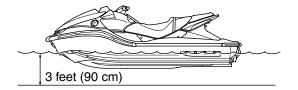
Always follow the proper starting procedure described below.

For your safety, avoid starting or operating the engine in an enclosed area such as a garage. Your PWC's exhaust contains poisonous carbon monoxide gas which can collect rapidly in an enclosed area and cause illness or death. Running the engine when your PWC is not in the water can also damage the engine.

### **Preparation**

Before starting, confirm the following:

• Make sure your PWC is in at least 3 feet (90 cm) of water that is free of debris and weeds.



- Push up and down on the rear of your PWC several times to flush out any sand.
- Check that there are no swimmers, boats, or obstacles in the area.

### **Starting Procedure**

### **A WARNING**

When the engine is running, long hair, PFD straps or loose clothing can be sucked into the intake grate and become entangled in the impeller. A person can be held under the water and drown.

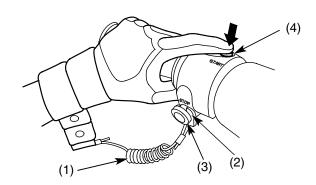
- Do not start the engine if anyone is in the water near the personal watercraft.
- Make sure people stay away from the intake grate when the engine is running.

1. Board your PWC, place your feet on the footboard. Make sure all passengers are on board and no one is behind the PWC.

(cont'd)

- 2. Attach the safety lanyard (1) to your left wrist.
- 3. Insert the lock clip (2) in the engine stop button/switch (3).

  Be sure the lanyard is not caught or tangled on anything.
- 4. Punch in your ID number to cancel the ID lock system (page 45), if necessary.
- 5. Keep the throttle closed to prevent unexpected movement of the PWC, then push the start button (4).



- (1) safety lanyard
- (2) lock clip
- (3) engine stop button/switch
- (4) start button

- 6. Immediately after the engine starts, release the engine start button. The jet pump will produce thrust and the PWC will move slowly.
- 7. If the engine does not start within 5 seconds, release the start button and wait 30 seconds before trying again, to avoid discharging the battery or damaging the starter motor.

The starter motor can operate while the display is indicated (10 seconds) even if the lock clip is pulled out from the engine stop button/switch.

### **Flooded Engine**

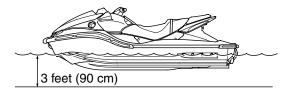
If the engine fails to start after repeated attempts, it may be flooded with excess fuel. To clear a flooded engine:

- 1. Open the throttle fully.
- 2. Press the start button for 5 seconds.
- 3. Follow the normal starting procedure.
- 4. If the engine starts, then open the throttle slightly if idling is unstable. If the engine does not start, wait 10 seconds, then follow steps 1 − 3 again.

If the engine still won't start, refer to *If Your Engine Quits or Won't Start*, page 221.

### How to Stop the Engine

To stop the engine, be sure there is at least 3 feet (90 cm) of water so that debris or weeds can't be drawn into the water inlet system.



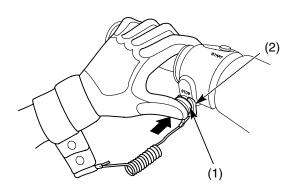
### **NOTICE**

Starting or stopping the engine in less than 3 feet (90 cm) of water can damage the jet pump if debris or weeds are drawn in.

Release the throttle lever and turn off the engine when you no longer need jet thrust to maintain directional control.

Wait until the engine is idling, then press the engine stop button/switch (1). (Once the engine stops, you will have no directional control.)

If you are leaving the PWC, activate the ID lock system, remove the lock clip (2) from the engine stop button/switch and take the safety lanyard with you.



(1) engine stop button/switch

(2) lock clip

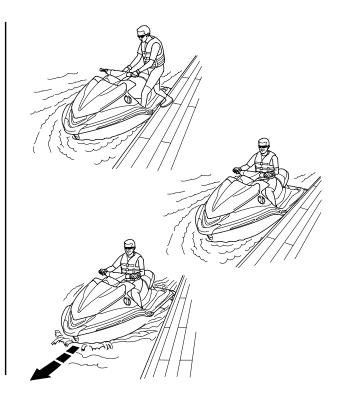
How you board your PWC is affected by water depth and whether or not you plan to carry a passenger or two. Once you (and any passengers) are on board, check that your path is clear of other boats, swimmers, or obstacles. Slowly increase throttle as you head toward open water.

### Launching from a Ramp

- 1. Complete the pre-ride inspection (page 94).
- 2. Check that the ramp is suitable for both your PWC trailer and your tow vehicle, and that the launch area is clear of people and other boats.
- 3. Attach a bow line to your PWC.
- 4. Release the tie downs.
- 5. Back your trailer into the water until the rear of the hull begins to lift.
- 6. Unlock the winch.
- 7. Slowly push your PWC into the water and remove the bow line.
- 8. Slowly move your PWC to a docking area and moor it securely.
- 9. Move your tow vehicle away from the ramp.

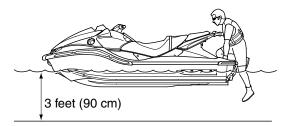
### **Boarding from a Dock**

- 1. Place one foot on the footboard nearest the dock.
- 2. Hold the handlebar.
- 3. Transfer your weight to balance the PWC as you place your other foot on the footboard.
- 4. Start the engine (page 115).
- 5. Push your PWC away from the dock or apply slight throttle and steer at a slight angle away from the dock until the rear of your PWC clears.



### **Boarding in Shallow Water**

1. Make sure the engine is off and your PWC is in at least 3 feet (90 cm) of water.



### NOTICE

Starting or stopping the engine in less than 3 feet (90 cm) of water can damage the jet pump if debris or weeds are drawn in.

2. Board from the rear. Balance your PWC as you climb aboard.

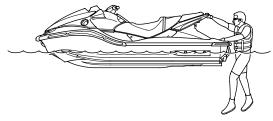


### **Boarding in Deep Water**

Practice in shallow water before attempting to board in deeper water.

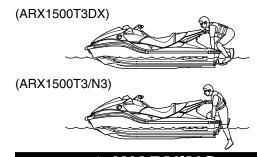
Make sure the engine is off.

1. Move to the rear of the PWC.



- 2. Grasp the grab rail and pull yourself up until you can place one knee on the rear deck.
- 3. (ARX1500T3DX)

  Boarding may be easier if you use the spring-loaded, pull-down boarding step, located under the rear deck.



### **A WARNING**

The boarding step is intended only for boarding the PWC in water. Improper use can result in serious injury or death.

- Do not use the step when the PWC is in motion.
- Do not use the step to pull anyone or anything.

(cont'd)

- 4. Bring your other knee onto the rear deck.
- 5. Move forward, being careful to balance your PWC.
- 6. When possible, grasp the handlebar for support.



- 7. Place your feet on the footboards.
- 8. Sit on the seat.



### **Boarding with Passengers**

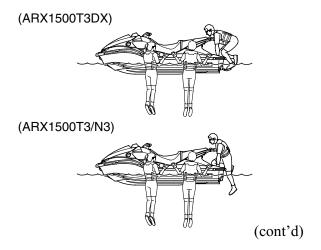
For more information on riding with passengers, see page 135.

### **A WARNING**

If a passenger falls off the back of a personal watercraft after the operator opens the throttle, water can be forced into lower body cavities, causing severe internal injuries.

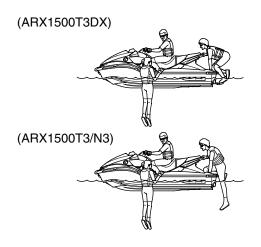
- Do not start the engine until all passengers are seated properly and holding on.
- All riders should wear a wet suit bottom or equivalent.
- 1. (ARX1500T3DX)
  The spring-loaded, pull down boarding step may also be used to make boarding easier.

- 2. The passengers should hold the PWC to steady it as the operator grasps the grab rail to climb on.
- 3. The operator should get in position on the seat, but not start the engine.
- 4. One passenger should move to the rear of the PWC.



- 5. The operator should slide forward to give the passenger more space.
- 6. (ARX1500T3DX)

  The spring-loaded, pull down boarding step may also be used to make boarding easier.
- 7. The passenger should grasp the grab rail and climb on in the same manner as the operator, first one knee, then the other.



- 8. Both the operator and the passenger should concentrate on balancing the PWC as the next passenger boards.
- 9. Once the second passenger is seated, the operator should check that each passenger is holding onto the waist of the person in front of them or the seat strap and has placed both feet on the footboards.
- 10. The operator is now ready to start the engine.



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### **Your First Ride**

Check your path is clear of other boats, swimmers, or other obstacles in the water.

We recommend use of the limit mode until the PWC operator is familiar with operating the PWC.

Get familiar with operating the throttle. To go faster, pull the throttle lever toward you. To go slower, reduce pressure on the lever to allow it to move away from you. Gradually increase throttle to see how speed affects your directional control, then try varying the speed.

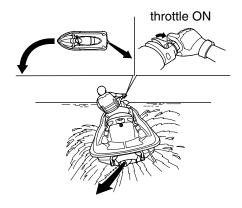
Try turning gradually. Pay attention to the connection between throttle input and the use of the handlebar. Remember, steering with the handlebar will not turn the PWC unless you are applying some throttle.

Get acquainted with the handling of your PWC.

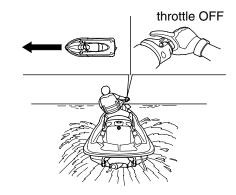
# **Turning**

Turning your PWC requires two actions:

- Turning the handlebar (in the direction you want to go).
- Using the throttle lever (to maintain thrust).



Your PWC will not turn if you are not applying some throttle. Jet thrust is necessary to change your direction.



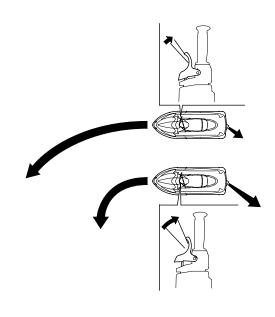
Before turning, always check to make sure you aren't turning into another PWC's path.

# **Turning**

Your PWC requires thrust to turn, so you must pull on the throttle lever while you turn the handlebar. The more you pull on the throttle lever, the more thrust your PWC will have and the sharper your turns will be.

To turn at higher speeds, you should first reduce speed by gently releasing the throttle a little. Too sharp a turn at high speed may cause the PWC to slide sideways or spin and throw off the operator and passengers.

If you are heading toward an obstacle you want to avoid — do not release the throttle lever. Keep the throttle on and steer away from the object.



## **Turning**

### **Off-throttle Steering (OTS)**

Your PWC is equipped with an Off-throttle Steering (OTS) System.

At cruising speeds and faster, your PWC's OTS will activate if you let go of the throttle and turn the handlebar all the way to the left or right. OTS will provide some turning thrust but you can turn sharper if you apply the throttle. OTS does not work when the engine is off.

For the best steering and turning performance, apply throttle while turning the handlebar.

## **Reverse Operation**

Before selecting reverse, look around and behind you, and slow your PWC to idle speed.

### NOTICE

Provide lubrication when moving parts do not work smoothly. Also lubricate as per the maintenance schedule (page 150).

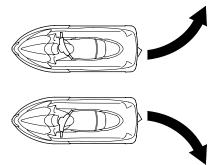
### **A WARNING**

Shifting to reverse at higher forward speeds may cause abrupt deceleration. You and your passengers could be thrown forward or off of the personal watercraft and be seriously injured.

Shift to reverse only while the engine is idling or off.

## **Reverse Operation**

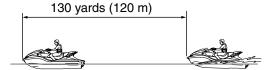
- 1. Squeeze the trigger and pull the reverse lever toward you. This drops the reverse bucket over the jet pump steering nozzle, diverting the thrust forward to push the PWC backward (page 52).
- 2. Turn the handlebar opposite the direction you want. (To steer the rear of your PWC to the left, turn the handlebar to the right. To steer to the right, turn the handlebar to the left.)
- 3. Carefully apply throttle to maintain control.
- 4. To return to normal operation, release throttle pressure, wait for your PWC to slow to idle speed, then push the lever forward.



# Stopping/Docking/Beaching

Your PWC has no brakes. Please keep this in mind whenever you are planning to stop.

The drag of the water will slow it to a stop after the throttle is closed. Running at full speed, your PWC may require up to 130 yards (120 m) to stop after the throttle is released.



## Stopping/Docking/Beaching

#### Stop Your PWC

- Check that there are no other boats, swimmers, or obstacles in your path.
- Slow the PWC by releasing the throttle lever as you approach the stopping area.

#### NOTICE

Starting or stopping the engine in less than 3 feet (90 cm) of water can damage the jet pump if debris or weeds are drawn in.

#### Dock Your PWC

• With the engine idling, ride to the stopping area. Keep your engine running so you have jet thrust to maneuver. Open the throttle slightly in case you need power to steer away from an obstacle.

You and your passengers should keep all feet, arms, and hands inside the PWC as it approaches a dock or another object in the water.

• Push the engine stop button or pull the lock clip and moor your PWC to the dock using bow and stern eyelets securely.

Do not run your PWC onto a beach with the engine running. Sand or other debris can enter the jet pump and the hull may be damaged. Stop the engine with at least 3 feet (90 cm) of water under the hull.

#### Beach Your PWC

• Get off your PWC, guide it in, and pull it up on the beach.

## **Riding with Passengers or Cargo**

Your PWC is designed to carry you and up to two passengers. Whenever you add passengers or cargo, you must be careful not to exceed the total load limits (*Load Limits*, page 99). Make sure your cargo is properly secured (*Loading Guidelines*, page 100).

Be aware that carrying passengers or heavy cargo can affect acceleration, slowing, and handling.

Do not carry passengers until you become comfortable operating your PWC by yourself.

Remember, you are responsible for the safety of your passengers. Be sure they are wearing PFDs and other protective apparel (page 90), and are familiar with all safety information.

Avoid giving a ride to any passenger whose feet do not reach the footboards.

Tell your passengers to hold on firmly to the person in front of them or the seat strap, lean with you in the turns, and keep their feet on the footboards at all times, even when the PWC is stopped and idling. The operator should let the passengers know if a sudden maneuver is planned.

### **A WARNING**

If a passenger falls off the back of a personal watercraft after the operator opens the throttle, water can be forced into lower body cavities, causing severe internal injuries.

- Do not start the engine until all passengers are seated properly and holding on.
- All riders should wear a wet suit bottom or equivalent.

## **Towing a Water Skier**

Your PWC can be used to tow a single water skier. If you will be towing a skier, you must also have a passenger onboard to act as a spotter (1) to communicate between the skier (2) and the operator (3).

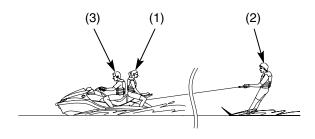
Some states do not allow PWCs to tow water skiers. Other states have special requirements for towing skiers. Check your local and state regulations.

If it is legal to tow a water skier, follow the guidelines listed here.

### **A WARNING**

Towing a skier, another personal watercraft, or other heavy items can make the personal watercraft difficult to control and could result in an accident.

Follow the towing instructions in this manual.



- (1) spotter
- (2) skier
- (3) operator

# **Towing a Water Skier**

Consider the following recommendations when you use your PWC for water skiing.

- Store the water skiing tow rope and "skier down" flag in the front storage compartment. Both are commercially available at marine shops.
- Before launching, the operator, spotter and skier get familiar with each other's duties and skill levels and decide on signals for speed and direction.
- The skier tells the operator what is planned (figure eights, slaloms, etc.) and requests the desired tow speed. The speed should depend on the skier's skill level and the type of ski equipment (single ski, double ski, wakeboard, etc.).

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### **Post-ride Maintenance**

After you finish riding your PWC, always perform post-ride maintenance to keep your PWC in good operating condition.

- 1. Remove your PWC from the water.
- 2. Purge the exhaust system of excess water by starting the engine and, while checking the tachometer, repeatedly rev the engine up to no more than 4,000 rpm for no more than 15 seconds.
  - Engine rpm can increase rapidly when the watercraft is out of water.

### **NOTICE**

Operating the engine out of water at high rpm or for longer than 15 seconds at a time may cause severe engine and/or exhaust system damage.

- 3. Wash the hull, deck, handlebar, and intake/propulsion system with fresh water.
- 4. Flush the cooling system with fresh water (page 192).
- 5. Remove the lock clip from the engine stop button/switch.

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### **Post-ride Maintenance**

6. Use fresh water to rinse out the engine compartment. Avoid spraying water on the electrical components.

#### NOTICE

High pressure water (or air) can damage certain parts of your personal watercraft.

- 7. Remove the bilge drain plugs to drain any water. Raise the bow (front) of your PWC about 1 foot (30 cm) to allow complete draining.
- 8. Wipe the engine compartment dry with dry, clean rags.
- Confirm the engine and the exhaust system is cool, then spray a waterdisplacement corrosion-proof lubricant (without Teflon or molybdenum additives, such as CRC 6-56 or equivalent) on the engine, electrical wiring and jet pump assembly.

If you won't be riding for more than one week, perform the following:

- 10.Spray a water-displacement corrosion-proof lubricant (without Teflon or molybdenum additives, such as CRC 6-56 or an equivalent) into the throttle body (pages 180-181).
- 11.ARX1500T3DX/T3 only: Spray a water-displacement corrosion-proof lubricant (without Teflon or molybdenum additives such as CRC 6-56 or equivalent) on the outside of the turbocharger (especially the wastegate link) (page 184).
- 12.Keep your PWC as level as possible and place a cover over it for storage. For prolonged storage, refer to *Storing Your Honda* on page 210.

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# **Servicing Your Honda**

To help keep your PWC in good shape, this section includes a Maintenance Schedule for required service, a list of periodic checks you should perform at least once a month, and step-by-step instructions for specific maintenance tasks.

You'll also find important safety precautions, information on fuels and oils, and tips for keeping your Honda looking great.

For information about the exhaust emission requirements of the U.S. Environmental Protection Agency (EPA), the California Air Resources Board (CARB), and Environment Canada (EC), see page 250.

For information about replacing fuses, see page 228.

#### **USA** only

Maintenance, replacement, or repair of emission control devices and systems may be performed by any engine repair establishment or individual, using parts that are "certified" to EPA standards.

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Important Safety Precautions 146
Maintenance Schedule
Maintenance Record

(cont'd)

# **Servicing Your Honda**

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Electrical Battery
Appearance Care

# **Servicing Your Honda**

The following table summarizes the three types of inspections and servicing recommendations for your PWC. Both the pre-ride inspection and the scheduled maintenance at the recommended intervals are necessary to assure safe and dependable performance.

Type of Inspection/Service	Refer to page:	When Performed	Who Performs
Pre-ride Inspection	94	before every ride	you
Post-ride Maintenance	138	after every ride	you
Maintenance Schedule	147	interval on schedule	your Honda PWC dealer*

<sup>\*</sup> unless you have the proper tools and service data and are mechanically qualified

### The Importance of Maintenance

Keeping your PWC well-maintained is absolutely essential to your safety. It's also a good way to protect your investment, get maximum performance, avoid breakdowns, and have more fun. A properly maintained PWC will also help to reduce air and water pollution.

Remember, proper maintenance is the owner's responsibility. Be sure to inspect your PWC before each ride, service it after every ride, and follow the Maintenance Schedule in this section.

### **A WARNING**

Improperly maintaining this personal watercraft or failing to correct a problem before you ride can cause a crash in which you can be seriously hurt or killed.

Always follow the inspection and maintenance recommendations and schedules in this owner's manual.

If your PWC submerges or is involved in a crash, be sure your Honda PWC dealer inspects all major parts, even if you are able to make some repairs.

# **Maintenance Safety**

This section includes instructions on how to perform some important maintenance tasks. If you have basic mechanical skills, you can perform many of these tasks with the tools provided with your PWC.

Other tasks that are more difficult and require special tools are best performed by professionals.

Some of the most important safety precautions follow. However, we cannot warn you of every conceivable hazard that can arise in performing maintenance. Only you can decide whether or not you should perform a given task.

### **A WARNING**

Failure to properly follow maintenance instructions and precautions can cause you to be seriously hurt or killed.

Always follow the procedures and precautions in this owner's manual.

## **Maintenance Safety**

#### **Important Safety Precautions**

• Make sure the engine is off and the lock clip is removed from the engine stop button/switch before you begin any maintenance or repairs. This will help eliminate several potential hazards:

**Carbon monoxide poisoning from engine exhaust.** Be sure there is adequate ventilation whenever you operate the engine.

**Burns from hot personal watercraft parts.** Let the engine and exhaust system cool before touching.

**Injury from moving parts.** Do not run the engine unless instructed to do so.

- Read the instructions before you begin, and make sure you have the tools and skills required.
- To support your PWC, place it on an appropriate stand or trailer.
- To reduce the possibility of a fire or explosion, be careful when working around gasoline. Use only non-flammable solvent, not gasoline, to clean parts. Keep cigarettes, sparks, and flames away from all fuel-related parts.

Remember that your Honda PWC dealer knows your PWC best and is fully equipped to maintain and repair it. To ensure the best quality and reliability, use only new Honda Genuine Parts or their equivalents for repair and replacement. If you have the tools and skills required for additional maintenance jobs, you can purchase an official Honda Service Manual (page 260).

The required Maintenance Schedule that follows specifies how often you should have your PWC serviced, and what things need attention. It is essential to have your PWC serviced as scheduled to maintain safe, dependable performance and proper emission control.

The service intervals in this Maintenance Schedule are based on average riding conditions. Some items will need more frequent service if you ride in salt water or at full throttle. Consult your Honda PWC dealer for recommendations applicable to your individual needs and use. Some items in the Maintenance Schedule can be performed with basic mechanical skills and hand tools. Procedures for these items are provided in this manual. Other items involve more extensive procedures and may require special training, tools, and equipment. We recommend that you have your Honda PWC dealer perform these tasks unless you have advanced mechanical skills and the required tools and equipment. Procedures for such items in this schedule are provided in an official Honda Service Manual available for purchase (page 260).

If you do not feel capable of performing a given task or need assistance, remember that your Honda PWC dealer knows your PWC best and is fully equipped to maintain and repair it. If you decide to do your own maintenance, use only Honda Genuine Parts or their equivalents for repair or replacement to ensure the best quality and reliability.

Perform the pre-ride inspection (page 94) and owner maintenance (page 149) at each scheduled maintenance period.

Each item on the maintenance schedule requires some mechanical knowledge. Certain items (particularly those marked \* and \*\*) may require more technical information and tools. Consult your Honda PWC dealer.

- \* Should be serviced by your Honda PWC dealer, unless you have the proper tools and service data and are mechanically qualified. Refer to the official Honda Service Manual (page 260).
- \*\* In the interest of safety, we recommend these items be serviced only by your Honda PWC dealer.

		FREQUENCY	WHICHEVER COMES FIRST	INITIAL MAINTENANCE	REGI MAINTENAN	ULAR CE INTERVAL	Refer
	TTEMO		MONTH	_	6	12	to page
	ITEMS		HOURS	10	100	200	"""
*	FUEL TANK/FUEL LINE	Inspection			0	0	_
*	THROTTLE CABLE	Inspection/Lubricate			0	0	_
	THROTTLE BODY	Lubricate		0	0	0	180-181
	SPARK PLUGS Inspection/Replace					0	188
**	VALVE CLEARANCE Inspection/Adjust				EVERY 200 hours		_
*	AIR FILTER	Replace				0	_
	ENGINE OIL Replace			EV	ERY 50 hours or every	year	163
	ENGINE OIL FILTER Replace					0	171
	COOLING SYSTEM	Inspection		0	0	0	192

- \* Should be serviced by your Honda PWC dealer, unless you have the proper tools and service data and are mechanically qualified. Refer to the official Honda Service Manual (page 260).
- \*\* In the interest of safety, we recommend these items be serviced only by your Honda PWC dealer.

NOTE: • Some items will need more frequent service if you ride in salt water or at full throttle. Consult your Honda PWC dealer for recommendations applicable to your individual needs and use.

	FREQUENCY		WHICHEVER COMES FIRST	INITIAL MAINTENANCE	REGULAR MAINTENANCE INTERVAL		Refer	
	ITEMS			MONTH	_	6	12	to page
	HEMS			HOURS	10	100	200	page
*	IMPELLE	ER	Inspection			0	0	
*	COUPLIN	NG RUBBER	Inspection				0	
	TURBOCHARGER Lubricate		ARX1500T3DX/T3	0	0	0	184	
		Turbocharger	Inspection/Replace	ARX1500T3DX/T3			0	
*	ANODE Exhaust Manifold, Oil Inspection/Replace Cooler and Cylinder Head			EVERY 400 hours				
	BILGE STRAINER Clean				0	0	196	
	DRAIN PLUG Inspection/Replace					0	197	
**	BEARING HOUSING Grease/Inspection		Grease/Inspection			0	0	
*	REVERSE SYSTEM Inspection/Adjust/Lubricate		Inspection/Adjust/Lubricate			0	0	182
*	NUTS, BOLTS, FASTENERS Inspection			0	0	0		
*	STEERING SYSTEM Inspection/Adjust/Lubricate			0	0	0	_	

<sup>\*</sup> Should be serviced by your Honda PWC dealer, unless you have the proper tools and service data and are mechanically qualified. Refer to the official Honda Service Manual (page 260).

NOTE: • Some items will need more frequent service if you ride in salt water or at full throttle. Consult your Honda PWC dealer for recommendations applicable to your individual needs and use.

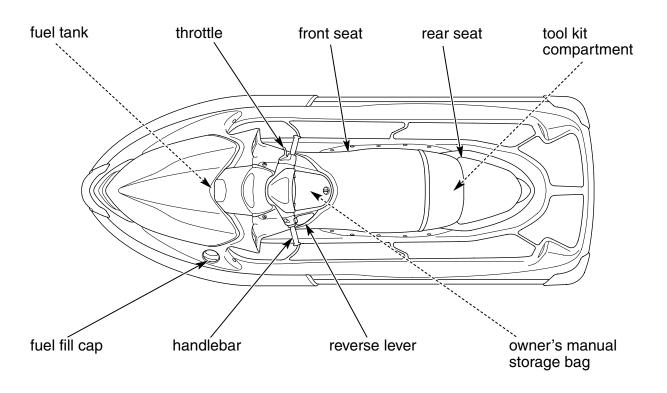
<sup>\*\*</sup> In the interest of safety, we recommend these items be serviced only by your Honda PWC dealer.

### **Maintenance Record**

Keeping an accurate maintenance record will help ensure that your PWC is properly maintained. Retain detailed receipts to verify the maintenance was performed. If the personal watercraft is sold, these receipts should be transferred with the personal watercraft to the new owner.

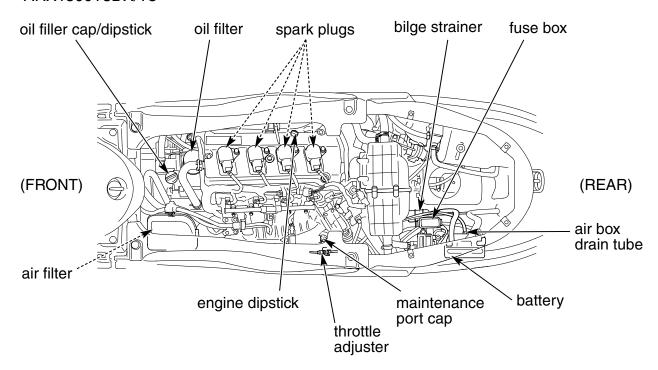
Make sure whoever performs the maintenance completes this record. All scheduled maintenance, including the 10 hours initial maintenance, is considered a normal owner operating cost and will be charged for by your dealer. Use the space under Notes to record anything you want to remind yourself about or mention to your dealer.

Hours or Months	Hourmeter	Date	Performed By:	Notes	
100 or 6					
200 or 12					
300 or 18					
400 or 24					
500 or 30					
600 or 36					
700 or 42					
800 or 48					
900 or 54					
1000 or 60					

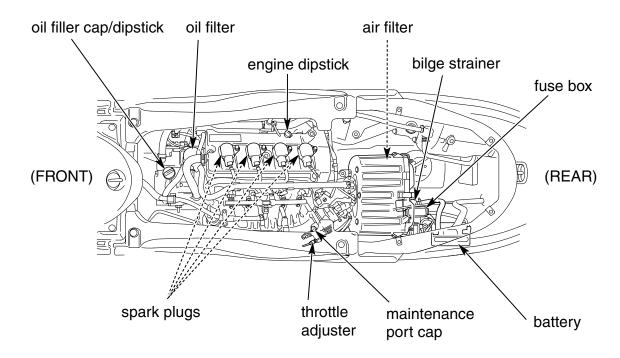


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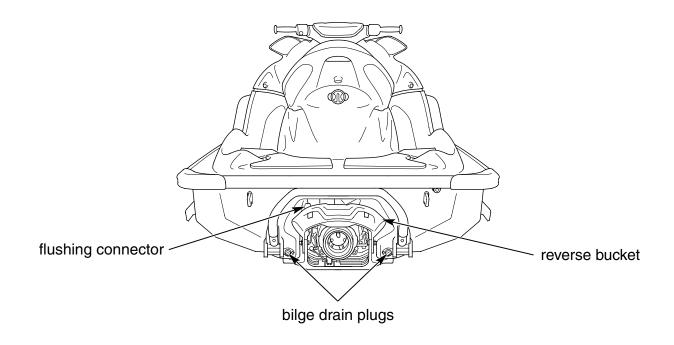
### ARX1500T3DX/T3



### ARX1500N3



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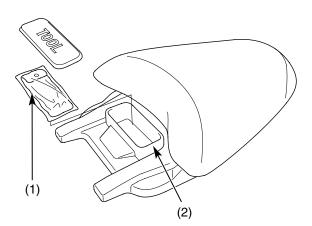


# **Tool Kit**

The tool kit (1) is stored in the tool kit compartment (2) attached on the rear seat (page 158).

An optional, larger tool kit may be available. Check with your Honda dealer's parts department.

#### **REAR SEAT**



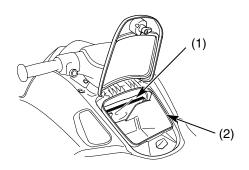
(1) tool kit (2) tool kit compartment

# **Owner's Manual Storage**

Your PWC provides storage for the owner's manual so you'll have it with you for easy reference. To avoid possible water damage, store your owner's manual (and other documents) in the plastic storage bag (1) in the glove box (2) (page 101).

Be careful not to flood this area when washing your PWC.

#### **FRONT**



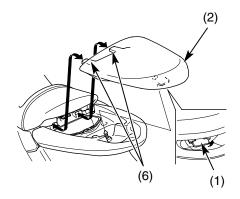
- (1) plastic storage bag(2) glove box

### **Seat Removal**

Refer to Safety Precautions on page 146.

The seat must be removed for battery, fuse, and engine compartment maintenance, and to access to the rear storage compartment.

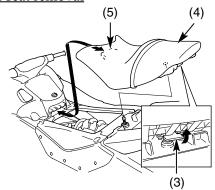
#### Rear seat removal



- (1) rear seat latch
- (6) rear seat prongs
- (2) rear seat

- 1. Release the rear seat latch (1).
- 2. Pull the rear seat (2) back and up.

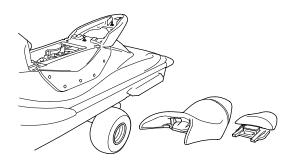
#### Front seat removal



- (3) front seat latch
- (5) front seat prong
- (4) front seat
- 3. Release the front seat latch (3).
- 4. Pull the front seat (4) back and up.

# **Seat Removal**

Place the removed seats as shown in following illustration.



Don't rest against the seats.

#### Installation

- 1. Position the front seat prong (5) and press on the front seat until the latch closes.
- 2. Position the rear seat prongs (6) and press on the rear seat until the latch closes.
- 3. Make sure to tighten the latches securely.

### **Fuel**

Refer to Safety Precautions on page 146.

#### **Fuel Recommendation**

Туре	premium unleaded
Pump Octane	91 (or higher)
Number	

This marine engine is certified to operate on premium unleaded gasoline. Unleaded gasoline produces fewer engine and spark plug deposits and extends exhaust system life.

Your engine is designed to use any premium gasoline that has a pump octane number of 91 or higher. Gasoline pumps at service stations normally display the pump octane number.

If you are unable to find premium unleaded gasoline, you may substitute an unleaded regular gasoline (minimum unleaded gasoline 86 pump octane or higher). However, keep the engine under 5,000 rpm, and resume using unleaded premium gasoline as soon as possible.

For information on the use of oxygenated fuels, see page 257.

Never use stale or contaminated gasoline. Avoid getting dirt, dust, or water in the fuel tank.

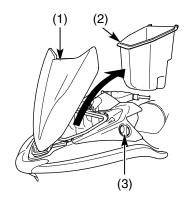
### **Fuel Capacity**

Fuel tank capacity: 18.49 US gal (70.0 ℓ)

The tank should be refilled as soon as possible after the low fuel indicator and WARNING lamp flash and the beeper sounds.

### **Refueling Procedure**

Refer to Safety Precautions on page 146.



- (1) front hood(2) front storage box
- (3) fuel fill cap
- 1. Pull on the front hood latch and lift the front hood (1).

(cont'd)

### **Fuel**

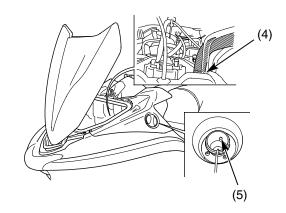
- 2. Remove the front storage box (2).
- 3. Turn the fuel fill cap (3) counterclockwise to remove it.
- 4. Add fuel until you see the level reach the filler tube neck (4).
- 5. Stop refueling when fuel comes through the hole (5) in the filler neck.

### **A WARNING**

Gasoline is highly flammable and explosive. You can be burned or seriously injured when handling fuel.

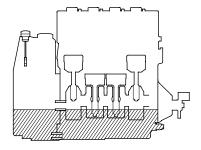
- Stop the engine and keep heat, sparks and flame away.
- Handle fuel only outdoors.
- Wipe up spills immediately.

- 6. After refueling, install the fuel fill cap and turn it clockwise until it clicks.
- 7. Reinstall the front storage box and close the front hood, then check the latch is secure.



(4) filler tube neck (5) hole

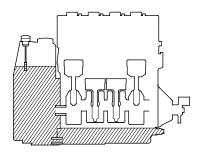
This model is equipped with a dry sump engine.



The oil in the oil tank drains to the engine crankcase after the engine is stopped.

The engine must be warmed-up (page 168) and then turned off to get a correct reading of the oil level.

The dry sump engine oil drains from the oil tank to the engine crankcase over time. Therefore, the oil level in the oil tank will drop (lower) over time when the PWC is stored. Also, the oil level in the oil tank does not lower immediately after warming up and stopping the engine.



Oil level with the engine stopped right after warming up.

Engine oil quality is a major factor that affects both the performance and the service life of the engine.

Using the proper oil (page 165) and filter, and regularly checking, adding, and changing oil will help extend your engine's life. Even the best oil wears out. Changing oil helps to get rid of dirt and deposits in the engine. Operating the engine with old or dirty oil can damage your engine. Running the engine with insufficient oil can cause serious damage to the engine.

Change the engine oil as specified in the maintenance schedule on page 149.

#### **Oil Recommendation**

API classification	SG or higher except oils labeled as energy conserving on the circular API service label
viscosity (weight)	SAE 10W-30
JASO T 903 standard	MA

Pro Honda GN4 4-stroke oil (USA & Canada), or
Honda 4-stroke oil (Canada only), or an
equivalent motorcycle oil.

<sup>\*</sup> Suggested oils are equal in performance to SJ oils that are not labeled as energy conserving on the circular API service label.

- Your PWC does not need oil additives. Use the recommended oil.
- Do not use non-detergent, vegetable, or castor based racing oils.
- Do not use API SH or higher oils labeled as energy conserving on the API service label.

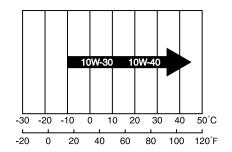




NOT RECOMMENDED

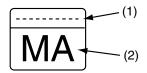
OK

Other viscosities shown in the following chart may be used when the average temperature in your riding area is within the indicated range.



#### JASO T 903 Standard

The JASO T 903 standard is an index for engine oils for 4-stroke motorcycle engines. There are two classes: MA and MB. Oil conforming to the standard is labeled on the oil container. For example, the following label shows the MA classification.



PRODUCT MEETING JASO T 903 COMPANY GUARANTEEING THIS MA PERFORMANCE:

- (1) code number of the sales company of the oil
- (2) oil classification

### **Checking & Adding Oil**

Refer to Safety Precautions on page 146.

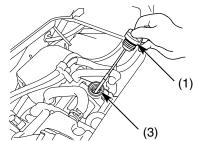
Check the engine oil level each day before operating your PWC and add oil if needed. Keep your PWC as level as possible for this procedure.

It is preferable to check the oil on shore. If necessary, this procedure may be performed with your PWC on calm water.

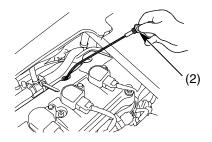
Before checking the engine oil level: Perform this pre-check procedure on shore.

- 1. Remove both seats (page 158).
- 2. Remove the oil filler cap/dipstick (1) and wipe it clean.
- 3. Insert the oil filler cap/dipstick until it seats, but do not screw it in.

#### **ENGINE COMPARTMENT**



(1) oil filler cap/dipstick (3) oil filler cap hole



(2) engine dipstick

(cont'd)

- 4. Remove the oil filler cap/dipstick and check the oil level.
  - If oil appears on the oil filler cap/dipstick, refer to *To check the oil level*.
  - If oil does not appear, perform step 5.
- 5. Remove the engine dipstick (2) and wipe it clean.
- 6. Insert the engine dipstick until it seats, but do not screw it in.
- 7. Remove the engine dipstick. If no oil appears on the engine dipstick, do not start the engine.
- 8. Reinstall the engine dipstick and tighten it securely.
  - Before starting the engine, add the specified oil into the oil filler cap hole (3), until it appears on the oil filler cap/dipstick.
- 9. Reinstall the oil filler cap/dipstick. Make sure the cap is tightened securely.

To check the oil level on shore

1. In a well-ventilated area, start the engine while flushing the cooling system (page 193).

#### **NOTICE**

- Start the engine before turning on the water to prevent flow through the exhaust pipe back into the engine where it could cause severe damage.
- Avoid running the engine without water flow for more than 15 seconds to prevent severe engine and exhaust system damage.
- 2. Let the engine idle for 5 minutes. If the air temperature is below 50°F (10°C), let it idle for an additional 5 minutes (a total of 10 minutes).

3. Stop the flushing.

#### **NOTICE**

Avoid running the engine without water flow for more than 15 seconds to prevent severe engine and exhaust system damage.

- 4. Stop the engine and wait 2 3 minutes.
- 5. Remove both seats (page 158).

This procedure continues with Step 6 on page 170.

To check the oil level on calm water

- 1. Start the engine.
- 2. Warm up the engine at approximately 4,000 rpm for 5 minutes.

  If the air temperature is below 50°F (10°C), let the engine idle for an additional 5 minutes (a total of 10 minutes).
- 3. Let the engine idle for a minute.
- 4. Stop the engine, wait 2 3 minutes and get off your PWC.
- 5. Remove both seats (page 158).

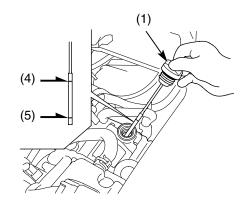
(cont'd)

- 6. Remove the oil filler cap/dipstick (1) and wipe it clean.
- 7. Insert the oil filler cap/dipstick until it seats, but don't screw it in.
- 8. Remove the oil filler cap/dipstick and check the oil level.
  - If the oil is at or near the upper level mark (4) you do not have to add oil.
  - If the oil is below or near the lower level mark (5) remove the oil filler cap/dipstick and add the recommended oil until it reaches the upper level mark. (Do not overfill.)

Wipe up any spilled oil immediately.

- 9. Reinstall the oil filler cap/dipstick.
- 10. Check for oil leaks.
- 11.Install both seats.

#### **ENGINE COMPARTMENT**



- (1) oil filler cap/dipstick
- (4) upper level mark
- (5) lower level mark

### **Changing Engine Oil & Filter**

Refer to Safety Precautions on page 146.

Your PWC's oil filter has very specific performance requirements. Use a new Honda Genuine oil filter or a filter of equal quality specified for your model.

### **NOTICE**

Using the wrong oil filter may result in leaks or engine damage.

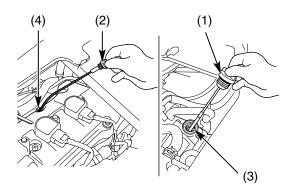
This procedure requires mechanical skill and professional tools such as a torque wrench and oil filter wrench, as well as a means for disposing of the drained fluid (page 217). If you do not have the skills or the tools, see your Honda PWC dealer.

Wipe up any spilled oil immediately.

Drain the Engine Oil:

- 1. Secure your PWC on a stand or trailer.
- 2. Remove both seats (page 158).
- 3. Remove the oil filler cap/dipstick (1) and the engine dipstick (2).
- 4. Using a commercially available fluid evacuator, drain the oil from the oil filler cap hole (3) and the engine dipstick hole **(4)**.

#### **ENGINE COMPARTMENT**



- (1) oil filler cap/dipstick
- (2) engine dipstick (3) oil filler cap hole
- (4) engine dipstick hole

# **Engine Oil & Filter**

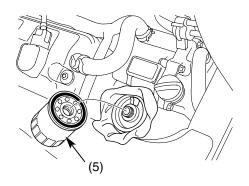
Install a New Oil Filter:

- 5. To avoid spilling the oil, wrap a soft cloth around the oil filter.
- 6. Remove the oil filter (5) with a filter wrench and let the remaining oil drain into a suitable container. Discard the oil filter in an approved manner (page 217).
- 7. Pour the drained oil into a suitable container and dispose of it in an approved manner (page 217).

#### NOTICE

Improper disposal of drained fluids is harmful to the environment.

#### **ENGINE COMPARTMENT**

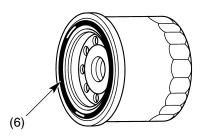


(5) oil filter

(cont'd)

## **Engine Oil & Filter**

8. Apply a thin coat of engine oil to the rubber seal (6) of a new oil filter



- (6) rubber seal
- 9. Install the new oil filter and tighten it by hand
- 10. Using an oil filter wrench attachment and a torque wrench, tighten the new oil filter to the specified torque:19 lbf·ft (26 N·m, 2.7 kgf·m)

11. Install the engine dipstick.

#### Add Engine Oil:

12. Fill the oil tank with the recommended oil slowly (page 165).

If the oil filter was replaced, use approximately:

- ARX1500T3DX/T3 4.5 US qt (4.3 \ell )
- ARX1500N3 4.2 US qt (4.0 \ell)

If the oil filter was not replaced, use approximately:

- ARX1500T3DX/T3 4.4 US qt (4.2 \ell )
- ARX1500N3 4.1 US qt (3.9 \ell )

## **Engine Oil & Filter**

- 13. Install the oil filler cap/dipstick securely.
- 14. Start the engine and let it idle for a few minutes while flushing the cooling system.

#### NOTICE

Turning on the water before starting the engine will allow water to flow through the exhaust pipe back into the engine where it could cause severe damage.

15. Stop the flushing.

#### **NOTICE**

Running the engine without water flow for more than 15 seconds can cause severe engine and exhaust system damage.

- 16. Stop the engine.
- 17. Check that the oil level is at the upper level mark on the oil filler cap/dipstick (page 167).
- 18. Check that there are no oil leaks.
- 19. Install both seats.

### Air Filter

Refer to Safety Precautions on page 146.

Service the air filter more frequently if you ride in salt water or at full throttle. Your Honda PWC dealer can help you determine the correct service interval for your riding conditions.

Your PWC's air filter has very specific performance requirements. Use a new Honda Genuine air filter specified for your model or an air filter of equivalent quality.

### **NOTICE**

Using the wrong air filter may result in premature engine wear.

Proper air filter maintenance can prevent premature engine wear or damage, expensive repairs, low engine power, poor gas mileage, and spark plug fouling.

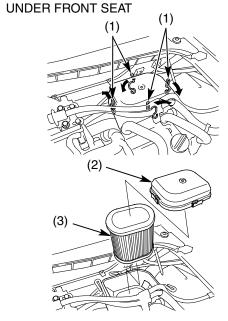
### NOTICE

Improper or lack of proper air filter maintenance can cause poor performance and premature engine wear.

### **Air Filter**

### Replacement (ARX1500T3DX/T3)

- 1. Remove both seats (page 158).
- 2. Unhook the springs (1).
- 3. Remove the air box cover (2).
- 4. Remove the air filter (3).
- 5. Discard the air filter.
- 6. Install a new air filter.
- 7. Install the removed parts in reverse order of removal.
- 8. Make sure the air box cover is completely latched.
- 9. Install both seats.

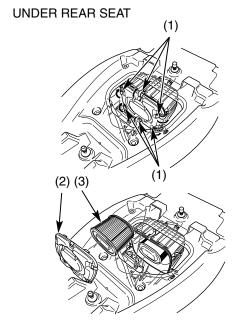


- (1) springs(2) air box cover(3) air filter

### **Air Filter**

### Replacement (ARX1500N3)

- 1. Remove both seats (page 158).
- 2. Remove the rear storage box (page 229).
- 3. Unhook the springs (1).
- 4. Remove the air box cover (2).
- 5. Remove the air filter (3).
- 6. Discard the air filter.
- 7. Install a new air filter.
- 8. Install the removed parts in reverse order of removal.
- 9. Make sure the air box cover is completely latched.
- 10. Install both seats.



- (1) springs(2) air box cover(3) air filter

To keep moving parts functioning properly, coat them with a water-displacement corrosion-proof lubricant (without Teflon or molybdenum additives, such as CRC 6-56 or equivalent).

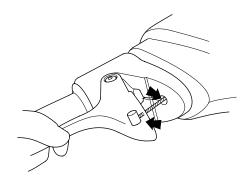
Provide lubrication when moving parts do not work smoothly. Also lubricate as per the maintenance schedule (page 149, 150).

Consult your Honda PWC dealer for more information about lubrication procedures.

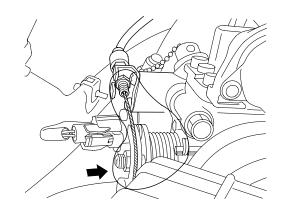
#### **Lubrication Points**

Lubricate the throttle link, cable and inside of throttle body as shown in the following illustrations.

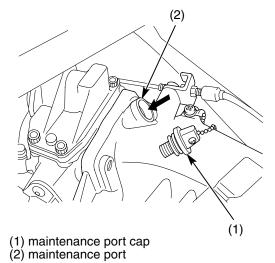
#### **RIGHT HANDLEBAR**



#### **ENGINE COMPARTMENT**



#### ENGINE COMPARTMENT

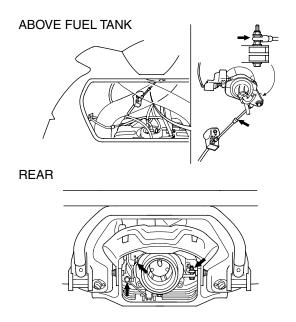


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To lubricate and rustproof the inside of the throttle body, proceed as follows after confirming that the engine is stopped and cool.

- 1. Remove both seats (page 158).
- 2. Remove the maintenance port cap (1).
- 3. Insert the spray nozzle of a water-displacement corrosion-proof lubricant (without Teflon or molybdenum additives, such as CRC 6-56 or an equivalent) into maintenance port (2).
- 4. Close the throttle.
- 5. Spray the lubricant into the maintenance port for 3 seconds.
- 6. Operate the throttle lever slowly, from fully ON to fully OFF, three times.
- 7. Repeat steps 3-6 again.
- 8. Install the maintenance port cap and make sure it is tightened securely.
- 9. Install both seats.

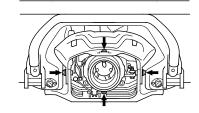
Lubricate the steering cable, cable ball joint, shift cable ball joint and shift guide roller as shown in the following illustrations.



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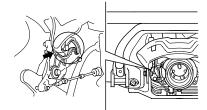
Lubricate the steering nozzle and reverse bucket pivots as shown in the following illustration.

REAR



Lubricate a water-displacement corrosionproof grease (Unilite M No.2 Grease or an equivalent) the area as shown in the following illustration.

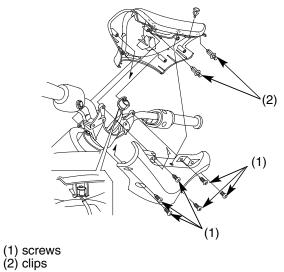
REAR



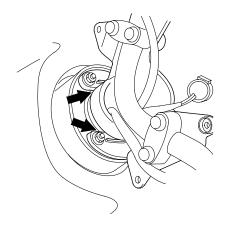
Lubricate the steering pivot shaft as shown in the following illustrations.

• To remove the handle cover, remove the screws (1) and clips (2).

#### HANDLEBAR



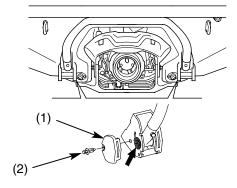
**PIVOT SHAFT** 



ARX1500T3DX only: Lubricate the boarding step spring as shown in the following illustration.

• To remove the boarding step cover (1), and remove the clip (2).

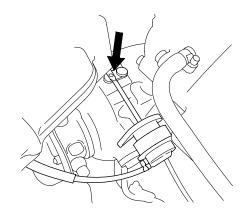
#### **REAR**



- (1) boarding step cover
- (2) clip

ARX1500T3DX/T3 only: Lubricate and rustproof the turbocharger (especially the wastegate link) as shown in the following illustration after confirming the engine is cool.

#### **ENGINE COMPARTMENT**

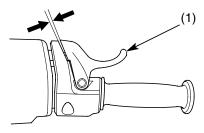


# **Throttle**

### **Throttle Freeplay**

Refer to Safety Precautions on page 146.

#### RIGHT HANDLEBAR



(1) throttle lever

Inspection

Check freeplay at the throttle lever (1).

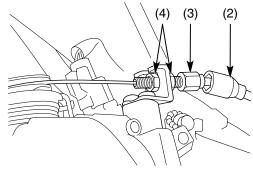
Freeplay:

1/8–3/16 in (3–5 mm)

If necessary, adjust to the specified range.

# **Throttle**

#### **ENGINE COMPARTMENT**



(4) lock nuts

- (2) sleeve
- (3) adjuster

- operation of the throttle lever from fully ON to fully OFF in all steering positions.
- 6. Reinstall the sleeve.

#### Adjustment

For throttle adjustments, use the adjuster shown in the illustration.

- 1. Slide the sleeve (2) back to expose the adjuster (3).
- 2. Loosen the lock nuts (4).
- 3. Turn the adjuster.
- 4. After adjustment, check for smooth
- 5. Tighten the lock nuts.

### **Throttle**

### **Throttle Inspection**

Refer to Safety Precautions on page 146.

- 1. Check that the throttle assembly is positioned properly and the securing bolts are tight.
- 2. Check for smooth operation of the throttle lever from fully ON to fully OFF in all steering positions. If there is a problem, see your Honda PWC dealer.

#### **Spark Plug Recommendation**

standard spark	IMR9D-9H (NGK)
plug	

Use only the recommended type of spark plugs in the recommended heat range. It should not be necessary to use spark plugs in a different heat range because the engine is water-cooled.

#### **NOTICE**

Using spark plugs with an improper heat range can cause engine damage.

This PWC uses spark plugs that have an iridium coated center electrode. Be sure to observe the following when servicing the spark plugs.

- Do not clean the spark plugs. If an electrode is contaminated with accumulated objects or dirt, replace the spark plug with a new one.
- To check the spark plug gap, use only a "wire-type feeler gauge".
   To prevent damaging the iridium coating of the center electrode, never use a "leaf-type feeler gauge."
- Do not adjust the spark plug gap. If the gap is out of specification, replace the spark plug with a new one.

### **Spark Plug Inspection & Replacement**

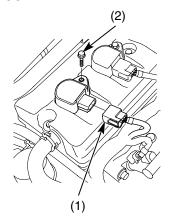
Refer to Safety Precautions on page 146.

- 1. Remove both seats (page 158).
- 2. Disconnect the ignition connectors (1) and remove the bolts (2).

#### NOTICE

Getting the ignition connectors wet can damage the ignition system.

#### **ENGINE COMPARTMENT**

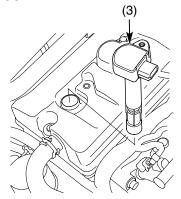


(1) ignition connectors (2) bolts

(cont'd)

3. Remove the ignition coils (3) from the spark plugs.

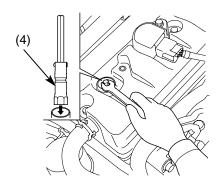
#### **ENGINE COMPARTMENT**



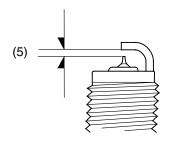
(3) ignition coils

4. Using the spark plug wrench (4) provided in the tool kit, remove the spark plugs.

#### **ENGINE COMPARTMENT**



(4) spark plug wrench



- (5) spark plug gap
- 5. Inspect the electrodes and center porcelain for deposits, corrosion, or carbon fouling. If the corrosion or deposits are heavy, replace the plug.
- 6. Make sure that a 1.0 mm wire-type feeler gauge cannot be inserted between the spark plug gap (5). If the gauge fits in the gap, replace the plug with a new one.
- 7. With the plug washers attached, thread the spark plugs in by hand to prevent cross-threading.

- 8. Tighten each spark plug:
  - If the old plug is good: 1/8 turn after it seats.
  - If installing a new plug, tighten it twice to prevent loosening:
    - a) First, tighten the plug: NGK: 1/2 turn after it seats.
    - b) Then loosen the plug.
    - c) Next, tighten the plug again: 1/8 turn after it seats.

#### **NOTICE**

Improperly tightened spark plugs can damage the engine. If a plug is too loose, a piston may be damaged.

If a plug is too tight, the threads may be damaged.

- 9. Reinstall the ignition coils and bolts, and connect the ignition connectors.
- 10. Install both seats.

Always flush the engine cooling system after using your PWC.

Flushing the system with fresh water prevents salt water corrosion and removes silt, sand, and other residue.

If you beach your PWC, be sure to flush the cooling system to avoid possible engine damage.

You may also use the flushing procedure to provide engine cooling when you are running the engine out of the water for maintenance purposes.

The flushing connector is located in the jet nozzle cavity (page 193) at the rear of your PWC.

While flushing the system, observe the following suggestions to avoid engine damage or personal injury:

 Do not touch any electrical parts or driveshaft components while the engine is running.

### **Flushing Procedure**

Refer to Safety Precautions on page 146.

### **CAUTION**

When running the engine on land, hot water and steam can spurt from the cooling water bypass outlet and the exhaust outlet and may cause burns to people in the area.

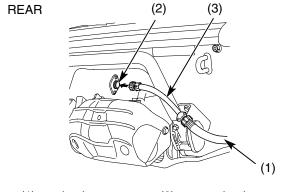
Keep people away from the rear of the personal watercraft when the engine is running.

Check that the stern is lower than the bow.

1. Pull the reverse lever to lower the reverse bucket (page 52).

2. Attach a garden hose (1) to the flushing connector (2), but do not turn on the water. An optional, connection hose (3) may be available.

Check with your Honda PWC dealer's parts department.



- (1) garden hose
- (3) connection hose
- (2) flushing connector

(cont'd)

3. Start the engine.

#### **NOTICE**

Start the engine before turning on the water to prevent flow through the exhaust pipe back into the engine where it could cause severe damage.

4. Immediately after starting the engine, turn on the water flow.

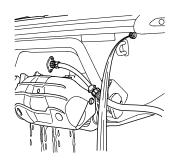
#### NOTICE

Running the engine without water flow for more than 15 seconds can cause severe engine and exhaust system damage.

- 5. Check that water flows out of the cooling water bypass outlet.
  - If you don't see water flowing out of the outlet, turn off the water and the engine. Contact your Honda PWC dealer.
- 6. Let the engine idle for about 10 minutes while continuing the water flow.

If the engine stops during this procedure, immediately stop the water flow and resume from step 3.

**REAR** 



- 7. Turn off the water while leaving the engine idling.
- 8. Check the tachometer while running the engine for less than 15 seconds at low rpm.

### **NOTICE**

Operating the engine out of water at high rpm or for longer than 15 seconds at a time may cause severe engine and/or exhaust system damage.

- 9. Stop the engine.
- 10. Disconnect the garden hose from the flushing connector.
- 11. Push the reverse lever to pull up the reverse bucket.

# **Bilge Drain System**

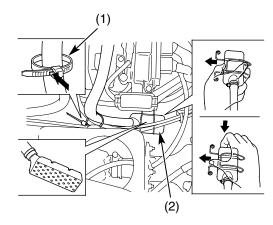
Refer to Safety Precautions on page 146.

The bilge system, which drains water from the engine compartment, should be flushed periodically according to the Maintenance Schedule, or whenever blockage is suspected.

Be sure to remove the lock clip from the engine stop button/switch.

- 1. Remove both seats (page 158) and the rear storage box (page 229) to access the engine compartment.
- 2. Remove the band (1).
- 3. Push out the bilge strainer (2) while sliding it

#### **ENGINE COMPARTMENT**



- (1) band
- (2) bilge strainer

# **Bilge Drain System**

- 4. Clean the bilge strainer in fresh water.
- 5. Check for clogging by spraying water from the bilge strainer side. Water should flow out of the bilge drain nozzle in the jet pump.
  - If the bilge strainer or other parts of the bilge drain system are clogged or damaged, replace as necessary. See your Honda PWC dealer.
- 6. Remove the bilge drain plugs to drain the engine compartment (page 54).

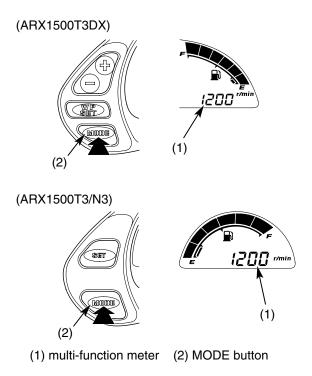
- 7. Inspect the bilge drain plugs for cracks or damage. Replace if necessary. Tighten the bilge drain plugs securely.
- 8. Tighten the band.
- 9. Install the bilge strainer.
- 10. Install both seats and rear storage box.

# **Off-throttle Steering System**

Your PWC is equipped with an "off-throttle steering system" (page 130).

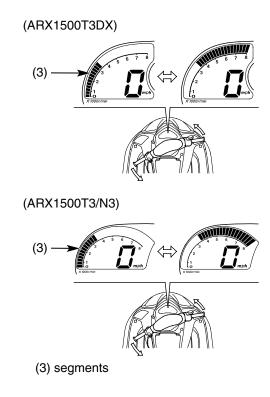
### **Checking System Operation**

- 1. Insert the lock clip in the engine stop switch to turn on the display.
- 2. Switch the multi-function meter (1) to the tachometer mode by pushing the MODE button (2).
- 3. Perform the flushing procedure (page 193).



# **Off-throttle Steering System**

- 4. Open the throttle and rev the engine up to approximately 4,000 rpm for 5 seconds.
- 5. Fully close the throttle and turn the steering fully to the right or to the left and hold it.
- 6. With the handlebar turned, check that the left and right segments (3) alternate rapid flashing as illustrated, and the engine is reving up.



Your PWC has a maintenance-free type battery. You do not have to check the battery electrolyte level or add distilled water as you would with a conventional-type battery.

#### NOTICE

Your battery is a maintenance-free type and can be permanently damaged if the cap strip is removed.

If you do not expect to ride your PWC for at least two weeks, we recommend you remove the battery, or at least disconnect the battery cables (negative cable first).

If you plan to store your PWC, see *Battery Storage*, page 201.

If your battery seems weak and/or is leaking electrolyte (causing slow starting or other electrical problems), see your Honda PWC dealer.

WARNING: Battery posts, terminals and related accessories contain lead and lead compounds. Wash your hands after handling.

#### **Battery Storage**

Refer to Safety Precautions on page 146.

If you plan to store your PWC, we recommend you remove the battery and store it where it can be charged at least every 30 days to maintain its service life.

If you do not remove the battery, we recommend disconnecting the battery cables (negative cable first).

You will get the best storage results from removing the battery and slow (trickle) charging it every 30 days (see *Battery Charging*, page 204).

Before you remove the battery, be sure to read all the information that follows. After removing the battery, be sure to read the information on the battery label.

### **A WARNING**

The battery gives off explosive hydrogen gas during normal operation.

A spark or flame can cause the battery to explode with enough force to kill or seriously hurt you.

Wear protective clothing and a face shield, or have a skilled mechanic do the battery maintenance.

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The battery is located in a battery tray in the engine compartment below the rear seat.

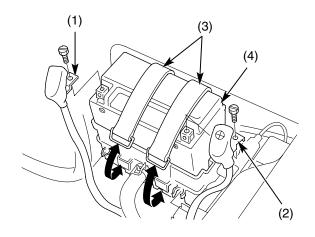
#### Removal

- 1. Make sure the lock clip (page 50) is removed.
- 2. Remove both seats (page 158) and the rear storage box (page 229) and wait a few minutes for the engine to ventilate.
- 3. Disconnect the negative (–) terminal lead (1) from the battery first.

Always disconnect the negative (black cover) cable first. Fuel vapors may be present in the engine compartment which a spark could ignite.

- 4. Disconnect the positive (+) terminal lead (2).
- 5. Release the rings and remove the rubber bands (3).
- 6. Pull the battery (4) out of the battery tray.

#### **ENGINE COMPARTMENT**



- (1) negative (-) terminal lead (black cover)
- (2) positive (+) terminal lead (red cover)
- (3) rubber bands
- (4) battery

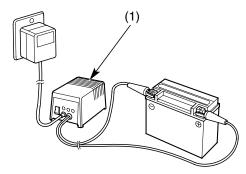
- 7. Charge the battery (see following section), unless you have been riding regularly.
- 8. Clean the top of the battery and the terminals using a baking soda/water solution.
- 9. Scrape off the deposits with a wire brush.
- 10. Rinse the battery with fresh water and dry it.
- 11. Use waterproof grease to coat the terminals.
- 12. Store your battery in an easy-to-reach location off the floor, in an area protected from freezing temperatures and direct sunlight.
- 13. Clean the battery tray after removing the battery for storage. Dry the battery tray and, if paint is missing, re-paint the area.
- 14. Slow charge the battery (see following section) once every 30 days.

#### **Installation**

- 1. Reinstall in the reverse order of removal. Be sure to connect the positive (+) terminal first, then the negative (-) terminal.
- 2. Check all bolts and other fasteners are secure.

### **Battery Charging**

Refer to Safety Precautions on page 146.



(1) "trickle" charger

Be sure to read the information that came with your battery charger and follow the instructions on the battery. Improper charging may damage the battery.

We recommend using a "trickle" charger (1) for home charging. These units can be left connected for long periods without risking damage to the battery. However, do not intentionally leave the charger connected longer than the time period recommended in the charger's instructions.

Avoid using an automotive-type battery charger. An automotive charger can overheat a PWC battery and cause permanent damage.

# **Appearance Care**

Frequent cleaning and polishing will keep your Honda looking newer longer. Frequent cleaning also identifies you as an owner who values your PWC. A clean PWC is also easier to inspect and service.

Periodically, the engine compartment should be cleaned by your Honda PWC dealer to remove fuel/oil/electrolyte deposits and mildew.

#### **General Recommendations**

Refer to Safety Precautions on page 146.

- To clean your PWC, you may use:
  - mild, neutral detergent and fresh water.
  - marine boat wax (for use on fiberglass gelcoat).

(cont'd)

### **Appearance Care**

• We recommend the use of a garden hose to wash your PWC.

#### **NOTICE**

High pressure water (or air) can damage certain parts of your personal watercraft.

• After cleaning, inspect for damage, wear, and leaks (fuel and oil).

# Washing Your PWC with a Mild Detergent

Refer to Safety Precautions on page 146.

- 1. Rinse your PWC thoroughly with cool water. Spray the hull, deck, handlebar, and drive system.
- 2. Fill a bucket with cool water. Mix in a mild, neutral detergent, such as dish washing liquid or a product made especially for washing PWC or automobiles.
- 3. Rinse the engine and the engine compartment with fresh water. Dry with clean rags and spray a water-displacement corrosion-proof lubricant (without Teflon or molybdenum additives, such as CRC 6-56 or equivalent) on the engine.

## **Appearance Care**

- ARX1500T3DX/T3 only: Clean the turbocharger in the same manner. Over time, rust may appear on the outside of the turbocharger. This rust does not affect the performance of the unit.
- 4. Wash your PWC with a sponge or a soft towel.
- 5. After washing, rinse your PWC thoroughly with plenty of clean water to remove any residue. Detergent residue can corrode alloy parts.
- 6. Dry your PWC with a chamois or a soft towel. Leaving water on the surface to air dry can cause dulling and water spots. As you dry, inspect for chips and scratches.

#### **Finishing Touches**

Refer to Safety Precautions on page 146.

After washing your PWC, consider using a commercially available quality fiberglass marine wax to finish the job. Apply only a non-abrasive wax made specifically for marine use. Apply the wax to the hull and deck according to the instructions on the container.

If the fiberglass is damaged, see your Honda PWC dealer.

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# **Tips**

Here's a few helpful tips on how to store and
transport your Honda, and how to be an
environmentally responsible PWC owner.

Storing Your Honda	210
Transporting Your PWC	216
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Your PWC should not be left in the water for extended periods.

If you won't be riding for an extended period, such as during the winter, or any period longer than one month, thoroughly inspect your PWC and correct any problem before storing it. That way, needed repairs won't be forgotten and it will be easier to get your PWC running again.

We suggest you perform the following procedures to keep your PWC in top condition. These storage procedures will reduce the deterioration that can occur during storage.

We recommend that the following storage procedures be performed by your Honda PWC dealer.

#### **Preparation for Storage**

Refer to Safety Precautions on page 146.

This procedure requires a means for disposing of drained fuel (page 217).

### **A WARNING**

Gasoline is highly flammable and explosive. You can be burned or seriously injured when handling fuel.

- Stop the engine and keep heat, sparks and flame away.
- Handle fuel only outdoors.
- Wipe up spills immediately.

- 1. Flush the engine cooling system (page 193). After flushing, disconnect the garden hose.
- 2. Remove the bilge drain plugs to drain any water. Raise the bow (front) of your PWC about 1 foot (30 cm) to allow complete draining.
- 3. To prevent rusting the inlet valves, proceed as follows after confirming the engine is cool.
  - Remove both seats (page 158).
  - Remove the maintenance port cap.
  - Start the engine at idle speed (without pulling the throttle lever) and spray a water-displacement corrosion-proof lubricant (without Teflon or molybdenum additives, such as CRC 6-56 or an equivalent) into maintenance port for 20 seconds. Refer to the illustration of page 180.

#### **NOTICE**

Avoid running the engine without water flow for more than 15 seconds to prevent severe engine and exhaust system damage.

(cont'd)

- 4. To prevent rusting in the cylinders, perform the following:
  - Disconnect the ignition coil connectors and ignition coils from the spark plugs.
  - Remove the spark plugs from the engine and store them in a safe place. Do not connect the ignition coils to the ignition coil connectors.
  - Pour a tablespoon (15–20 cc) of clean engine oil into each cylinder and cover the spark plug holes with a piece of cloth.
  - Disconnect the injector connectors for each cylinder.
  - Push the start button several times to crank the engine and distribute the oil.
  - After cleaning the spark plug holes, reinstall the spark plugs and the ignition coils
  - Reconnect the ignition coil connectors and injector connectors.

- 5. Spray a water-displacement corrosion-proof lubricant (without Teflon or molybdenum additives, such as CRC 6-56 or an equivalent) into the throttle body (pages 180-181).
- 6. Using a commercially available fluid evacuator, drain the fuel.

- 7. Rinse the outside of the engine. Dry with a soft clean cloth and spray with a water-displacement corrosion-proof lubricant (without Teflon or molybdenum additives, such as CRC 6-56 or an equivalent). (ARX1500T3DX/T3 only: Also rinse and dry the turbocharger, and spray it with the same lubricant. For turbocharger lubrication, see page 184.)
- 8. Remove the battery and charge it fully. Store it in an area protected from freezing temperatures and direct sunlight. Slow charge the battery (page 204) once a month.
- 9. Wash and dry your PWC. Apply fiberglass marine wax to the hull and deck.
- 10. Lubricate the moving parts (page 179).
- 11. Store your PWC in an unheated area, free of dampness, away from sunlight, with a minimum of daily temperature variation.
- 12. Remove both seats (page 158) to allow the engine compartment to dry thoroughly.

- 13. After the engine compartment is dry, reinstall both seats (page 159).
- 14. Keep your PWC as level as possible and cover it with a porous material. Avoid using plastic or similar non-breathing, coated materials that restrict air flow and allow heat and moisture to accumulate.

#### **Removal from Storage**

Refer to Safety Precautions on page 146.

- 1. Uncover and clean your PWC.
- 2. If your PWC has been stored for more than four months change the engine oil (page 171).
- 3. Charge that the battery (page 204) as required. Install the battery.
- 4. Check the throttle lever moves smoothly without sticking, and snaps shut automatically when it is released, in all steering positions.
- 5. Lubricate the moving parts (page 179).
- 6. Before starting, remove both seats and front storage box to ventilate the engine compartment.

### **A WARNING**

Starting the engine without ventilating the engine compartment can cause a fire or explosion and you or others could be seriously injured or killed.

Always vent the engine compartment before starting the engine.

- 7. Perform the engine flushing procedure (page 193).
- 8. Check all hoses for cracking, and looseness.
- 9. Install the bilge drain plugs. Check they are secure.
- 10. Check that the fire extinguisher is not beyond its expiration date and charge or replace, if necessary.

# **Transporting Your PWC**

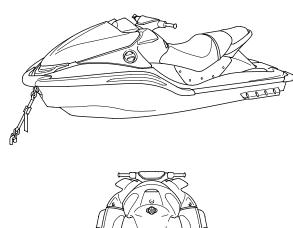
Your PWC should be carried on a trailer designed for its hull design and weight. Check that the trailer meets all local regulations.

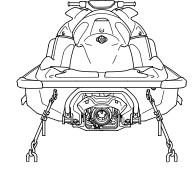
Before transporting your PWC, make sure all compartments, covers, and both seats are secure and the reverse bucket is up.

Use tie downs on the bow and stern eyelets to secure your PWC to the trailer.

Do not route a tie down or rope over the seat or wrap them around the handlebar. Do not use the grab rail. Use padding wherever a tiedown or rope contacts the hull or deck.

Use a PWC cover, especially if you will be driving on dirt roads.





### You & the Environment

Owning and riding a PWC can be enjoyable, but you must do your part to protect nature. When you show respect for the waterways, wildlife, and other people, you also help preserve the PWC sport.

Following are tips on how you can be an environmentally responsible PWC owner.

- Ride in Approved Areas. Ride responsibly only in areas approved for PWC. Avoid shoreline homes, wildlife areas, other boats, and swimmers.
- Keep the Noise Down. Loud personal watercraft can be offensive. Ride as quietly as possible. Don't modify the muffler or any other part of your air intake and exhaust systems. Such modifications not only increase noise, they also reduce engine performance and may be illegal.
- Refuel Carefully. If you pump gasoline at a dock, take care not to spill any. Gasoline in the water can poison wildlife and people. If you spill gasoline, immediately wipe it up with a rag and dispose of it properly. A little attention on your part can do a lot to help preserve the environment and ensure that you'll have places to ride your PWC in the future.
- Choose Sensible Cleaners. Use a biodegradable detergent when you wash your PWC. Avoid aerosol spray cleaners that contain chlorofluorocarbons (CFCs) which damage the atmosphere's protective ozone layer. Don't throw cleaning solvents away; see the following guidelines for proper disposal.

(cont'd)

### You & the Environment

• Recycle Wastes. It's illegal and thoughtless to put used engine oil in the trash, down a drain, or on the ground. Used oil, gasoline, coolant, and cleaning solvents contain poisons that can hurt refuse workers and contaminate our drinking water, lakes, rivers, and oceans. Before changing your oil, make sure you have the proper containers. Put oil and other toxic wastes in separate sealed containers and take them to a recycling center. Call your local or state office of public works or environmental services to find a recycling center in your area, and to get instructions on how to dispose of non-recyclable wastes.

# **Taking Care of the Unexpected**

This section discusses the more common problems that can occur with your PWC while you're riding. It tells you how to evaluate each problem and what actions you can take to try to resume riding.

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If Your Engine Quits or Won't Start	221
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If the Low Oil Pressure Indicator	
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If a Fuse Blows	
If You Have a Collision	232
If Your PWC Must Be Towed	233
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If the Intake or Propulsion System	
Is Clogged	238
If Your Battery Is Low (or Dead)	

# Taking Care of the Unexpected

#### **General Guidelines**

Keeping your PWC well-maintained is the best way to reduce the possibility of having a problem on the water.

Remember to take along your owner's manual, the tool kit that came with your PWC, and additional tools that might help you solve a problem on your own.

Should you ever have a problem while riding, please follow these guidelines:

- Always put personal safety first head back to land.
- Take time to assess the situation and your options before deciding what to do.
- If the problem is relatively minor and you have the tools, supplies, and skills to make a temporary repair, be sure to have permanent repairs made as soon as possible.
- If you can fix the problem yourself and plan to go out again, perform a pre-ride inspection first.

Additional recommendations for specific problems follow.

# If Your Engine Quits or Won't Start

Proper operation and maintenance can prevent starting and engine performance problems. In many cases, the cause of the problem may be a simple operational oversight.

If you have a problem starting the engine – or experience poor engine performance – the following information may help you. If you can't correct the problem, see your Honda PWC dealer.

While some checks and procedures can be performed on the water, most require returning to land.

If your PWC won't start, listen as you push the start button. If you don't hear the starter motor turning, refer to the *Starter motor doesn't operate* symptom. If you can hear the starter motor working normally, refer to the *Starter motor works, but the engine won't start* symptom.

# If Your Engine Quits or Won't Start

SYMPTOM: Starter motor doesn't operate.		
POSSIBLE CAUSE	WHAT TO DO	
blown fuse	Replace with a new fuse of the same rating (page 228).	
battery lead loose	Tighten the battery lead.	
low (or dead) battery	Charge the battery (page 204) . If charging doesn't help, see your Honda PWC dealer.	
faulty starter motor	If all possible causes are negative, the starter motor may be faulty. See your Honda PWC dealer.	
lock clip not inserted	Insert the lock clip in the engine stop button/switch.	
ID lock system not deactivated	Enter the ID number. If you forget the ID number, see your Honda PWC dealer.	

SYMPTOM: Starter motor works, but the engine won't start.			
POSSIBLE CAUSE	WHAT TO DO		
out of fuel	Fill the fuel tank		
flooded engine	See Flooded Engine (page 117) .		
loose or unconnected ignition coil connectors and ignition coils	Install the ignition coil connectors and ignition coils securely. If the engine still won't start, see your Honda PWC dealer.		
loose battery cables	Tighten the battery terminal bolts.		
weak battery	Charge the battery (page 204) . If charging doesn't help, see your Honda PWC dealer.		

# If Your Engine Quits or Won't Start

SYMPTOM: Engine starts, but runs poorly.		
POSSIBLE CAUSE	WHAT TO DO	
idles roughly, too fast, stalls	See your Honda PWC dealer.	
overheating	Check the cooling water bypass outlet. If water is not flowing, shut off the engine. Refer to <i>If Your Engine Overheats</i> , page 224.	
low oil pressure	Check the low oil pressure indicator. Refer to <i>If the Low Oil Pressure Indicator Lights</i> , page 226.	
runs erratically, misfires	See your Honda PWC dealer.	
blubbers (rich fuel mixture)	See your Honda PWC dealer.	
sooty exhaust (rich fuel mixture)	See your Honda PWC dealer.	
detonates or pings under load	If applicable, switch to the recommended octane gasoline (page 160) or change your brand of gasoline. If the problem persists, see your Honda PWC dealer.	
afterfires (backfires)	See your Honda PWC dealer.	

## If Your Engine Overheats

If your engine overheats, the multi-function display will show a warning message, the high engine cooling water temperature indicator and the WARNING lamp will flash, and you will hear a warning beeper.

#### (ARX1500T3DX)

To stop the warning beeper, press and hold any one of the six control buttons (WP SET, MODE, ID SET, ID No., +, or –) for more than 2 seconds.

#### (ARX1500T3/N3)

To stop the warning beeper, press and hold any one of the four control buttons (SET, MODE, ID SET, or ID No.) for more than 2 seconds.

If the engine cooling water temperature reaches a certain level, engine revs are automatically limited to 3,000 rpm to prevent damage. If the temperature continues rising, the engine will automatically shut off and cannot be restarted until the temperature drops.

- Return to shore immediately and shut off the engine. Allow it to cool.
- Check inside of the hull. If a large amount of bilge water is found, check connection of the water hoses in the cooling system.
- Inspect the jet pump water intake for clogging.
- Inspect the impeller for clogging.
- Flush the cooling system (page 193).

# If Your Engine Overheads

• After taking the above-mentioned measures or if there is no obvious problem, start the engine and slowly ride the PWC (under 3,000 rpm). Monitor the high engine cooling water temperature indicator. If the engine still overheats, shut off the engine. Transport your PWC to a Honda PWC dealer (page 216).

### **NOTICE**

Continuing to ride with an overheated engine can cause serious engine damage.

### If the Low Oil Pressure Indicator Lights

If you check your engine oil level regularly, you should never see the low oil pressure indicator while riding.

Low oil pressure may be caused by an oil leak, a low oil level, or some problem in the engine's lubrication system.

If the low oil pressure indicator and the WARNING lamp flash and you hear a warning beeper while you're riding, don't ignore it. Return to shore and stop the engine as soon as it's safe to do so.

#### (ARX1500T3DX)

To stop the warning beeper, press and hold any one of the six control buttons (WP SET, MODE, ID SET, ID No., +, or –) for more than 2 seconds.

#### (ARX1500T3/N3)

To stop the warning beeper, press and hold any one of the four control buttons (SET, MODE,

ID SET, or ID No.) for more than 2 seconds.

If the oil pressure drops below a certain level, engine revs are automatically limited to 3,000 rpm. If the pressure continues dropping, the engine will automatically shut off and cannot be restarted until the pressure problem is solved.

- Check for an oil leak.
- Then check the oil level. If necessary, add the recommended oil (page 165) to the upper level mark on the land.
- After adding oil, start the engine, and check that the low oil pressure indicator goes off. Check for a possible leak.

# If the Low Oil Pressure Indicator Lights

If the indicator goes off and there is no leak—resume riding. If there is a leak—do not ride the PWC until the leak is repaired by a Honda PWC dealer.

### **NOTICE**

Continuing to ride with low oil pressure can cause serious engine damage.

All of the electrical circuits on your PWC have fuses to protect them from damage caused by excess current flow (short circuit or overload).

If something electrical on your PWC stops working, the first thing you should check for is a blown fuse. Determine from the chart on the circuit fuse box cover which fuse or fuses control that component. Check those fuses first, but check all the fuses before looking elsewhere for another possible cause of the problem. Replace any blown fuses and check component operation.

The fuse box is located in the engine compartment below the rear seat.

#### Recommended Fuses

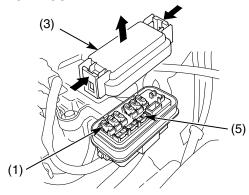
main fuse	30 A
other fuses	15 A, 5 A

To prevent an accidental short circuit, remove the lock clip before checking or replacing the fuses.

#### Main Fuse Access:

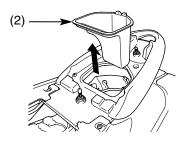
- 1. To access the main fuse (1), remove the rear seat (page 158) and rear storage box (2) to access the engine compartment.
- 2. Remove the fuse box cover (3).

#### **ENGINE COMPARTMENT**

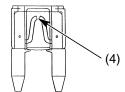


- (1) main fuse (3) fuse box cover
- (5) spare main fuse

#### **REAR**



- (2) rear storage box
- 3. Pull the main fuse out. If it is blown (4), install the spare main fuse (5).



(4) blown fuse

(cont'd)

Circuit Fuse Access:

4. To check or replace a circuit fuses (6), pull the old fuse out of its retaining clips. Look for a burned wire inside the fuse. If the fuse is blown (4), replace it with a spare fuses (7) of the same rating.

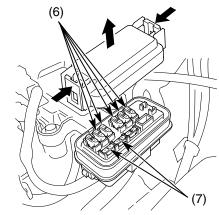
If you do not have a spare fuse and you cannot ride the PWC without fixing the problem, take a fuse of the same rating or a lower rating from one of the other circuits that you can do without temporarily.

#### NOTICE

Replacing a fuse with one that has a higher rating greatly increases the chance of damage to the electrical system.

- 5. Install the fuse box cover.
- 6. Install the rear storage box (page 229) and the rear seat (page 159).

#### **ENGINE COMPARTMENT**



- (6) circuit fuses
- (7) spare fuses

If you replace a blown fuse with a spare fuse that has a lower rating, replace the fuse with the correct rating as soon as you can. Also remember to replace any spare fuses that were installed.

If the replacement fuse of the same rating burns out in a short time, there is probably a serious electrical problem on your PWC. Leave the blown fuse in that circuit and have your PWC checked by your Honda PWC dealer.

### If You Have a Collision

Personal safety is your first priority after any collision. If you or anyone else has been injured, take time to assess the severity of the injuries. Call for emergency assistance if needed, and head for shore. Also follow applicable laws and regulations if another person or vehicle is involved in the collision.

If you decide it is possible to ride safely, carefully inspect your PWC for damage and determine if it is safe to ride. Check the tightness of critical nuts and bolts securing such parts as the handlebar, throttle lever, and jet pump steering nozzle. Also check the operation of these parts.

No matter how much damage there is, ride slowly and cautiously toward shore. Depending on how severe the damage is, you may need to be towed to shore. Sometimes, collision damage is hidden or not immediately apparent, so you should have your PWC thoroughly checked by a Honda PWC dealer as soon as possible.

### If Your PWC Must Be Towed

If you run out of fuel, have engine problems, or have collision damage, you can attach a tow line to the bow eyelet so your PWC may be towed to shore.

Do not attach a tow line any where on the PWC except the bow eyelet.

- The recommended tow rope length is three times the combined length of the towing boat and your PWC.
- If you use a tow line, take care to keep it away from the propeller of the towing boat.
- The towing boat should slowly pull away from the PWC until the tow rope slack is taken up.

You should ride on your PWC, holding the handlebar, as it is towed.

### **NOTICE**

Towing your personal watercraft at speeds exceeding 10 mph (16 km/h) can cause water to flood into the engine.

Keep the tow speed below 10 mph (16 km/h).

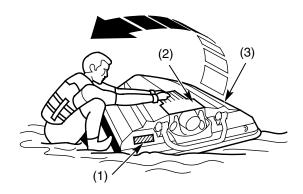
# If You Capsize

Your PWC is designed to resist capsizing. However, if your PWC does turn over, it will remain capsized until you right it again.

Act quickly to turn the boat back upright. If your PWC remains capsized, you will probably have some problems.

Serious damage can be caused if the engine runs while your PWC is capsized. This is another reason why it is important to always insert the lock clip in the engine stop button/switch and wear the safety lanyard before you operate your PWC.

- 1. Make sure the engine is off. If the lock clip is still in the engine stop button/switch, remove it.
- 2. Swim to the rear of your PWC.



- (1) uprighting procedure label
- (2) grate
- (3) outside bumper

# If You Capsize

- 3. Look for the uprighting procedure label (1) (on the left side when capsized, viewed from the rear).
- 4. Make sure the area is clear of people and passengers, then grab the intake grate (2) with both hands and pull the PWC over toward you while pushing down on the side of the hull nearest you.
- 5. As your PWC rolls over, remove your hands from the intake grate and grab the outside bumper (3).
- 6. Get out of the way as the PWC completes its rotation.
- 7. Remove both seats and the rear storage box, and check for flooding of the engine compartment.

- If the engine compartment is badly flooded, do not start the engine. Have someone tow your PWC to land and drain the water from the engine compartment, then take your PWC to your Honda PWC dealer.
- If the engine compartment is not badly flooded, go to step 8.
- 8. Insert the lock clip in the engine stop button/switch.
- 9. Push the start button.
  If the engine starts, you can continue riding.
- 10. If the engine does not start, do not attempt repeated starts. Get towed to shore. Refer to *If Your PWC Is Submerged*, page 236.
- 11. See your Honda PWC dealer immediately to avoid possible severe engine damage.

**Taking Care of the Unexpected** 

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# If Your PWC Is Submerged

Your PWC will not sink, but if it is submerged or flooded with water, act quickly to avoid severe engine damage.

- 1. Remove your PWC from the water.
- 2. Remove the bilge drain plugs to drain the water out of the engine compartment.
- 3. ARX1500T3DX/T3 only:
  Check the transparent section of the air box drain tube.
  - If you can see water, pull the plug on the end of the tube to drain the air box.
- 4. Disconnect the ignition coil connectors and ignition coils from the spark plugs.
- 5. Remove the spark plugs from the engine and store them in a safe place and put soft cloths on the plug holes. Do not connect the ignition coils to the ignition coil connectors.
- 6. Disconnect the injector connectors.
- 7. Open the throttle fully.

- 8. Press the start button for 15 seconds.
  Continue this procedure until water stops coming out.
- 9. Remove the soft cloths and pour a tablespoon (15–20cc) of clean engine oil into each cylinder.
- 10. Push the start button several times to crank the engine and distribute the oil.
- 11. After cleaning the spark plug holes, reinstall the spark plugs and the ignition coils.
- 12. Remove the air box cover and check the air filter.
  - If the filter is wet, remove the filter and dry it.
  - Do not use compressed air to dry the air filter.
- 13. Reconnect the ignition coil connectors and the injector connectors.
- 14. Take your PWC to your Honda PWC dealer as soon as possible.

# If Your PWC Is Submerged

Letting your PWC sit overnight with water in the engine, especially with more corrosive salt water, may cause severe engine damage.

If a Honda PWC dealer is not available:

- 1. Change the engine oil and filter (page 171).
- 2. Using the flushing procedure (page 193), run the engine for at least 10 minutes to remove any moisture left in the combustion chamber.
- 3. After stopping the engine, check the oil. If it appears milky (indicating water contamination), change the oil and filter again.

# If the Intake or Propulsion System Is Clogged

If riding over water heavy with weeds is unavoidable, vary throttle input to reduce the chances of clogging the intake system.

If the intake/propulsion system is clogged by weeds or other debris, you may experience one or two problems. Reduced water jet thrust may slow your water speed even as you increase engine rpm with the throttle lever. The reduction of water flow may also cause the engine to overheat.

Before attempting to clean the intake/ propulsion system, always remove the lock clip from the engine stop button/switch to prevent accidental engine starting.

# If the Intake or Propulsion System Is Clogged

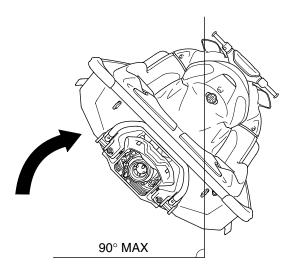
# Cleaning the Intake/Propulsion System on the Shore

- 1. After shutting the engine off, remove your PWC from the water.
- 2. Remove the lock clip from the engine stop button/switch.
- 3. Disconnect the battery cables.
- 4. If possible, use a protective pad or cardboard to prevent scratching when you turn your PWC on its side for cleaning.
- 5. Rotate your PWC clockwise (from the rear, 90° max.) to its right side. Do not push the engine start button.

#### **NOTICE**

Rotating the personal watercraft counterclockwise to its left side, and maintaining this position while cleaning the intake system, could allow a substantial amount of oil to leak from the engine or allow water from the cooling system to enter the engine.

- 6. Check and, if necessary, clean all components (intake grate, driveshaft, impeller, and jet pump steering nozzle) of the water intake/propulsion system.
- 7. After uprighting your PWC, check for leaks in the engine compartment.



Taking Care of the Unexpected

## If Your Battery Is Low (or Dead)

Jump starting is not recommended, especially if you use an automobile battery. The greater amperage of an automobile battery when the car engine is running can damage your PWC's electrical system.

Do not charge the battery while it is installed in the PWC.

If you can't charge the battery or it appears unable to hold a charge, contact your Honda PWC dealer.

# **Technical Information**

This section contains dimensions, capacities, and other technical data, plus information on government requirements and how to breakin your PWC.

Vehicle Identification	242
Specifications	245
Break-in Guidelines	249
Emission Control Systems	250
Star Label (USA only)	
Oxygenated Fuels	

Technical Information 241

### **Vehicle Identification**

#### **Serial Numbers**

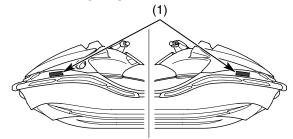
The registration (or primary) identification number, hull identification number (HIN), and engine number are required when you register your PWC. They may also be required when ordering replacement parts. You may record these numbers in the *Quick Reference* section at the rear of this manual.

Also record these identification numbers with your other important documents at home in case your PWC is stolen.

Federal law requires that all PWC be registered and numbered. The registration number must appear on both sides of the PWC, above the water line. Make sure the numbering meets all local regulations.

The registration (or primary) identification number (1) is located on both sides of the PWC.

#### LEFT AND RIGHT SIDE



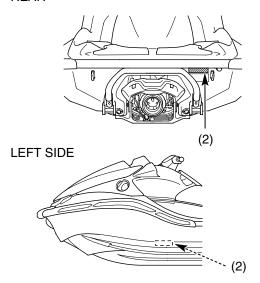
(1) registration identification number

#### 242 Technical Information

# **Vehicle Identification**

The hull identification numbers (HIN) (2) is located on the hull at the rear of the PWC, and inside the hull on the left side of the PWC.

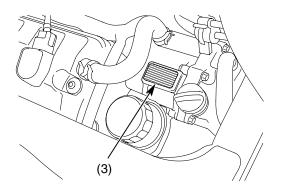
#### **REAR**



(2) hull identification numbers (HIN)

The engine number (3) is stamped on the top of the oil tank.

#### **UNDER FRONT SEAT**



(3) engine number

Technical Information 24,

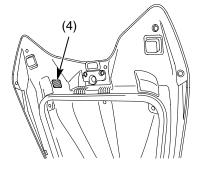
# **Vehicle Identification**

#### **Color Label & Code**

The color label (4) is attached behind the front hood.

The color code is helpful when ordering replacement parts. You may record the color and code in the *Quick Reference* section at the rear of this manual.

#### BEHIND FRONT HOOD



(4) color label

#### 244 Technical Information

Dimensions	
overall length	133.9 in (3,400 mm)
overall width	49.0 in (1,245 mm)
overall height	42.3 in (1,075 mm)

Weight	
dry weight	ARX1500T3DX: 842 lbs (382 kg)
	ARX1500T3: 838 lbs (380 kg)
	ARX1500N3: 813 lbs (369 kg)

Fuel & Lubricants		
fuel recommendation	premium unleaded gasoline, pump octane number of 91 or higher	
fuel tank capacity	18.49 US gal (70.0 ℓ)	
engine oil capacity	ARX1500T3DX/T3	after disassembly : 5.6 US qt (5.3 $\ell$ ) after draining : 4.4 US qt (4.2 $\ell$ ) after draining & oil filter change : 4.5 US qt (4.3 $\ell$ )
	ARX1500N3	after disassembly : 5.3 US qt (5.0 $\ell$ ) after draining : 4.1 US qt (3.9 $\ell$ ) after draining & oil filter change : 4.2 US qt (4.0 $\ell$ )

Fuel & Lubricants (cont'd)		
engine oil recommendation	API Service Classification SG or higher except oils labeled as energy conserving on the circular API service label. SAE 10W-30 JASO T903 standard MA Pro Honda GN4 4-stroke oil (USA & Canada) or Honda 4-stroke oil (Canada only), or an equivalent motorcycle oil	
lubricant	Water-displacement corrosion-proof lubricant (without Teflon or molybdenum additives, such as CRC 6-56 or equivalent)	
cooling system	Water-cooled, open loop, direct flow from propulsion system	

Capacities	
passenger capacity	operator, two passengers
maximum weight	525 lbs (238.5 kg)
capacity	rider, passengers, all cargo
cargo capacity	glove box: 6.6 lbs (3 kg)
	front storage compartment: 22 lbs (10 kg)
	rear storage compartment: 1 lbs (0.5 kg)

Engine	
engine type	four-stroke
displacement	89.7 cu-in (1,470 cm <sup>3</sup> )
bore & stroke	3.11 x 2.95 in (79.0 x 75.0 mm)
spark plug	IMR9D-9H (NGK)
valve clearance (cold)	intake : 0.008 in (0.20 mm) exhaust : 0.01 in (0.26 mm)
spark plug gap	0.031 - 0.035 in (0.80 - 0.90 mm) no adjustment
idle speed	1,200 $\pm$ 100 rpm

Performance	
maximum output	ARX1500T3DX/T3: 147.1 kW (197.3 HP)/6,500 rpm ARX1500N3: 114 kW (153 HP)/7,500 rpm
fuel consumption	ARX1500T3DX/T3: 17.07 US gal/hour (64.6 ℓ/hour)/6,500 rpm ARX1500N3: 11.89 US gal/hour (45 ℓ/hour)/7,500 rpm
cruising range	ARX1500T3DX/T3: 1.08 hours (at full throttle) ARX1500N3: 1.47 hours (at full throttle)

Propulsion System	
jet pump type	axial flow, single stage
minimum level for jet pump operation	3 feet (90 cm)
impeller	3-blade stainless steel

Hull	
hull material	fiberglass reinforced plastic

Electrical	
battery	12 V-18 Ah
generator	0.31 kW/5,000 rpm

Fuses	
main	30 A
other fuses	15 A, 5 A

Torque Specifications	
oil filter	19 lbf·ft (26 N·m, 2.7 kgf·m)

### **Break-in Guidelines**

Help assure your PWC's future reliability and performance by paying extra attention to how you ride during the first tank full of fuel.

During the first 5 minutes:

• Use the lowest possible speed.

During the remainder of the first full fuel tank:

- Vary the operating speed often, do not continue running for a long time at any one speed.
- Avoid full-throttle starts and rapid acceleration.
- Use no more than 3/4 throttle.
- Do not carry passengers.

### **Exhaust Emission Requirements**

The U. S. Environmental Protection Agency (EPA), the California Air Resources Board (CARB), and Environment Canada (EC) require that your PWC comply with applicable exhaust emissions standards during its useful life, when operated and maintained according to the instructions provided.

The U.S. and California Clean Air Acts EPA and California regulations require all manufacturers to furnish written instructions describing the operation and maintenance of emission control systems.

The following instructions and procedures must be followed in order to keep the emissions from your Honda engine within the emission standards.

### Tampering and Altering

Tampering with or altering the emission control system may increase emissions beyond the legal limit.

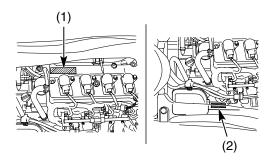
Among those acts that constitute tampering are:

- Removal or alteration of any part of the intake, fuel, or exhaust systems.
- Alterations that would cause the engine to operate outside its design parameters.

### **Warranty Compliance**

Compliance with the terms of the Distributor's Warranties for Honda Personal Watercraft Emission Control Systems is necessary in order to keep the emissions system warranty in effect (USA only).

#### **ENGINE COMPARTMENT**



(1) vehicle emission control information label(2) vehicle emission control information label(Canada only)

The vehicle emission control information label (1) is attached on the cylinder head cover.

The vehicle emission control information label (2) is attached on the connecting tube. (Canada only)

#### **Source of Exhaust Emissions**

The combustion process produces carbon monoxide (CO), oxides of nitrogen (NOx) and hydrocarbons (HC). Control of oxides of nitrogen and hydrocarbons is very important because, under certain conditions, they react to form photochemical smog when subjected to sunlight. Carbon monoxide does not react in the same way, but it is toxic.

Honda Motor Co., Ltd. utilizes various systems to reduce carbon monoxide, oxides of nitrogen and hydrocarbons.

### **Exhaust Emission Control System**

The exhaust emission control system includes a PGM-FI system.

### PGM-FI System

The PGM-FI system uses sequential multiport fuel injection. It has three subsystems: Air Intake, Engine Control, and Fuel Control.

The Engine Control Module (ECM) uses various sensors to determine how much air is going into the engine. It then controls how much fuel to inject under all operating conditions.

### Ignition Timing Control System

The system constantly adjusts the ignition timing, reducing the amount of HC, CO and NOx produced.

### **Crankcase Emission Control System**

The engine is equipped with a closed crankcase system to prevent discharging crankcase emissions into the atmosphere. Blow-by gas is returned to the combustion chamber through the air cleaner and the intake manifold.

# **Problems That May Affect PWC Exhaust Emissions**

If you are aware of any of the following symptoms, have the vehicle inspected and repaired by your authorized Honda PWC dealer.

### Symptoms:

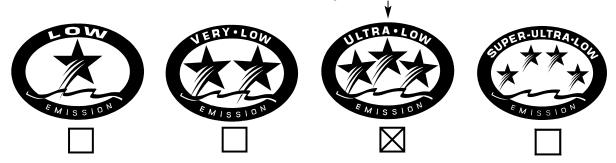
- 1. Hard starting or stalling after starting
- 2. Rough idle
- 3. Misfiring or backfiring during acceleration
- 4. After-burning (backfiring)
- 5. Poor performance (driveability) and poor fuel economy

## **Star Label (USA only)**

A star label was applied to this PWC in accordance with the requirements of the California Air Resources Board.

### The Star Label means Cleaner Marine Engines

This engine has been certified as a:



### The Symbol for Cleaner Marine Engines:

Cleaner Air and Water - for healthier lifestyle and environment.

**Better Fuel Economy** - burns up to 30-40 percent less gas and oil than conventional carbureted two-stroke engines, saving money and resources.

Longer Emission Warranty - protects consumer for worry free operation.

## **Star Label (USA only)**



### One Star Low Emission

The one-star label identifies engines that meet the Air Resources Board's Personal Watercraft and Outboard marine engine 2001 exhaust emission standards. Engines meeting these standards have 75% lower emissions than conventional carbureted two-stroke engines. These engines are equivalent to the U. S. EPA's 2006 standards for marine engines.



### Two Stars Very Low Emission

The two-star label identifies engines that meet the Air Resources Board's Personal Watercraft and Outboard marine engine 2004 exhaust emission standards. Engines meeting these standards have 20 % lower emissions than One Star-Low Emission engines.

### **Star Label (USA only)**



### **Three Stars Ultra Low Emission**

The three-star label identifies engines that meet the Air Resources Board's Personal Watercraft and Outboard marine engine 2008 exhaust emission standards or the Sterndrive and Inboard marine engine 2003-2008 exhaust emission standards. Engines meeting these standards have 65% lower emissions than One Star-Low Emission engines.



**Super Ultra Low Emission** 

The four-star label identifies engines that meet the Air Resources Board's Sterndrive and Inboard marine engine 2009 exhaust emission standards. Personal Watercraft and Outboard marine engines may also comply with these standards. Engines meeting these standards have 90% lower emissions than One Star-Low Emission engines.

> Cleaner Watercraft - Get the Facts 1-800-END-SMOG www.arb.ca.gov

## **Oxygenated Fuels**

Some conventional gasolines are being blended with alcohol or an ether compound. These gasolines are collectively referred to as oxygenated fuels. To meet clean air standards, some areas of United States and Canada use oxygenated fuels to help reduce emissions. If you use an oxygenated fuel, be sure it is unleaded and meets the minimum octane rating requirement.

Before using an oxygenated fuel, try to confirm the fuel's contents. Some states/provinces require this information to be posted on the pump.

The following are the EPA-approved percentages of oxygenates:

ETHANOL (ethyl or grain alcohol) 10% by Volume

You may use gasoline containing up to 10% ethanol by volume. Gasoline containing ethanol may be marketed under the name "Gasohol."

MTBE (Methyl Tertiary Butyl Ether) 15% by Volume

You may use gasoline containing up to 15% MTBE by volume.

## **Oxygenated Fuels**

METHANOL (methyl or wood alcohol) 5% by Volume

You may use gasoline containing methanol containing up to 5% methanol by volume as long as it also contains cosolvents and corrosion inhibitors to protect the fuel system. Gasoline containing more than 5% methanol by volume may cause starting and/or performance problems. It may also damage metal, rubber, and plastic parts of your fuel system.

If you notice any undesirable operating symptoms, try another service station or switch to another brand of gasoline.

Fuel system damage or performance problems resulting from the use of an oxygenated fuel containing more than the percentages of oxygenates mentioned above are not covered under warranty.

Oxygenated fuels can damage paint and plastic. Be careful not to spill fuel when filling the fuel tank. Wipe up any spills immediately.

### NOTICE

Oxygenated fuels can damage paint and plastic. Damage caused by spilled fuel is not covered by warranty.

## **Consumer Information**

This section contains information on your warranty and how to get an official Honda service manual.

Authorized Manuals	.260
Warranty Coverage	.263
Warranty Service	.264
Contacting Honda	.265
Your Honda PWC Dealer	
The Honda Rider's Club (USA only)	.267
Reporting Safety Defects (USA only)	

### **Authorized Manuals**

The Service Manual used by your authorized Honda dealer is available from Helm, Inc. (USA only, Canada: See your Honda dealer to order authorized manuals.)

Also available but not necessary to service your PWC is the Honda Common Service Manual, which explains theory of operation and basic service information for various systems on this PWC.

These Honda manuals are written for the professional technician, but most mechanically capable owners should find them easy to use if they have the proper tools and observe proper safety standards. Special Honda tools are necessary for some procedures.

Publication Item No.	Description	Price Each*
61HW501	2009 ARX1500T3DX/T3/N3 Service Manual	\$60.00
61CM002	Common Service Manual	\$48.00
31HW5610	2009 ARX1500T3DX/T3/N3 Owner's Manual	\$16.00
*Prices are subject to change without notice and without incurring obligation.		

## **Authorized Manuals**

Order On-Line: www.helminc.com

**Order Toll Free: 1-888-CYCLE 93** (1-888-292-5393)

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By completing this form you can order the materials desired. You can pay by check or money order, or charge to your credit card. Mail to Helm, Inc. at the address shown on the back of this order form (USA only).

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## **Warranty Coverage**

Your new Honda is covered by these warranties:

- Personal Watercraft Limited Warranty
- Emission Control System Warranty
- Replacement Parts Warranty
- Accessories Warranty

There are responsibilities, restrictions, and exclusions which apply to these warranties. Please read the Warranties Booklet given to you by your Honda PWC dealer at the time of purchase. Be sure to keep your Honda owner's card with your Warranties Booklet (USA only).

It is important to realize that your warranty applies to defects in material or workmanship of your Honda. Your warranty coverage does not apply to normal wear or deterioration associated with using the PWC.

Your warranty coverage will not be voided if you choose to perform your own maintenance. However, you should have the proper tools and service information and be mechanically qualified. Failures that occur due directly to improper maintenance are not covered.

Almost all of your warranty coverage can be extended through the Honda Protection Plan (USA only). For more information, see your Honda PWC dealer.

### Warranty Service

Please remember that recommended maintenance interval servicing is not included in your warranty coverage. Additionally, your warranty does not apply to the normal wear of items.

If you believe you have a problem with your PWC, call the service department of your Honda PWC dealer. Make an appointment for an inspection and diagnosis. Remember, as the owner of the PWC, you will be asked to authorize that inspection. Your dealer will give you the results of the inspection. If the problem is covered under warranty, your dealer will perform the warranty repairs for you.

If you have questions about warranty coverage or the nature of the repair, it is best to talk to the Service Manager of your Honda PWC dealer.

Sometimes, in spite of the best intentions of all concerned, a misunderstanding may occur. If you aren't satisfied with your dealer's handling of the situation, we suggest you discuss your problem with the appropriate member of the dealership's management team. If the problem has already been reviewed with the Service Manager, Parts Manager, Sales Manager, etc., contact the Owner of the dealership or their designated representative.

## **Contacting Honda**

Your owner's manual was written to cover most of the questions you might ask about your Honda. Any questions not answered in the owner's manual can be answered by your Honda PWC dealer. If your dealer doesn't have the answer right away, they will get it for you.

If you have a difference of opinion with your dealer, please remember that each dealership is independently owned and operated. That's why it's important to work to resolve any differences at the dealership level.

If you wish to comment on your experiences with your Honda or with your Honda PWC dealer, please send your comments to the following address (USA only):

Motorcycle Division, American Honda Motor Co., Inc., P.O. Box 2200, Torrance, CA 90509-2200, mailstop: 100-4C-7B, telephone: (866) 784-1870.

Canada: Refer to the Warranties Booklet that was supplied with your PWC.

Please include the following information in your letter:

- name, address, and telephone number
- product model, year, and HIN
- date of purchase
- dealer name and address

We will likely ask your Honda PWC dealer to respond, or possibly acknowledge your comments directly.

### Your Honda PWC Dealer

Once you purchase your new Honda, get familiar with the organization of your Honda PWC dealer so you can utilize the full range of services available.

The service department is there to perform regular maintenance and unexpected repairs. It has the latest available service information from Honda. The service department will also handle warranty inspections and repairs.

The parts department offers Honda Genuine Parts, Pro Honda products, Honda Genuine Accessories (USA only), and Honda accessories and products (Canada only). The same quality that went into your Honda can be found in Honda Genuine replacement parts. You'll also find comparable quality in the accessories and products available from the parts department.

The sales department offers the Honda Protection Plan to extend almost all of your warranty coverage (USA only). Your Honda PWC dealer can inform you about competition and other events in your area.

We're sure you'll be as pleased with the service your Honda PWC dealer continues to provide after the sale as you are with the quality and dependability of your Honda.

## The Honda Rider's Club (USA only)

You may be eligible for a Honda Rider's Club of America (HRCA) membership with the purchase of your new Honda. You can log on to the HRCA Clubhouse website for details at www. hrca. honda. com.

## **Reporting Safety Defects (USA only)**

If you believe that your vehicle has a defect which could cause a crash or could cause injury or death, you should immediately inform the U. S. Coast Guard (U.S.C.G.) in addition to notifying American Honda Motor Co., Inc.

If the U.S.C.G. receives similar complaints, it may open an investigation, and if it finds that a safety defect exists in a group of vehicles, it may order a recall and remedy campaign. However the U.S.C.G. cannot become involved in individual problems between you, your Honda PWC dealer, or American Honda Motor Co., Inc.

To contact the U. S. Coast Guard, write to:

Office of Boating Safety Product Assurance Division G-OPB-3 United States Coast Guard 2100 Second Street SW Washington, DC 20593-0001

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The following is a brief, but important collection of information you need to know about your Honda. You'll also find space to record important notes.

### **How To Avoid Costly Repairs**

The engine of your Honda can be the most expensive component to repair. Proper maintenance, especially the use of the recommended fluids and filters, prevents premature wear and damage.

Frequent causes of costly repairs are:

- Engine oil-- Check the level frequently.

  Make sure you're using the recommended oil
- Water cooling bypass outlet-- Check the outlet frequently to make sure nothing is clogging the engine's cooling system.

- Bilge drain plugs-- Check both plugs are secure before each ride to avoid possible engine damage from water (especially salt water) in the engine compartment.
- Jet pump water intake-- Avoid debris such as sand, weeds, or rocks which can damage the propulsion system.
- Improper towing-- Always tow your PWC in a forward direction with bow eyelet, at a slow speed (under 10 mph (16 km/h)).

Record important information on the following page:

Registration No.	
Hull Identification No. (HIN)	
Engine No.	
Color Label	
Owner's Name	
Address	
City/State	
Phone	
Dealer's Name	
Address	
City/State	
Phone	
Service Mgr.	

Scheduled Maintenance	Initial: 10 hours Regular: every 100 hours or 6 months
Pre-ride Inspection	Check the following items each time before you ride (page 94). Engine compartment, bilge, fuel and oil leaks, fire extinguisher, steering, throttle, safety lanyard, fuel level, reverse system, hull, bilge drain plugs, jet pump water intake, loose parts, latches, engine start & stop, engine cooling system, engine oil, off-throttle steering system (OTS)
Fuel/Capacity	premium unleaded gasoline, pump octane number 91 or higher 18.49 US gal (70.0 $\ell$ )
Engine Oil	API Service Classification SG or higher except oils labeled as energy conserving on the circular API service label. SAE 10W-30, JASO T 903 standard MA, Pro Honda GN4 4-stroke oil or equivalent
Maximum Weight	525 lbs (238.5 kg)
Capacity Spark Plugs	rider, passengers, all cargo and accessories standard: IMR9D-9H (NGK)
Fuses	main: 30 A other: 15 A, 5 A