

# OPERATING INSTRUCTIONS

## FLEXTOOL<sup>®</sup> DRIVE UNITS (PETROL MODELS) FDU-P1, FDU-P2 & FDU-P3



Version 1.0 (December 2021)

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## INTRODUCTION

Thank you for your selection of Parchem equipment.

Parchem have specialised in the design and manufacture of quality products since 1951.

We have taken care in the design, manufacture and testing of this product. Should service or spare parts be required, prompt and efficient service is available from our branches.

General Safety Instructions for the Operation of Power Equipment

The goal of Parchem is to produce power equipment that helps the operator work safely and efficiently. The most important safety device for this or any tool is the operator. Care and good judgement are the best protection against injury. All possible hazards cannot be covered here, but we have tried to highlight some of the important items, individuals should look for and obey Caution, Warning and Danger signs placed on equipment, and displayed in the workplace. Operators should read and follow safety instructions packed with each product.

Learn how each machine works. Even if you have previously used similar machines, carefully check out each machine before you use it. Get the "feel" of it and know its capabilities, limitations, potential hazards, how it operates, and how it stops.

## APPLICATIONS

Heavy duty concrete vibrators, 28 mm - 60 mm dia. Submersible pumps, up to 50 mm discharge.

## FUNCTION

This portable drive unit is designed to power flexshaft drive submersible pumps and model VP (pendulum) vibrators. A quick action 60 mm diameter flexible shaft coupling with aluminium alloy housing, rotary trigger latch and hardened 45 mm 3-tooth dog drive enable ease of use by allowing the operator to simply engage or disengage the flexible shaft coupling, to facilitate either a change of position or a change of flexshaft driven device.

## FUNCTION AND CONTROLS

### BELL HOUSING / ROTARY TRIGGER

Is mounted directly to the motor and enables quick connection between the coupling and the 3-tooth dog drive mounted on the crankshaft. The rotary trigger latch assures a positive engagement between drive dogs.

### MOTOR

The motor is controlled by an on/off switch or push button switch mounted on the motor below the fuel tank.

To STOP the machine TURN the switch to the OFF position or PRESS the push button in until the motor stops.

Honda, Robin and Vanguard motors are fitted with an oil sensor device that will stop the motor or prevent starting when the crankcase oil level falls below a safe level.

The motor speed is controlled by a throttle lever mounted below the air cleaner. The throttle should be adjusted to the maximum position when operating a flexible shaft driven device.

## HAZARDS AND RISKS

NEVER allow any person to operate a machine without adequate instruction.

ENSURE all operators read, understand and follow the operating instructions.

SERIOUS INJURY may result from improper or careless use of this machine

### ! MECHANICAL HAZARDS

DO NOT operate the machine unless all protective guards are in place

KEEP hands and feet clear of rotating and moving parts as they will cause injury if contacted.

BE CAREFUL not to come in contact with the muffler when the engine is hot, since it can cause severe burns.

ENSURE that the motor operation switch is in the OFF position and the spark plug ignition lead is disconnected before removing guards or making adjustments.

ENSURE both the machine and the operator are stable by setting up on level terrain and the machine will not move or fall while in operation or unattended.

DO NOT leave the machine in operation while it is unattended.

DO NOT increase the governed no-load motor speed above 3,000 r/min on an engine with a power output of less than 5.6 kW, or a flexible shaft smaller than 16 x 38mm. Any increase may result in personal injury and damage to the machine.

KEEP bystanders and animals clear of the work area.

ENSURE that repairs to the motor and machine are carried out by COMPETENT personnel.

### ! FIRE & EXPLOSION HAZARDS

PETROL is extremely flammable and explosive under certain conditions.

ENSURE that petrol is only stored in an approved storage container.

DO NOT refuel the motor while it is in operation or hot.

DO NOT refuel the motor in the vicinity of sparks, a naked flame or a person smoking.

DO NOT overfill the fuel tank and avoid spilling petrol when refuelling. Spilled petrol or petrol vapour may ignite. If spillage occurs, ensure that the area is dry before starting the motor.

ENSURE that the fuel tank cap is securely fitted after refuelling.

#### **! CHEMICAL HAZARDS**

DO NOT operate or refuel a petrol motor in a confined area without adequate ventilation.

CARBON MONOXIDE exhaust gases from internal combustion motor driven units can cause death in confined spaces.

#### **! NOISE HAZARDS**

EXCESSIVE NOISE can lead to temporary or permanent loss of hearing.

#### **! ADDITIONAL HAZARDS**

Slip/Trip/Fall is a major cause of serious injury or death.

Beware of excess hose, the flexible shaft and water left on the walking or work surface.

DO NOT allow waste water to accumulate under foot.

Exercise caution and ensure that the perimeter of elevated formwork or platforms is protected.

Exercise care when working in the vicinity of unprotected holes or excavations.

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## **OPERATION**

For information on correct starting procedures refer to the engine manufacturers operation manual.

Before engaging the flexshaft with a petrol drive unit start the motor using the recoil starter, increase the speed to full throttle and allow it to warm up for a few minutes. (If the motor is fitted with an on/off switch this must first be turned ON before starting.)

Stop the motor.

Turn the bell housing trigger 180 degrees.

Insert the flexshaft coupling fully into the housing of the drive unit and release the trigger.

Push the coupling into the housing and twist the flexible shaft until the drive dogs are fully engaged and the trigger returns to the horizontal position.

The motor may now be started

Drive units should be operated on a level surface. If the surface is not level the drive unit should be restrained to ensure that it does not move due to vibration or the weight of a pump and hose or vibrator.

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## **CARE AND PREVENTIVE MAINTENANCE**

Check the condition of the drive dog regularly and that the three tooth drive dogs are fully meshed. The position of the drive dog on the crank shaft is critical and should also be checked. The correct distance from the face of the teeth to the face of the bell housing is 73 mm (2.875 inches).

Worn coupling housings and poorly operating triggers together with worn grooves in the shaft coupling will lead to a shorter operating life and should be replaced before they have worn excessively.

Check the oil level in the petrol motor crankcase daily.

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## **SERVICE**

Change the oil in the petrol motor crankcase regularly to minimise wear.

Inspect, clean and/or replace the motor air cleaner regularly, particularly when operating in a dusty environment.







Inspect, clean and/or replace the spark plug regularly.

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## **CLEANING AND STORAGE**

Keep the unit clean and free of concrete residue.

Ensure the cooling fins on the motor are kept unobstructed.

Model	Operating Weight (kg)	Engine Speed (rpm)	Vibration Isolating Mounts	Lifting Hook	Engine Make	Engine Model	Max Rated Power (Hp)	Fuel Type	Product Code	Barcode
<b>FDU-P1 (Standard)</b>	28.5	3000	No	Yes	Honda	GX160	5.5		FT201802-UNIT	 9300611599469
<b>FDU-P2 (Super)</b>	32	3000	Yes	Yes	Honda	GX160	5.5		FT201798-UNIT	 9300611599421
<b>FDU-P3 (Heavy Duty)</b>	38.5	3000	Yes	Yes	Honda	GX270	9		FT201799-UNIT	 9300611599438

**TROUBLESHOOTING**

SYMPTOM	POSSIBLE CAUSES AND CORRECTION
Motor will not start	<ul style="list-style-type: none"> <li>■ Check the ON/OFF switch to ensure that it is switched 'ON'.</li> <li>■ Check the fuel supply.</li> <li>■ If a Honda or Robin motor is fitted check the crankcase oil level as an oil sensor device is fitted to these motors which prevents starting and stops the motor when oil level is low</li> <li>■ Ensure the spark plug ignition lead is connected</li> <li>■ Check the carburettor jet and bowl to ensure they are clean</li> </ul>
Motor stops	<ul style="list-style-type: none"> <li>■ Check the fuel supply</li> <li>■ Check that the fuel cock is turned on</li> <li>■ Check the condition of the air filter</li> </ul>
Petrol Motor lacks power	<ul style="list-style-type: none"> <li>■ Check the condition of the air filter</li> <li>■ Check the condition of the spark plug</li> </ul>



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This manual summarises our best knowledge of the product based on the information available at the time of publication. You should read this manual carefully and consider the information in the context of how the product will be used. Our responsibility for products sold is subject to our standard terms and conditions of sale.

### **DISCLAIMER:**

Any advice, recommendation, information, assistance or service provided by us in this manual is given in good faith and is believed by us to be appropriate and reliable. However, any advice, recommendation, information, assistance or service provided by us is provided without liability or responsibility PROVIDED THAT the foregoing shall not exclude, limit, restrict or modify the right entitlements and remedies conferred upon any person or the liabilities imposed upon us by any condition or warranty implied by Commonwealth, State or Territory Act or ordinance void or prohibiting such exclusion limitation or modification. The product can be expected to perform as indicated in this manual so long as operation and operational procedures of the individual products are followed as recommended in this manual.

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