

Thank you very much for purchasing our pump.

This Operation Manual tells you how to operate and service your pump. Please read carefully before using the pump to ensure proper handling and operation.

Follow the instructions carefully to keep your pump in the best running condition. If you have any questions concerning this manual, or any suggestions, please contact your nearest dealer for assistance.

IMPORTANT MESSAGE TO THE CONSUMER AND/OR OPERATOR



CAUTION

This symbol of safety will be found throughout this manual alerting you to the possibility of injury. Do not expose yourself or others to danger. Carefully read each message that follows this safety symbol.



WARNING

This symbol of safety will be found throughout this manual alerting you to the possibility of severe personal injury or loss of life if instructions are not followed.



SAFETY PRECAUTIONS

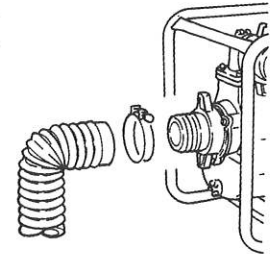
1. Before starting the pump, study all of the instructions in this booklet. Make sure you thoroughly understand how to operate the machine. Proper preparation, operation and maintenance will result in operator safety, optimum performance and long unit life.
2. Be sure each person who operates the machine is properly instructed as to its safe operation.
3. This pump is designed to give safe and dependable service, if operated according to the instructions.
4. Always keep the machine and associated equipment clean, properly serviced and maintained.
5. Observe all safety regulations for safe handling of fuel. Handle fuel in safety containers. Do not refill engine while it is running or hot. Carefully clean up any spilled fuel before starting.
6. Never operate the machine in an explosive atmosphere, near combustible materials or where ventilation is not sufficient to carry away the exhaust fumes.
7. Always be sure that the machine is on secure footing and cannot shift around and injure someone. Remember that the suction hose on a pump tends to pull the pump down when it is filled with water.
8. Keep the immediate working area free from all bystanders.

9. When starting the machine, be sure that nothing is in a position to be hit by the operator's hand or arms.
10. Avoid contacting the hot exhaust manifold, muffler or cylinder. Keep clear of all rotation parts.
11. Stop the engine and disconnect the spark plug wire before working on any part of the machine to prevent accident at starting.



SETTING UP THE PUMP

Before starting the engine, sufficiently fill engine oil and fuel in the engine. All connections on the suction side of the pump must be air tight, so air cannot leak into the suction. In addition, the suction hose or pipe must be non-collapsible. If a pipe is to be used with an engine-driven pump, always connect a short piece of flexible hose between the pump and the pipe, so the pump will be free to float on its springs.



**PUT THE SUCTION STRAINER
ONTO THE END OF THE SUCTION HOSE AND
NEVER USE PUMP WITHOUT IT**

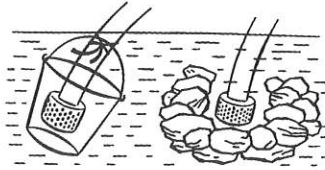
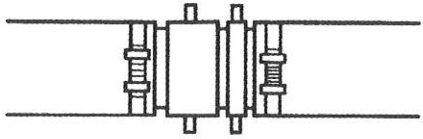
FILL PUMP WITH CLEAN WATER



CENTRIFUGAL PUMPS can prime only when they contain water. **USE CLEAN WATER** for priming. Nevertheless, contaminated and extremely muddy liquids can be pumped satisfactorily provided clean water is used for priming.

Self priming is not instantaneous. The pump needs 60 to 150 seconds to prime, according to the length of the suction hose, size of suction diameter. It is best if the discharge hose is laid out straight. If it is necessary to curve the hose, be sure there are no sharp bends or kinks, as such restrictions reduce the flow.

Locate the suction strainer over as firm a bottom as can be found. Clogging of the strainer with a muck, roots, debris or leaves can be a problem.



OPERATING CONDITION

• Temperature: -5~40°C (23~104°F) • Humidity: 85% or below • Height: 1000m or below

STORAGE CONDITION

• Temperature: -20~60°C (-4~140°F) • Humidity: 85% or below • Location: outdoors

PROTECT PUMP FROM BEING DAMAGED

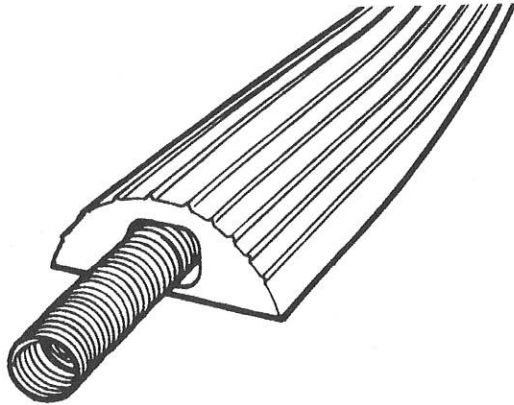
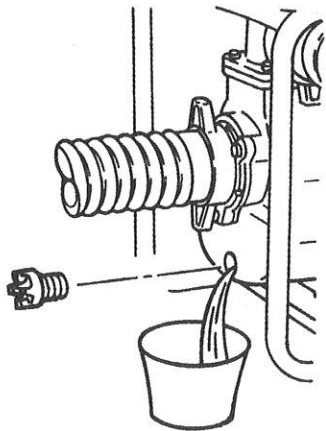


Whenever hose must be laid across a roadway, lay planking along side of it so vehicles cannot cut off the flow as they cross the hose. A vehicle running over an unprotected discharge hose while the pump is operating might not only damage the hose, but also crack the pump. It will cause pressure in the reverse direction three times greater than before, known as "water hammer". Avoid the water hammer for long life operation.



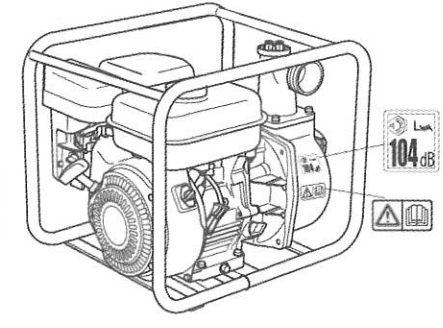
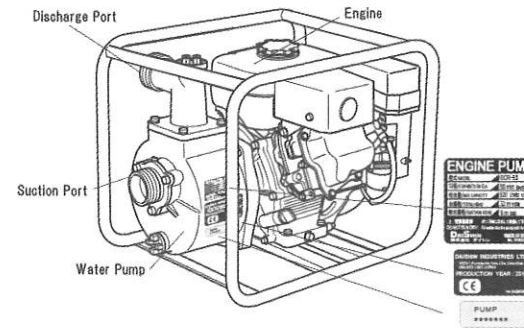
Whenever stopping to use the pump, drain out the water from the pump casing.

Because the water makes the impeller rust, especially in the winter season, it will freeze and cause damage to them.

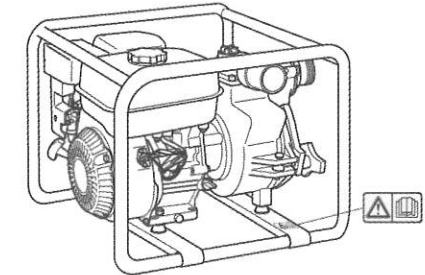
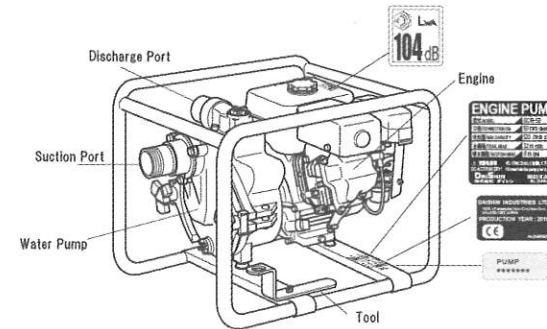


Name of parts and location of nameplates.

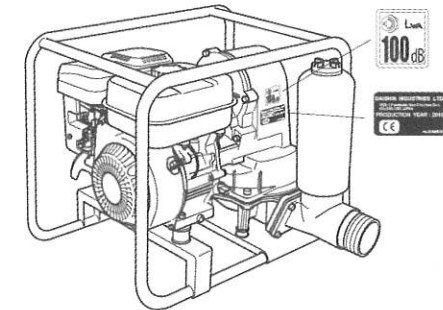
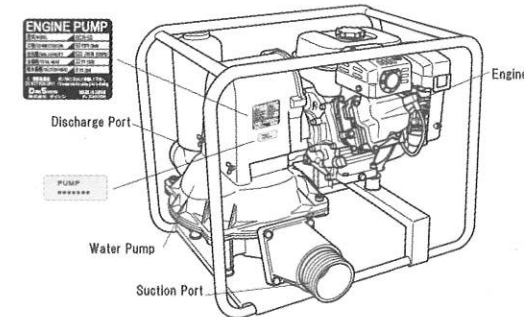
Dewatering Pump
Semi-Trash Pump



Trash Pump



Diaphragm pump



: CAUTION

1. Before starting always full pump casing with water
2. Tighten hose-coupling packing or release pipe to suction side

SPECIFICATIONS

Model	SCR254HX	SCR-50RX	SCR-50HX	SCR-80RX	SCR-80HX	SCR-100RX	SCR-80HX	SCH-4070HX	SCH-5050HX	
Type	Dewatering pump							High head pump		
Suc.&Dis.Dia	mm	25x25	50x50		80x80		100x100		40x40	50x50
Engine Model	-	HONDA GX25	ROBIN EX13	HONDA GX120	ROBIN EX17	HONDA GX160	ROBIN EX27	HONDA GX240	HONDA GX160	HONDA GX160
Max.Output	kW	0.8	3.2	2.9	4.2	4.0	6.6	5.9	4.0	4.0
Max.Capacity	L/min	130	520	520	1000	1000	1800	1800	390	400
Total.Head	m.	35	32	32	32	32	28	28	70	50
Measured Noise Level	dB	98	101	102	104	104	105	107	104	104
Guaranteed Noise Level(LWA)	dB	100	103	103	105	106	106	110	106	106

Model	SST-50RX	SST-50HX	SST-80RX	SST-80HX	SWT-50RX	SWT-50HX	SWT-80RX	SWT-80HX	SWT-100HX	
Type	Semi-trash pump				Trash pump					
Suc.&Dis.Dia	mm	50x50		80x80		50x50		80x80		100x100
Engine Model	-	ROBIN EX13	HONDA GX120	ROBIN EX17	HONDA GX160	ROBIN EX17	HONDA GX160	ROBIN EX27	HONDA GX240	HONDA GX340
Max.Output	kW	3.2	2.9	4.2	4.0	4.2	4.0	6.6	5.9	8.0
Max.Capacity	L/min	700	700	1000	1000	700	700	1360	1360	2000
Total.Head	m.	23	23	23	23	27	27	28	28	23
Measured Noise Level	dB	101	102	104	104	102	104	104	107	107
Guaranteed Noise Level(LWA)	dB	103	103	105	106	103	106	106	110	110

Model	SMD-50RX	SMD-50HX	SMD-80RX	SMD-80HX	
Type	Diaphragm pump				
Suc.&Dis.Dia	mm	50x50		80x80	
Engine Model	-	ROBIN EX13	HONDA GX120	ROBIN EX17	HONDA GX160
Max.Output	kW	3.2	2.9	4.2	4.0
Max.Capacity	L/min	120	120	240	240
Total.Head	m.	15	15	15	15
Measured Noise Level	dB	98	101	102	104
Guaranteed Noise Level(LWA)	dB	100	103	101	105

Important note - when operating SMD series diaphragm pumps:

- the discharge line must be completely open at all times
- do not use lay-flat type hose on the discharge line
- any restrictions, kinks or obstructions on the discharge line will cause serious damage to the pump
- do not install an on/off valve on the discharge line

TROUBLE-SHOOTING CHART

PROBLEM	CAUSE AND TREATMENT
ENGINE CANNOT BE STARTED	Follow instruction in engine manual.
THE PUMP CANNOT PRIME	<p><u>THE PUMP NEED WATER.</u> Fill with clean water.</p> <p><u>WATER INSIDE THE PUMP CONTAMINATED WITH WATER.</u> Drain pump and fill with clean, cold water. Even though the pump can use dirty water, clean water may be needed for priming.</p> <p><u>LEAKING HOSE OR CONNECTIONS ON SUCTION OF THE PUMP.</u> Make coupling tighter.</p> <p><u>STRAINER CLOGGED.</u> Clean strainer, use mean of keeping the strainer from clogging.</p> <p><u>SYSTEM CLOGGED</u> Clean hoses. If necessary disassemble and clean out pump.</p>
FLOW IS SCANTY	<p><u>THE PUMP IS O.K., BUT TOO SMALL FOR JOB.</u> Install larger pump fitted with larger diameter hoses. Just try larger hoses with the same pump.</p> <p><u>TOTAL HEAD INCLUDING FRICTION TOO GREAT.</u> Do everything possible to decrease the head, eliminate unneeded elbows, adapters, and reducers. If possible, move the pump closer to the water and shorten suction hoses. Increase size of hose, especially with high suction lift and long discharge hose.</p> <p><u>PUMP LEAKING OR WORN</u> Overhaul the pump. Have worn seals, gaskets, impeller or housing parts replaced as necessary; or shim to reduce clearance between impeller and the wear plate or the housing.</p>
VOLUME DECREASES DURING PUMPING	<u>CLOGGED STRAINER.</u> Clean the strainer.
THE PUMP IS "FROZEN" FAST	<u>ICE INSIDE PUMP.</u> Turn the pump shaft a little way by hand. Warm the pump slowly until the ice melts.

Original instructions