CROMMELINS FIRE FIGHTING PUMPS SINGLE IMPELLER

OPERATION & INSTRUCTION MANUAL

Thank you for your selection of a Crommelins Fire Fighting Pump Single Impeller. This Operation Manual explains its use, installation, checking and maintenance. Please retain this manual for ready reference regarding its proper handling.



Head Office: (08) 9350 5588
www.crommelins.com.au

Sales: 1300 650 659
Customer Service: 1300 554 524
sales@crommelins.com.au

Thank you very much for purchasing a Crommelins Fire Fighting Pump Single Impeller which can be used for domestic farming, fire fighting and general pumping purposes. This manual covers its operation and maintenance.

Please take a moment to familiarise yourself with the proper operation and maintenance procedures in order to maximise the safe and efficient use of this product.

Keep this owner's manual at hand, so that you can refer to it at anytime.
Due to constant efforts to improve our products, certain procedures and specifications are subject to change without notice.

When ordering spare parts please have handy your products model number and serial number. Record these numbers in the boxes below for future reference – the location of these numbers vary depending on the product.

MODEL NO														
SERIAL NO														

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SAFETY

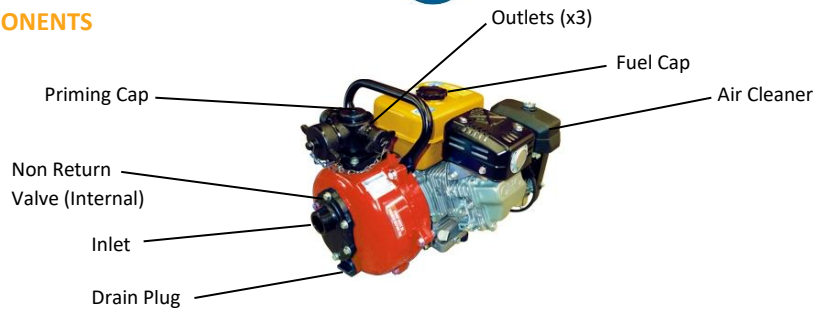
This manual contains important information on how to use the following Crommelins Fire Fighting Pump Single Impeller models properly and safely: FF150RP, FF150RP7, FF150RP7E, FF150HP, FF150YD, FF150YDE and FF150YDEM. Please read through this manual before you attempt to operate the machine.

This fire fighting pump is designed to give safe and dependable service if operated according to the instructions.

- Always make a pre-operation inspection before starting the engine. (For more information read engine operational manual).
- Do not place flammable objects near the unit.
- Children and pets must keep away from the area of operation at all times.
- Never allow anyone to operate the unit without proper instructions.
- You must know how to stop the engine quickly and understand the operation of all controls.
- Ensure the operating space is well ventilated. Avoid operating the machine in a closed room, tunnel or other poorly ventilated places, as the exhaust fumes contain deadly poisonous carbon monoxide. If the machine is unavoidably operated in such a place, discharge the exhaust outside the room by a suitable means.
- Mufflers and other hot parts are dangerous. Do not touch them with hands or any other body parts.
- Observe the following cautions when transporting. Close the fuel tank cap securely and close the fuel tap tightly during transportation. Drain petrol or diesel from fuel tank before transporting over a long distance or on rough roads.
- Stop engine without fail before replenishing fuel tank. Never replenish fuel while the engine is running or remains hot otherwise spilled or evaporated fuel is liable to catch fire from the engine spark or muffler heat. Wipe off spilled fuel before starting engine.
- To prevent injury, wear the following protective items: Ear protection and any other protective items required by job conditions.



COMPONENTS



OPERATING INSTRUCTIONS

Suction and discharge pipes:
To avoid air locks and make priming easy, the suction pipe should be laid so that it rises evenly from the water source to the pump. All pipe joints have to be sealed airtight and they should be the same size or larger than the pump inlet and discharge outlet.

PRIMING

- To prime the pump, remove the priming plug and fill pump and suction pipe with water. The pump has a non-return valve and is capable of drawing air from the normal size suction pipes and hoses. Replace plug and start pump. If it pumps a small amount then stops, turn it off, check the suction pipe for leaks and repeat the priming procedure until the pump works well.
- When filled with water, self-priming pumps will gradually draw air from the suction line. If priming a long or large diameter pipe, additional water may have to be added to the pump at three minute intervals.

N.B. Do not run the pump dry of water for extended periods as it will destroy the mechanical seal and void warranty.

HOW THE PUMP OPERATES

Before starting the pump, make sure the non-return valve is freely able to move. If the pump fails to prime, there could be a problem with the suction pipe such as a leak, worn impeller or too strong of a suction lift. Self-priming pumps will not self-prime with high discharge head. If this is the case, the suction flap valve should be removed and a suction foot valve installed on the hose.

SUCTION STRAINER

A suction hose strainer may be needed for portable pump use. This stops gravel or any large debris getting into the pump and causing damage.

ENGINE

The engine user manual is enclosed. Using low speed extends the life of your engine. When continually pumping, we recommend operation at approximately 3000rpm. In contrast, high speed will increase the pump's performance when needed as in fire fighting or intense situations. However, be aware, the pump life will eventually suffer if high speed is continually applied.

TYPE OF WATER

If any liquid contains stringy or large material this may cause an obstruction, in which case, a suction strainer should be used. If the pump is needed for chemicals, you must check the pump compatibility with your local dealer.

FIXED INSTALLATIONS

In some installations and only if the pump is used under stressful conditions, such as pumping uphill for long distances, the pump may not work on start up.

To rectify this, a check valve should be installed between the pump and the pipe and a gate valve should be installed on the pump discharge. If it still fails, open the valve to release a full flow of water and close it again. It should now pump fully. Under some conditions the procedure might have to be repeated at each start up.

STORAGE

- Make sure that the engine is completely cooled off before storage.
- Clean up oil and dust accumulation on rubber parts.
- Drain pump completely of all water.
- Cover the machine and store it in a dry place.
- For long-term storage of petrol unit, remove fuel from the fuel tank. Also remove fuel remaining in the fuel line and chamber of the carburettor. To drain fuel from the chamber of the carburettor, remove the drain plug provided at the chamber, and drain the fuel.

WARRANTY

Consult the Crommelins Machinery Warranty Information leaflet, supplied with your new product, for full details of your machinery warranty including consumer advice and information about accessing a service agent to repair your product. You can also visit our website at www.crommelins.com.au to find your local service agent who will be able to assist with all warranty claims.

FIRE FIGHTING PUMP SINGLE IMPRELLER SPECIFICATION CHART

MODEL	FF150RP	FF150RP7	FF150RP7E	FF150HP
Inlet (inch)	1 ½"	1 ½"	1 ½"	1 ½"
Outlet (inch)	1 x 1 ½" & 2 x 1"	1 x 1 ½" & 2 x 1"	1 x 1 ½" & 2 x 1"	1 x 1 ½" & 2 x 1"
Total Head (m)	60m	60m	60m	60m
Volume max. (L/min)	360	420	420	360
Volume max. (L/hr)	21,600	25,200	25,200	21,600
Max. Suction lift (m)	8m	8m	8m	8m
Pump Type	Aluminium	Aluminium	Aluminium	Aluminium
Suction Type	Self Priming	Self Priming	Self Priming	Self Priming
Impeller	Single	Single	Single	Single
Axle Seal Material	Ceramic-carbon	Ceramic-carbon	Ceramic-carbon	Ceramic-carbon
Engine Make	Robin	Robin	Robin	Honda
Engine Type	6.0hp EX17	7.0hp EX21	7.0hp EX21	GX200
Starting System	Recoil Start	Recoil Start	Electric Start	Recoil Start
Fuel Type	Petrol	Petrol	Petrol	Petrol
Fuel Tank (L)	3.6L	3.6L	3.6L	3.1L
Noise Level (db@7m)	66db	68db	68db	66db
Weight (kg)	28kg	29kg	34kg	29kg
Manufacturers Warranty	2yrs	2yrs	2yrs	2yrs
Engine Warranty	3yrs	3yrs	3yrs	3yrs

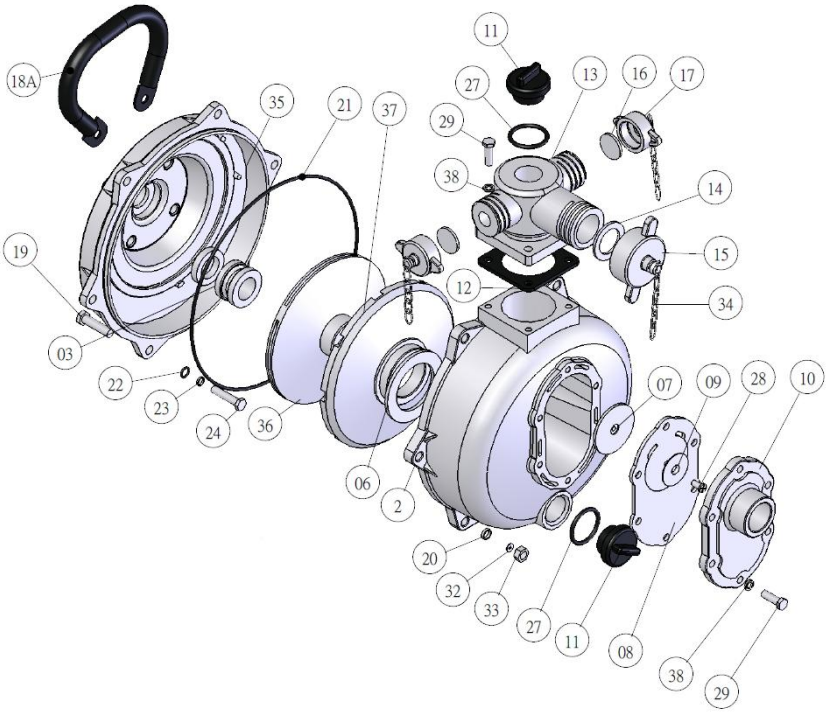
FIRE FIGHTING PUMP SINGLE IMPRELLER SPECIFICATION CHART (cont…)

MODEL	FF150YD	FF150YDE	FF150YDEM
Inlet (inch)	1 ½"	1 ½"	1 ½"
Outlet (inch)	1 x 1 ½" & 2 x 1"	1 x 1 ½" & 2 x 1"	1 x 1 ½" & 2 x 1"
Total Head (m)	57m	57m	57m
Volume max. (L/min)	300	300	300
Volume max. (L/hr)	18,000	18,000	18,000
Max. Suction lift (m)	8m	8m	8m
Pump Type	Aluminium	Aluminium	Aluminium
Suction Type	Self Priming	Self Priming	Self Priming
Impeller	Single	Single	Single
Axle Seal Material	Ceramic-carbon	Ceramic-carbon	Ceramic-carbon
Engine Make	Yanmar	Yanmar	Yanmar
Engine Type	L48	L48	L48
Starting System	Recoil Start	Electric Start	Electric Start
Fuel Type	Diesel	Diesel	Diesel
Fuel Tank (L)	2.4L	2.4L	2.4L
Noise Level (db@7m)	77.8db	77.8db	77.8db
Weight (kg)	45kg	53kg	58kg
Manufacturers Warranty	2yrs	2yrs	2yrs
Engine Warranty	2yrs	2yrs	2yrs

TROUBLE SHOOTING GUIDE

PROBLEM	CAUSE	SOLUTION
Engine won't start	1. Engine switch in OFF position 2. No fuel in engine 3. Worn, fouled or dirty spark plug 4. Engine not level or engine oil level too low	1. Turn engine switch to ON position 2. Fill fuel tank or turn on fuel supply 3. Replace with factory recommended spark plug 4. Place engine on level surface or fill crankcase with oil (refer to engine manufacturers instruction manual)
Engine with low power	1. Throttle control lever not set to full throttle position	1. Set throttle control lever to full position
Engine runs rough	1. Dirty air filter 2. Out of petrol 3. Stale petrol 4. Spark plug wire not connected to spark plug	1. Clean or replace air cleaner 2. Fill fuel tank 3. Drain fuel tank, fill with fresh fuel 4. Connect wire to spark plug
Pump will not prime within 30 seconds	1. Air leak on suction side 2. Blocked impeller 3. Pump too far away from water level	1. Check couplings/hoses 2. Clear blockage 3. Lower pump to within 8 metres of water level

PARTS DIAGRAM AND LIST



No.	Description	Qty
02	Casing Outer (Ali Alloy)	1
03	Seal Assembly	1
06	Seal Ring, Volute	1
07	Flap Valve Weight	1
08	Flap Valve Rubber	1
09	Flat Valve Washer	1
10	Cover, Suction (Inlet 1 ½")	1
11	Priming & Drain Plug (Cap)	2
12	Gasket, Discharge Bend	1
13	Discharge Tee (Outlet 1 ½")	1
14	Rubber Gasket	1
15	Butterfly Nut (1 ½")	1
16	Rubber Gasket (1")	2
17	Butterfly Nut (1")	2
18A	Handle	1
19	Set Screw, UNF 3/8"x 1 ½"	6
20	Washer 3/8	6
21	O'Ring 241x247	1

No.	Description	Qty
22	O'Ring 7x11	4
23	Washer (Stainless) 5/16"	4
24	Set Screw, UNF 5/16"x 1 ½" (Stainless)	4
27	O'Ring 31.5 x 39.5	2
28	Screw ¼ " x ½ "	1
29	Set Screw 5/16" x 1"	9
32	Washer, Inside Ratchet 3/8"x17	6
33	Nut, UNF 3/8"	6
34	Chain	3
35	Casing Inner (Aluminium Alloy)	1
36	Impeller, Close (H) Type	1
37	Diffuser (H)	1
38	Washer 5/16"	11
41	Foot 5/16"	2
41-1	Nut, UNF 5/16"	2
41-3	Spring Washer	2
51	Shaft Sleeve	1

PSA SHEET

We have Product Safety Assessment Sheets for all Crommelins Machinery products. If you require one due to work site policies and procedures or for your own reference please go to www.crommelins.com.au to locate your product and download the relevant document.

NOTES

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