FLEXTOOL RIDE ON TROWEL

FP836

OPERATING INSTRUCTIONS

WARNING

To reduce the risk of injury, all operators and maintenance personnel must read and understand these instructions before operating, changing accessories, or performing maintenance on this power equipment. All possible situations cannot be covered in these instructions. However care must be exercised by everyone using, maintaining or working near this equipment.

parchem
CONSTRUCTION SUPPLIES

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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 assembly 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 ones. 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.

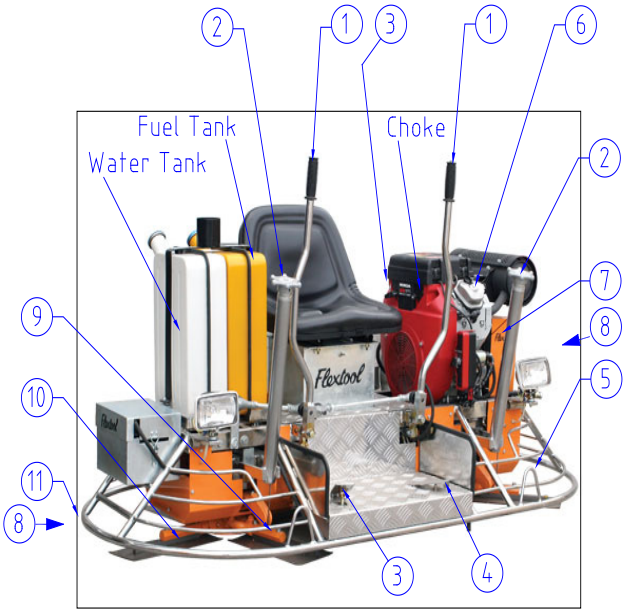
Learn how each machine works. Even if you have previously used similar machines, carefully check out each machine before you use it. Get the “feel” of it and know its capabilities, limitations, potential hazards, how it operates, and how it stops.

APPLICATIONS

The Ride On Power Trowel can be used for trowelling concrete surface through floating and finishing operations. Three types of blades can be fitted with the trowel: combination, floating and finishing blades. Two types of float pans are compatible and available: regular dish pan and mild dish pan.

FUNCTIONS AND CONTROLS

The trowel machine reproduces the action of hand trowels while giving a high quality dense finish with wear resistance. The angle of the blades is adjustable during operation from a floating position, with the full blade area in contact to flatten the surface, to a finishing position with the blades tilted to give a finished surface.



The figure above shows the location of the controls and components for this Ride on Power Trowel. The functions of controls are described below:

1. **Handle Grip/Handle Bar** – When operating the trowel, hold both handgrips with hands. Replace handgrips when they are worn or damaged.
2. **Blade Pitch Control** – Turn the star knob clockwise to increase blade pitch, and counter-clockwise to decrease blade pitch.
3. **Throttle Control Lever** – Controls the speed of engine. Push the lever downwards to increase engine speed, upwards to decrease engine speed.
4. **Safety Stop Switch or Inertia Lever** – If the operator loses control and lets go of the trowel, the inertia lever will be swung to OFF position by centrifugal force, and shut down the engine or if a dead mans pedal is fitted releasing the foot pressure, will stop the machine. These switches MUST be tested before each use of the trowel. It is also recommended that these switches be used to stop the engine after each use of the trowel to validate there operation.
5. **Lifting Frame** – Use the lifting frame to lift the trowel and move to desired location.
6. **Engine** – Honda V-Twin, 27HP Petrol engine.
7. **V-belt Cover** – Safety guard for V-belts and pulleys. Remove the cover only to get access to the V-belts for inspection and replacement. Make sure the cover is always in place when trowel is in operation or de isolated.
8. **Gearbox** – Transfers power from engine to the spider assembly. Check oil level in gearbox through the sight glass on a daily basis, and refill as necessary only with machine stopped.
9. **Trowel Arm** – NEVER use broken or bent trowel arms. Check for arm alignment if blades show uneven wear or some wear earlier than others only when machine stopped and isolated.

10. **Blades** – Combination blades, floating blades and finishing blades can be fitted with the trowel.
11. **Guard Ring** – NEVER attempt to put hands or feet inside the guard ring while the engine is running.

HAZARDS AND RISKS

NEVER allow any person to operate machines without adequate instruction, and a signed JSEA and Work Method Statement provided.

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

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

Ride on Power trowels are heavy units and require mechanical lifting device/ crane or a multiple person lift, using correctly trained lifting techniques and people of appropriate strength. Where provided, use the lifting eye for mechanical lifts using approved lifting devices.

! MECHANICAL HAZARDS

DO NOT operate the machine unless all protective guards are in place. Ensure all warning labels are still visible.

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

DO NOT increase the governed no-load motor speed above 140 RPM. Any increase may result in personal injury and damage to the machine.

Be sure the runaway protection dead mans switch provided is working properly, not fixed in on position so that if the foot should slip away from your control, the ignition supply will be cut off. While operating machine, if control is lost by the operator, remove foot from runaway protection dead mans switch.

Take care not to come in contact with the muffler or engine when the engine is hot, since it may result in severe burns. Wear suitable protective gloves

Keep hands and feet clear of rotating or moving parts as they will cause injury if contact is made. DO NOT place fingers, hands or feet with in the Ring Guard while machine is still running.

It is important that the operator is seated and balanced when starting the engine ensuring the area is clear of persons.

When starting the trowel, do not exceed the ¼ throttle setting. A higher setting could engage the centrifugal clutch.

Be careful with the trowel around pipes or cables sticking out of the floor or other obstacles on the floor. Should the trowel blades catch on these, serious damage to the machine or harm to the operator may result.

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

! FIRE & EXPLOSION HAZARDS

PETROL or diesel is extremely flammable and explosive under some conditions.

ENSURE that petrol and diesel is only stored in an approved and labelled storage container away from any source of ignition.

DO NOT refuel the motor while it is in running.

DO NOT refuel the motor in a confined space or in the vicinity of ignition sources such as sparks, naked flames or a person smoking.

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

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

ENSURE a serviceable appropriate type and size fire extinguisher is readily available for immediate use

! CHEMICAL HAZARDS

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

CARBON MONOXIDE exhaust gases from internal combustion motor driven units can cause death in confined spaces. Ensure chemical TLV and oxygen content of area is safe for operation

WATER DISPENSER Careful not to get water on one self from end of dispenser, located at the front of Trowel Machine.

! NOISE HAZARDS

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

WEAR an approved hearing protection device to limit noise exposure, as required by Occupational Health and Safety regulations.

! VIBRATION HAZARD

Excessive exposure to prolonged or extreme whole body and hand vibration, can cause permanent injury

Ensure any abnormal or excessive vibration in equipment is reported

Grip controls as lightly as possible within the bounds of safety using vibration absorbing gloves

PROTECTIVE CLOTHING

WEAR protective goggles, long sleeve close fitted clothing, trousers and safety footwear, gloves while operating the machine.

WEAR sun cream, sun goggles and wide brimmed hat in sunny exposed or high light reflecting areas.

! ADDITIONAL HAZARDS

Slips/ trips/ falls are major causes of serious injury or death. Beware of obstacles or water left on the walking or work surface.

Exercise caution and ensure that the perimeter of all elevated formwork or platforms is protected per Australian Standards.

Ensure work platform or form work is adequate to support concrete, equipment and persons applied load while wet

Always maintain good footing when stepping on to the Ride on Trowel so that you do not slip

Ensure other persons and children are controlled and clear of the area. Barricade as required

Ensure there are no electrical leads or hoses on floor being trowelled

OPERATION

BEFORE OPERATION

The following items should be checked on a daily basis before operating the trowel.

- Engine oil level
- Gearbox oil level
- Blade condition and pitch control operation
- V-belt clutch operation
- The following items SHALL be checked on a daily basis before operating the trowel.
- Safety Stop Switch operation. If the dead mans foot pedal cut out switch is not fully functional to stop the equipment in an emergency then the equipment SHALL be tagged out DO NOT USE.
- Check warning labels in place and understood

STARTING THE ENGINE

1. Move the engine Fuel Valve Lever to “ON” position.
2. Move the Throttle Control Lever to “MIN” position.
3. Move the Safety Stop Switch to “ON” position or hold dead mans Penal down with foot.
4. Place the Choke Lever in the “CLOSED” position.[Petrol Only}
5. Rotate the Ignition key to Start the Engine – Electric start feature.
6. If the engine has started, return the Choke Lever to “OPEN” position; If the engine has not started, repeat 1 to 5 steps above.
7. Run the engine for a few minute and make sure the machine is in normal working condition.
8. Test the Safety Stop Switch or ‘dead mans pedal’. This test should be conducted in a clear area. Remove left foot from the ‘dead mans pedal’, with the engine at idle. The engine should shut down. Move the switch to “ON” position or hold ‘dead mans pedal’, start the engine and let idle, swing the trowel handle to the right and let go. The Safety Stop Switch Lever where fitted should be swung to the “OFF” position to shut down the engine.
9. DO NOT TAPE UP, TAMPER WITH OR DISABLE THESE SAFETY DEVICES
10. To start trowelling, push the Foot Throttle Control Lever down towards “MAX” position. Or press Right side pedal for throttle control.

MACHINE OPERATION

Steering the machine on a slab is relatively simple but does require some practice prior to actually working with the machine.

The illustration shows the necessary hand movements required to move the trowel in the desired direction.

For straight line movements (forward and reverse) move the handles in the same direction you wish to travel.

Move the handles in the opposite directions to produce rotation on the machine axis.

Left handle forward, right handle backwards for clockwise direction.

Left handle backwards, right handle forward for the counter clockwise direction.

Sideways directionis achieved by moving the right handle either the left or right direction.

To familiarize a new operator with the ride-on trowel the following steps should be taken: With the operator seated on the machine prior to starting the unit show them the function of the ignition switch, deadman lever, throttle control, steering handles and blade tilt levers. Prior to starting the unit, ensure the operator knows the emergency stop procedure. To stop the unit the operator can either release pressure from the deadman lever or release the throttle control.

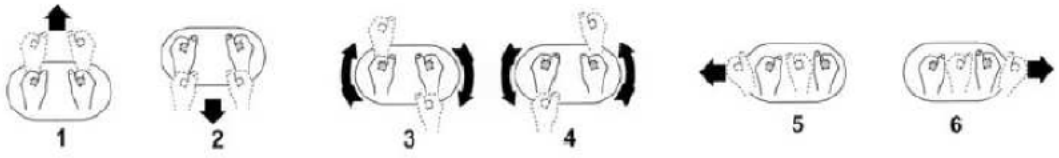
Once the operator is familiar with these controls they need to practice steering the trowel. The best place for this is on a large section of finished concrete which is at ground level.

With the blades in the flat position have the operator depress the deadman lever and start the unit without depressing the throttle control. With both hands on the steering handles the operator should depress the throttle control to about half way and obtain a feeling for the steering by making the machine hover in the one spot.

Once the operator feels confident and is able to make small steering inputs to maintain the position of the unit they may then practice riding the machine in a straight line and making 180 degree turns. This is best done at full throttle as the machine is easiest to control at full RPM.

The operator should continue to practice operating the unit until they are familiar with the steering and operation of the unit. The operator should not start working with the machine until they are capable of being in complete control of the machine and their actions while operating the machine.

1 - forward
2 - reverse
3 - rotate clockwise
4 - rotate counter-clockwise
5 - left sideways
6 - right sideways



CUSTOMER RESPONSIBILITY

GENERAL INFORMATION

The Parchem ride-on trowel is a modern, high production machine. The finishing rate of the unit will vary depending on the model, operator skill and job conditions.

Please take time to familiarise all operators of the machine with the location and function of all controls.

It is essential that your ride-on trowel is kept in a good operating condition as this will prolong the units operational life and reduce maintenance costs, as well as helping to identify any problems or components which may require maintenance or replacement.

The easiest way to ensure the machine is kept in a good operating condition is to follow the Parchem service plan and clean the unit at the end of each day to ensure it is kept free of concrete residue. Concrete residue that hard¬ens is very difficult to remove and is extremely abrasive and if left to build up on the machine will quickly degrade crucial mechanical components including the steering mechanism, blade tilt mechanism and drive mechanism as well as increasing machine weight and reducing efficiency.

If your ride-on trowel is fitted with a hydraulic steering the dual joysticks are linked to three hydraulic steering cylinders. A hydraulic pump is coupled to the engine to deliver a controlled flow of hydraulic fluid to the steering cylinders. The hydraulic fluid level must be maintained and the hydraulic system including hoses, pump, filters and valve block must be inspected regularly to ensure there are no leaks and all hoses and fittings are in good condition. Failure to conduct preventative maintenance on these items may result in a hose failure, hydraulic system failure and loss of steering.

We recommend that prior to starting the trowel the items listed under ‘each use’ on the preventative maintenance schedule are checked. These include the following items: Engine oil level, cooling system level, hydraulic oil level, gearbox oil level, fuel level, deadman switch operation, throttle pedal operation, steering control operation, belt tension, spider plate lubrication, condition of blades

The minimum maintenance requirements required on machines are listed in the Parchem service plan.

PRE-DELIVERY INSPECTION.

A pre-delivery inspection service has been completed by Parchem. The operation of specific items including: con¬trols, motor & transmission, moving & fixed parts have been inspected and tested prior to the delivery of your machine and adjustments and corrections have been made where necessary.

INITIAL INSPECTION REQUIREMENTS.

After your machine has been operated for 25 hours or a period of one month, you are requested to return it to the Parchem branch from where it was purchased for the 25 hour inspection service. Note that the inspection service should be completed within 2 months from the date of sale. Please book your machine with a Flextool service co-ordinator to arrange for the no charge 25 hour inspection service. If the inspection service is due while the machine is in operation or the machine is being operated in a different State to which it was purchased in, please contact your sales representative to organise the inspection service at the next available opportunity at the closest Parchem branch.

PITCHING THE BLADES

To pitch the blades upward, turn Pitch Control Knob clockwise. To lay the blades flat, turn the knob counter-clockwise. The pitch adjustment feature of the trowel permits quick and accurate pitch changes of the trowel blades without having to stop the machine. By adjusting pitch to suit varying conditions over the slab surface, the operator can do the work faster and achieve a better slab finish.

FLOATING OPERATION

For floating and finishing operations, guiding the trowel on the slab is simple: a slight upward lift of the handle causes the trowel to travel to the left. Holding the handle in a neutral position leaves the trowel rotate in one spot. Slight downward pressure on the handle causes the trowel to travel to the right. A slight twist to the right will move the trowel forward, and a twist to the left will move it backward.

To achieve quality slab finish, the operator should start floating operation at the right time. This can be determined by using a footprint test. If the operator steps onto the slab and leaves a 3 mm impression on the surface, then it may be ready for the floating.

It is recommended that, during floating, blades be kept in a flat position with the trowel working at ½ to ¾ of the full speed, and each pass should overlap the previous by half the width of the trowel. A second trowel pass may be required for the desired finish. Crossover floating is recommended for this pass with blade pitch at a slightly higher level and trowel at about ¾ of the full speed.

Under normal operating conditions the machine may cover as much as 90 square metres in about 15 minutes. After the floated slab has set sufficiently it is ready for the finishing operation.

CAUTION: Do not let the machine stand in one spot on the soft concrete. Lift the trowel safely by 2 persons or mechanical aids from the slab when the floating operation is completed.

FINISHING OPERATION

For a good concrete surface finish, the operator should adjust the blade pitch based on the hardness or plasticity of the concrete surface. When the concrete is wet or plastic, begin with the blades lying flat or at a small angle on the surface. When the concrete has sufficiently hardened, increase the blade pitch and keep it at a level corresponding to the concrete hardness and the desired finish. Check the obtained finish, and adjust the blade pitch as necessary. As a rule the greater the blade pitch, the smoother the finish. However, excessive blade pitch will cause the blades to wear rapidly.

When finishing, run the trowel at full throttle, and keep the blade coverage at approximately 10 cm on each turn. Let the trowel move right or left, backwards or forwards approximately 10 cm with each revolution of the trowel blades. To fill a hole or cut down a hump, move the unit back and forth over the hole or hump. More passes may be needed for the desired surface finish.

CARE AND PREVENTIVE MAINTENANCE

ENSURE repairs and maintenance of the trowel machine is performed only by qualified personnel.

CAUTION: Make sure the engine is shut down, isolated and cool enough before performing repairs and maintenance.

For preventive maintenance of the engine, please refer to the Owner's Manual of the Honda engine supplied with the Ride on Power trowel. The following schedule should be followed when performing regular maintenance of the trowel:

DAILY (8 – 10 HOURS)

- Check the oil level in the engine crankcase and gearbox before each use, refill as necessary. The gearbox is fitted with a sight glass, maintain the oil level at the half way level on the sight glass.
- Check that the V-belt is running true. Adjust or replace as necessary.
- Keep the trowel clean and free of concrete residue after each use.

WEEKLY (50 – 60 HOURS)

- Check and clean or replace engine air filter as necessary.
- Check blades for their condition, and adjust or replace if necessary.
- Relubricate trowel arms, thrust collars and clutch.

MONTHLY (200 – 300 HOURS)

- Remove, clean, reinstall and relubricate the trowel arms and thrust collars.
- Check and adjust the trowel arms for alignment
- Remove, clean, reinstall and relubricate the clutch.

YEARLY (2000 – 2500 HOURS)

- Check arm bushings, thrust collar bushings, and shaft seals. Replace if necessary.
- Check the pitch control cable for wear. Replace if necessary.

TROUBLESHOOTING

SYMPTOM	POSSIBLE CAUSES AND CORRECTION
Motor does not start	■ Check the ON/OFF or dead mans foot switch to ensure that it is switched to "ON" ■ Check the runaway protection switch is operational ■ Check the fuel supply ■ Check the crankcase oil level. An oil sensor device is fitted to the motor, low oil level prevents the motor from starting or stopping ■ Check the carburettor jet and bowel to ensure they are clean
Motor stops	■ Check the fuel supply ■ Check that the fuel cock is turned on ■ Check the condition of the air filter
Petrol motor lacks power	■ Check the condition of the air filter ■ Check the condition of the spark plug

SPECIFICATIONS

TROWEL MACHINE

Model	FP836
Part Number	F03836
Motor	HONDA GX690
Governed Motor Speed	140 RPM
Trowel Path	78” (1980 mm)
Weight	330Kg
Noise Levels	105Dba.
Vibration Levels	< 2.5 m/s2

Sales Office 1800 801 108
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