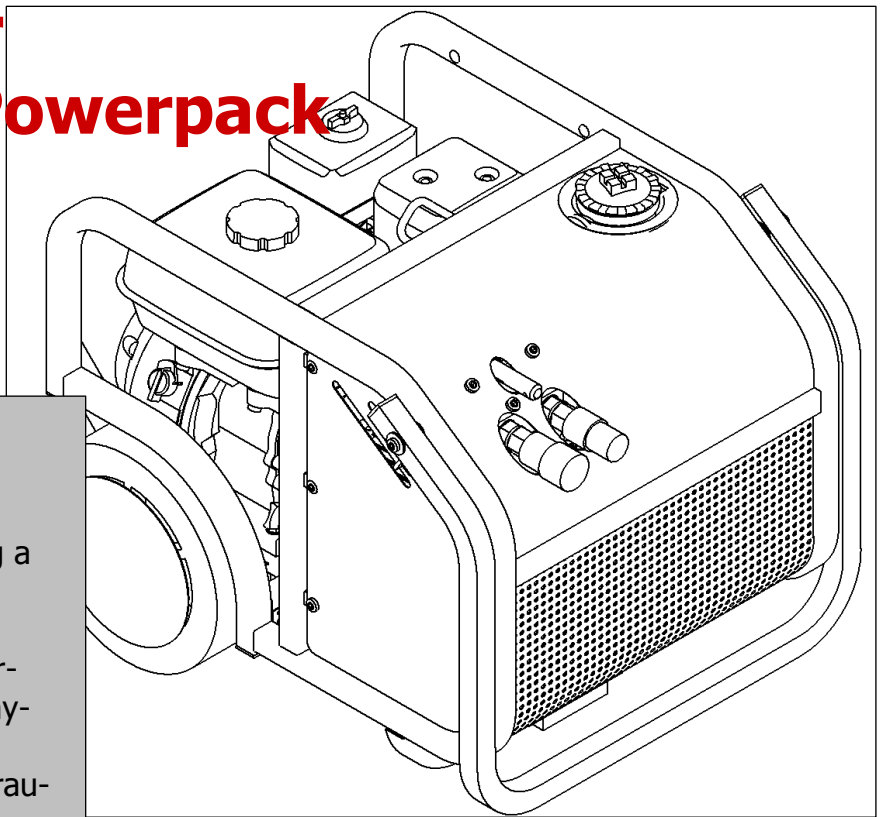


Operating Manual

Multipower Hydraulic Powerpack



Prior to Operation

We thank you for choosing a FREMCO powerpack.

Please note that the powerpack is delivered without hydraulic oil, and therefore it must be filled up with hydraulic oil prior to operation.

To ensure smooth operation and long-lasting performance of your new powerpack, we recommend you to study this operating manual carefully and pay special attention to the

Safety and Service Precautions

We hope you will be satisfied with your new FREMCO powerpack.


Best regards
FREMCO A/S



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Safety Precautions

1.  The MultiPower Pack is not intended for indoor use and use in enclosed spaces.
2. Always use protective earplugs. The powerpack complies with the EU noise limits, but by daily long-lasting operation there is a risk of hearing defects.
3. Always connect hoses before starting.
4. Never add fuel and oil when the engine is running.
4. In case of non-operation or performance of service, always turn off the engine.
5. Never start the engine without side covers.
6. Operation of the powerpack without tool connected and with lever at "ON" may cause overheating of the system and damage to the powerpack.
7. When lifting the powerpack from a vehicle, we recommend the use of a crane.
8. The pressure relief valve is set at 110 bar from our plant. Never set it higher.
9. Always use filters with by-pass. The use of filters without by-pass may blow the hydraulic hoses and the filter cover.

Filling Up Hydraulic Oil

- To fill up with hydraulic oil, loosen the filter cover on top of the powerpack.
- Remove the filter element (see photo), and fill up with oil. When oil is showing at the bottom of the filter unit, there is enough oil on the powerpack.
- Insert the filter element again, mount the cover and the powerpack is ready for use.

Please note: When connecting new extension hoses, it is necessary to fill up with extra 2 litres of oil. Therefore always top up the powerpack when connecting new extension hoses.



Technical Data

Hydraulics

The powerpack is mounted with a pressure relief valve to avoid a too high pressure. Furthermore, the very efficient air cooling protects the powerpack against super-heating.

Oil flow	18 l.p.m at 3300 r.p.m.
Working pressure nominal	100 bar
Pressure relief valve	Set at 110 bar
Pump	Gear pump
Oil temperature	Max. 70° C
Hydraulic oil tank capacity	Min. 5 litres/max. 7 litres
Petrol tank capacity	3.1 litres
Hydraulic system compl.	Max. 8 litres
Filter system (filter element)	25 Micron with by-pass
Engine	Honda GX200QX7 6.5 HP (gross power) 4-stroke petrol with oil alert system Petrol - normal or unleaded Engine oil 1.1 litres
Guaranteed sound power level L_{WA}	100 dB
Sound pressure level 1 m L_{PA}	88 dB
Dimensions (LxWxH)	630x530x510 mm
Weight, without hydraulic oil	54 kg

Starting Instructions

Please observe the starting instructions on the front of the powerpack.

- Start:**
- Check engine oil level
 - Check hydraulic oil level at sight glass
 - Connect hoses and tool
 - Switch fuel tap to "ON"
 - Activate choke
 - Turn ignition switch to "1"
 - Pull recoil starter
 - Move the lever to "ON"

- Stop:**
- Move the lever to "OFF"
 - Turn off the ignition switch
 - Turn the fuel tap to "OFF"

Service, Maintenance and Hydraulic Settings

Service/Maintenance	Daily	Weekly	Yearly
Engine oil	Check		1 x replacement
Hydraulic oil	Check		1 x replacement
Hydraulic oil filter *)			1 x replacement
Check hoses		(tighten up if needed)	
Air filter			1 x replacement
Fuel filter			1 x replacement

*) Use only filters with by-pass

Hydraulic Settings

Check the working pressure by means of test equipment. The test equipment must comprise a pressure gauge, a flow meter and a valve for adjustment of pressure.

The pressure relief valve is placed on the right side of the valve block.

1. Connect the test equipment, start the powerpack and move the lever to "ON". Then close the valve - the pressure gauge must show 110 bar.

Adjust the pressure relief valve by loosening the lock nut and turning the adjustment screw in or out. "In" increases the pressure, and "out" decreases the pressure.

Retighten the lock nut after adjustment.

2. When the pressure relief valve has been adjusted correctly, the working pressure must be set at 100 bar by means of the valve on the test equipment. At 100 bar, the oil flow should be 18 l. p.m.

If correct pressure/oil flow cannot be achieved by following the above instructions, the powerpack must be re-adjusted. If the pressure/oil flow is then still incorrect, the pump is defect and must be replaced.

Fault Location

Start by checking the hydraulic settings

Before starting, check the oil level at the sight glass.

Check the working pressure by means of the FREMCO test equipment. The test equipment comprises a pressure gauge, a flow meter and a valve for adjustment of pressure.

The pressure relief valve is placed on the right side of the valve block.

1. Connect the test equipment, start the powerpack and move the lever to "ON". Then close the valve - the pressure gauge must show 110 bar.

If the pressure relief valve does not show 110 bar, adjust the valve by loosening the lock nut and turning the adjustment screw in or out. "In" increases the pressure, and "out" decreases the pressure.

Retighten the lock nut after adjustment.

2. When the pressure relief valve has been adjusted correctly, the working pressure must be set at 100 bar by means of the valve on the test equipment. At 100 bar, the oil flow should be 18 l. p.m. Adjust the flow on the powerpack by means of the max. r.p.m. adjustment screw.
3. The number of revolutions must not exceed 3300 r.p.m. at 18 l.p.m. If the number is higher, there may be dirt in the pressure relief valve, or the pump may be worn.

Problem	Cause	Solution
Powerpack does not give the right oil flow, or r.p.m. is too high	Pressure relief valve may be clogged up or set incorrectly	Dismount pressure relief valve and clean with compressed air, or correct the setting of the valve
	Pump is worn	Replace pump
The maximum pressure of the powerpack is too high	Wrong adjustment of pressure relief valve	Adjust pressure relief valve to 110 bar (see instructions above)
Hydraulic oil is foaming, and oil is leaking at the air filter on the filter housing	Leaking shaft seal in pump	Replace pump
	Oil level too low	Add oil
	Heavy vibrations because of defective fan blade or defective rubber dampers	Replace defective parts
	Too much oil in tank	Drain off oil from tank
Engine does not start		See engine manual

Oil Types

The FREMCO powerpack uses standard hydraulic oil, i.e. all types of mineral oil and biodegradable oil, which comply with the following values:

Recommended viscosity	20-40 cSt
Permitted viscosity	15-1000 cSt
Viscosity index	Min. 100
Temperature area	-20° to +70° C

EC Declaration of Conformity



We hereby declare that

101-10102 Hydraulic MultiPower Pack

is manufactured in conformity with the EC Directives 2006/42/EC and 2000/14/EC.

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A handwritten signature in blue ink that reads "Kim Carlsen".

Kim Carlsen
Managing Director

06.06.2016