



Models ZOF 161100 & ZOF 161200



INTERIM OPERATOR'S MANUAL

READ THIS MANUAL BEFORE OPERATING THE MACHINE

DEATH, PERSONAL INJURY AND/OR PROPERTY DAMAGE MAY

OCCUR IF THE INSTRUCTIONS IN THIS MANUAL ARE NOT FOLLOWED

OWNERS INFORMATION

Record the following information

Machine

Model No: _____

Serial No: _____

Engine

Model No: _____

Date of Purchase: _____

Purchased From: _____

ISSUED TO

Owners Name: _____

Address: _____

Town/City: _____

Phone No: _____ Fax No: _____

Email Address: _____

Introduction

This manual covers the following products

ZOF 161100 Panther
ZOF 161200 Panther

READ THIS MANUAL carefully to learn how to operate safely and maintain your Panther Mower effectively.

Failure to follow Safety, Operating or Maintenance instructions in this manual could result in Death, Personal Injury or Equipment Damage.

THIS MANUAL IS PART OF YOUR PANTHER MOWER and should be supplied with the mower when you take it to a Kingcat Dealer for service or if you lend or sell this mower. This should also apply to the Engine Owner's Manual.

CONVENTIONS. Measurements in this manual are given in metric units unless otherwise stated.

Right-hand and Left-hand are determined by facing the direction of forward travel. Direction of rotation is determined by looking into the components in motion parallel to the axis of rotation.

WRITE PRODUCT IDENTIFICATION NUMBERS in the Owners information section of this manual. Accurately recording these numbers will assist your Kingcat Dealer when ordering spare parts or help in tracing the Machine if it should be stolen. Store this manual in a secure place remote from the mower.

ENSURE YOU UNDERSTAND THE WARRANTY POLICY with regard to the responsibilities of operation, maintenance and ownership of this mower.

THE INTENDED USE OF THIS MACHINE IS FOR MOWING OF Residential lawns, Landscape Parks, Gardens, Grounds, Sporting Fields, Farms and Lifestyle blocks... Strict adherence to the conditions of Operation, Maintenance, Service and repair as specified by the manufacturer constitute essential elements for the intended use.

Use in any other way not specifically approved directly by the manufacturer is considered as contrary to the intended use and will increase the risk of personal injury or property damage and is therefore considered as misuse for which the manufacturer accepts no responsibility as these increased risks must be accepted solely by the user.

OPERATION, MAINTENANCE, SERVICE AND REPAIR of this machine should be performed only by persons familiar with its characteristics and acquainted with relevant Statutory Regulations in force at the place and time.

When your mower requires service or repair please remember your Kingcat Dealer is an industry trained professional who is supported by the personnel of the Sales and Marketing, Parts Distribution and Service Sections of the Manufacturer and is dedicated to your satisfaction.

THE INFORMATION INCLUDED IN THIS MANUAL was considered correct at the time of approval for printing. HMF Mowers reserves the right to change specifications or designs without notice or obligation.

ASSEMBLY AND PREDELIVERY INSTRUCTIONS

RECEIVING

When receiving a new Panther Mower, carefully inspect the shipping crate and machine for any damage taking particular notice of any possible concealed damage. Sign the delivery note only when you are satisfied that the product is in good condition.

UNPACKING

Place the shipping crate on a firm flat level surface and proceed to unpack from the Pallet.

Carefully remove all strapping and protective covering and dispose in appropriate facilities.

Unlock and lower deck to normal position, BE AWARE that deck weight can take you by surprise. Move deck locking pins to the "Lock" position.

Dispose of all remaining packing material.

ASSEMBLY ADJUSTMENTS

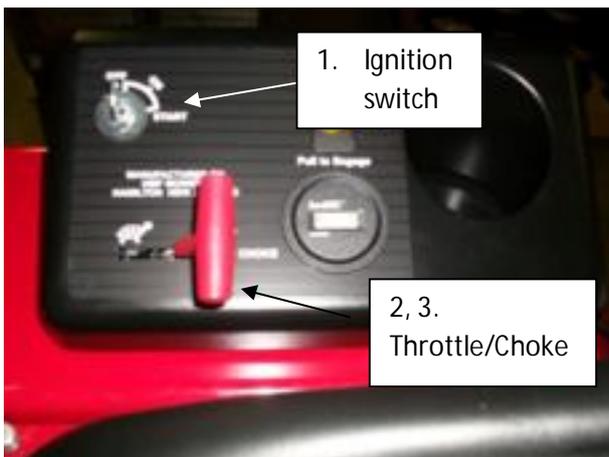
Check tyres for correct inflation:

Drive Wheels 15 psi
Rear Castor Wheel 20 psi
Front Deck Wheels 20 psi

Place unit on a flat level surface.

Making sure that the deck height adjusting pins are in the same position on each of the three height adjusting towers. Check the mowing deck for level. To adjust, back off the lock nuts and adjust the two locking bolts at the deck pivot point on each side re-tighten the lock nuts.

FUNCTION OF OPERATING CONTROLS



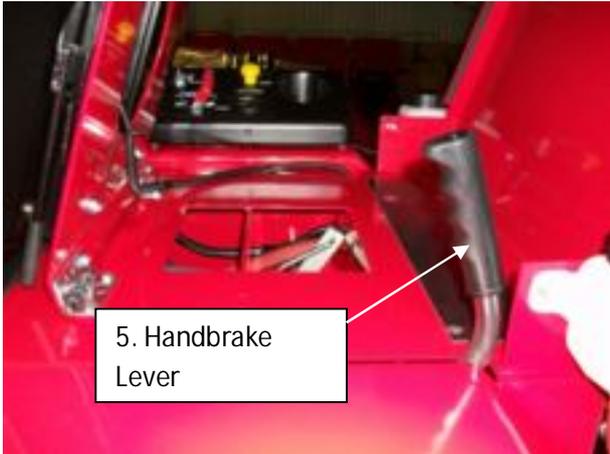
- 1. Ignition switch: Start, Run, Off**
When key inserted, rotate it clockwise to **start** position, release key when engine starts, and switch will automatically return to the **run** position. Turn key to **off** position to stop the engine.
- 2. Throttle control:** For controlling engine speed, move the lever rearward to increase engine rpm and forward to decrease engine rpm
- 3. Choke control:** For starting the engine when cold. Move the lever all the way rearward for start position. Move the

lever forward to the run position immediately when the engine starts.

- 4. Blade Control Knob:** Pull out to engage the blade drive, push in the stop the blades.



- 5. Handbrake:** To Park mower when unattended. To apply, lift lever to vertical position..DO NOT ATTEMPT TO DRIVE WITH THE PARK BRAKE ENGAGED. To release, move lever down,..



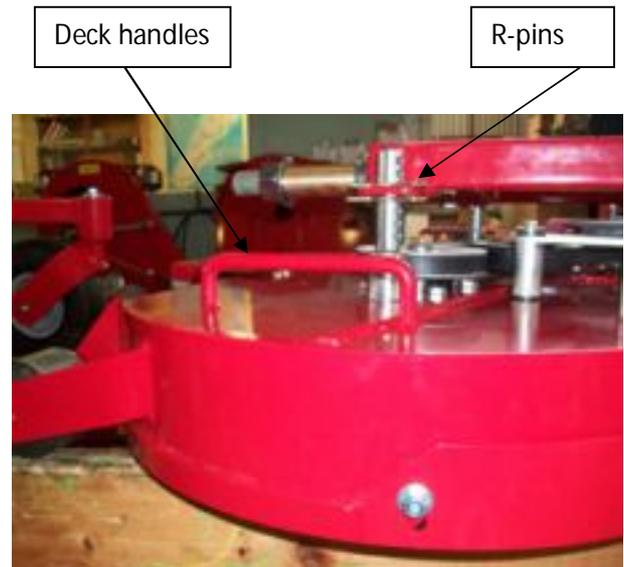
5. Handbrake
Lever

6. **Control Levers:** used to control the direction and speed of the mower. Levers are used to steer, accelerate, decelerate and change direction.



6. Control levers

7. **Deck Height adjustment:** USING THE DECK HANDLES ON TOP OF THE MOWING DECK TO TAKE THE DECK WEIGHT, fit "R" pins to the same relative position on each of the three deck height towers. DO NOT ADJUST DECK HEIGHT WITH THE ENGINE RUNNING OR THE BLADES GOING



Deck handles

R-pins

PRE DELIVERY CHECKLIST

Check off each item as it is found satisfactory or proper adjustments are made:

- All safety guards and shields are fastened in place
- All decals are in place and readable
- Inflate tyres (see maintenance section)
- Check engine oil level (see engine owner's manual) and Hydro
reservoirs
- Check V belt tensions and adjustments (see maintenance section)
- Fill battery to the correct electrolyte level and charge
- Add fuel (see maintenance section)
- Check controls: throttle/choke, blade engagement, park brake, drive
system
- Test drive tractor
- Check for fluid leaks (engine oil, fuel, battery acid)
- Check safety stop system
- Check paint work and touch up where necessary
- Clean and polish tractor unit, blacken tyres

Date completed: _____

By Signature: _____

DELIVERY CHECK LIST

Check off each item as you review the Owners/Operators Manual with the customer explaining the following:

- HMF Mowers warranty policy
- Safety instructions and safe operation
- Use of controls
- Maintenance section
- Operating the tractor correctly
- Transporting the tractor safely on a trailer or truck
- The correct fuel, oil and lubricants
- Daily and periodic inspections
- Maintaining the tractor regularly and correctly
- Record Owners information
- Give the customer the Operators Manual and Engine Owner's manual,
encourage them to read the manuals before operating the tractor

Date Completed: _____

By Signature: _____

SAFETY PRECAUTIONS

Important

All operators must be aware of all safe operating and maintenance procedures. **This is the Owners responsibility** and it is recommended that full training, including reading and understanding this manual, is given to ALL operators.

Preparation

Always wear suitable clothing e.g. Long trousers, strong foot wear, suitable ear and eye protection. Long hair should be tied up and/or covered to prevent accidental entanglement with moving machinery parts or tree branches etc.

Thoroughly inspect the area where machine is to be used and remove all objects that could be thrown by the blades.

Adding Fuel – **WARNING, PETROL IS HIGHLY FLAMMABLE**

- a. Store fuel in containers specifically designed for this purpose
- b. Refuel outdoors only
- c. Do not smoke while refuelling
- d. Add fuel before starting the engine
- e. Never remove the fuel cap or add petrol while the engine is running or when the engine is hot.
- f. If petrol is spilled, do not attempt to start the engine but move the machine away from the area of spillage and avoid creating any source of ignition until the petrol vapours have dissipated
- g. Replace all fuel tank and container caps securely

Before using, always visually inspect the cutting deck assembly, blades, blade bolts/nuts are not worn or damaged. **Replace worn or damaged parts.**

Take care rotating one blade as this will cause the other blades to rotate.

Operation

Your Panther mower is equipped with a safety interlock electrical system that is designed to protect you and others from injury. **Never disable this system by disconnecting wiring from switches etc.** Always ensure the system is in good working order and repair immediately should a fault occur.

The safety interlock system has the following features:

1. Engine will not crank unless the blade control knob is in the disengaged position and the steering levers are in the 'out' position
2. The engine will shut down when the operator moves from the seat if the blade control knob is in the engaged (out) position. The operator may move from the seat while the engine is running if the blade control knob is in the disengaged (in) position. This feature allows the operator to dismount safely to remove obstacles, open gates etc, without the engine shutting down.

Do not operate this engine in a confined space where dangerous carbon monoxide fumes can collect.

Operate the machine only in daylight or in good artificial light.

Never direct discharge of material towards bystanders nor allow anyone else near the machine while it is operating.

Never leave a machine running while unattended. Always disengage deck blade control switch, place drive control levers in the neutral position, apply handbrake, turn engine off and remove key before leaving seat.

Watch out for traffic and/or pedestrians when operating near roads and footpaths.

Trying to drive with the Handbrake engaged will cause the engine to stop, and can damage the transmission brakes.

Stop the blades rotating before attempting to cross surfaces other than grass.

Never operate the machine with defective guards or without all safety devices in place and operating correctly.

Never attempt to clear grass blockages while the engine is running. Use a stick **NOT YOUR HANDS** to clear the obstructions.

Take great care when mowing slopes. It is recommended that operators should not attempt to mow a slope until sufficient experience and confidence has been gained on flat ground.

When mowing slopes, always check that there are no hazards at the bottom of the slope such as rivers, banks, fences etc.

OPERATING INSTRUCTIONS

If you are a first time operator for this style machine, read and understand section 1 before attempting to operate.

Section 1

GETTING STARTED

Choose a large flat area free from obstacles for your first operating attempt

If the machine has been parked in a confined area, push it out or have someone experienced to move it into the mowing area for you.

1. Without engine running, place the two drive levers into the neutral position, open them as wide as possible and sit on the seat. .
2. Adjust the seat position so that your feet rest comfortably against the footrest.

READY TO START

1. Make sure the park brake lever is in the “park” (up) position
2. Make sure that the blade control knob is in the disengage position (pushed in). Engine will not crank if knob is pulled out.
3. Set throttle control to full rear position to engage choke.
4. Turn ignition key to start and release immediately when the engine starts.
5. Push the throttle control lever forward to approximately the middle position soon after the engine starts and then back for fast speed when the engine has warmed enough for smooth running.
6. Move the park brake lever down into the “drive” position
7. Bring the steering control levers together (levers must be out to start the engine)
8. Without engaging the cutting blades, gradually move the control levers forward evenly to move tractor forward slowly. As you gain confidence, move the levers further forward to increase travel speed and then gradually move them back to the neutral position to slow down and stop.

Always use slow gradual movement as the machine will respond directly to the action of the control levers. (Quick jerky movement will cause the machine to operate in a quick jerky manner).

9. Check that all is clear behind you and move the control levers rearward evenly to move the tractor rearward. Slowly return the controls to the neutral position to slow down and stop.
10. To make a left turn while travelling forward, move the right control lever further forward and the left control rearward.
11. To make a right turn while travelling forward, move the left control lever further forward and the right control lever rearward.
12. Continue to practice varying travel speeds and turns until you are confident and familiar with the function of the control levers. It is better to keep both drive wheels moving during turns without skidding a wheel to minimize turf damage.
13. Be aware: Sudden stops and quickly going from forwards to reverse can cause the trailing rear wheel to lift from the ground. This is normal and can be minimized by: driving smoothly and keeping pressure on the footplate with both feet.
14. By design front zero turn mowers have a better rate of climb on slopes going backwards than forwards. Be aware that backing up a slope can also cause the rear trailing wheel to lift. Apply pressure to the foot plate with both feet and back up smoothly

Section 2

READY TO CUT GRASS

1. With engine running, stop the tractor unit where the grass is not thick, long or wet.
2. Move the throttle control lever rearward to fast (Rabbit) but not into the choke section.
3. Engage the mowing blades by pulling the blade knob out.
4. Move the tractor forward and determine that the cutting height is suitable. Raise or lower the cutting deck as necessary. If long grass is required to be cut short, cut in high position first then cut the area again in the lower position.
5. To stop the cutter blades, push the blade knob in, this will also engage this blade brake.
6. Always cut grass with the left side of the cutting deck towards buildings, kerbs, walls etc. Mowing with discharge opening close to vertical faces, can cause foreign objects to deflect toward the operator and causes injury. Best mowing practice is to mow in a counter clockwise direction, thereby discharging the cut grass onto the cut lawn. Mowing in a clockwise direction will increase the amount of grass to be cut with each circuit to the point where the mower may not be able to cope.
7. **Do not attempt to start blades if the cutting deck is clogged or the mower is sitting in long grass.** The drive belt and or blade clutch will be damaged if this occurs.
8. **Tilting the Mowing deck:** To tilt the deck to vertical, park the mower on a flat hard stable surface. Blades and engine must be turned off. Lift the deck slightly to take the weight off the locking pins, pull and twist the two locking pins on the deck arms down to the unlock position. From the front of the deck, lift the deck assembly by the castor wheel arms to the vertical position, while holding the deck at vertical-reach over or around the deck and re-lock the pins to secure the deck. See photo on page 13.



9. Cleaning: With the mowing deck tilted to vertical, wash both the top and underside of the mowing deck with a hose; avoid high pressure water blasters as they may force water pass the seals into the bearings. Also wash any grass off the transmissions. To return the deck to the mowing position, unlock the pins holding the deck to vertical, gently lower the deck back down on to the castor wheels, move the locking pins vertical to the lock position. It may be necessary to take the deck weight one side at a time to allow the locking pins to “pop” back into place. After washing, start the engine and, while sitting on the seat, engage the blades for a few minutes to clear water from pulleys and belts.

10 Loading/Unloading on to a trailer; Extreme care must be taken when driving on to a trailer using wheel ramps. Ramps must be attached to the trailer so that they cannot move from under the drive wheels. You will need three ramps, or a single ramp the same width as the wheel track. It may be necessary to unlock the deck pins to allow the deck increased articulation. Extreme care is needed if backing up ramps onto a trailer with the deck pins unlocked, **use a low throttle setting**, drive slowly and keep your body weight well back. Should the mower start rocking back and forth with the rear wheels lifting off the ground, release the drive handles to the neutral position immediately. Remember to **always relock the deck pins before starting to mow.** **Never drive the mower with the deck unlocked.**

IMPORTANT STEPS FOR EFFICIENT MULCHING IF USING THE OPTIONAL MULCH PLATE

- 1. Always use maximum engine revs.** Trying to cut grass at low engine revs will put unnecessary load on the engine and belt drive system. It is a false economy.
- 2. Never attempt to mulch long grass.** Only cut 1/3 on the grass length at a time. Trying to mulch long grass will produce a poor finish, overload the mowing deck and cause the engine to stall and/or damage the belts
- 3. Do not mulch wet grass.** Wet grass will stick to the inside of the mowing deck, build up and not be mulched. This will cause overloading and belt failure as above.
- 4. To get the best results when mulching;** Cut the grass long enough to accept the mulched clippings. If you can see grass on the lawn after mulching, the cut grass is either too short,(nowhere for the mulched grass to go) too long or too wet, (too much grass trying to be processed at once) or you are travelling too fast, not allowing enough time for the mulching process to happen.

Moving the tractor without the engine running

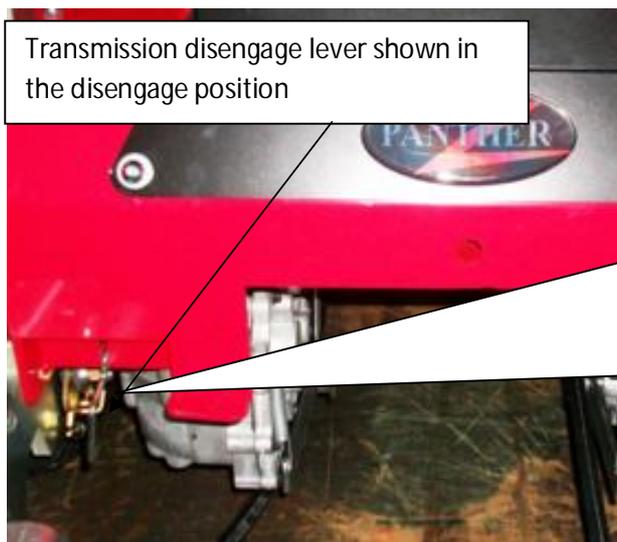
It is intended that the Panther should always be moved by its own motive power, however, should it be required to move without power due to mechanical failure e.g. flat battery, no fuel etc, it will be necessary to **disengage the hydrostatic transmission units before pushing or towing.**

CAUTION:

DO NOT TOW AT SPEEDS GREATER THAN 5KPH OR FOR LONG DISTANCES

To disengage the transmissions, pull both transmission dump valve rods forward. A separate lever is provided for each transmission (one each side) and both need to be activated.

To engage transmissions push both rods fully in.



MAINTENANCE and ADJUSTMENTS

The Panther has been designed and manufactured to very high specifications to provide a grass cutting machine that will give long trouble free service.

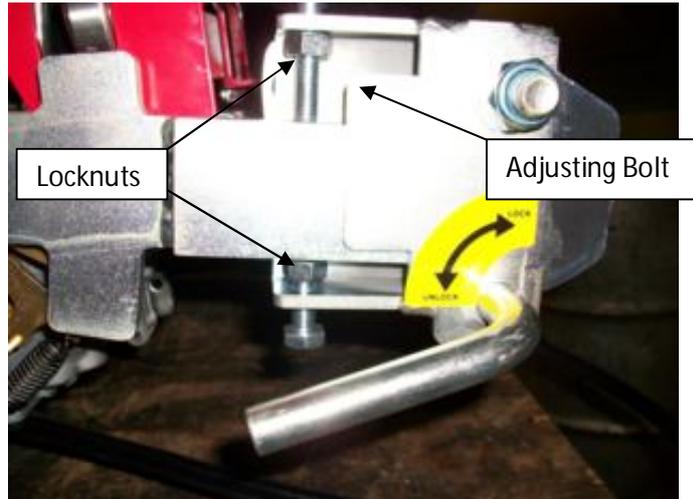
It is important however, that general maintenance is carried out on a regular basis to ensure that **Performance, Reliability and Safety** are maximised.

- 1. Oil changing and filter replacement (engine)** refer to separate engine owner's manual **servicing engine air cleaner foam pre cleaner** see owner's manual for correct method to check and service.
- 2. Lubrication**, use a few drops of oil on all linkages and pivot points associated with deck lifting mechanism. This should be done every 25 to 30 hours.
- 3. To check and/or replace blades** stop engine and remove spark plug leads. Tilt cutting deck .Check for blade damage and or excessive blade wear taking particular note of the condition of the air vane behind the cutting edge. It is important that all blade tips are at the same height for best cutting performance. Repair or replace if necessary.
- 4. Battery Maintenance.** Check the battery fluid is at the correct level. Use distilled water to top up if necessary. If the mower is not used regularly, the battery will lose charge (even if the terminals are not connected). Keep battery charged with a mains battery charger.
- 5. Tyre pressures.** Incorrect tyre pressures will alter the level of the cutting deck. Correct pressures are as follows:
 - Drive Wheels 15 psi
 - Rear Castor Wheel 20 psi
 - Front Deck Wheels 20 psi

ADJUSTMENTS

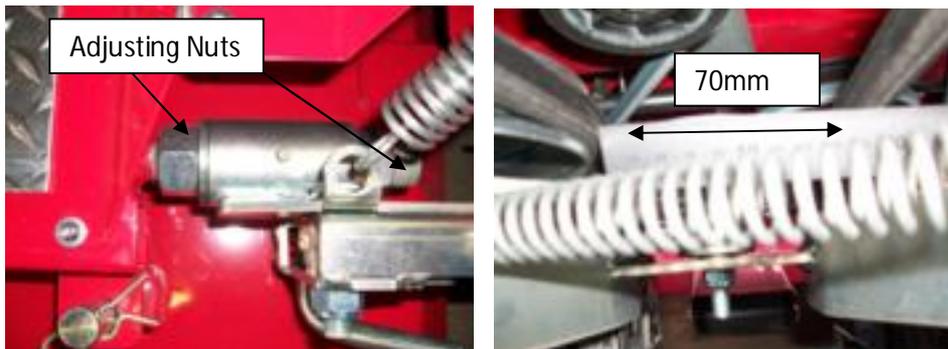
Steps to level cutting deck

Park the mower on a level surface. Measure the height of the deck off the ground on both sides. If the height differs, one side can be raised or lowered to match the other by loosening the locknuts on the deck mounting arms and adjusting the adjusting bolt. Tighten the locknuts after adjustment.



PTO belt (primary blade) tension

To increase the cutter drive belt tension, adjust the cutting deck forward using the adjustment nuts on the deck support arms. The tension will be correct when there is a 70mm gap between the belt faces at the point opposite the idler pulley closest to the clutch.



If you are not confident making these adjustments, take your machine to your HMF Mowers dealer who is competent and qualified to do them for you.



Warranty Claim Form

HMF Mowers
Private Bag 20503,
Te Rapa, Hamilton. 3241

Phone:07 849 2274
Fax: 07 849 0531
email: info@hmf.co.nz

Dealers Name: _____ Claim Date: / /

HMF Mowers Claim Number _____
(QUOTED BY HMF MOWERS PRIOR TO WORK BEING COMMENCED)

Owners Name: _____ Failure Date: / /

Model No: _____ Serial No: _____

Engine Hours: _____ Purchase Date: / /

Commercial Use / Domestic use / Hire Use ← Please Circle

Service Register Attached (see notes below) Yes / No

Describe damage / defect:

Describe Remedy / Work carried out

Materials claimed (** Note all parts for warranty work must be purchased from HMF Mowers)

Part No	Description	Qty	Cost (as per HMF invoice)

Time Taken _____

Procedure for warranty work and claim – this procedure helps minimize warranty claim disapprovals.

- In the event of the need for warranty service, all warranty work must be first discussed with the HMF technical team prior to any warranty work being carried out. Failure to do so may invalidate the claim.

- The information requested above must be supplied for a warranty claim to be processed.
- For the extended warranty (36 months) a copy of the service record for the product is required.

Warranty Policy

New Mower

HMF Mowers warrants in respect of each new Panther ride-on sold, that for a period of one (1) year (Domestic* and Commercial** use) or 6 months (Hire use***) to the original purchaser from the date of purchase, HMF Mowers or an authorized dealer will repair or replace free of charge any ride-on mower parts found to be defective in materials or workmanship under normal use and operating conditions provided that:

1. The mower has been properly and reasonably used, operated, maintained and regularly serviced as per the safety and operating instructions and maintenance schedule during warranty period.
2. The replacement or repair is performed by an authorized HMF Mower Dealer.

**"Domestic/Consumer use" means the personal residential household property use by the original retail purchaser.

**" Commercial use" means the use by professional lawn mowing contractors, schools, government departments and charity operators.

***"Hire use means all uses where the mower is hired out for reward to casual operators..

New Mower Warranty Extension

To triple the warranty period (Domestic use only) from the existing twelve (12) months to thirty six (36) or 300 hours whichever comes first, all we require is that:

1. The warranty registration form be completed and returned to HMF Mowers, Private Bag 20503, Te Rapa, Hamilton 3241
2. The mower receives an initial service at five (5) to ten (10) hours or one (1) month, then a service as per the maintenance schedule at every fifty (50) hours or six (6) months whichever is the sooner, and those service times and dates are recorded in the owner's manual by the HMF Mowers servicing dealer.
3. All Panther cutter deck chassis produced are warranted to give a minimum of **FIVE** years safe operation. (excludes paint repairs)

Parts Installed During New Mower Warranty Period

Warranty coverage for parts installed during the life of the new mower warranty period shall consist of the remainder of the new mower period or ninety (90) days, whichever is the greater, provided the installation is performed by an authorized HMF Mowers Service Dealer.

Engine

The engine in a new mower is covered by the manufacturer of that specific engine, not by HMF Mowers. Please refer to the engine manual supplied with the mower.

Battery and Electric Clutch

The battery or electric clutch in a new mower is covered for a period of twelve (12) months by the battery/electric clutch supplier and/or HMF Mowers to the original purchaser from the date of purchase. (Excluded in extended Warranty)

Warranty Service

In the event of the need for warranty service, please contact your local authorized HMF Mowers dealer. The date and proof of purchase, Model and Serial number of the machine must be supplied before any warranty claim will be accepted for the processing.

Warranty registration

The warranty registration card must be completed by the dealer/purchaser at the time of the purchase and returned to HMF mowers, Private bag 20503, Te Rapa, Hamilton 3241

Warranty Exclusions

1. The rental of another machine or related equipment while unit repairs are in progress
2. Telephone, facsimile expenses or other related communication expenses.
3. Transportation and Insurance charges during transportation of failed unit or any part thereof.
4. The labour, parts, mechanical adjustments or lubricant costs which, in the judgment of HMF Mowers are made or should be made as standard maintenance according to the maintenance schedule.
5. The replacement of normal maintenance parts such as mower discs, blades, cutter bars, bolts and nuts, vee belts, bearings, and chains made in connection with normal maintenance services as opposed to manufacturing defects.
6. Any defect caused by alteration, modification, fitment of non genuine part or attachment not approved by HMF Mowers.
7. Any defect caused by misuse, negligence, accidents or failure to carry out proper maintenance procedures.
8. Any defect caused by work carried out by anyone other than an Authorized Dealer.
9. Damage caused by the continued operation of the machine after it is known to be defective.

10. Damage caused by racing and similar activities or by overloading.

11. The cost and results of any modification done by any persons other than the manufactures to any of the Kingcat products.

All implied warranties (save those preserved by statute) are excluded. Liability for consequential damages under any and all warranties are excluded to the extent exclusion is permitted by law. To the extent that it is not prevented from doing so from statute, the manufacturer will not accept liability for costs of labour, postage, cartage or delivery to replace faulty materials or parts; or for any loss, damage or accident directly, indirectly, or consequently suffered by the purchaser, operator or any person or property as a result of such faults whether due to defective materials or workmanship or otherwise.

The careless or improper use of a machine of this type can be dangerous. The manufacturer or selling agent does not accept responsibility for accident either to the operator, to the owner or to any person directly or indirectly or to property as a result of such accident is caused by circumstances other than by negligence or default of HMF Mowers.

Due to HMF Mowers on-going commitment to product improvement, we reserve the right to change at any time, product specifications, configurations and company policies.

SERVICE RECORD

INTERVAL	HOUR METER READING	SERVICE DATE	DEALER STAMP
10 Hours			
50 Hours			
Subsequent 50 hour intervals			