

**OPERATIONS MANUAL
KUBOTA B3150 HST
WITH NEILO BROOM COMBO**



**This manual is to be used in conjunction with the
Kubota B3150 operator manual supplied**

**ROLLERS
AUSTRALIA**

Safety First

Before operation please read and understand the yellow safety section of the Kubota B3150 operator manual.

- Always wear a seat belt
- Always sit in the operators seat when starting the engine or operating levers and controls
- Never carry passengers
- Before dismounting the tractor stop engine, disengage PTO/ broom and engage parking brake
- There are dangerous pinch points and rotating parts in the vicinity of the front broom, do not operate with other personal in the vicinity
- Stop the tractor, disengage PTO broom drive, engage parking brake before attempting any adjustment or work on the tractor or broom
- Only operate the tractor broom with doors and windows fully closed

■ Seat Belt



WARNING

To avoid personal injury:

- Always use the seat belt when any ROPS or CAB are installed.

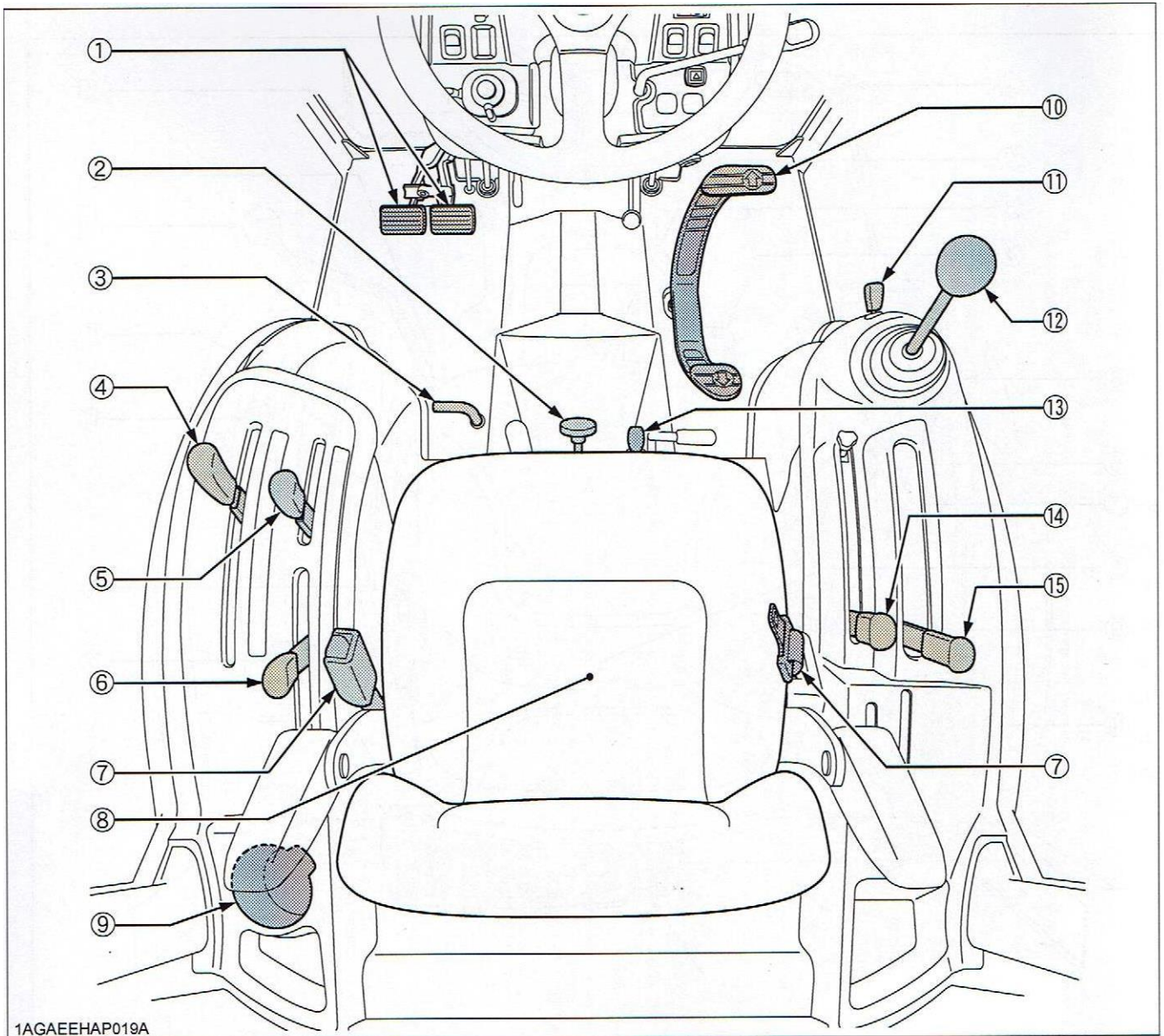
Adjust the seat belt for proper fit and connect the buckle.
This seat belt is auto-locking retractable type.



① Seat belt

BASIC OPERATING PROCEDURE OF KUBOTA B3150HST TRACTOR WITH NEILO BROOM

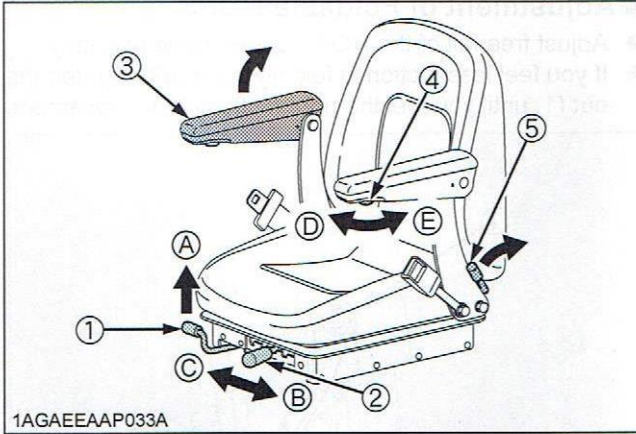
For detailed operating and servicing procedures please see Kubota B3150 HST operator manual supplied



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- | | |
|----------------------------------|-------------------------------------|
| 1. Brake pedal | 9. Cup Holder |
| 2. 3 PL speed knob (disengaged) | 10. HST speed control pedal |
| 3. Differential lock Pedal | 11. Broom lock lever |
| 4. Range gear shift lever | 12. Broom control joystick |
| 5. PTO clutch (Broom Drive) | 13. 4WD lever(disengaged) |
| 6. PTO select Lever (disengaged) | 14. 3 PL position lever(disengaged) |
| 7. Seat belt | 15. Cruise control lever |
| 8. Operators seat | |

Seat and Steering Wheel Adjustments



- | | |
|--------------------------------|---------------------------|
| (1) Travel adjust lever | (A) "UNLOCK" |
| (2) Suspension adjust lever | (B) "TO INCREASE TENSION" |
| (3) Arm rest | (C) "TO DECREASE TENSION" |
| (4) Arm rest angle adjust knob | (D) "TO INCREASE ANGLE" |
| (5) Backrest tilt adjust lever | (E) "TO DECREASE ANGLE" |

◆ Travel adjustment

Unlock the travel adjust lever and slide the seat backward or forward, as required. The seat will lock in position when the lever is released.

◆ Suspension adjustment

Pull and slide the suspension adjust lever to desired tension or increase tension position while sitting in the seat.

◆ Tilt adjustment

Pull the backrest tilt adjust lever and tilt the backrest to the desired position.

◆ Arm rest

Armrest may be set at upright position if desired.

◆ Armrest angle adjustment

Turn the arm rest angle adjust knob to the desired angle.

IMPORTANT :

- After adjusting the operator's seat, be sure to check to see that the seat is properly locked.

■ Tilt Steering Adjustment

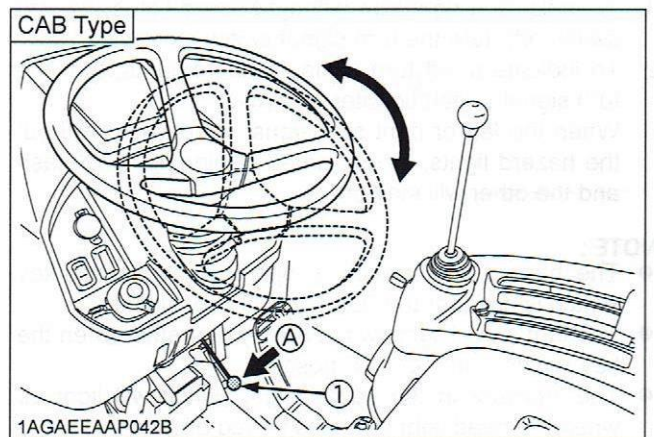
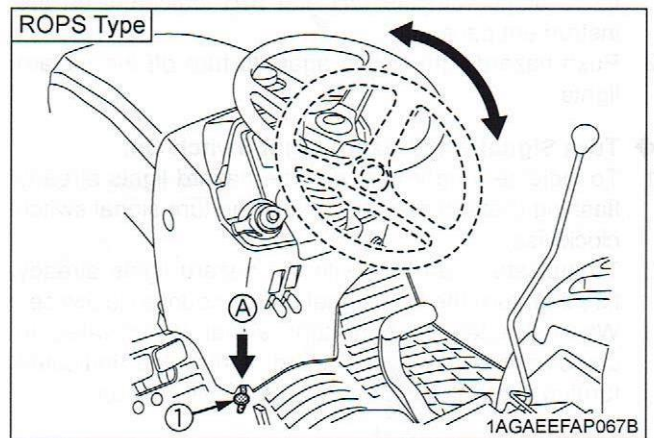


CAUTION

To avoid personal injury:

- Do not adjust the steering wheel while the tractor is in motion.

Press down the steering wheel pedal, to release the lock so the steering wheel can be adjusted to one of 3 desired positions.



- (1) Steering wheel tilt pedal (A) "PRESS DOWN"

Gauges:

Fuel

Coolant Temp

Engine RPM

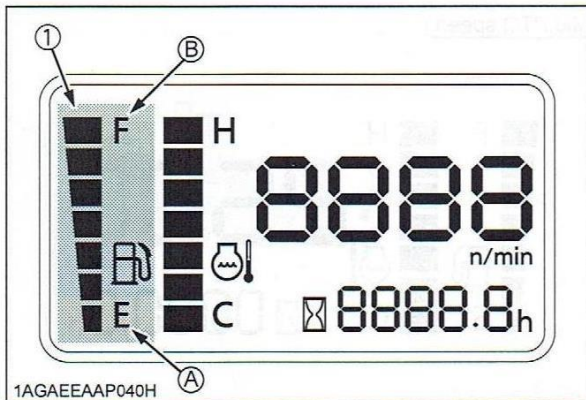
PTO Speed

■ Fuel Gauge

When the key switch is on, the fuel gauge indicates the fuel level.

Be careful not to empty the fuel tank. Otherwise air may enter the fuel system.

Should this happen, the system should be bled. (See "Bleeding Fuel System" in "SERVICE AS REQUIRED" in "PERIODIC SERVICE" section)

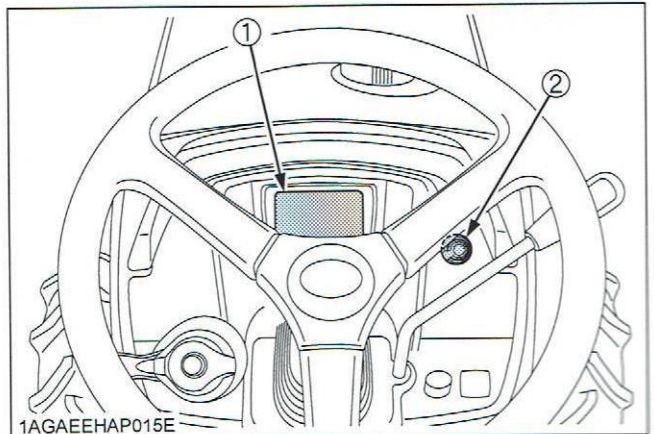


(1) Fuel gauge

(A) "EMPTY"
(B) "FULL"

■ Changing Display Mode

1. The LCD monitor give several different displays.
2. The LCD monitor displays "Engine rpm" normally.
3. The display switch is pressed, the display is switched to "Rear PTO speed", "Mid PTO speed", "Engine rpm".



- (1) LCD monitor
(2) Display switch

■ Coolant Temperature Gauge

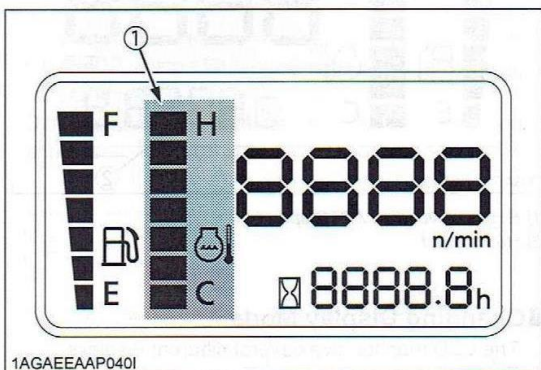


WARNING

To avoid personal injury or death:

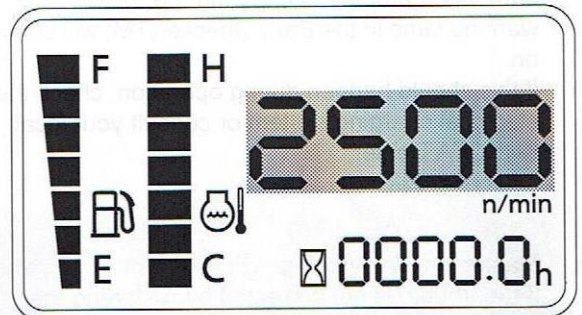
- Do not remove radiator cap until coolant temperature is well below its boiling point. Then loosen the cap slightly to relieve any pressure before removing the cap completely.

1. With the key switch "ON", this gauge indicates the temperature of the coolant. "C" for "cold" and "H" for "hot".
2. If the indicator reaches the "H" position (red zone), engine coolant is overheated. Check the tractor by referring to "TROUBLESHOOTING" section.



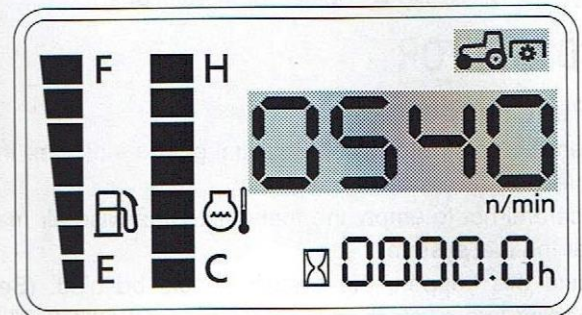
(1) Coolant temperature gauge

Engine rpm



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Rear PTO speed



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To Start Tractor

- Disengage the PTO (Broom drive)
- Ensure cruise control lever (# 1 page 5) is in rear position
- Ensure HST pedal (# 1 page 2) is in neutral position
- Set throttle at aprox. ½ speed
- For first start In cold weather hold the key on the pre-heat position for 0 to 5 seconds
- Start
- To stop tractor Turn key
- When key is off position, broom will be locked and cannot be dropped

Engine operating RPM

When driving the tractor always operate at 80 to 100% of available RPM (throttle) to ensure efficient operation of HST Transmission

ALWAYS WEAR A SEAT BELT!

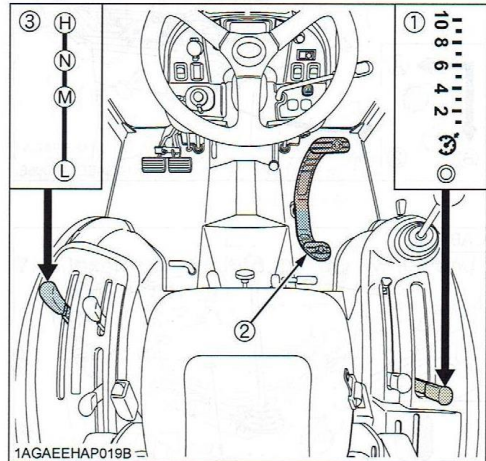
HST Hydrostatic Transmission

HST is a fluid or hydraulic drive transmission.

HST allows infinite speed adjustment and instant forward to reverse travel via the foot pedal.

Components of the HST Transmission are:

1. Cruise control lever
2. HST speed control pedal
3. Range change lever L-M-H



Range change lever 3

Select a suitable gear range depending on the type of work load. Ensure tractor is stationary before selecting gear.

L (low) **M** (medium) **H** (high)

L is the lowest and most powerful gear and will operate between **0 - 5.9 km/H.**

Use for very heavy operations.

M is the medium range and will operate between

0 – 8.7 km/H.

We recommend Medium as the most suitable gear for brooming operations

H is the highest and least powerful gear and will operate between **0 – 18.5 km/H.**

Use for light work and highway operations.

HST continued.

HST speed control pedal (2)

- To move forward, slowly depress the front of the HST pedal
- The further you depress the HST pedal the higher the gear and the faster the tractor travels.
- To decrease speed or when the pulling requirement increases simply decrease pedal pressure.

Forward to reverse:

- To shuttle between forward to reverse simply step on front or rear of HST pedal

Cruise control lever (1)

Caution: We do not recommend cruise control for highway use.

When operating the cruise control we recommend leaving the right hand on the cruise control lever at all times

- Cruise control will manually override the HST pedal.
- Push the cruise control lever forward for a higher gear and the faster the tractor travels

Safety feature of cruise control:

- By stepping hard on the brake pedal or hard on the rear of the HST pedal and the cruise control lever will return to the neutral position.

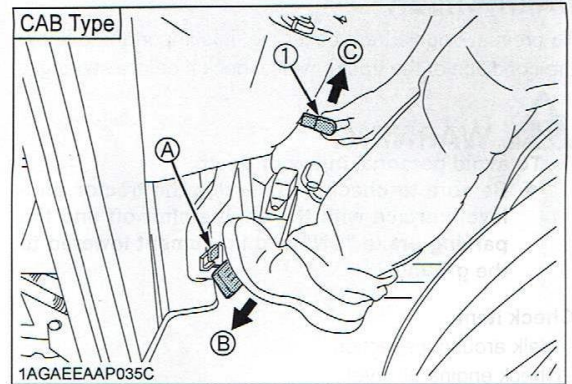
Note: increased transmission noise may be experienced when cruise control engaged, this is normal

Engine braking and the HST transmission:

- Tractors with HST transmissions enjoy very effective engine 8 braking.

Parking Brake

- **To set the parking brakes:**
Depress the brake pedal (a)
- Latch the brake pedal with the parking brake latch lever (1)
- To release parking brake step firmly on brake pedal.

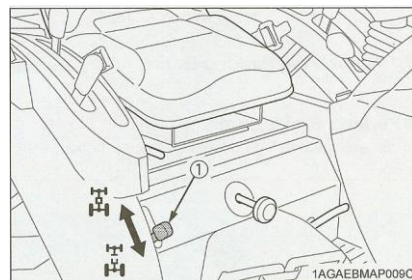


4WD Four Wheel Drive

- 4WD should only be engaged when greater pulling force is required on wet or loose surfaces.
- **Caution!** To avoid excess front tire wear and torque build up in the tractors drive line, do not operate 4WD when operating on hard dry surfaces or traveling at highway speed.

To engage/disengage 4wd:

- Stop tractor
- 4WD lever in up position
- 2WD lever in down position



**Note: Neilo Broom Tractors are locked in 2WD
To avoid excess tyre wear and scuffing on new seal.**

Broom Controls & Broom Drive (PTO)

Joystick control to lift lower and angle

Push directly forward to lower broom

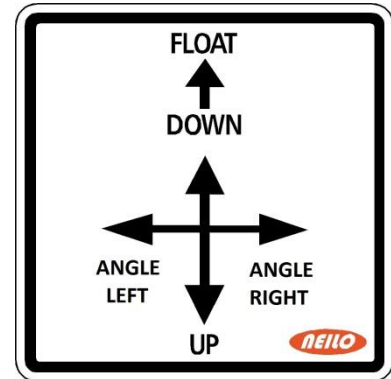
Normal operating position

- Push through detent to float broom

Float should only be used on very undulating surfaces

Brush wear may increase in float position

- Pull directly back to lift
- Push to left to angle leftt (see decal)
- Push to right to angle right (see decal)



Decal above is located by joy stick

Note: Broom cannot be lowered with key off

Safety locking mechanism

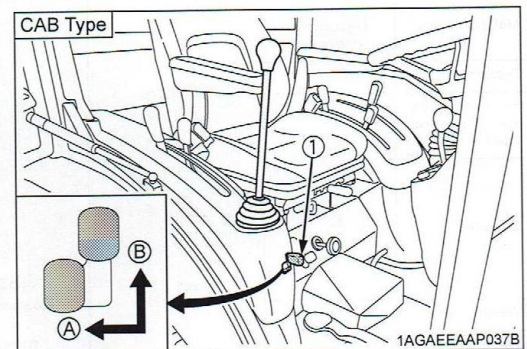
- A locking mechanism is located at the front of the joystick.

Lock before dismounting machine!

To engage & stop broom drive

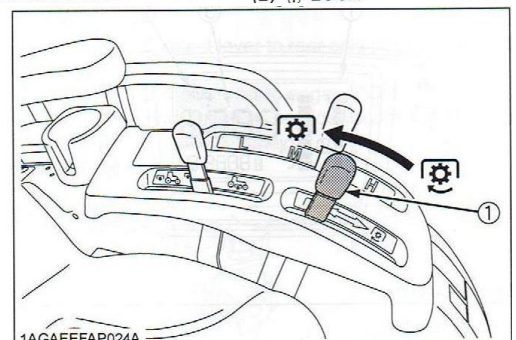
- To engage broom push
- the PTO lever (1) forward
- To stop broom pull lever back

See page 5 re. monitoring pto RPM



(1) Lock lever

(A) "UNLOCK"
(B) "LOCK"



(1) PTO clutch lever

☑ "ON" "ENGAGE"
☐ "OFF" "DISENGAGE"

Caution never ½ engage lever, slippage & excess wear may occur

If the operator leaves the seat with the PTO broom drive engaged the safety switch will stop the engine, to override and operate PTO broom drive while out of the cabin engage parking

brake then engage PTO

Keeping Dust Out Of The Cabin

- Keep all windows and doors shut
- Turn on blower with or without air conditioning
- Set to FRESH to keep positive air pressure in cab, this will minimalize dust
- The lever may have been locked or removed in correct FRESH position in some tractors

Replacing Brush Sections

- Stop engine and lower close to ground
 - Remove 16mm Lock nut LH end of broom
 - Remove large nut on LH end of broom
 - Remove LH end plate and worn brush section
 - Fit new brush sections and replace spacers
- and reverse above procedure
- Spacers may need to be trimmed with grinder to suit the various brush options, spacer should not protrude past end of square shaft



If brushes are to be re-bristle 25mm of bristle must be retained

We recommend NZ Brush Company brushes

Daily & Weekly Service Checks

- Check engine oil level and cooling water daily

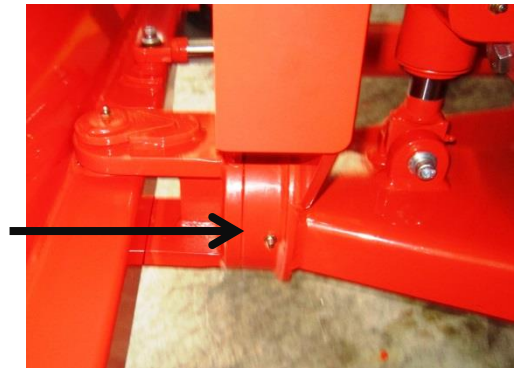
- Greasing-There are twelve grease nipples requiring one shot of grease daily



Important

It is possible to over-grease the spring loaded pivot causing it to lock. If this occurs, remove grease nipple, cycle pivot and release excess grease, replace grease nipple.

A locked pivot will cause premature brush wear!



- Top spin Pre-cleaners automatically eject the dust and Do not require to be emptied.

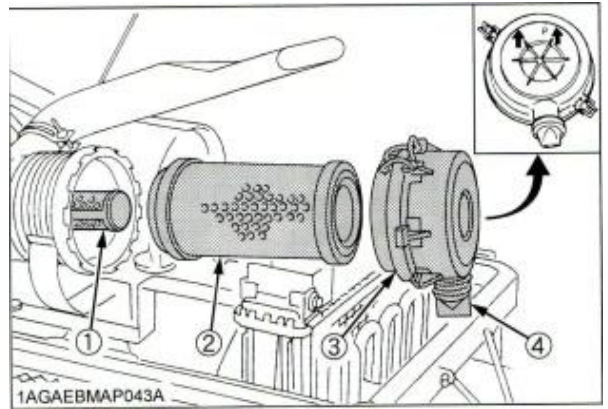


- Weekly: Squeeze vacuator on bottom of long pre cleaner pipe to release potentially trapped water

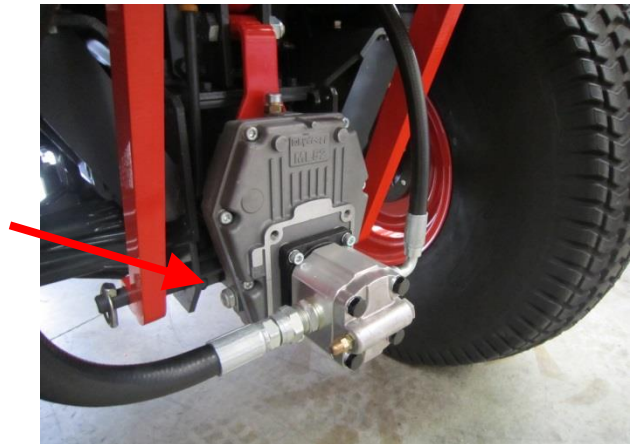


Daily & Weekly Service Checks Continued..

- Check & Clean all screens daily
- Check primary air filter weekly



- Check site glass on PTO step up box weekly, top up with Kubota UDT oil (same as transmission)
- **Note:** Change oil in step up box when trans. oil changed



- Breather only, not to be opened
- Top up or change oil via filter
- Check oil level of hydraulic reservoir, oil should be aligned with top indicator



- Check tyre pressures weekly, Front 25 PSI, Rear 16 PSI

Note rear tyres are 50% filled with water ballast

CHECK DAILY FOR OIL LEAKS AND REPORT IMMEDIATELY TO YOUR SUPERVISOR OR SERVICE PROVIDER

MAINTENANCE

SERVICE INTERVALS

No.	Items		Indication on hour meter														Interval	Ref page		
			50	100	150	200	250	300	350	400	450	500	550	600	650	700			800	
1	Clogging of air conditioner condenser screen [CAB Type only]	Clean																Daily	76	
2	Engine oil	Change	☉			○				○						○		every 200 Hr	86	
3	Engine oil filter	Replace	☉			○				○						○		every 200 Hr	85	
4	Transmission oil filters [HST]	Replace	☉			○				○						○		every 200 Hr	86	
5	Hydraulic oil filter	Replace	☉							○							○	every 400 Hr	92	
6	Transmission fluid	Change								○							○	every 400 Hr	91	
7	Front axle case oil	Change								○							○	every 400 Hr	93	
8	Front axle pivot	Adjust								○							○	every 400 Hr	93	
9	Engine start system	Check	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	every 50 Hr	79	
10	Greasing	-	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	every 50 Hr	78	
11	Wheel bolt torque	Check	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	every 50 Hr	79	
12	Battery condition	Check		○		○		○		○		○		○		○	○	every 100 Hr	80	*5
13	Air cleaner element [Double element type] Primary element	Clean		○		○		○		○		○		○		○	○	every 100 Hr	81	*1
		Replace																every 1 year	94	*2
	Air cleaner element [Double element type] Secondary element	Replace																every 1 year	94	
14	Fuel filter element	Clean		○		○		○		○		○		○		○	○	every 100 Hr	82	
		Replace								○							○	every 400 Hr	93	
15	Fan belt	Adjust		○		○		○		○		○		○		○	○	every 100 Hr	83	
16	Brake	Adjust		○		○		○		○		○		○		○	○	every 100 Hr	83	

Part Numbers & Oils

- Engine oil Filter part # HH160-32093
- Fuel filter part # 6A320-59930
- Hydraulic filter part # HH670-37710
- HST filter part # HH660-36060
- Air Filter (outer) part # 6C060-99410
- Air Filter (Inner) part # 32721-58242
- Air Conditioning Filter part # T1855-71600
- Fan Belt part # 6C430-59280
- Compressor Belt part # T2055-79320
- Cab key part # 15248-63700
- Ignition key part # T0270-81840
- Broom Filter MF1002P10NB
- Broom Bearing UC207 self aligning bearing & F207 bearing block

Oils

- **Engine oil:** Kubota Engine oil API CH4 15W40 / BP C6 Global
- **Transmission oil:** 15L (TTF) Tractor Transmission Fluid
Kubota UDT-GL4 or Super UDT-GL4 / BP Traction TF10 classification API-GL4
- **Front axle case:** 4.7 L same as tractor transmission
- **Broom Hydraulics:** 58 L HD46
- **Step up box:** same as tractor transmission, fill to site glass only (do not overfill)

GREASE

- General purpose grease

