

# MASTER EQUIPMENT

**BECAUSE YOU DESERVE BETTER**

**Master Equipment**  
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Thank you for your purchase  
of the **MASTER** Sweeper

## MASTER SWEEPER HANDBOOK

It is recommended that you read and understand this manual before operation. This manual is to be read in conjunction with the Kioti CK4220 Tractor Handbook and the Safety information sheet.

### YOUR SAFETY IS PARAMOUNT:

- You have a responsibility to read this information and understand the hazards and safety features associated with the equipment you operate.
- Ensure this safety information is made available to all equipment operators prior to use.
- Report any equipment / mechanical defects immediately to your Safety Manager or “person in charge”.

### SAFETY

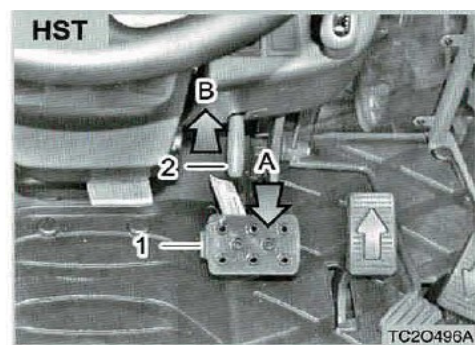
- Always wear the seat belt
- Always sit in the operators seat when starting the engine or operating the levers and controls
- Never carry passengers or children
- Trained operators only to use this equipment
- Do not leave engine running while sweeper is unattended
- Use in well ventilated area
- Use 3 points of contact when climbing in to and out of the operator cabin.
- Ensure correct PPE is worn when operating the sweeper. Ensure you wear appropriate working clothes, i.e. safety shoes, tight fitted clothes. If incorrect clothing is worn, these could be caught into rotating parts, or you may slip, leading to an accident.
- Carry out daily prestart checks, see list in next section.
- Check ground conditions before use, only travel up and down slopes not across the slope. Never operate on slopes too steep for safe operation, no sharp turns or sudden movements as this can cause roll over. Check area is stable and not slippery.
- Use care when loading and unloading on to the trailer or transporter truck.
- Ensure the flashing beacon and adequate lighting is working at all times while Sweeper is being used.
- Ensure Sweeper is securely fastened to trailer according to the approved road code when transporting on public roads. Ensure the park brake applied when transporting.

## PRE START CHECKS

- Walk around and visual check over machine
- Check engine oil level
- Check coolant level
- Check transmission oil level
- Check and clean front grill and radiator screen
- Check air cleaner element
- Check brake pedal operation
- Check all operator controls working correctly including dash gauges and indicators
- Check all lights including the flashing beacon is working
- Check seat belt and ROPS cabin for damage
- Check all danger and warning decals are clean and visible
- Check tyre pressure is correct and wheel bolts for tightness

## TO START AND STOP THE SWEEPER

- Make sure there is no obstacles around the tractor
- Depress the brake pedal
- Turn the key into the ON position. Wait for the preheat indicator to go off (approx. 8 seconds) when cold.
- Turn the key all the way until the engine starts then release the key to the ON position
- Warm the engine for 3 – 4 minutes before normal operation
- Check the warning lamps on the instrument panel turn off. If any remain on then turn the tractor off immediately and determine the cause.
- When turning off the machine, reduce the engine revs to idle
- Turn the key to the off position.



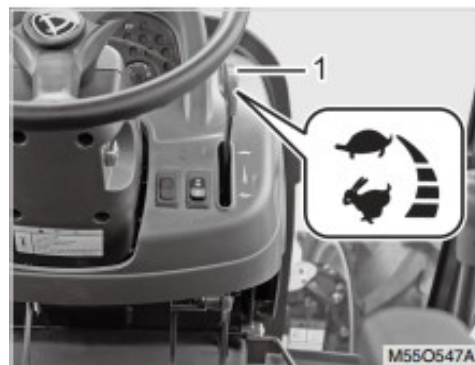
(1) Brake Pedal  
(A) Pull

(2) Parking Brake Lever  
(B) Depress

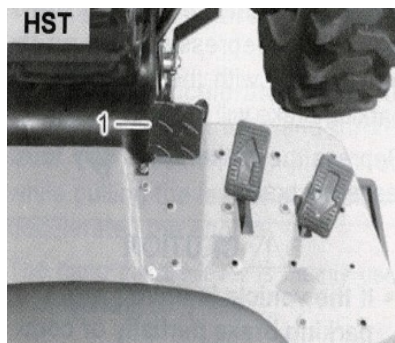
## BASIC OPERATING PROCEDURE OF KIOTI CK4220 TRACTOR WITH SWEEPER ATTACHMENT

### OPERATING TRACTOR – HOW TO DRIVE

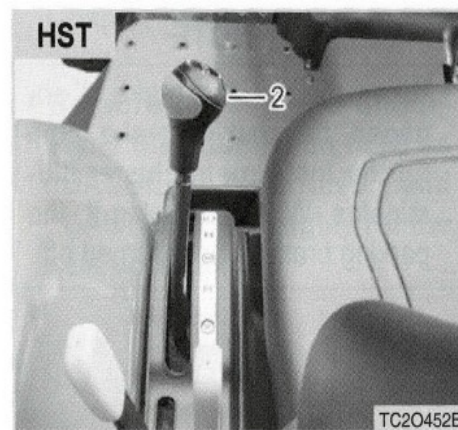
1. Adjust seat and fasten seat belt.
2. Increase slowly the engine RPM from idle to medium speed with the hand Throttle lever.
3. Release the parking brake
4. Select the correct range gear with the Range Shift lever for the type of work you are doing,
5. Use the hydrostatic pedals to move the tractor forward or backwards
6. When parking, stop engine with parking brake applied



(1) Hand Throttle Lever  
↶ : Fast      ↷ : Slow



*Hydrostatic Pedals*



(1) Main Shift Lever      (2) Range Shift Lever

**WARNING.** The 4WD function has been disabled to prevent excessive wear on the front tyres. Extra caution is needed when in wet slippery conditions or operating on slopes.

## SWEEPER CONTROLS

Ensure joystick lever is in the unlock position. Use the hydraulic control lever labelled “Broom On” and move to the forward position. This will begin the broom rotating and sweeping the material away from the Master Sweeper. Use the Joystick control lever to raise/ lower and angle the Broom head left and right as necessary.

**Helpful tip; if the broom won't lower, ensure the broom is rotating to enable the lowering function. When you have lowered the broom head, then stop the broom rotation.**



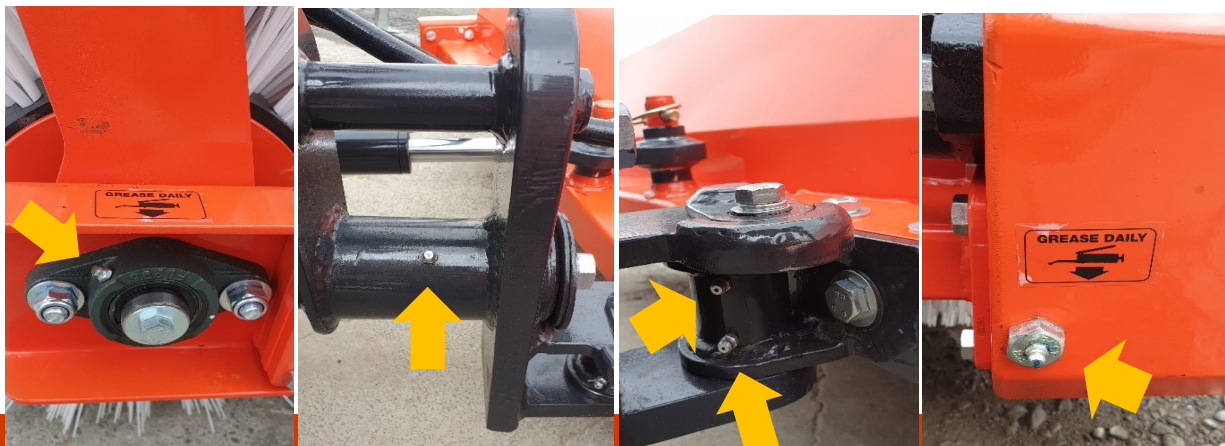


## MAINTENANCE

The first 50 hour service is to be carried out by Power Farming Service Department. This is to be arranged by Allways Hire. There after the machine is to be serviced by a qualified tractor service technician. Please refer to the Tractor handbook for full details for servicing the tractor. The following chart and grease points is the basic requirements to get the best out of the Master Sweeper.

CHECKING INTERVAL (Run Hours)	CHECK AND MAINTENANCE ITEMS	REMARKS
Initial 50 hours	Engine oil and Engine oil filter (DI / IDI engine), Transmission oil filter, HST filter	Replace
	Clutch pedal play, Brake pedal play, Fan belt tension, Greasing, Wheel bolt torque	Check
Daily check	Transmission oil level, Front axle oil level, Coolant level, Air cleaner element	Check
	Radiator grill cleaning, Engine air filter, Seat belt	Check
	Tire inflation pressure and damage, Parking brake condition	Check
	PTO shaft and Guard condition, 3 point hitch and Draw-bar condition with secure pins	Check
Every 100 hours	Engine oil and Engine oil filter, Clutch pedal play, Brake pedal play, Fan belt tension and condition, Engine air hose and clamp, Fuel line and clamp	Check
Every 200 hours	Transmission oil filter, HST filter, Fuel filter	Replace
	Radiator hose line and clamp, Toe-in, Air cleaner filter	Check
Every 250 hours	Engine oil and Engine oil filter (Tier2 or 3 engine)	Replace
Every 400 hours	Transmission oil, Front axle oil, Engine oil and Engine oil filter (Tier4 engine)	Replace
Every 800 hours	Engine intake and exhaust valve	Adjust
Every 1,000 hours	Coolant	Replace
Every 1 year	Air-con filter, Engine air filter, Engine oil and Engine oil filter	Replace
Every 2 years	Coolant	Replace

### Lubrication points on the Master Sweeper



## Tyre pressures

Front Wheel 34PSI

Rear Wheel 24PSI

## Part Numbers and Oils

Engine Oil Filter	E6201-32443
Fuel Filter	F6800-16411
Air Cleaner outer	E7230-11081 or Donaldson P822768
Air cleaner Inner	Donaldson P822769
Air Con / Cab Filter	TG16-0379A
Hydraulic Filter	T4260-38125

## Fluid Chart

No.	Item	Specification	Capacity [L (U.S.gal.)]
1	Engine oil	Tier2 or 3 (Without DPF) - API CH grade above Tier4 (With DPF) - API CJ grade above SAE 10W30, 10W40, 15W40	CK3520/4020: 5.5 (1.45) CK4220: 6.0 (1.6)
2	Transmission fluid	DAEDONG : UTF55 or S h e l l : Donax-TD, Exxonmobil: Mobilfluid 424 Exxon Hydraul 560 B P : Tractran UTH	22.0 (5.8)
3	Grease	SAE multi purpose type grease	As needed
4	Coolant (Engine Only)	Fresh clean water with ethylene glycol (50:50)	CK3520/4020: 3.0 (0.79) CK4220: 3.4 (0.89)

## SPECIFICATIONS

ENGINE
Daedong 3B183LWM-E
Liquid Cooled 3 Cylinder Diesel
1826cc Displacement
42hp @ 2800 RPM (Max hp)
34 Litre Fuel Tank Capacity
TRANSMISSION
3 Range Hydrostatic Drive
Cruise Control
Rear Differential Lock
HYDRAULICS & LINKAGE
Manual Linkage Control
44.4 l/min Total Flow
TYRES
Industrial / Turf / Agricultural

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## **BRAKES**

Independent Oil Immersed Disc Brakes

Cast Iron Transmission and Axle Housing

## **OPERATOR ENVIRONMENT**

Front Work Lights with Indicators/Brake Lights

Step Through Platform

Under Bonnet Muffler

Comfort Seat

Deluxe A/C Cabin

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## **WEIGHT**

1600kg excl. Trailer