

INTRODUCTION

This supplement covers the construction, function, and servicing procedures of the Honda WL20XH BRX type water pump.

For service information that is not covered in this supplement, please refer to the WL20/WL30 base shop manual (part number 82YG800).

All information contained in this manual is based on the latest product information available at the time of printing. We reserve the right to make changes at anytime without notice.

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As you read this manual, you will find information that is preceded by a **NOTICE** symbol. The purpose of this message is to help prevent damage to this Honda product, other property, or the environment.

SAFETY MESSAGES

Your safety and the safety of others are very important. To help you make informed decisions, we have provided safety messages and other safety information throughout this manual. Of course, it is not practical or possible to warn you about all the hazards associated with servicing these products. You must use your own good judgement.

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

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

These signal words mean:

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

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

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

- Instructions – how to service these products correctly and safely.

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 The marked sections contain no changes. They are not covered in this supplement.

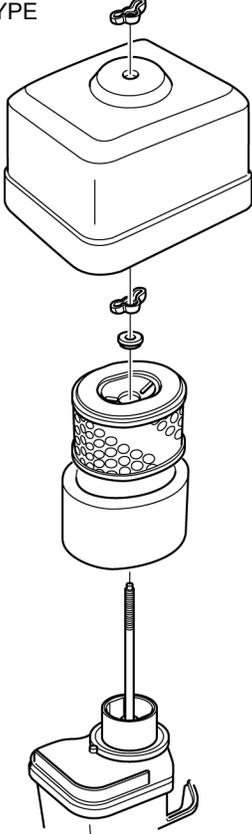
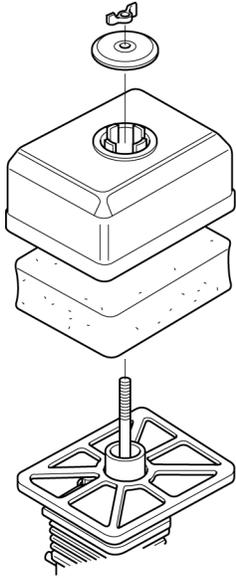
How to use this manual

SYMBOLS

The symbols used throughout this manual show specific service procedures. If supplementary information is required pertaining to these symbols, it will be explained specifically in the text without the use of the symbols.

	Replace the part(s) with new one(s) before assembly.
	Use the recommend engine oil, unless otherwise specified.
	Use molybdenum oil solution (mixture of the engine oil and molybdenum grease in a ratio of 1:1).
	Use multi-purpose grease (lithium based multi-purpose grease NLGI #2 or equivalent).
	Use marine grease (water resistant urea based grease).
	Apply a locking agent. Use a medium strength locking agent unless otherwise specified.
	Apply sealant.
	Use automatic transmission fluid.
(O x O) (O)	Indicates the diameter, length, and quantity of metric bolts used.
page 1-1	Indicates the reference page.

OUTLINE OF CHANGES

ITEM	After modification	Before modification
Air cleaner	<p data-bbox="581 310 711 338">DUAL TYPE</p> 	<p data-bbox="1084 310 1263 338">SEMI DRY TYPE</p> 

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1. SPECIFICATIONS

SPECIFICATIONS 1-2

SPECIFICATIONS

SPECIFICATIONS

DIMENSIONS AND WEIGHTS

Model	WL20XH
Description code	WADC
Type	BRX
Overall length	490 mm (19.3 in)
Overall width	385 mm (15.2 in)
Overall height	410 mm (16.1 in)
Dry weight	24 kg (53 lbs)
Operating weight	27 kg (60 lbs)

ENGINE

Engine model	GP160H
Description code	GCASH
Type	4 stroke, overhead valve, single cylinder, inclined by 25°
Displacement	163 cm ³ (9.9 cu-in)
Bore x stroke	68.0 x 45.0 mm (2.68 x 1.77 in)
Compression ratio	8.5
Ignition system	Transistor magneto ignition
Ignition timing	B.T.D.C. 25° /1,400 min ⁻¹ (rpm)
Spark plug	BPR6ES (NGK), W20EPR-U (DENSO)
Lubrication system	Forced spray
Oil capacity	0.58 liter (0.61 US qt, 0.51 Imp qt)
Recommended oil	SAE 10W – 30 API service classification SE or higher
Cooling system	Forced air
Starting system	Recoil starter
Stopping system	Ignition primary circuit ground
Carburetor	Horizontal type, butterfly valve
Air cleaner	Dual type
Governor	Centrifugal weight system
Breather system	Flat valve type
Fuel tank capacity	3.1 liters (0.82 US gal, 0.68 Imp gal)
Fuel used	Unleaded gasoline with a pump octane rating 86 or higher

WATER PUMP

Model	WL20XH
Type	Self priming centrifugal pump
Drive system	Direct connection engine
Suction port diameter	50 mm (2.0 in)
Discharge port diameter	50 mm (2.0 in)
Maximum total head	32 m (105.6 ft)
Maximum suction head	7.5 m (24.7 ft)
Maximum discharge capacity	670 liters (177.0 US gal, 147.4 Imp gal) /min
Maximum self-feed time	110 sec /5 m (16.5 ft)
Approx. operating hours (at max discharge)	2.1 Hr

2. SERVICE INFORMATION

MAINTENANCE STANDARDS 2-2

SERVICE INFORMATION

MAINTENANCE STANDARDS

Unit: mm (in)

Part	Item		Standard	Service limit
Carburetor	Main jet	BEA2M A	#75	—
	Pilot screw opening		2-1/2 turns out	—
	Float height		13.7 (0.54)	—

AIR CLEANER
CHECK/CLEANING/REPLACEMENT 3-2

AIR CLEANER CHECK/CLEANING/REPLACEMENT

A dirty air filter will restrict air flow to the carburetor, reducing engine performance. If the engine is operated in dusty areas, clean the air cleaner more often than specified in the MAINTENANCE SCHEDULE.

NOTICE

Operating the engine without the air filters or with the filter installed loosely will allow dirt to enter the engine, causing rapid engine wear. Install the air filters securely.

CHECK/REPLACEMENT

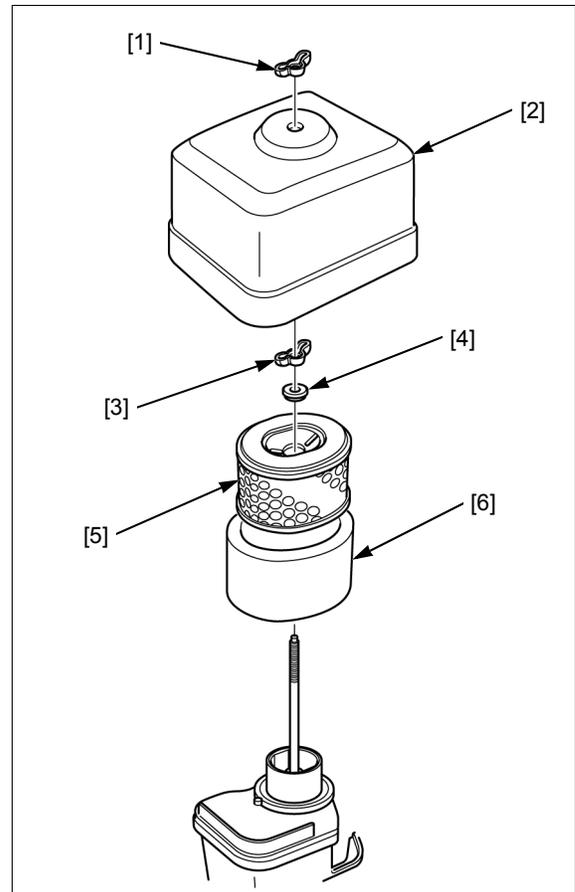
Remove the following:

- Wing nut [1]
- Air cleaner cover [2]
- Wing nut [3]
- Element Assy.
 - Grommet [4]
 - Inner filter (Paper) [5]
 - Outer filter (Foam) [6]

Carefully check both filters for holes or tears and replace if damaged.

Clean the filters if they are to be reused (page 3-3).

Installation is in the reverse order of removal.



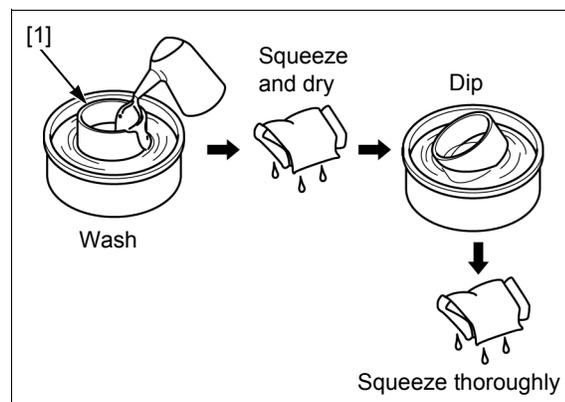
CLEANING

FOAM

Clean the filter [1] in warm soapy water, rinse, and allow to dry thoroughly, or clean with a non-flammable solvent and allow to dry thoroughly.

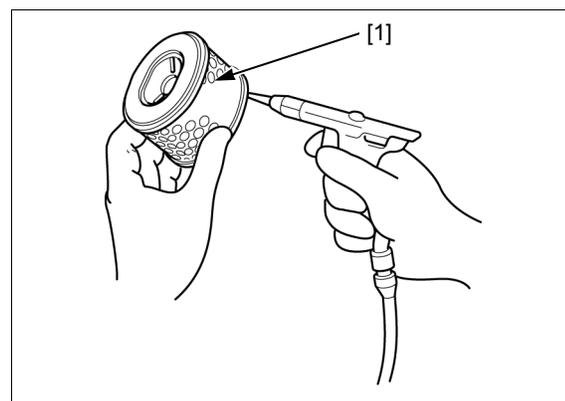
Dip the filter in clean engine oil, and squeeze out all the excess oil.

Excess oil will restrict air flow through the foam element and may cause the engine to smoke at startup.



PAPER

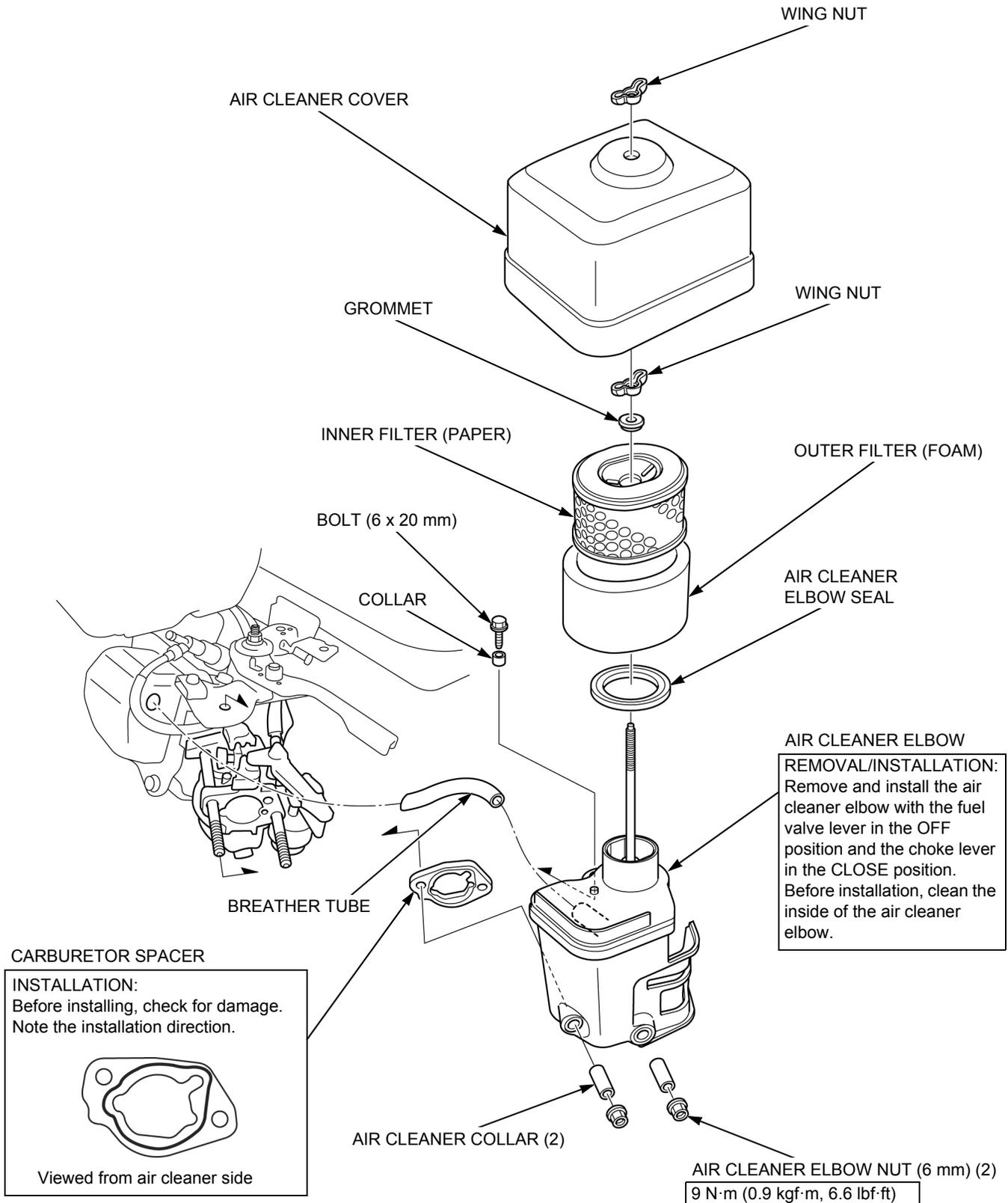
Tap the inner filter [1] lightly several times on a hard surface to remove excess dirt, or blow compressed air lightly (206 kPa (2.11 kgf/cm², 30 psi) or less) through the paper filter from the inside out. Never try to brush the dirt off; brushing will force dirt into the fibers.



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AIR CLEANER
REMOVAL/INSTALLATION 6-2

AIR CLEANER REMOVAL/INSTALLATION



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