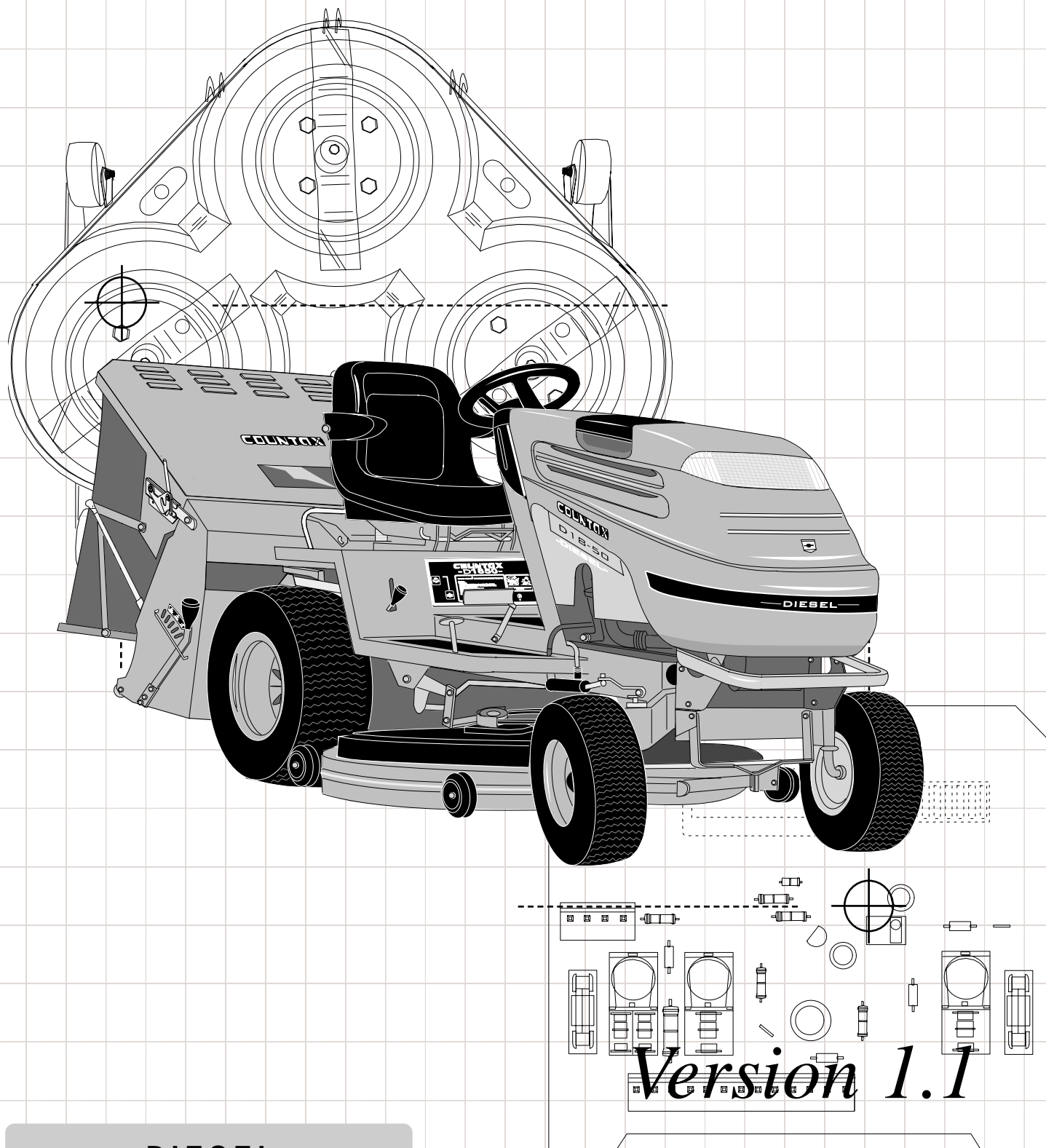


COUNTAX™

Manufacturers of Britain's Best Selling Range of Garden Tractors and Rider Mowers



Version 1.1

- DIESEL -

D18/50

Garden Tractor

OPERATORS MANUAL

Safety Instructions

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MANDATORY SAFETY INSTRUCTIONS FOR THE OPERATION OF GARDEN TRACTORS

TRAINING

1. Read the instructions carefully. Be familiar with the controls and the use of equipment.
2. Never allow children or people unfamiliar with these instructions to use the mower.
3. Never mow while people, especially children or pets are nearby.
4. The operator or user is responsible for accidents or hazards occurring to other people or their property.
5. Do not carry passengers.
6. All drivers should seek to obtain professional and practical instruction. Such instruction should emphasise:
 - The need for care and concentration when working with this machine.
 - Control of a tractor sliding on a slope will not be regained by the application of the brake.

The main reasons for loss of control are:

- Insufficient wheel grip.
- Driving too fast.
- Inadequate braking.
- Incorrect load distribution.

READ THE INSTRUCTION MANUAL BEFORE USING THE GARDEN TRACTOR AND ENSURE THAT OPERATORS STUDY IT FOR THEIR OWN SAFETY.

THE FOLLOWING PRECAUTIONS ARE OUTLINED TO HELP PREVENT ACCIDENTS. A CAREFUL OPERATOR WHO USES COMMON SENSE IS THE SAFEST OPERATOR.

THESE SAFETY PRECAUTIONS ARE IN ADDITION TO THOSE IN THE INSTRUCTION MANUAL.

1. Check that the machine complies with all applicable regulations, including those in force when used on the public highway.
2. When mowing always wear substantial footwear and long trousers. Do not operate when barefoot or with open toe sandals.
3. WARNING – Diesel is flammable:
 - Store fuel in containers specifically designed for this purpose.
 - Refuel outdoors only and do not smoke when refuelling.
 - Add fuel before starting engine. Never remove the cap from the fuel tank or add diesel while engine is running or when engine is hot.
 - If diesel is spilled, do not attempt to start engine but move the machine away from the area of spillage and avoid creating a source of ignition until diesel vapours have dissipated.
 - Replace the fuel tank cap securely.
4. Replace faulty silencers.
5. Before using, always inspect to see that the blades, bolts and cutter assembly are not worn or damaged.

CERTIFICATE OF CONFORMITY

EC Declaration of Conformity

I, the undersigned R. Kilminster of Countax Limited, Gt Haseley, Oxon. England, certify that lawnmowers:

MODEL	D18/50
Power (K/w)	11.93
Max Rotation of blades (rpm)	3100rpm
Engine Manufacturer	Yanmar
Engine Type	Diesel
Mass (Kg)	290
Max drawbar pull (Kg) at coupling hook	650 on level ground
Max vertical load (Kg)	25
Max sound power level	105 Db(A) @ 3000rpm
Vibration (m/s/s) hands:	2.05
Vibration (m/s/s) seat:	0.53
Type of cutting device	Rotary
Width of cutting device	127cm

Conforms to the specifications of Directive 84/583/EEC (as adapted to the technical progress by Directive 87/252/EEC and amended by Directive 88/180/EEC and Directive 89/392/EEC (amended by 91/368/EEC, 93/44/EEC and 93/68/EEC) and Directive 89/336/EEC and amended by 91/263/EEC 92/31/EEC, 98/37/EEC

Standards used BS5107, EN292, ISO3767, ISO3789, ISO3864
Tested at Oxford, England.

I declare that on behalf of Countax Limited these machines conform to EC Essential Health and Safety Requirements

Signed:



R.Kilminster (Technical Director) 1/4/99

Safety Instructions

6. Check the condition of the tyres and ensure that they are inflated to the correct pressure (refer to the specifications on the back page of this manual). This is particularly important if the machine is to be taken on the public highway.
7. Check the mower is in good working order, paying particular attention to brakes and steering.
8. Check that all linkages, connections, and pivot nuts are secure and that the wheel nuts are torqued correctly.

OPERATION

1. Do not operate the engine in a confined space where dangerous fumes can collect.
2. Mow only in daylight or in good artificial light.
3. Before starting the engine, disengage blade and attachment drives and ensure your feet are off all pedals.
4. Take care on slopes of more than 10° incline or decline (maximum safe operation is at 15°).
5. Remember that there is no such thing as a 'safe' slope. Travel on grass slopes requires particular care to guard against overturning:
 - Do not stop or start suddenly when going up or downhill.
 - Machine speed should be kept low on slopes and in tight turns.
 - Stay alert for humps and hollows and other hidden hazards.
 - Avoid mowing across the face of the slope.
6. Watch for traffic when crossing or near roadways.
7. Stop the blades rotating before crossing surfaces other than grass.
8. When using the machine, never direct discharge of material towards bystanders or allow anyone near the machine while in operation.
9. Never operate the mower with defective guards, shields or without safety protective devices in place and in good working order.
10. Do not change governor settings to increase the revs of the engine. Operating the engine at excessive speed increases the hazard of injury.
11. Before leaving the operators position:
 - Disengage the drive to the cutter blades and attachments and lower the attachments.
 - Remove your foot from drive pedals and set the handbrake.
 - Stop the engine and remove the key.
12. Disengage drive attachments, stop the engine and remove ignition key before:
 - Clearing blockages.
 - Checking, cleaning or working on the mower.
 - Refuelling.
 - Removing the grass catcher.
 - After striking a foreign object (inspect the mower for damage and make repairs before restarting the tractor).
 - If the machine starts to vibrate abnormally check immediately and call dealer if necessary.
13. Disengage drive to attachments when transporting or not in use.
14. Reduce the throttle setting during engine run-out.
15. Never work on the mower when the engine is running.

MAINTENANCE AND STORAGE

1. Check that all nuts, bolts and screws are tight to be sure the equipment is in a safe working condition.
2. Allow the engine to cool before storing in any enclosure.
3. To reduce the risk of fire keep the engine, silencer and battery compartment free of grass, leaves, petrol or excessive grease.
4. Check the grass catcher frequently for wear and tear or deterioration.
5. Replace worn or damaged parts for safety.
6. If the fuel tank has to be drained, this should be done outdoors.
7. Be careful during adjustment of the machine to prevent entrapment of fingers between moving blades and fixed parts of the machine.
8. Do not use steam cleaners or high-pressure washers directly towards the bearings or electrical components (Countax do not recommend the use of these power cleaners). Incorrect use could void warranty.

SUPPLEMENTARY INSTRUCTIONS FOR THE USE OF COUNTAX D18/50 TRACTOR

1. Use good sense at all times and to ensure this tractor is safe and serviceable, fit only original manufacturers supplied spares.
2. When inspecting the area to be cut, note also the position of any stumps, manhole covers, bumps and depressions and avoid them to prevent damaging the blades.
3. We recommend the use of standard diesel and that you ensure the fuel tank is full before you start the machine.
4. Always disconnect both battery terminals before attempting any work in the engine compartment.
5. Do not leave the tractor unattended and running.
6. Do not put hands near moving belts or the Power Take-Off pulley while it is rotating.

SAFETY SWITCHES

SEAT SAFETY SWITCH

Your Countax tractor is fitted with a switch that will turn OFF the engine and the cutter deck should you dismount. This is a **safety back-up** and should not be used voluntarily. If you want to dismount from the tractor and want the engine to continue running, first switch OFF the cutter deck, then apply the parking brake. You can now dismount. **DO NOT LEAVE THE ENGINE IDLING FOR ANY LENGTH OF TIME.** Should you try and dismount with the parking brake ON, the cutter deck will cut out after a short delay of a couple of seconds. Do not rely on this back up cutout. Ensure safety by switching the cutter deck off.

PARK BRAKE SAFETY SWITCH

Your Countax tractor is fitted with a safety switch activated by the Park Brake lever. This switch earths the ignition unless the brake is on. The engine will only start while the brake is engaged. Two red lights on the dash (Ignition, and Brake) indicate that the engine is ready to start.

N.B Both safety switches work on the fuel cut-out solenoid. Should safety switches be activated, to re-start the tractor - the ignition switch should be turned completely off.

Controls & Indicators - *Dashboard*

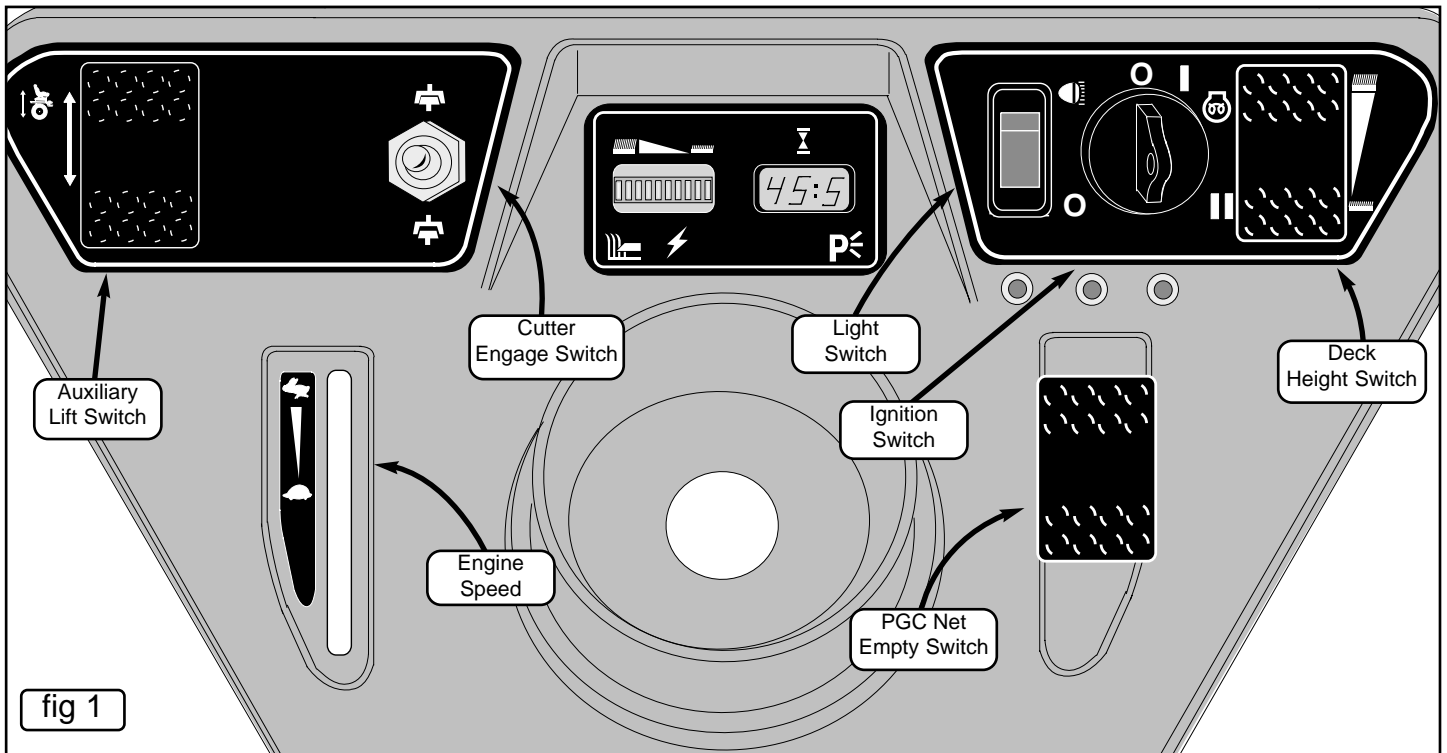


fig 1

IGNITION

The 'Key Start' controls both the ignition and the starter. Insert the key and turn to the **first** position, the dash lights will come on (check that all is ready to start). For starting from cold, turn the key to the **second** 'heat' position and hold for 10 seconds. Turn the key further to the **third** position to crank the engine, release the key as soon as the engine is running and it will return back to the first position. If the tractor is to be started from a hot engine, pre-heating is not required.

CUTTER ON/OFF SWITCH

The cutter switch controls the Electromagnetic Blade Clutch. It works like a light switch (but in reverse) – **UP** for **ON** and **DOWN** for **OFF**. Although it always returns to the central position and the cutter deck will automatically be turned off when the engine is switched off, it is not good practice to rely on this. The cutter deck should always be switched **OFF** as soon as you have finished cutting and certainly **BEFORE** stopping the engine or getting off the tractor.

ENGINE SPEED CONTROL

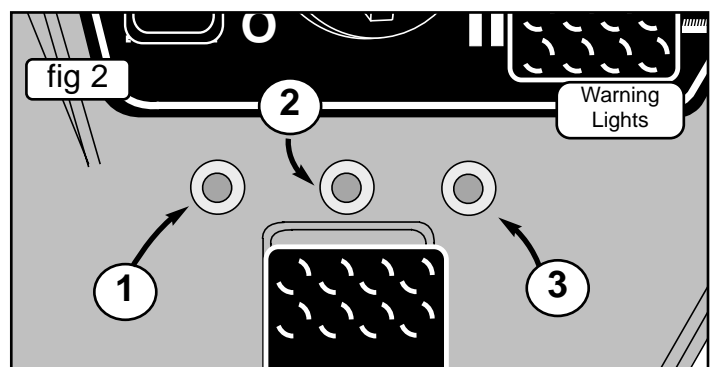
The lever is pushed forward and up for **high revs**, back and down for **low**. Please note, when in use the engine speed should be set to maximum revs.

HEADLIGHT SWITCH

Switching the rocker switch turns **ON** the headlights. The headlights will not operate when the ignition is **OFF**. Turn the headlights **OFF** before starting or stopping.

WARNING LIGHTS (fig 2)

- 1). Situated above the PGC net emptying switch are three warning lights. The first (**red**) light is a charge light. This light will illuminate when the key is turned to the first position, when the engine is started the light will go out. If the light comes on whilst the engine is running consult your dealer.
- 2). The second (**yellow**) light is a 'high water temperature' warning light. This light will only come on if the water temperature becomes too high. Should this occur, stop the engine straight away and allow to cool. When the engine has cooled, check the water level in the radiator (see page 20) and top up coolant as required. If the light stays illuminated – call your dealer immediately.
- 3). The third (**green**) light is an 'oil pressure' warning light. This light will come on when the key switch is turned to the first position, and then go out when the engine is running. If the light illuminates whilst the tractor is in use – stop the engine immediately and contact your dealer before attempting to restart your machine.



Controls - *Forward/Reverse*

FOOTPEDAL CONTROLS / MOVING OFF (fig 1,2)

To move off, ensure your foot is off the pedals 'A' and 'B' then disengage the parking brake by moving lever 'C' (fig 2) forward. Now gently depress either pedal 'A' or 'B' (fig 1) to move off forward or backward. The function of either pedal has the same effect as the accelerator on a car except that it controls the hydrostatic transmission and does not effect the speed of the engine. N.B. The engine speed must be set to maximum whenever the tractor is used. Never attempt to depress pedal 'A' and 'B' together as damage to the linkage may occur which will not be covered by warranty.

REVERSING (fig 1)

To engage and control reversing simply take your foot off pedal 'A' – to avoid a rapid stop remove your foot gently. The tractor will come to a standstill. When the tractor is stationary, depress pedal 'B' to move backwards.

PARKING (fig 2)

Remove your foot from pedal 'A' and 'B' and the tractor will come to a standstill. Now engage the park brake by simply moving lever 'C' (fig 2) rearward to an upright position- you will feel the lever lock into this position.

EMERGENCY BRAKING (fig 1,2)

In case of an emergency remove your foot from the drive pedal simultaneously engaging park brake lever 'C'. The tractor will stop abruptly.

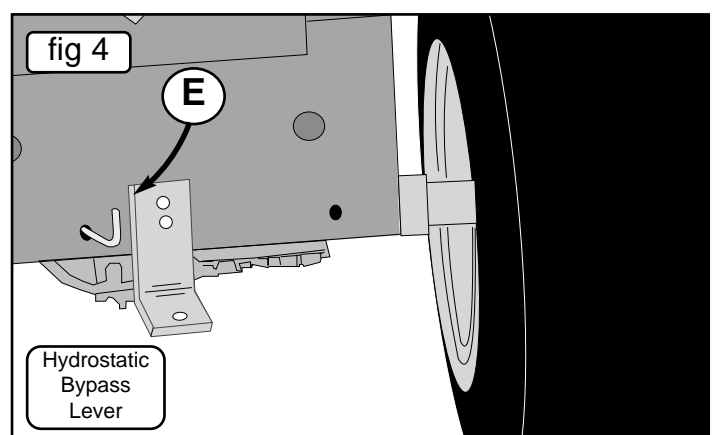
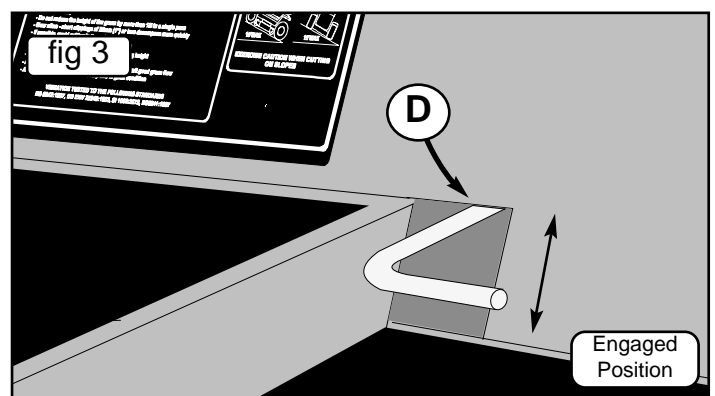
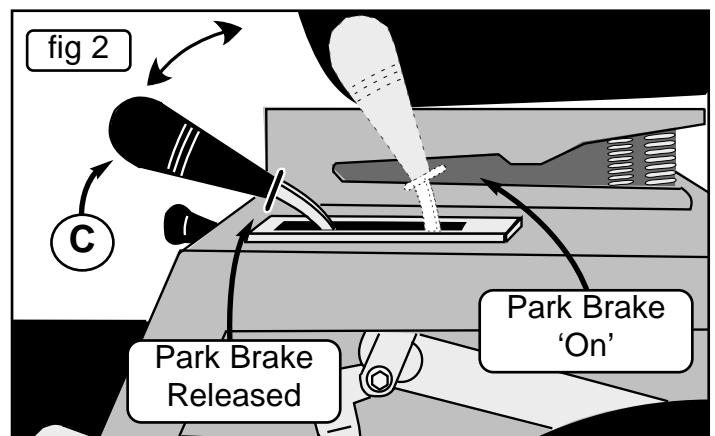
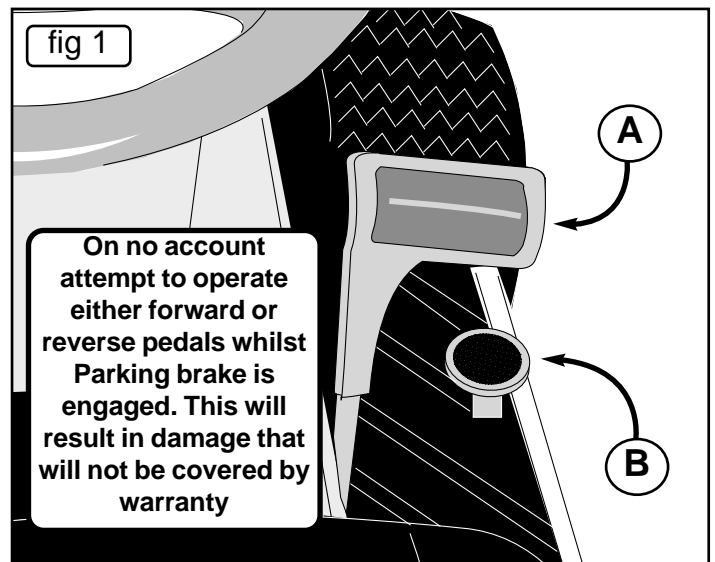
DIFFERENTIAL LOCK (fig 3)

The D18/50 is fitted with a differential lock for maximum traction on slopes and slippery ground. The differential lock should only be used in situations where one wheel is slipping and the other is not. In a situation when one wheel starts to slip and extra traction is required simply depress pedal 'D' (fig 3) and the differential will lock both wheels to drive at the same speed. As soon as the differential lock is not required release the engage pedal 'D' and as soon as the wheels are rotating at the same speed and not under load (i.e. on a slope) the lock will automatically release.

WARNING: Do not attempt to steer the tractor when the differential lock is engaged. Always ensure the differential lock is released before manoeuvring in a closed area.

HYDROSTATIC BYPASS VALVE (fig 4)

To push or freewheel the D18/50, release the park brake then disengage the hydrostatic transmission by releasing the bypass valve. Simply pull the bypass valve lever 'E' (fig 4) outward. You will now be able to push the tractor. Reset the bypass valve by pushing the lever in **BEFORE** starting the tractor.



Controls - Levers & Dashlights

POWER TAKE-OFF (PTO) fig 1

Lift the lever to the **LEFT** and **DOWN**, letting it find its own height to engage the PTO and **UP** and to the **RIGHT** to disengage (fig 1). This is an ON/OFF lever for the PTO. Always have this lever in the **DISENGAGED POSITION** when it is not in use. Do not put hands near moving pulleys and belts.

ELECTRIC LIFTS

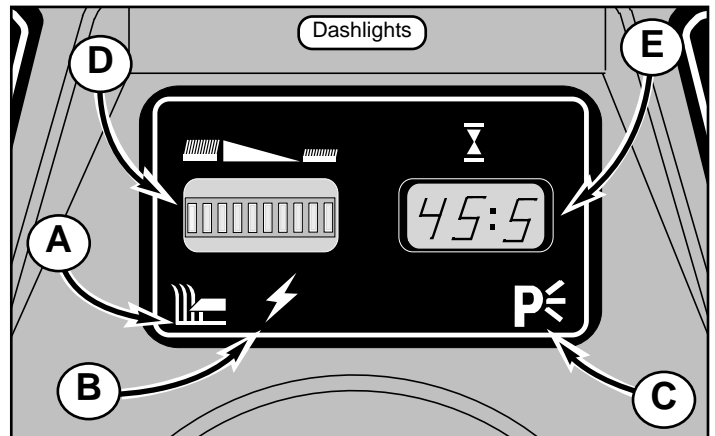
The cutting height is adjusted by pressing a rocker switch (A) on the left of the dash panel (fig 4) **UP** for higher or **DOWN** for lower. An illuminated indicator on the dash will show the position and 10 indicated heights are shown for guidance purposes only – the cutting height is in fact infinitely adjustable! To get the best from this refinement use it to continuously adjust cutting height to suit ground and grass conditions. Do not make downward adjustments on the move until you are familiar with this height control to avoid scalping.

PGC NET EMPTY SWITCH (fig 3)

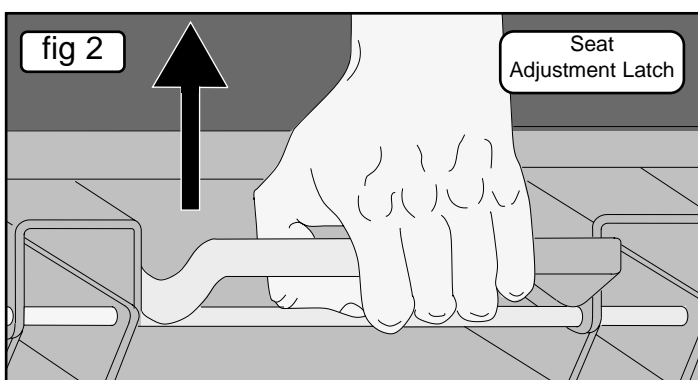
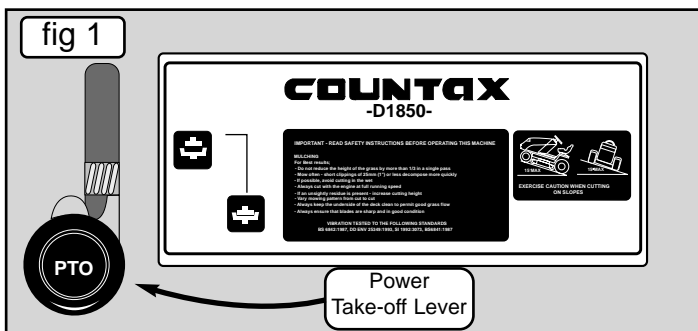
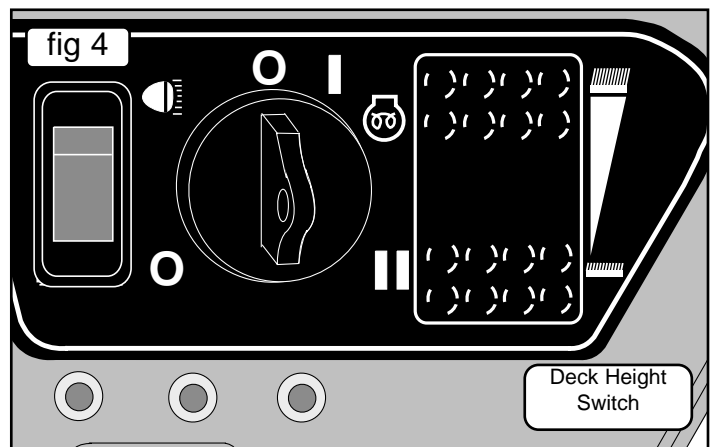
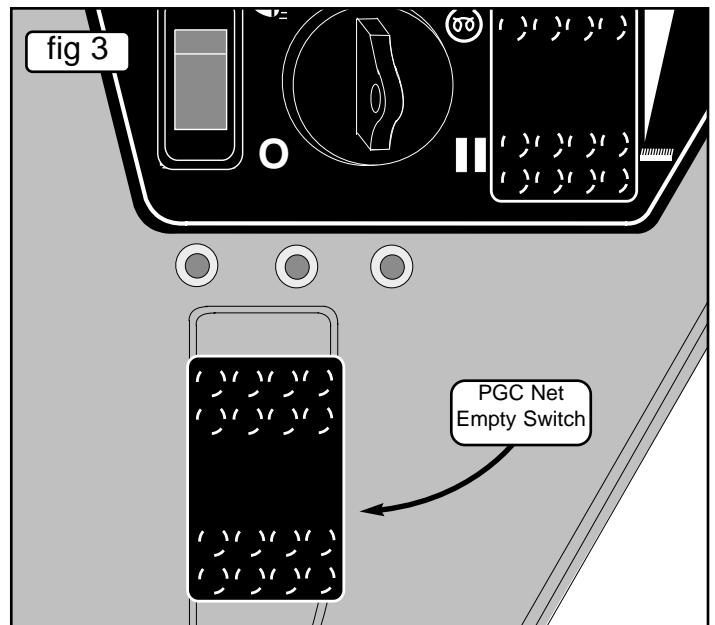
A third switch is fitted to those tractors with a Powered Grass Collector. This switch empties the collector net via an electric actuator mechanism that lifts the grass box and pushes out the bottom pan, fully emptying the collector contents. Press the switch **UP** to open and **DOWN** to close the net (fig 3).

SEAT ADJUSTMENT

The seat on the D18/50 is adjustable forwards and rearwards to suit the operator. Simply lift the seat latch at the front of the seat (fig 2) and slide the seat forwards or backwards to suit. Always ensure the seat is latched back into position before driving off.



- (A) 'Cutter On' indicator flashes continuously when cutter is running.
- (B) The 'Ignition On' indicator goes out when the cutter is running.
- (C) The 'Brake On' indicator.
- (D) The 'Deck Height' indicator.
- (E) The 'Hour Meter'.



Cutting Decks

MULCH MOWING

Mulching can save time, avoids gathering piles of rotting cuttings and feeds your lawn. It is however necessary to observe certain rules to mulch mow successfully:

- Reduce the height in each pass. If the grass has grown long make several passes to achieve the cut height you require.
- Always cut with the throttle set to FAST – mulching needs the full running speed of the engine.
- Mow often, particularly in spring and early summer. Short clippings of 25mm (1") or less decompose more quickly.
- If possible avoid cutting in the wet.
- If an unsightly residue of cuttings is being left – increase the cutting height.
- Vary the mowing pattern from cut to cut.
- Always keep the underside of the cutting deck clean to ensure good grass flow.
- Always check that the blades are sharp and in good condition – but do not attempt to sharpen or replace them yourself. New Countax blades are not expensive and it is good practice to ask your dealer to change them regularly.

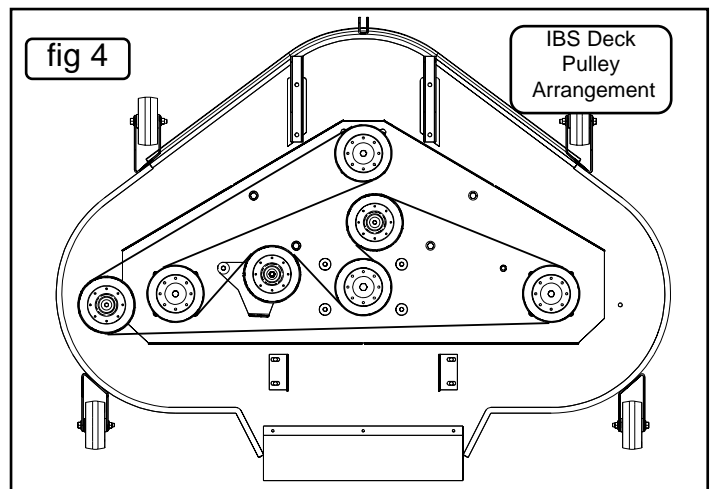
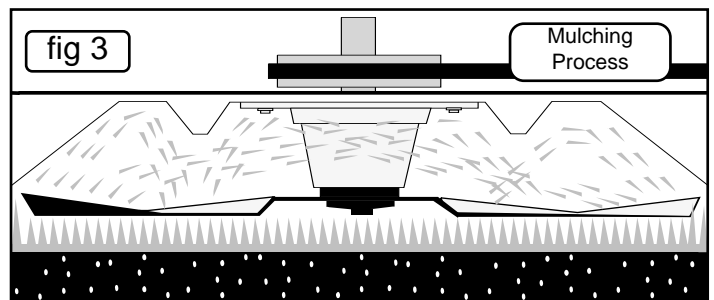
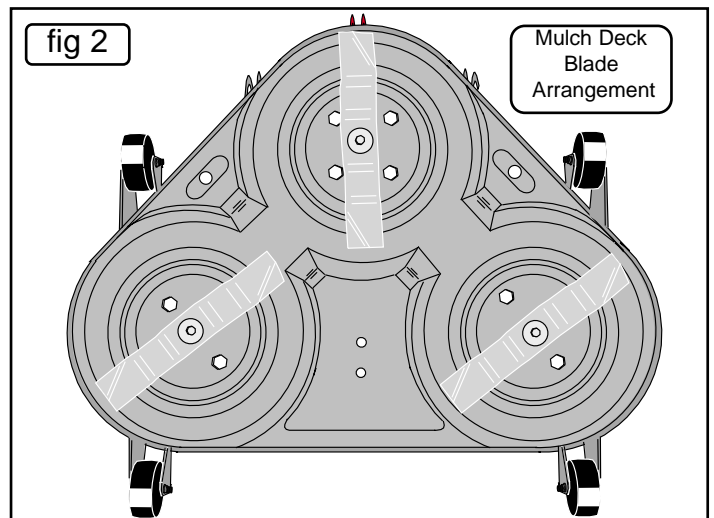
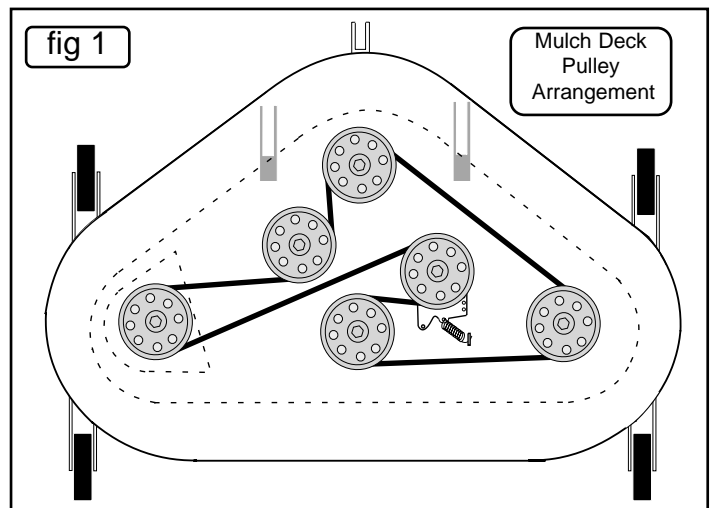
REAR DISCHARGE DECK

The Countax IBS Rear Discharge deck in contrast to the Mulch Deck, finely cuts the grass and then ejects it rearwards where it is collected by the Powered Grass Collector. This system offers the benefit of the 'striped lawn' finish to your garden and tidies loose leaves and garden debris from your lawn.

Specified Belts and Blades

Part:	Part No.
Engine/Deck Belt - Dayco Super II B56 (Mulcher)	22871200
Engine/Deck Belt - Dayco Super II B57 (IBS)	22940100
Deck Internal Drive (Mulcher) BB112	228000900
Deck Internal Drive (IBS) BB155	22950200
Mulcher Blades x3	16938100
IBS RH Blade	169381300
IBS LH Blade	169381400
PGC Drive Belt A47	22898000
PTO Drive Belt - Dayco II A98	22950100
Transmission Drive Belts A98 Dayco Super II	2295000

Remember - only use specified Belts and Blades. Never accept a substitute!



Cutter Deck - Removal

Either the Mulch Deck or the Rear Discharge Deck can be fitted to the D18/50 using the following instructions:

REMOVAL OF CUTTER DECK

The cutter deck can be quickly removed for servicing or cleaning or to give greater clearance when driving or towing over uneven ground.

Follow this sequence:

1. Put the cutter to the lowest position (see page 6).
2. De-tension the cutter drive belt with the lever situated under the left (nearside) running board (fig 6).
3. Remove the 3 securing pins from the front of the deck (fig 3 – A, B and C) by pulling out the spring clips.
4. Remove the 2 securing pins from the back of the deck (fig 2 – D and E).
5. Slip the cutter drive belt off the engine pulley.
6. Slide the deck out.
7. If you are going to use the tractor without the deck, remove the securing bar (F).

When replacing the cutter deck, re-tension the belt with the lever under the running board. Then check the belt tension (page 12).

TO CLEAN CUTTER DECK

Remove the deck as instructed, stand it on its side and hose off accumulated cuttings. This may be necessary routinely to prevent build-up of cuttings particularly at the beginning of the season when the grass is lush and wet. Thoroughly wash the underside of the cutter deck as regularly as possible.

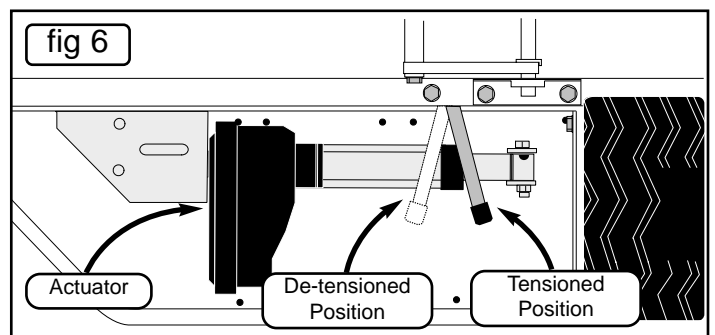
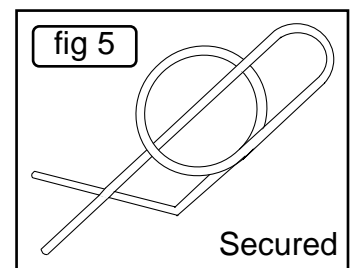
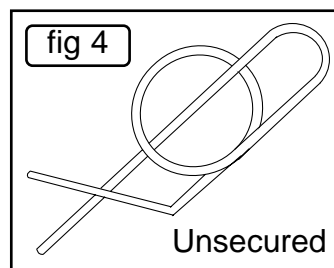
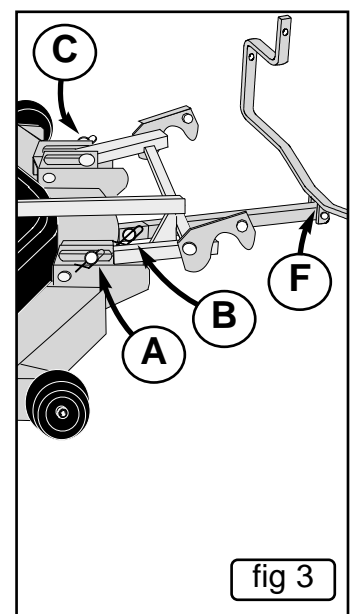
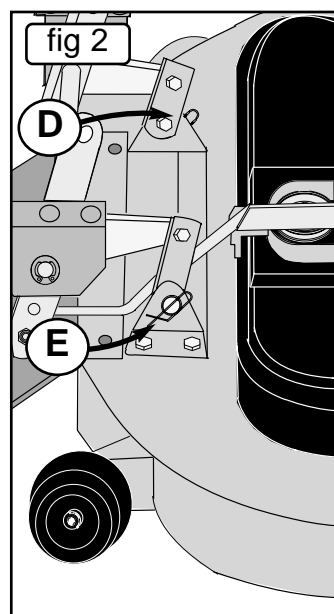
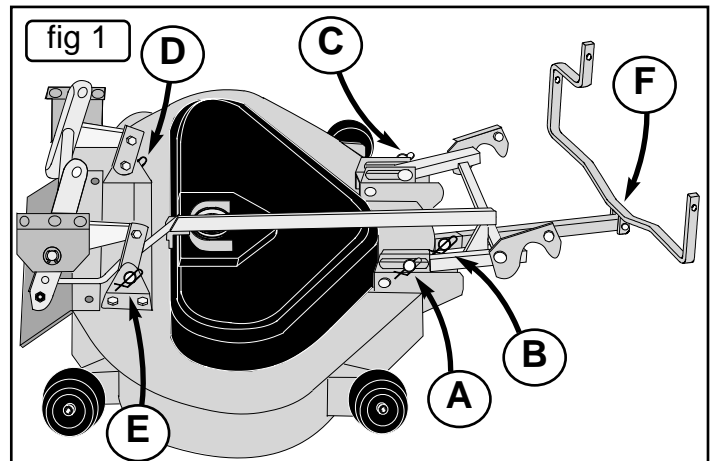
ENGINE TO CUTTER DRIVE BELT REPLACEMENT

Follow this sequence:

1. Pull the belt tension lever (fig 6) forward.
2. Lower the cutter deck to the lowest position.
3. Remove the cutter deck as described above.
4. Remove belt guard, loosen the two M8 set screws using a 13mm spanner and socket.
5. Remove the belt from the pulley and fit replacement.
6. Refit the belt guard ensuring that it is clear of the belt and pulley.
7. Refit the cutter deck to the tractor and re-tension the deck drive belt as described on page 12.

The belts fitted to your tractor are of a special construction and belt tensions have been precisely set in the factory. If you undertake to replace a belt yourself you must be VERY careful that the correct Countax supplied belt is used and that the tension is set accurately.

-Use only genuine Countax parts-



Cutter Deck - Check List

CUTTER FAILS TO START OR CUTS OUT WHEN SWITCHED ON

Check:

- Are you on the tractor? – Unless you sit on the seat the safety switch cuts out the cutter deck.
- Is the battery low? - The clutch engage switch will only operate if the battery is well charged.
- Does the 10Amp barrel fuse on the printed circuit board need replacing?
- That either the cutter switch or the safety switch on the seat is not faulty – if so, call your dealer.

UNEVEN CUT (CUTS SHORTER ONE SIDE THAN THE OTHER)

Check:

- That the tyres are all inflated to the correct pressures (see back page).
- That the front axle is pivoting freely.
- That the deck suspension brackets are moving freely and hitching up.
- That the side to side deck level adjustment is correct (see page 11).

CUT IS UNEVEN OR UNTIDY IN ONE OR MORE SECTORS

Check:

- That the cutter deck is levelled correctly front to back (see page 10).
- That one or more of the blades are not worn or damaged – if so, call your dealer.

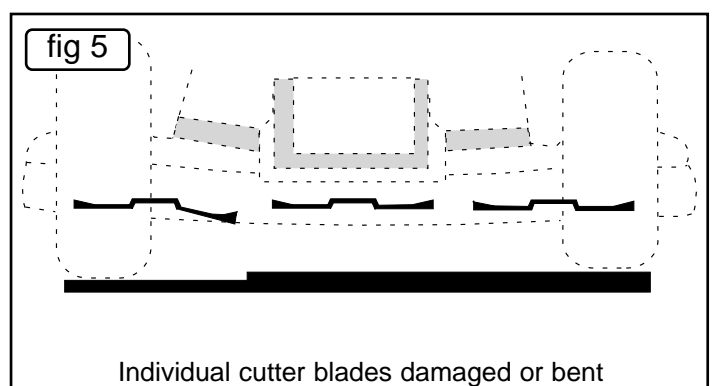
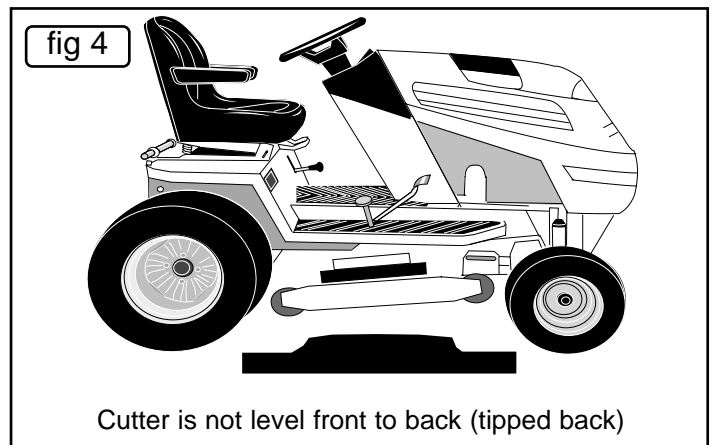
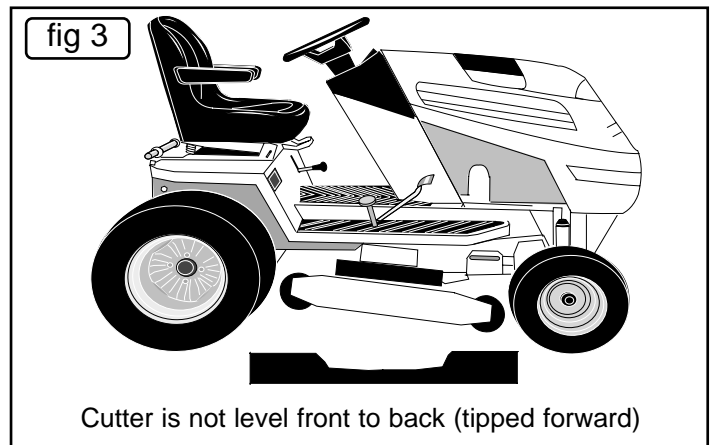
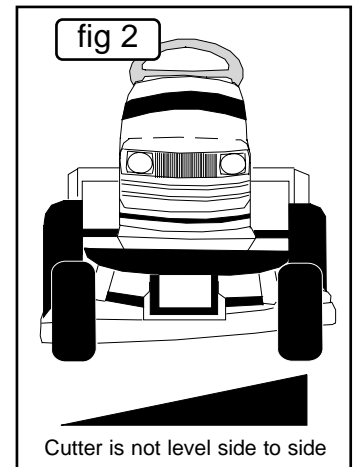
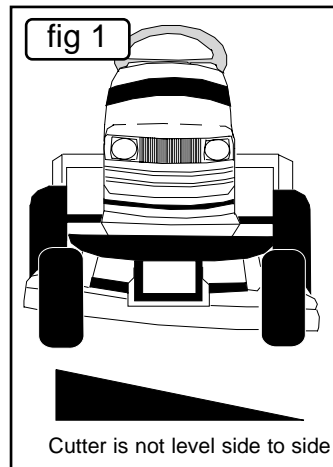
THE CUTTER SEEMS TO LOSE POWER AND THE BELT SLIPS AND OVERHEATS

Check:

- That the tensioner is correctly applied.
- That the cutter belt tension is correct (page 12).
- That the cutter deck is not clogged with wet cuttings.
- That the cutter drive belt is not worn.

Remember:

Correct levelling of your deck is vital to ensure the best cutting performance from your D18/50. If you are in doubt as to whether your cutter deck requires levelling, consult your local Countax dealer.



Deck Levels - *Front to Back*

The cutter deck should be set so that it is parallel to the surface it is cutting with a maximum variation from side to side, or front to back of 3mm. Check this by placing the tractor on a hard level surface and measuring the clearance heights front to back and side to side with a steel ruler or tape with the cutter set one adjustment from its lowest position (see page 6).

If the cutter deck seems to require levelling first check these other possible causes:

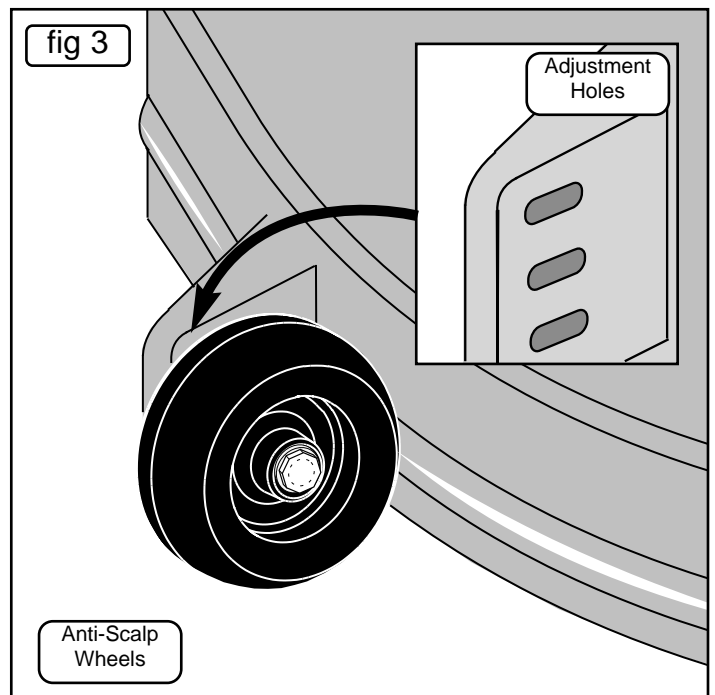
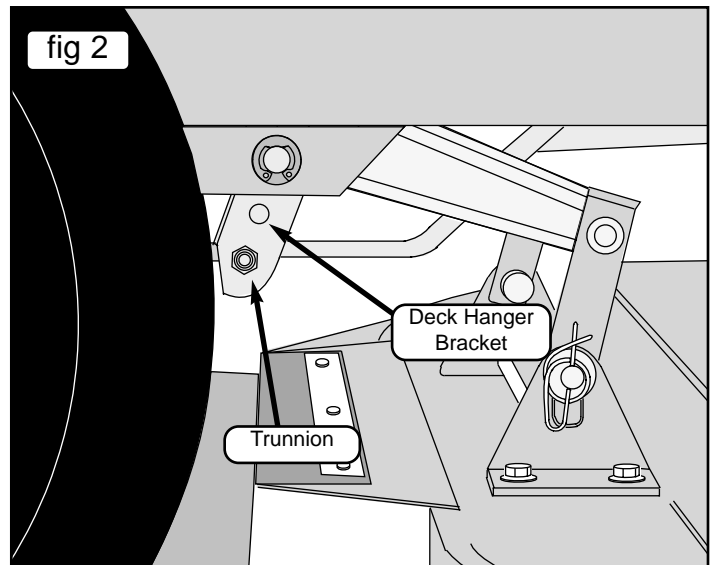
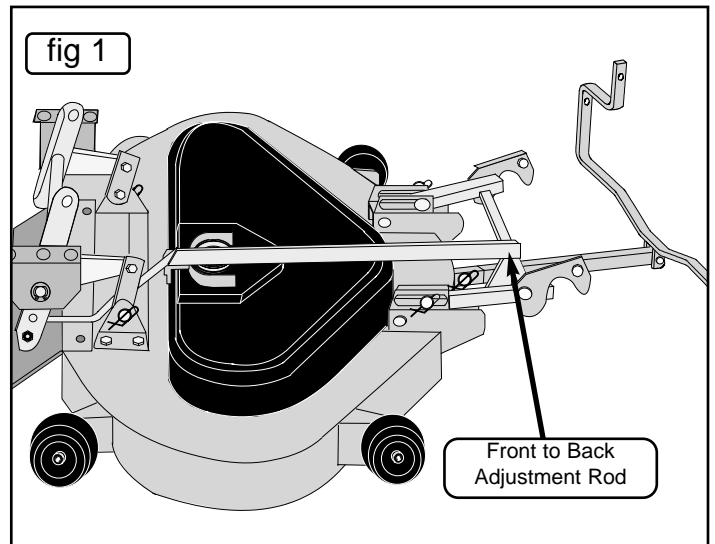
1. Are the tyres inflated to the correct pressure all round – if not, inflate to the correct pressures as specified on the back page.
2. Are the cutter deck hanger brackets (fig 2) moving freely. To check this lift the cutter deck to its highest position and lift and rock it, watching to ensure that the brackets move freely – if not clean and grease.
3. Is the front axle pivoting freely? – If not, clean and grease.
4. Is there any impact damage that has bent or distorted the deck suspension brackets (a matter for your dealer).
5. Is the cutter deck drive belt tensioned correctly?

If the deck is still uneven: -

LEVELLING FRONT TO BACK

(You need two people for this operation – one to lift the deck while the other removes or relocated the Trunnion)

1. Ensure that all the anti-scalp wheels are all adjusted in the same hole – if not, rectify (fig 3).
2. Lower the cutter deck to a position one above the lowest setting – check levels with a ruler or tape.
3. Now locate the front to back adjustment rod to the right offside of the cutter. At the rear end of this rod you will find the Trunnion (fig 2) that links the rod to the deck hanger bracket. Both the Trunnion and the rod are threaded and adjustment is achieved by rotating the Trunnion to shorten or lengthen the rod.
4. To free the Trunnion use a 9/16" spanner or socket to remove the 3/8" Nyloc nut and washer and push it free.
5. Rotate the Trunnion to advance it up the rod to lift the back of the deck. Rotate it the other way to lift the front. Adjustment is rapid so try one or two turns and relocate the Trunnion bracket and secure – then check the effect. Repeat and re-check if necessary.



Tools Required

- Steel Rule or Tape
- 9/16" AF Socket
- 1/2" Spanner
- 1/2" Socket
- 13mm Spanner
- 13mm Socket
- Reversible Ratchet
- 12" Extension Bar

Cutter - *Levelling Side to Side*

LEVELLING SIDE TO SIDE

Adjustment is best done with the deck in a position one up from its lowest cut – check the level both sides and levelling is then achieved by adjusting the left (nearside) of the deck at two points:

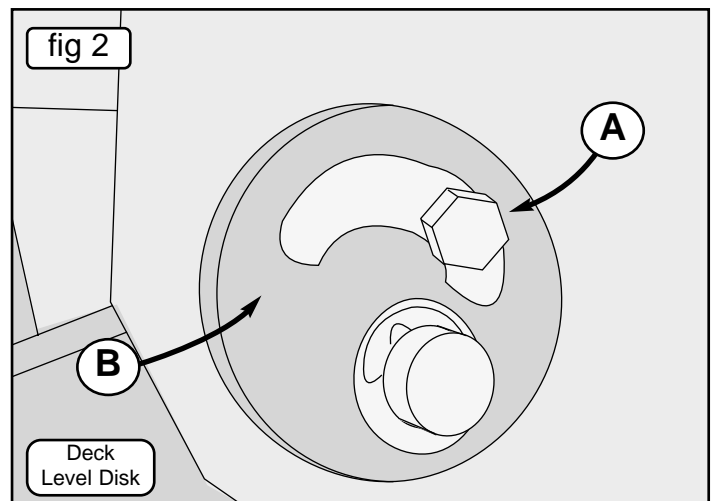
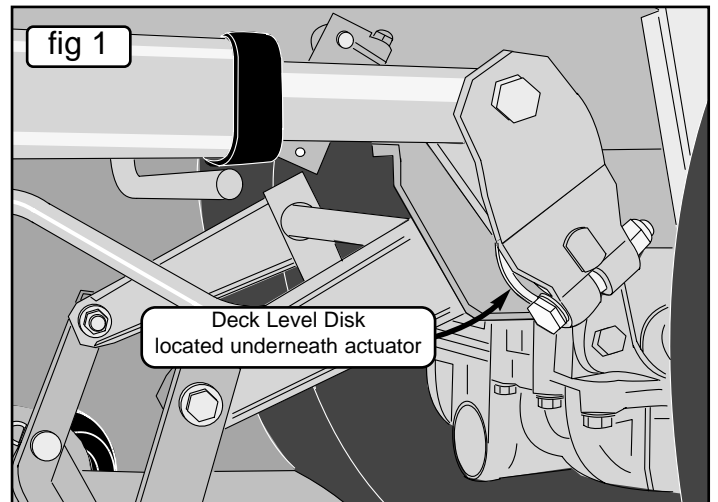
REAR ADJUSTMENT

1. Find the deck level disk (fig 1) near the back nearside wheel. underneath the actuator lifting arm. This disk has a concentric slot in which the deck-levelling rod is located.
2. Using a 1/2" spanner, loosen the 5/16" Nyloc nut **A** securing this stud just enough to permit some movement.
3. Now lift or lower the deck depending on the adjustment you wish to achieve. This will move the stud up or down the disk **B** – the higher up and nearer the centre of the disk the higher the deck.
4. Check with your ruler or tape and having levelled the deck at the rear, re-tighten the Nyloc nut.

FRONT ADJUSTMENT

1. Having levelled the rear of the deck, check if the front is level. If not, you will need to find the deck adjustment plate (fig 3) which is forward of the cutter deck near the front (nearside) wheel.
2. Before making adjustments loosen the two sets of nuts and bolts (**A** and **B**) securing the deck levelling bracket (**C**) using a 13mm spanner and 13mm socket.
3. Then using a 13mm spanner, loosen (upper) locknut (**D**).
4. Now adjust the height by using a ratchet or spanner to turn the Nyloc nut (**E**) clockwise (up) to raise the deck or anti-clockwise (down) to lower it.
5. When level is achieved tighten up all nuts and bolts except **E**.

For the closest cut, set the anti-scalp wheels in the middle adjustment holes. If you are experiencing scalping this can be minimised by setting the wheels in the lowest adjustment holes.

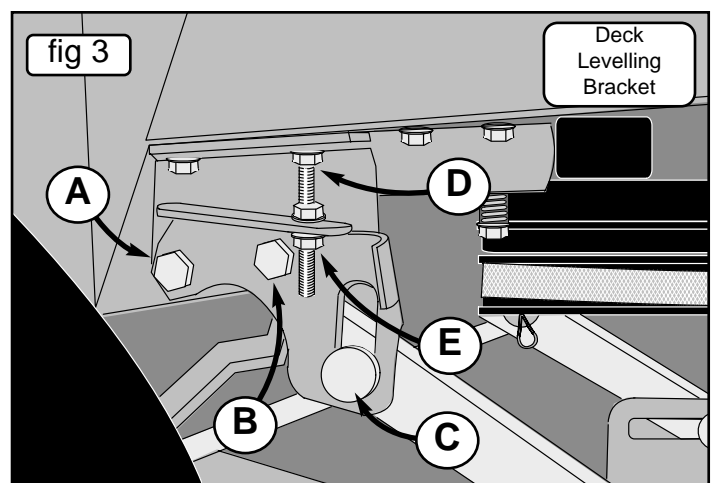


Please note:

Unless caused by our negligence, Countax cannot accept **any** liability for any damage to persons or property attributable to failure to comply with the instructions in this manual. To be absolutely sure that your warranty terms are not breached, service work should only be carried out by a Countax dealer.

Tools Required

Steel Rule or Tape
9/16" AF Socket
1/2" Spanner
1/2" Socket
13mm Spanner
13mm Socket
Reversible Ratchet
12" Extension Bar



Cutter - Drive Belt

Before carrying out tests or adjustments (the problem may be simpler) – first CHECK the following points:

1. Is the engine to cutter drive belt slipping? Check that the drive belt tension lever (fig 1) under the left running board is in the rear (tensioned) position. If not, rectify – this is the most likely cause.
2. Has debris collected in the cutter deck pulley housing (page 9)? If so remove the cover and remove the obstruction.

ENGINE TO CUTTER DRIVE BELT TENSION

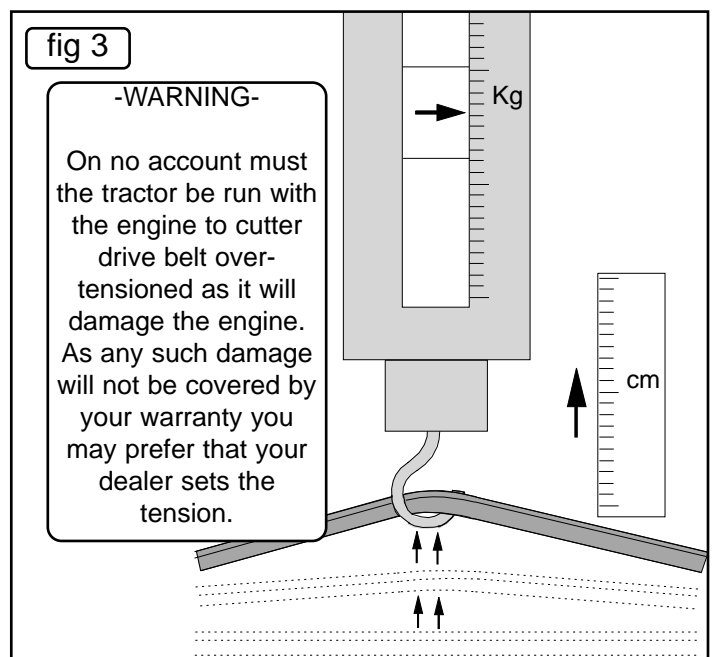
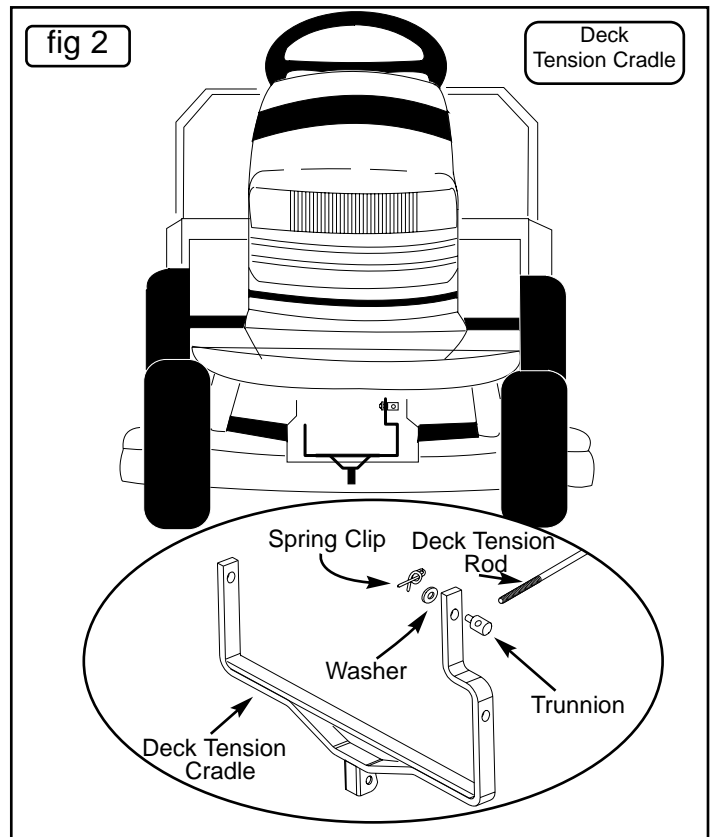
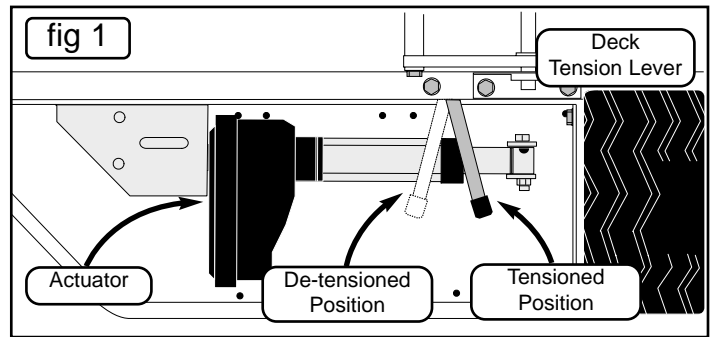
The correct tension of the cutter drive belt (engine to deck) is critical. If incorrectly set it can lead to engine damage.

To check the tension, follow this procedure:

1. Put the deck in a middle cutting height (position 5 on the HE illuminated indicator).
2. Select a midway position on the belt between the front (electric clutch) pulley and the rear (cutter deck) pulley and using a spring balance; apply a 2Kg (4 to 5lbs) pull (fig 3).
3. Using a ruler or tape, measure the deflection achieved which must be 13mm (1/2"). If more, the belt tension must be increased, if less – decreased.

To correct the tension, follow this procedure:

1. Release the tension on the belt by pulling the belt tension lever forward (see fig 1).
2. Taking care not to burn yourself on the hot exhaust, locate the Trunnion at the end of the belt tension rod – lift the bonnet and look at the front (nearside) close to the exhaust.
3. Remove the spring clip and washer holding the Trunnion in place on the deck tension cradle (fig 2) and release the Trunnion so it can be turned.
4. Both the Trunnion and the belt tension rod are threaded. You increase belt tension by winding the Trunnion towards the end of the rod and reduce tension by winding in the reverse direction.
5. Having made the adjustment re-locate and secure the Trunnion, re-tension the belt with the belt tension lever – then re-check the belt tension.



Specified Belts and Blades	
Part:	Part No.
Engine/Deck Belt - Dayco Super II B56 (Mulcher)	22871200
Engine/Deck Belt - Dayco Super II B57 (IBS)	22940100
Deck Internal Drive (Mulcher) BB112	228000900
Deck Internal Drive (IBS) BB155	22950200
Mulcher Blades x3	16938100
IBS RH Blade	169381300
IBS LH Blade	169381400
PGC Drive Belt A47	22898000
PTO Drive Belt - Dayco II A98	22950100
Transmission Drive Belts A98 Dayco Super II	2295000

Powered Collector

CONNECTION

To connect the Powered Grass Collector (PGC) to the D18/50 tractor, ensure both are on an even surface with the locking levers (fig 3) on the collector facing the lift arms of the tractor. Move the collector manually to the tractor. Lower the lift arms using the auxiliary lift switch button (page 4) on the dash console.

At the end of each lift arm you will find a locating lug. Slide the channels on either side of the PGC over the lugs but do not engage the locating lever yet. Ensure that the rubber flap at the opening of the PGC located on top of the transmission grass deflector.

INSTALLING THE DRIVE BELT

Place the drive belt over the PTO pulley (beneath the tractor seat). Standing adjacent to the tractor, extend the belt with both hands parallel to the ground. Now twist the belt to form a figure '8' – the right hand up and the left hand down. In this position place the other end of the belt over the Powered Collector pulley. Be sure that this is installed the right way round otherwise the brush will work in reverse and collection will be poor! Lock locating lever (fig 3) over the lift arm lugs. Rotate the locking clips over lift arm lugs. Connect net empty plug to socket as shown in fig 1. To disconnect, reverse this procedure.

PTO DRIVE BELT TENSION

Engaging the locating lever tensions the belt which should not be run too tight – to check the tension there should be a 19mm deflection with light finger pressure (2Kgs) at a midway point between PTO pulley and sweeper pulley. It is important after attaching the sweeper to the tractor to check the belt tension and adjust this if necessary this must be done before the sweeper is put into operation and with the sweeper on the ground. With light finger pressure, 2Kgs (4lbs) there should be a total deflection of 19mm (3/4") at midway point between PTO pulley and the sweeper pulley. If a spring balance is available a pressure of 4-5lbs (1.81-2.26Kgs) is required for a deflection of 3/4" (19mm). If the belt tension is incorrect, it can be adjusted by movement of sweeper locking levers on the threaded rod. Ensure the lock nuts are suitably tightened after adjustment. N.B. Do not over-tighten lock nuts as lever needs to pivot.

TO USE: raise sweeper to transport position. A button on the left hand side of the console (page 4) raises the Powered Collector to the transport position. We recommend that you drive to and from the area to be swept with the Powered Collector in this transport position and with the PTO disengaged. When you reach the area to be swept, lower the collector and then engage the brushes by pushing the sprung PTO lever to the left to release and engage.

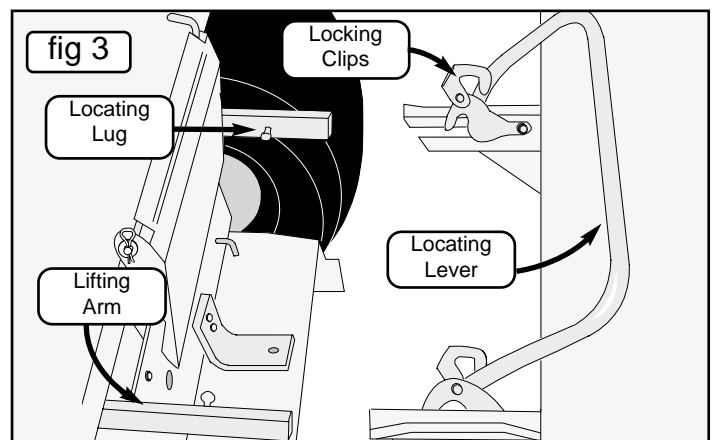
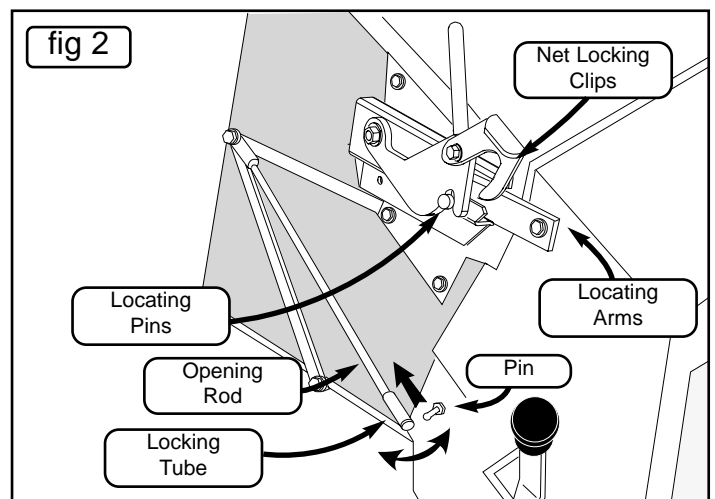
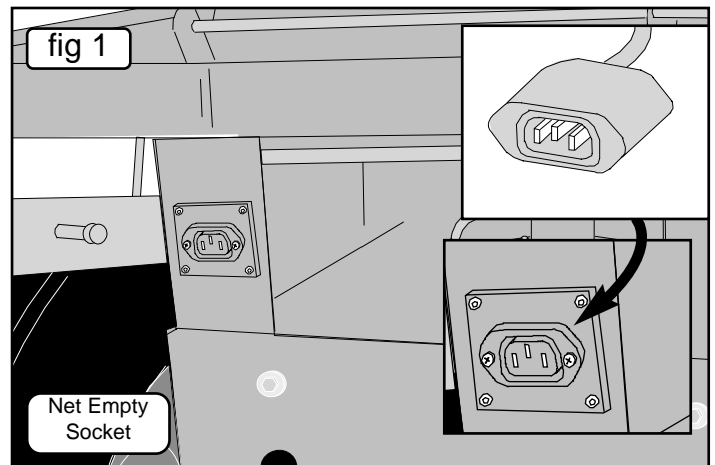
LOWER THE COLLECTOR

Using the Auxiliary lift switch on the dash, lower the collector.

REMOVE THE NET

When removing the net, we suggest you employ the assistance of another person.

1. Partially open the Sweeper net (100mm(4")). Disconnect opening rod by pulling back on sprung locking tube and uncoupling from pin (fig 2).
2. Repeat either side.
3. Undo net locking clip (both sides), unhook levers from locating pins (see fig 2).
4. With either person standing each side of the collector net, slide the net off the locating arms.
5. Reverse operation for fitting.



Collector - *Adjustments*

ADJUST THE SWEEPING HEIGHT

Using the Sweeping height lever (fig 2) select the position appropriate to the conditions and the height of the cut. TO GET THE BEST SWEEPING PERFORMANCE AND TO PRESERVE THE BRUSHES SELECT THE HIGHEST SETTING THAT WORKS – start high and adjust down until the brushes stop to collect. DO NOT SET THE BRUSHES TOO LOW – this will lead to scarifying and a very untidy finish as well as shortening brush life.

CHECK LIST

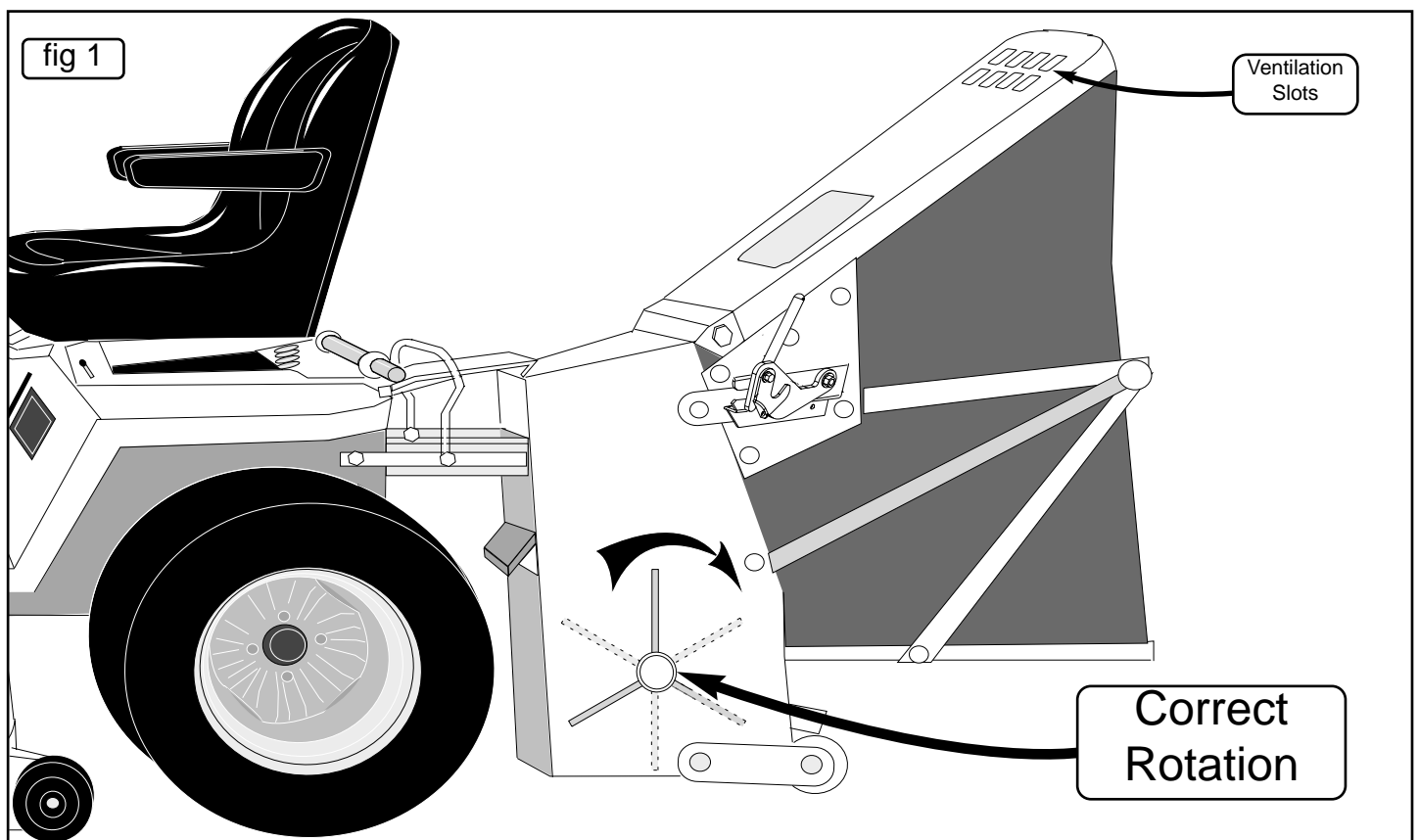
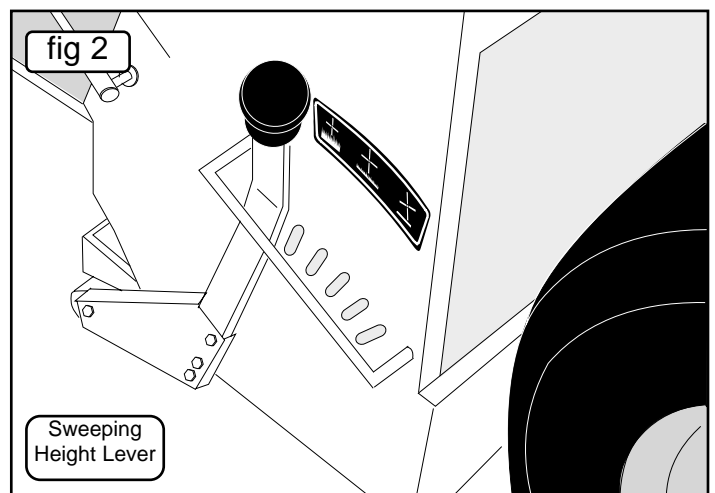
Not picking up satisfactorily – check:

1. That the PTO lever is engaged.
2. That PTO pulley beneath the seat is turning – if not call your dealer.
3. That the Collector Belt is not reversed (if it is correct the brush will revolve against the forward direction of the tractor - see below).
4. That the brush height adjustment is not too high or too low – start at the highest setting and lower until it begins to collect.
5. That there is not a build up of congealed grass on the leading edge on the brush guard.
6. That the brush is not clogged.
7. That the collector brush is not slipping – if so:
 - Adjust tension (see page 15)
 - Or replace worn or damaged belt (see page 15)
8. That the collector net is not clogged. If so, wash or brush with a stiff hand brush.

9. That the bristles are not damaged (if so you can replace individual comb bristles or fit a complete new brush (see page 17).
10. That the ventilation slots on the top of the collector box are not clogged.
11. That the venturi air vent is not blocked.

TO TIP CUTTINGS

You can check the contents of the grass box through the clear cover. When it is full raise the collector to the transport position. Drive to your tipping area; reverse to the pile, select neutral then depress the PGC net empty switch (see page 4 fig 1).



Collector - Drive Belts

REPLACING AND TENSIONING PTO DRIVE BELT CONNECTION

It is important that the belt from PTO to collector (Part No. 22950100) is crossed over in the correct direction (fig 1) before being fitted over the collector pulley. The easiest way to do this is to place the belt on the PTO pulley and then stand behind the tractor holding the belt with two hands. Turn the right hand above the left and fit the belt on to the collector pulley.

To check that you have this right - start your tractor and engage the PTO lever and check that the brush is revolving against the forward direction of the tractor (see page 14 fig 1).

CORRECT BELT TENSION

To check tension:

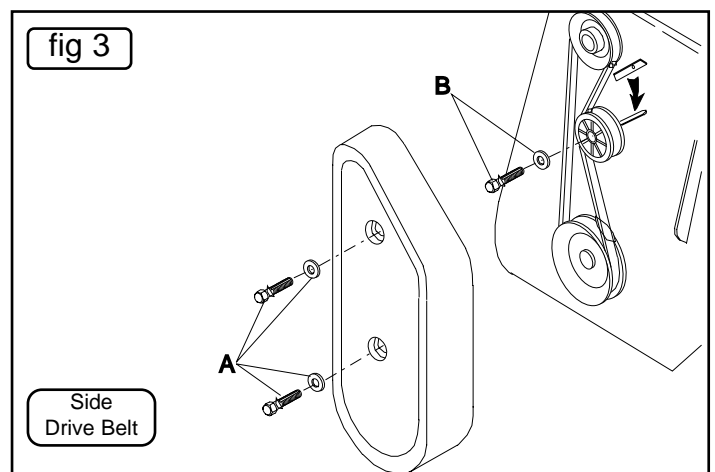
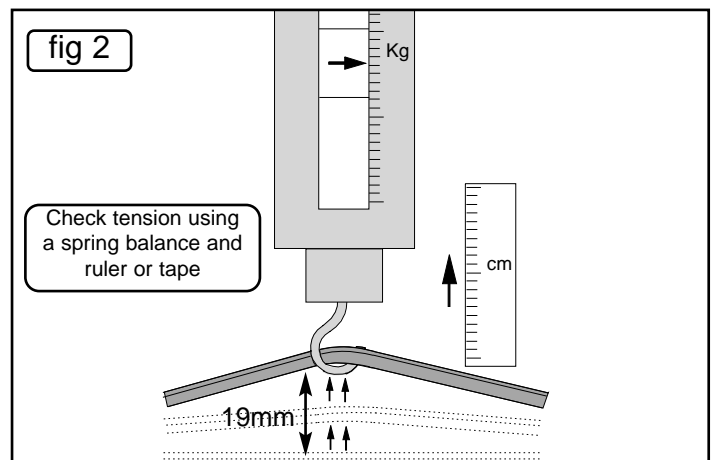
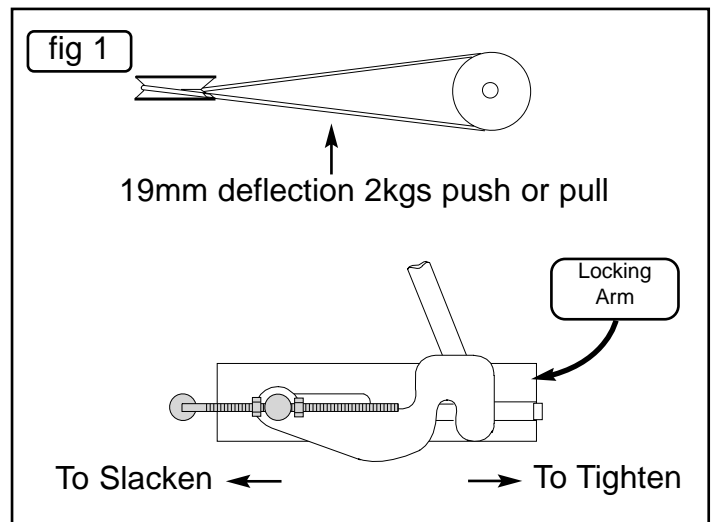
1. Lower the collector to the operating position and check the tension using a spring balance.
2. Select a place on the belt midway between the PTO pulley and the collector pulley.
3. Pull and measure the deflection using a ruler (fig 2). It should be 19mm at 2Kgs (4-5lbs).

If the tension needs to be adjusted – first:

1. Relocate the Collector from the tractor.
2. Locate the adjustment holes on the Locking Arms. These holes take the nuts and bolts on which the locking arm hinges.
3. To increase tension on the belt undo each nut and bolt and relocate them one or more holes forward (towards the tractor). To slacken move the bolts back, ideally the bolts should be in the same hole on each locking arm, however fine adjustment to get the right tension may only permit you to move one bolt – this is OK but there should not be more than one hole difference from side to side.
4. Replace the collector on the tractor and re-check the belt tension.

CHECKING, TENSIONING AND REPLACING SIDE DRIVE BELT (fig 3)

1. First remove collector from the tractor (page 13).
2. To remove the plastic cover, remove the two nuts and bolts (A) using a 1/2" spanner and socket.
3. Using a 1/2" spanner and socket slacken the nut and bolt (B) holding the tension pulley and slide the pulley out of the way.
4. Remove the belt and fit the Countax replacement (Dayco Super II A38 Part No. 229503000).
5. Tension the belt by sliding back and securing the belt tensioner. The tension is not critical but the belt must not be too tight. The ideal is 13mm (1/2") deflection at 2Kgs (4/5lbs) pull – use a spring balance and ruler or tape to check.
6. Make sure that the rectangular cover plate fits over the adjustment slot – failure to do this will allow cuttings and grit to accumulate and damage the pulleys and belt assembly.
7. Replace the plastic cover.



Please note:

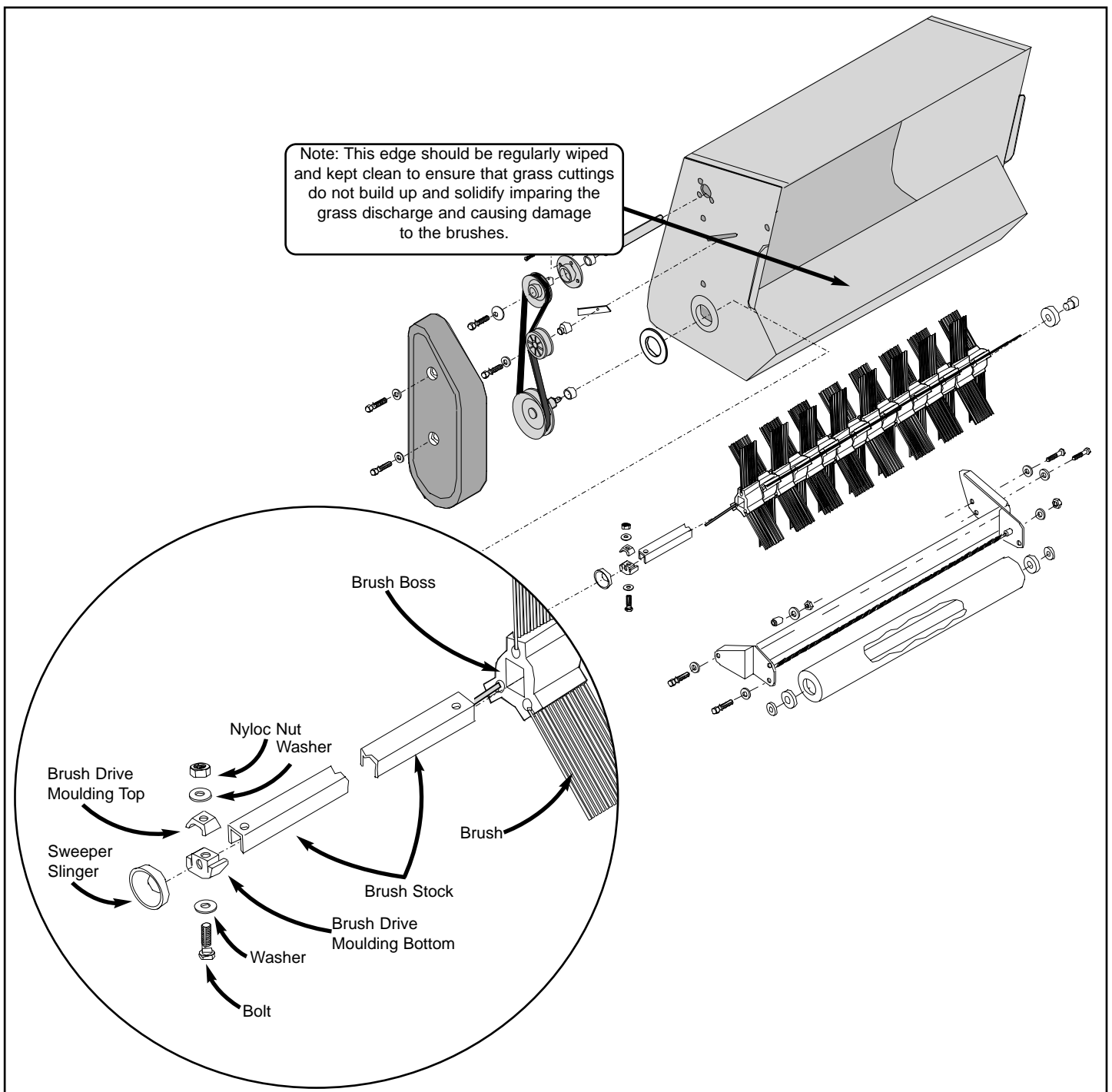
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Collector - *Brush*

If the brush has become worn or damaged it is simple to replace the whole brush assembly or individual bristles.

TO REMOVE THE BRUSH STOCK

1. Remove the grass bag assembly by lifting it off the pivot brackets.
2. Detach the collector from the tractor.
3. Locate the 1/4" nut and bolt at each end of the brush and undo and remove using a 1/6" spanner and socket. Keep safely taking care not to lose the washers.
4. Now remove the cover mouldings and free the brush stock.
5. You can now slide off the brush bosses which each hold three brushes. Note their position on the brush stock (fig 1) which must alternate when you return them.
6. Slide out and replace individual brushes where necessary and then re-assemble.
7. When you replace the cover mouldings note that the holes to take the spindles are off centre and are located at the furthest end of the brush stock.



Tyres and Wheels

Countax tractors are fitted with grassland tyres that are designed to present a large area to the ground for grip; and are soft profile to prevent marking your turf. They are of thicker section and tougher than most 4 ply tyres.

Persistent punctures and tyre deflation are nevertheless a problem experienced by about 5% of Countax customers. This is not a problem just for Countax owners - it is shared by the users of all types of off-road machinery fitted with pneumatic tyres. In practically every case there is one common cause – THORNS! Blackthorn, Hawthorn, and Rose are usually at the bottom of it and will puncture any tyre not fitted with very expensive guards. There are less expensive ways to overcome this problem.

Check and avoid these possible causes:

1. The rim of the wheel has become damaged – breaking the seal on the tubeless tyre. There are two possible solutions:

- If the damage is not severe, treat with Countax tyre sealant (Pt No. 52903501)
- If the damage is significant – order a new wheel

Front wheel – (Pt No. 198000500)

Rear wheel – (Pt No. 198000700)

2. You have Hawthorn, Blackthorn or Wild Rose in your hedges – these will puncture any tyre. It makes sense to check the area you intend to cut or drive over and to remove any branches. The long-term solution is to treat all four tyres with Countax tyre sealant – follow the instructions on the bottle.

If your tyres spin or lose grip check:

1. Are the tyres inflated to the correct pressures, check back page?
2. Are you driving too fast for the conditions? If so, select a slower speed.

REMOVAL OF FRONT WHEEL

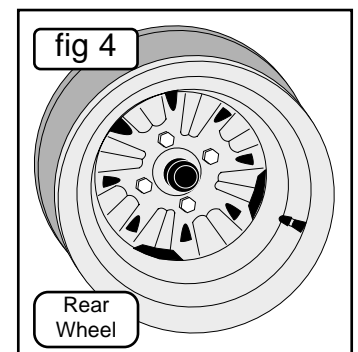
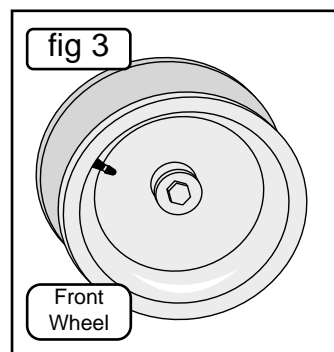
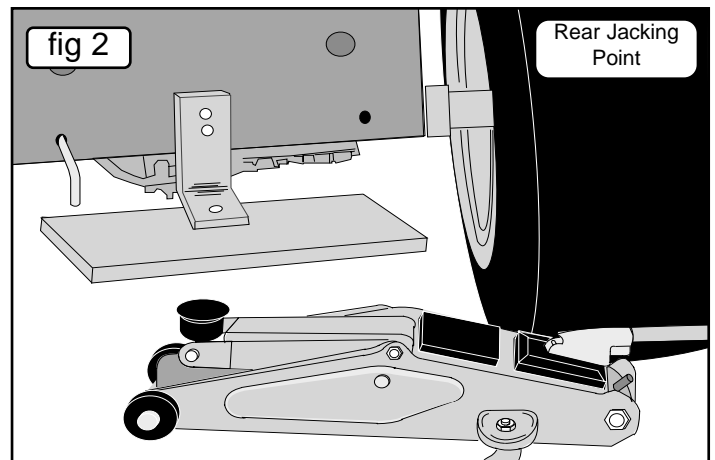
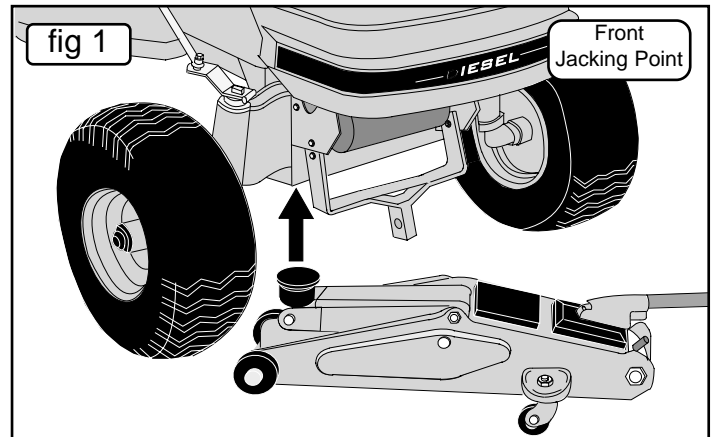
1. Apply the parking brake.
2. Place chocks under all wheels that are to remain on the ground.
3. Remove the hubcap.
4. Use a 3/4" (19mm) socket spanner and ratchet to slacken off the wheel nut – do not remove.
5. Place jack under the front axle (fig 1) and jack up until the wheel to be removed is well clear of the ground.
6. Remove the nut and washer and keep it safe,
7. Pull off the wheel carefully TAKING CARE NOT TO DISLODGE THE TRACTOR FROM THE JACK.

When the tyre is repaired replace the wheel preferably using a new 12mm Nyloc nut, Part No. 049381100.

REMOVAL OF REAR WHEEL

1. Apply the parking brake.
2. Place chocks under wheels that are to remain on the ground.
3. Place the jack under the Transaxle (see fig 2) and raise until the wheel is well off the ground.

4. Undo the four 19mm (3/4") nuts using socket and wrench.
5. Pull off the wheel carefully TAKING CARE NOT TO DISLODGE THE TRACTOR FROM THE JACK.
6. Reverse instructions to complete the job making sure to tighten wheel nuts (to torque – 68NM/50ftlbs).



-Warning-

Never jack the tractor up by jacking under the running board. We do not advise owners repair punctures. It is best to take the wheel to your local tyre specialist or use Countax tyre sealant.

Electrical

FUSES AND SHORTS

There are 5 fuses on the D18/50 tractor. The 20Amp (yellow) charging circuit, the mid positioned 20Amp (yellow) lights, ignition and safety switches. The 20Amp (yellow) electric lift for cutter deck and auxiliary lift. The fourth 20Amp fuse is connected in line for the net emptying system.

To check – remove fuse and check small window, there should be an unbroken metal strip bridging the gap (fig 2).

Note – If the 20Amp (centre) fuse blows when the ignition key is turned this means there is a short between the red and blue coloured wire and the body of the tractor. The usual places to investigate are:

- The electrical PTO and socket.
- Seat switch wires.
- The brake micro switch.

If fuses blow after these areas have been checked call your dealer.

PRINTED CIRCUIT BOARD

There are 2x10Amp Barrel fuses on the circuit board (fig 3) which can be reached by removing the cover (fig 1). These two fuses control lights and the Electromagnetic Blade Clutch. If the problem is not a fuse and you cannot see any loose connections – call your dealer.

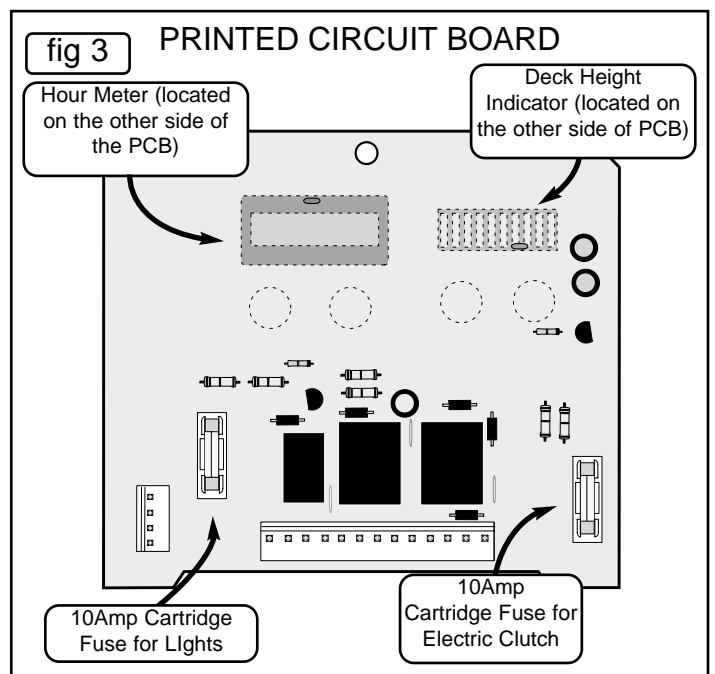
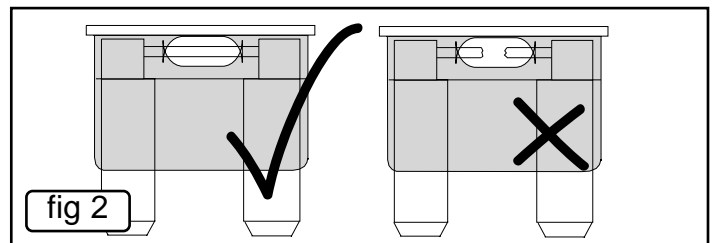
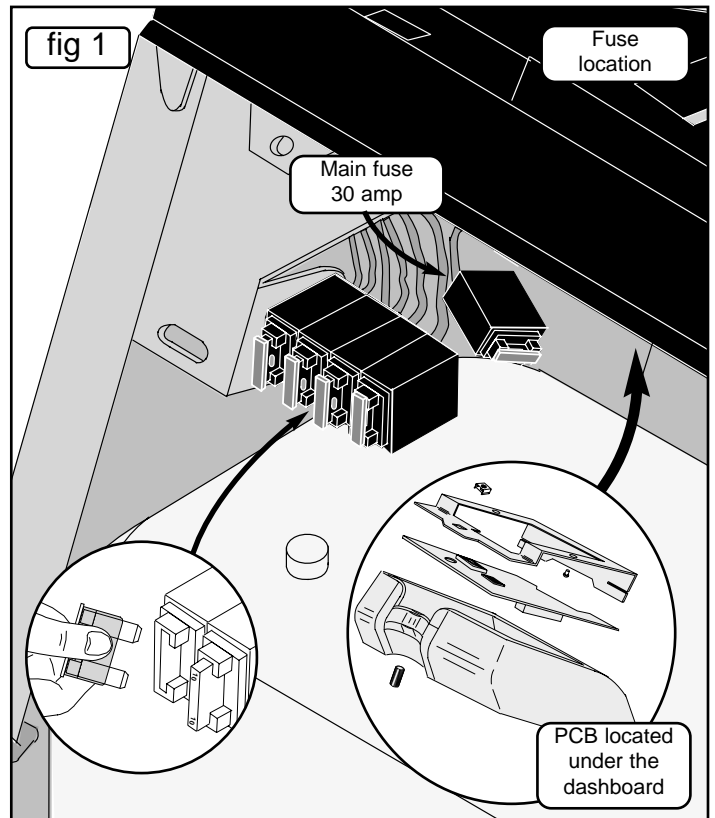
ELECTROMAGNETIC BLADE CLUTCH

If the blade clutch disengages without being switched off these are the possible causes:

- You have got off the seat – the safety switch will disengage the cutter.
- The battery has lost charge and will not longer hold the clutch in operation.
- Fuse blown on printed circuit board – see fig 3.
- Faulty safety switch or break in wire – see your dealer.

-Please Note-

Countax recommends that any electrical problems you may have with your tractor be dealt with by your supplying dealer. If owners choose to undertake service work themselves they do so at their own risk. Countax accepts NO responsibility for any damage thus caused whether or not the instructions have been misunderstood



Engine - Oil and Oil Filter

LUBRICATION OIL INSPECTION AND REFILL

Always check the engine oil before starting the tractor. Ensure the tractor is on an even level surface when inspecting or refilling oil. To check oil levels, follow this procedure:

- Clean around dipstick to prevent debris from falling into the crankcase and damaging your engine.
- Remove dipstick and wipe off any oil with a clean lint free cloth.
- Install the dipstick back into the tube, but **DO NOT** tighten. Let the dipstick threads rest on top of the tube.
- Remove the dipstick and examine the marked area for the highest point of oil. The oil level should be between the upper and lower limit lines on the dipstick.

If the oil level is low then top up to the required level using a good grade 15w30 Diesel engine oil. Remember, overfilling beyond the upper limit level can be just as damaging to your engine as running the tractor without any oil. Fill with small amounts of oil at a time and then recheck and top up if necessary.

CAUTION – After refilling, wipe off any spilled oil and tighten the oil filler cap securely.

OIL CHANGE (fig 2)

Change the oil in your D18/50 after the first 50 hours of use, then every 200 hours thereafter. Drain the oil while it is still warm after running (having allowed the engine to cool enough as to not scold). Warm oil drains quicker and more cleanly than cold.

To change the oil, follow this procedure:

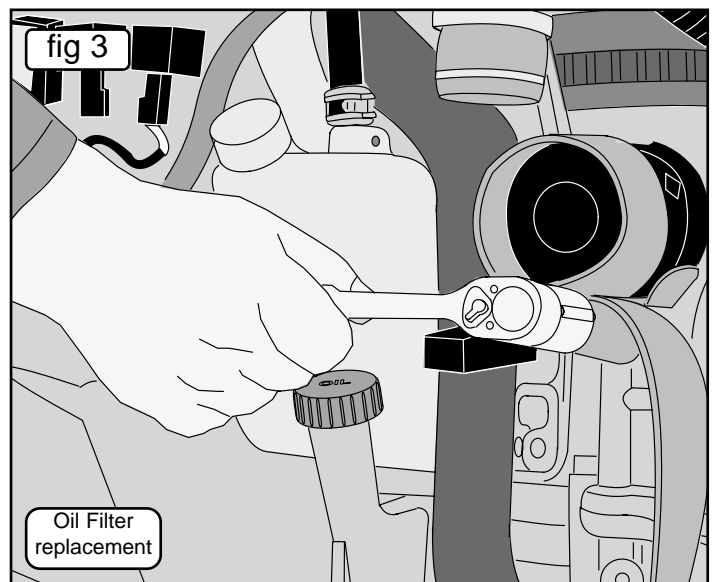
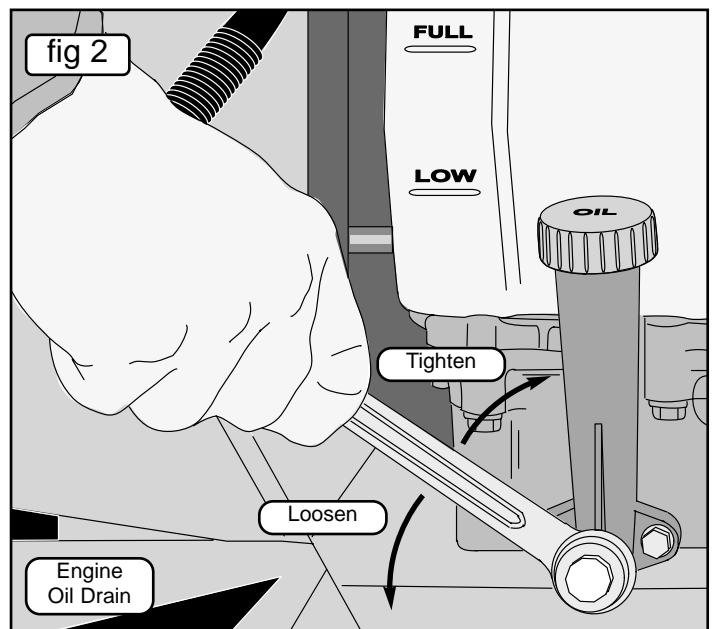
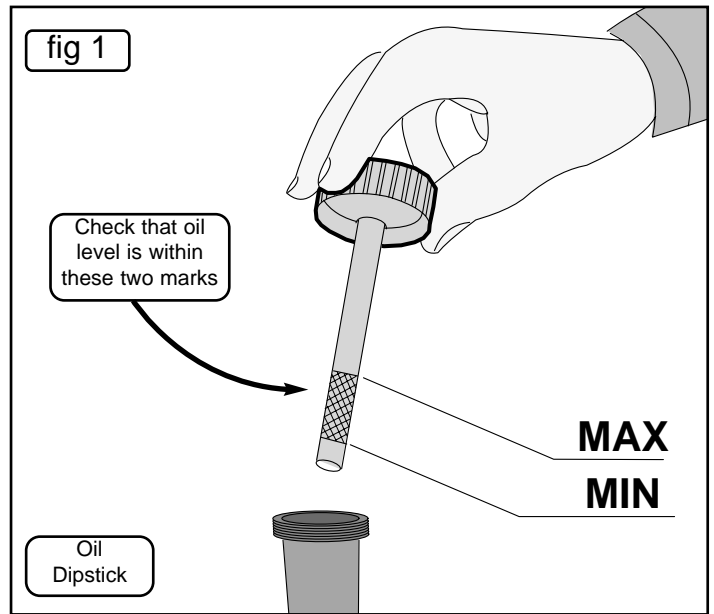
- Remove the drain plug and drain oil.
- After draining oil, tighten the drain plug securely.
- Fill with fresh oil to the specified level.
- Run the engine at no-load for about 5 minutes and check the oil level again about 5 minutes later and top up if low.

ENGINE OIL FILTER REPLACEMENT(fig 3)

Change the oil filter after the first 50 hours of use, then after every 200 hours of use. Always ensure oil and filter have sufficiently cooled before attempting to replace the filter. To replace the oil filter in your D18/50, follow this procedure:

- When removing the engine oil filter, hold the bottom of the filter mount with a piece of rag to prevent the oil from dripping.
- Use a filter wrench to loosen and remove oil filter.
- Clean the oil filter mount surface on the cylinder block.
- Apply clean engine oil to the new O-ring for the oil filter.
- Fully tighten the oil filter to the mount surface, then tighten it about three quarters of a turn using the filter wrench.

OIL FILTER PART No. 11930535150



Engine - Cooling

COOLANT LEVEL

The coolant level should be checked daily as a matter of routine. **ONLY EVER INSPECT COOLANT WHEN THE ENGINE IS COMPLETELY COLD.** To check level, follow this procedure:

- Check the coolant level in the sub-tank. If the level is close to the lower limit, remove the sub-tank cap and fill with coolant to the upper limit.
- Remove the radiator cap and check the amount of coolant in the radiator. Fill with coolant to the overflow if the level is low.

Check the difference of the cooling water level before and after operation once a week. Before operation when the engine is cold there should be a low level of coolant. Immediately after operation (when the engine is hot) there should be a high level of coolant. If there is no difference in coolant level before and after the engine operation open the radiator cap and check the coolant volume. Also check the hose linking the radiator and the sub tank to make sure that it is not disconnected, loosened or torn. Check that the hose is inserted to the lower level of the sub-tank (when engine is cold).

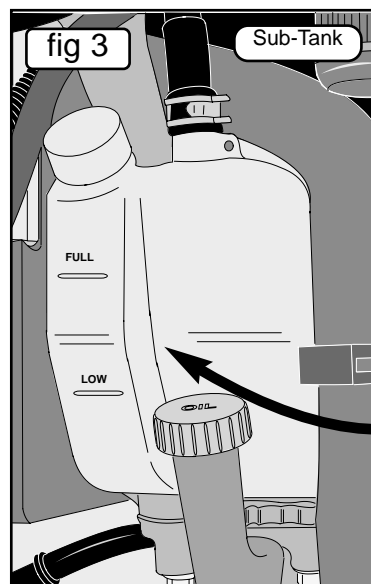
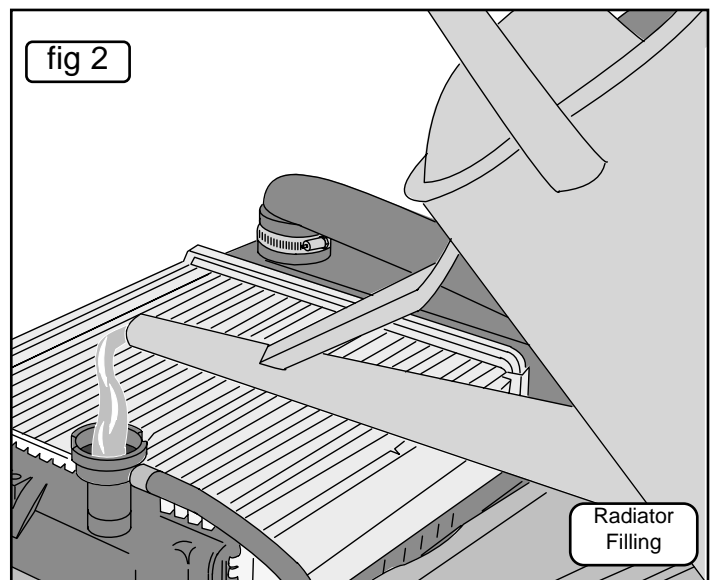
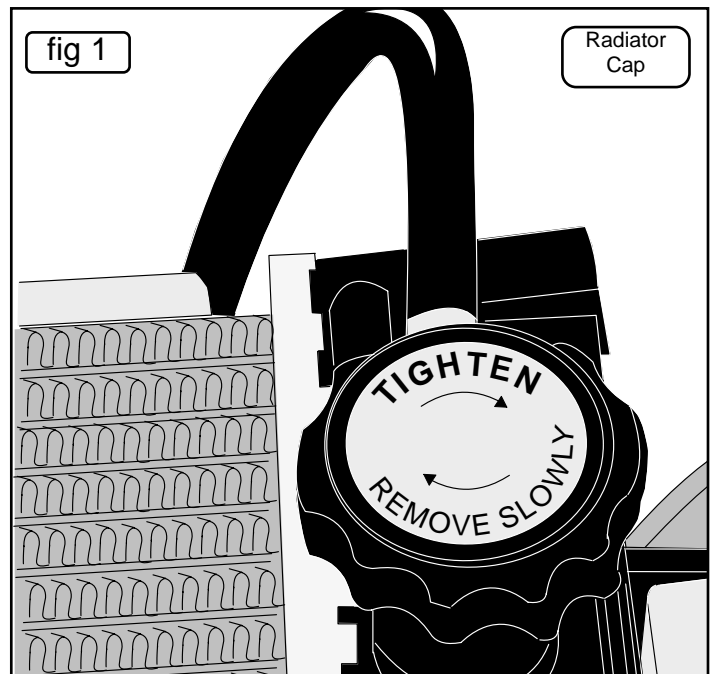
COOLING WATER REPLACEMENT

- CAUTION -

Change the cooling water when the engine is fully cold to prevent scalding. Never open the radiator cap whilst the engine is hot, this may result in scalding steam and a hot water blow-out.

To change coolant, follow this procedure:

- Position a can to collect the waste fluid.
- Turn the radiator cap anti-clockwise for 90° without pressing it downward.
- Press the cap downward and continue to turn it anti-clockwise to remove. If forcibly turned the cap may become damaged.
- Disconnect the hose between the coolant pump and the radiator out of the cooling pump side. When the coolant is fully drained, reconnect the coolant rubber hose.
- Add coolant whilst bleeding air by pinching or tapping the coolant rubber hose.
- Fill coolant to the upper limit of the sub tank.
- Operate the engine at no-load for about 5 minutes and check for any fluid leakage.
- Check the sub-tank coolant level about 5 minutes after stopping engine and replenish as required.



Check coolant level by examining the sub-tank. The Liquid should be visible through the white plastic tank.

Engine - *Fuel & Air Filter*

FUEL FILTER

Replace the fuel filter after 400 hours of use or annually (**Part No. 1182005510**). Follow this procedure:

- Loosen the inlet and outlet port clip of filter and remove pipe.
- Remove the fuel filter by pulling it towards you.
- Install a new fuel filter to the support.
- Attach the inlet/outlet pipe to the fuel filter.

AIR BLEEDING FROM FUEL SYSTEM

By starting your D18/50 the solenoid pump is actuated to bleed air automatically from the fuel system.

AIR CLEANER ELEMENT CLEANING AND REPLACEMENT

Clean the air cleaner element once every 50 hours and replace it every 200 hours.

1. Remove the air cleaner cover and element.
2. Blow the element with compressed air (7kg/cm or below) to remove dust.
3. Clean inside the case any dust and dirt and install the element.
4. Always ensure that seal is in place.

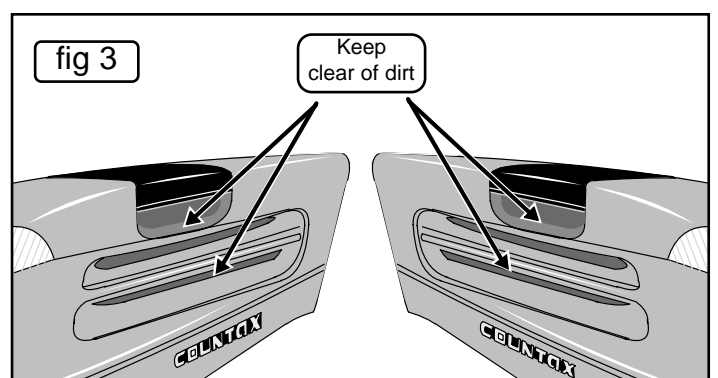
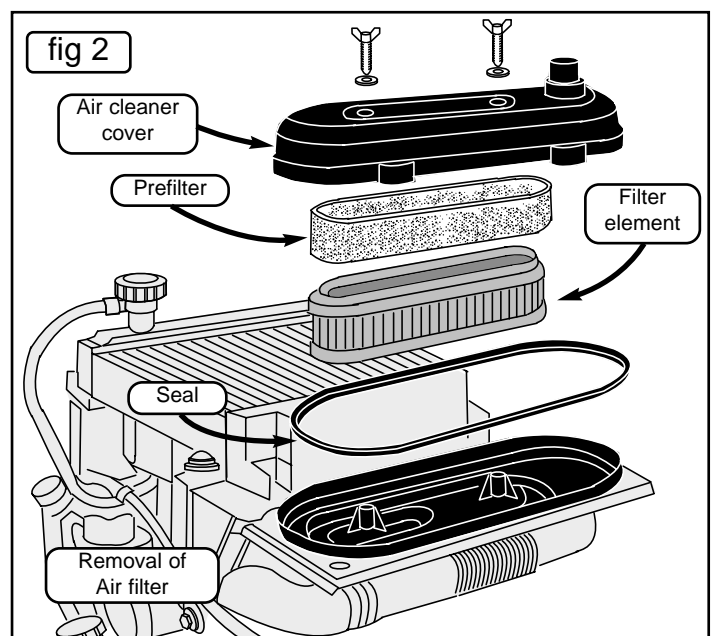
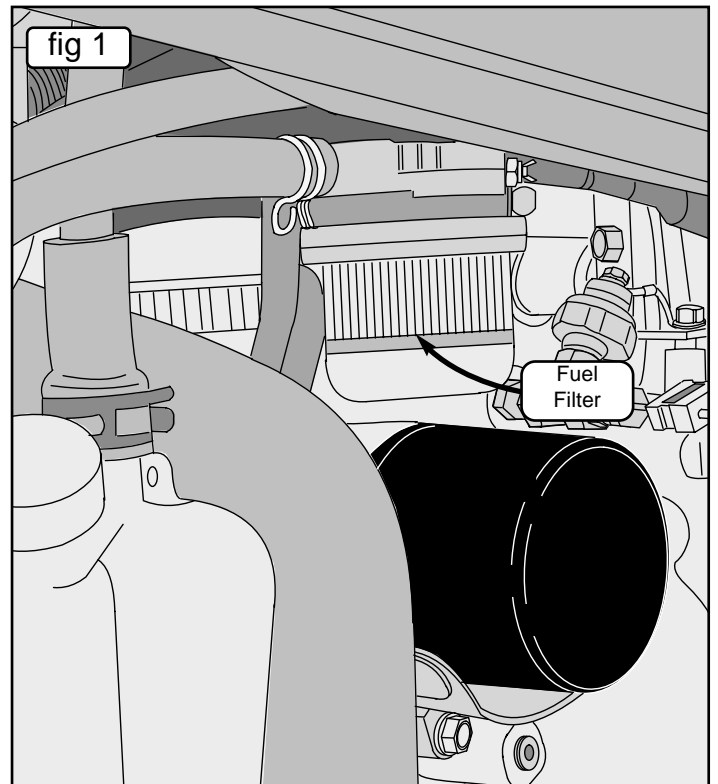
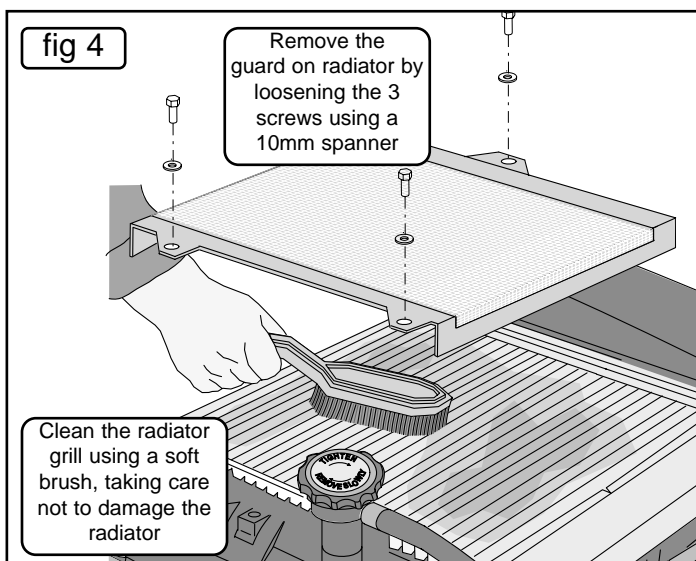
Always replace excessively used or damaged filter elements
Part No. 11840012520.

BONNET AIR VENTS

It is very important to regularly check and clean the side air vents located on either side of the bonnet of your D18/50 tractor.

RADIATOR GRILL

Check and clean on every refuelling, see fig 4.

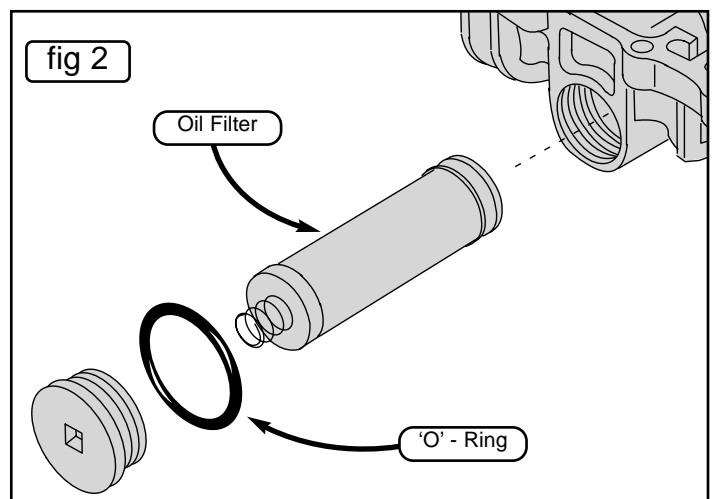
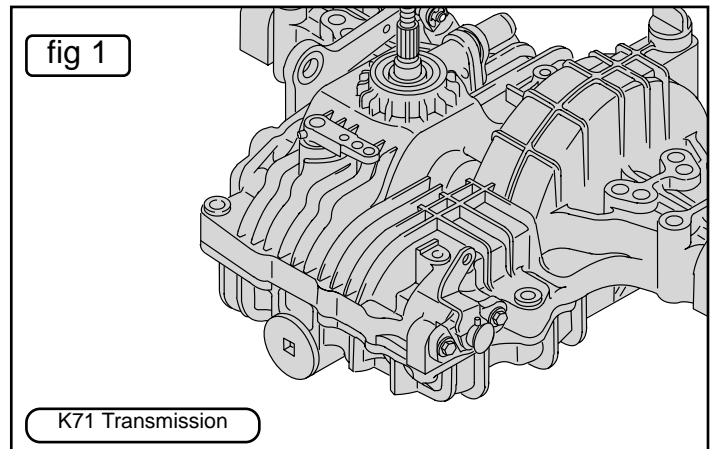


Transmission - Oil

TUFF TORQ K71 AXLE

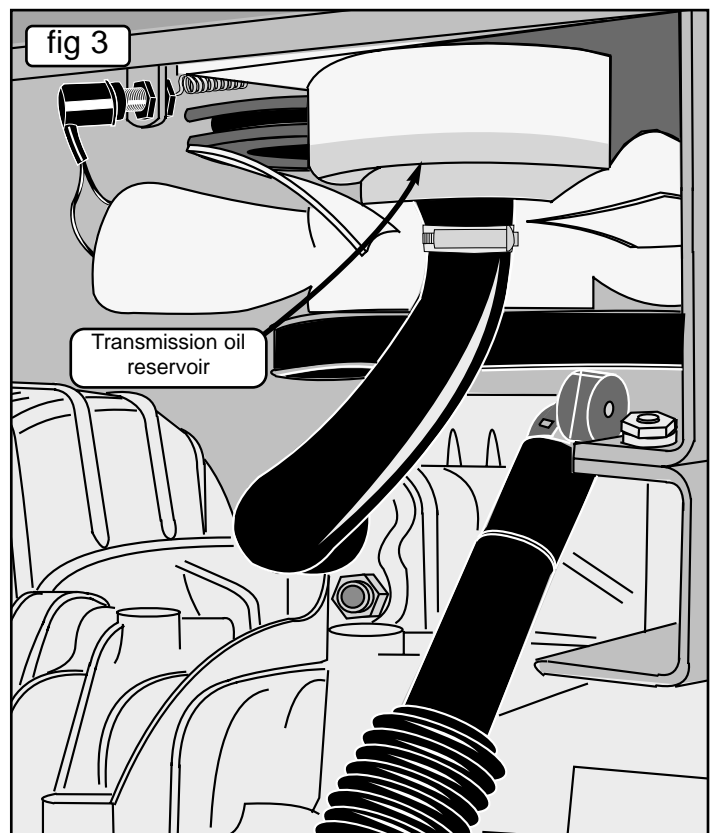
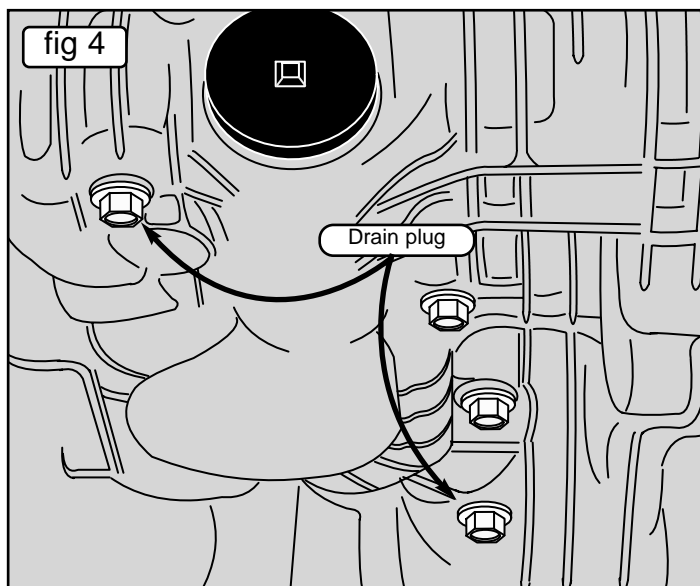
Change transmission oil first time after 50 hours, then every 200 hours thereafter. Transmission oil should be a good quality 10W-40 engine oil CE or CD rated. To change oil follow this procedure:

- Remove the drain plug and drain oil (fig 4).
- After draining oil, thoroughly clean the drain plug then secure and tighten the drain plug.
- Remove oil filter cap using a 3/8" drive extension socket.
- Remove oil filter and dispose.
- Fit new filter.
- Check condition of O-ring, replace if required.
- Lightly lubricate O-ring and replace on cap.
- Fit oil filter cap.
- Fill with fresh oil to specified level.
- Run the tractor with the transmission engaged for about 5 minutes and check the oil level again about 5 minutes later and top up if low.



TRANSMISSION OIL LEVEL

The transmission oil reservoir is located behind drawbar plate at rear of tractor. To inspect, remove drawbar plate and check. Maximum oil level for transmission when cold 15mm in reservoir (fig 3).



Notes:

SPECIFICATION SUMMARY

D18/50 Garden Tractor

MODEL	ENGINE	DISP	POWER	TORQUE	BORE	STROKE
D18/50	Yanmar 2V78 Diesel	749cc	13.8kw 18.5hp @3600 rpm	38NM @2800rpm	78mm	78.4mm

Engine Lubricant:

2.27 litres
Recommended

Recommended Tyre Pressure:

Front Wheels:
0.8kgf - 1.1kgf
(12lb PSI* - 16lb PSI)

Rear Wheels:
0.43kgf - 0.7kgf
(6lb PSI* - 16lb PSI)

Forward Speeds:

@3600rpm
Where load and engine output allow

0-12 mph

Transmission:

Tuff Torq Heavy Duty
Hydrostatic K71, infinitely variable speed control.
Sealed for life lubrication.

PGC Capacity:

380 litres

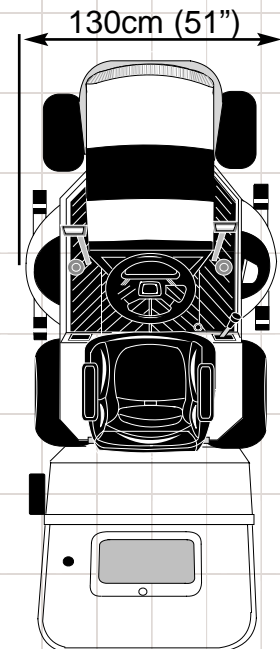
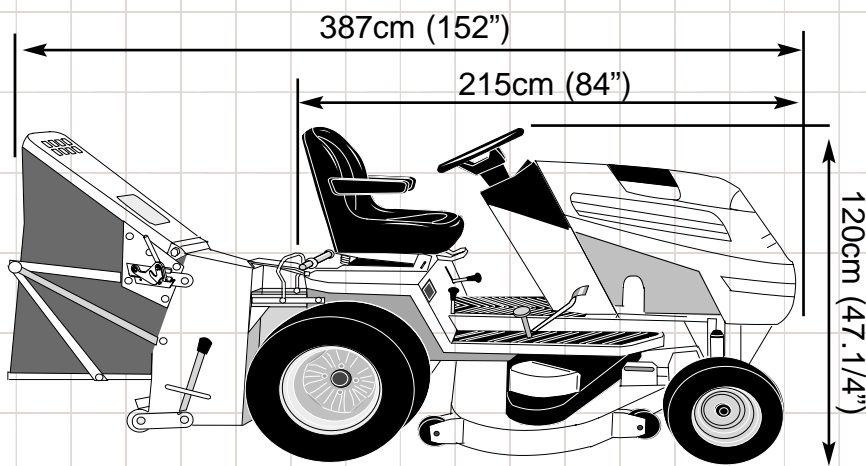
Weight:

D18/50: 325kg
Sweeper: 62kg

* Pressure recommended for maximum grip

Turning Radius:

114cm (44.8")



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All figures are approximate. We reserve the right to change specification and price without notice E&OE

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