Westwood

S/T Series & V20/50

Operator's Manual

Westwood Tractors, FREEPOST 3376, Plymouth, Devon, PL7 5ZY
Tel: 0800 0720127 Fax: 0800 0720132
www.westwoodtractors.com • email@westwoodtractors.com

13DEC2005

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Westwood Garden Tractor

Contents Page

I, the undersigned A. Bennett of Westwood Tractors, Freepost 3376, Plymouth, Devon, England. certify that the lawnmower:

MODEL	S1300M	S1300H	S1400H	S1600H	T1600H	T1800H	V20/50	T1600-4WD	T1800-4WD
Power (kw)	9.4	9.4	10.7	11.5	11.8	13.4	14.9	11.8	13.4
Engine operating speed	2800	2800	2800	2800	2800	2800	2800	2800	2800
Engine Manuf.	Briggs & Stratton	Briggs & Stratton	Briggs & Stratton	Briggs & Stratton	Briggs & Stratton	Briggs & Stratton	Briggs & Stratton	Briggs & Stratton	Briggs & Stratton
Engine Type	Petrol	Petrol	Petrol	Petrol	Petrol	Petrol	Petrol	Petrol	Petrol
Weight in Kg	239	239	241	242	259	259	290	279	279
Max Drawbar pull (Kg) @ coupling hook	500	500	500	500	500	500	500	500	500
Max Vertical load (Kg)	25	25	25	25	25	25	25	25	25
Max Sound Power Level	100Db(A) @2600rpm	100Db(A) @2800rpm	100Db(A) @2800rpm	100Db(A) @2800rpm	99Db(A) @2800rpm	98Db(A) @2800rpm	104Db(A) @2800rpm	99Db(A) @2800rpm	98Db(A) @2800rpm
Vibration (m/s/s) hands (Max)	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
Vibration (m/s/s) seat (Max)	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
Type of Cutting Device	Cutterbar	Cutterbar	Cutterbar	Cutterbar	Cutterbar	Cutterbar	Cutterbar	Cutterbar	Cutterbar
Width of Cutting Device	91cm	91cm	97cm	97cm	97cm/107cm	122cm	127cm	97cm/107cm	122cm

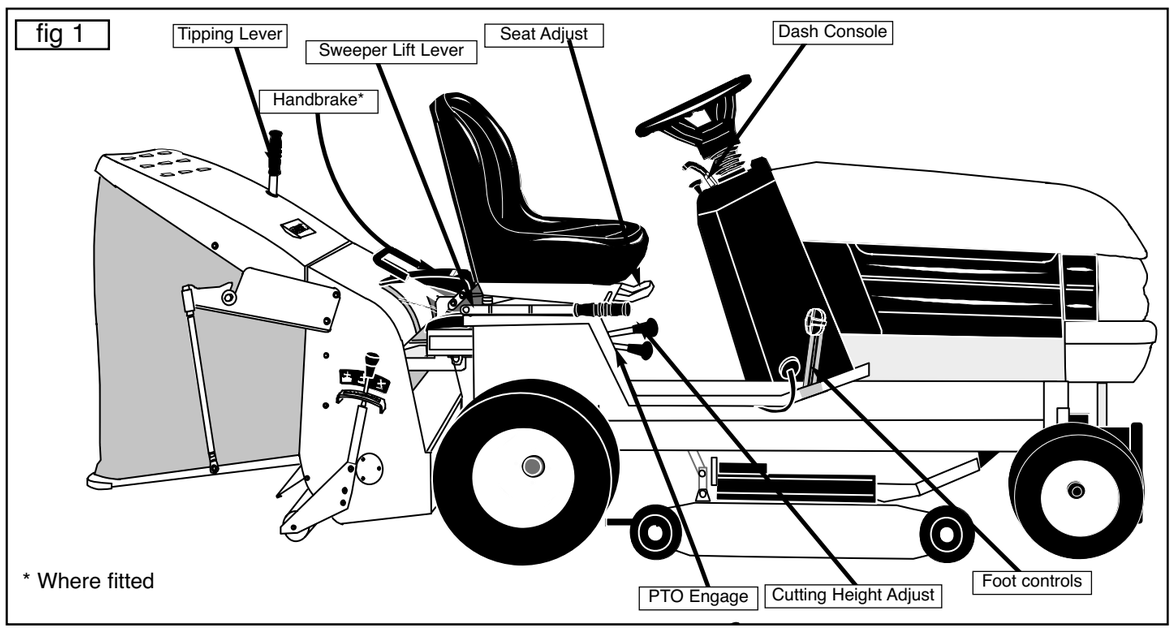
Comply to the provision of the directive 89/392/EEC amended by 98/37/EC and the regulations transposing it into national law. Complies with the provisions of "noise emission in the environment by equipment for use outdoors" directive 2000/14/CE and the regulations transposing it into national law Complies with the provisions of "electromagnetic compatibility" 89/336/EEC directives and the regulations transposing it into national law.
Tested at Oxford, England.
I declare that on behalf of Westwood Tractors, these machines conform to EC Essential Health and Safety requirements.
Signed:

A. Bennett (Technical Director) 1/1/01

THE CONTROLS OF YOUR WESTWOOD GARDEN TRACTOR

Before you start your Tractor for the first time, sit in the seat with this Operator's Manual and familiarise yourself with the layout and operation of the controls. If the seat needs adjusting see *page 5.*

fig 1



Specifications (V20/50)

Weight
V20/50 290 kg
PGC 59 kg

Fuel Tank Capacity
7 litres (1.5 gallons)

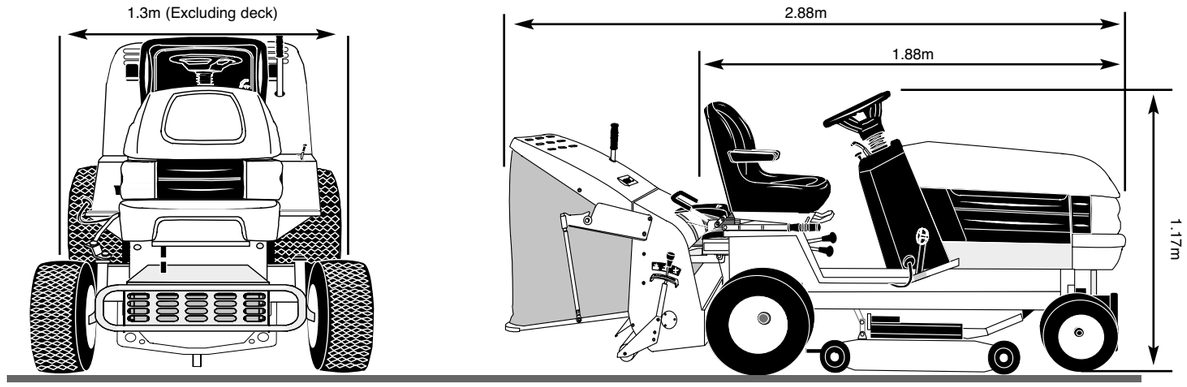
PGC Capacity
300 litres

Transmission
Tuff Torq K62 Hydrostatic

Turning Radius
99cm

Forward Speeds
0-5.8 mph

Tyre Pressures
Front: 0.8-1.1 KGF/cm (12-16 psi)
Rear: 0.43-0.7 KGF/cm (6-10 psi)



Model	Engine	Displacement	Power	Torque	Bore	Stroke
V20/50	20hp Briggs & Stratton Vanguard V-Twin OHV	570cc	14.9kw (20hp)	44.1NM @2600rpm	72mm	70mm

Specifications (S & T Series)

Weight

S1300/36	239 kg
S1300H/36	239 kg
S1400H/38	241 kg
S1600H/38	242 kg
T1600H/38	242 kg
T1600H/42	259 kg
T1800H/48	259 kg
T1600-4WD	279 kg
T1800-4WD	279 kg
PGC	59 kg

Fuel Tank Capacity
7 litres (1.5 gallons)

PGC Capacity
300 litres

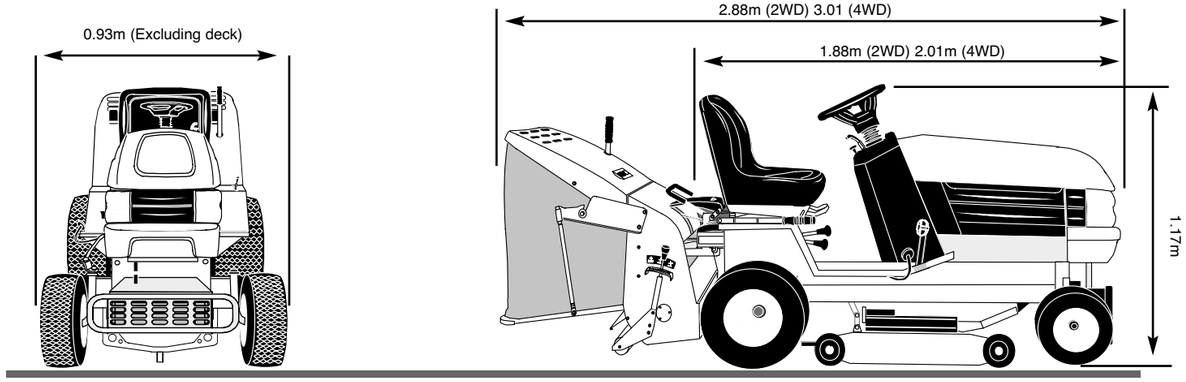
Transmission
Tuff Torq K46 Hydrostatic

Transmission 4WD
Tuff Torq K57 & HFWD

Turning Radius
2WD 63.5cm
4WD 77cm

Forward Speed
2WD 5.3 mph
4WD 5.7 mph

Tyre Pressures
Front: 0.8-1.1 KGF/cm (12-16 psi)
Rear: 0.7-1.1 KGF/cm (10-12 psi)



Model	Engine	Displacement	Power	Torque	Bore	Stroke
S1300M/H	12.5hp Briggs & Stratton I/C Single Cylinder	465cc	9.4kw (12.5hp)	24.1NM @2600rpm	87.3mm	77.7mm
S1400H	14.5hp Briggs & Stratton I/C Single Cylinder	465cc	10.7kw (14.5hp)	24.5NM @2600rpm	87.3mm	77.1mm
S1600H	15.5hp Briggs & Stratton I/C Single Cylinder	465cc	11.5kw (15.5hp)	30NM @2600rpm	87.3mm	77.7mm
T1600H	16hp Briggs & Stratton INTEK V-Twin OHV	480cc	11.8kw (16hp)	36.5NM @2600rpm	75.4mm	70mm
T1800H	18hp Briggs & Stratton INTEK V-Twin OHV	656cc	13.4kw (18hp)	44.1NM @2600rpm	75.4mm	70mm
T1600-4WD	16hp Briggs & Stratton Vanguard V-Twin OHV	480cc	11.8kw (16hp)	36.5NM @2600rpm	75.4mm	70mm
T1800-4WD	18hp Briggs & Stratton Vanguard V-Twin OHV	656cc	13.4kw (18hp)	44.1NM @2600rpm	75.4mm	70mm

Safety

Congratulations on the purchase of your new Westwood Garden Tractor.

This is a highly versatile machine, built to the highest engineering standards to operate in a wide range of conditions.

To get the most out of your machine spend a little time going through this Manual. It will pay dividends.

International Symbols

	Warning! General Hazard - Safety Alert		Beware of objects thrown out by the cutter blade
	Read Instruction Manual before using your machine		Keep bystanders clear
	Disconnect Spark Plugs before carrying out maintenance		Keep hands and feet away from cutter blade

You'll find these International Symbols on your Tractor. Please take notice of them, they are there for your safety.

Safety Instructions

Read the instructions carefully – get to know the controls, and learn how to stop the engine in an emergency.
If you stick to these sensible rules, you'll avoid the risk of injury and make sure your machine has a long and hard-working life. If you are not clear about anything in the following pages, contact your dealer for advice.

Wherever you see this symbol, either in the Manual or on your Tractor, it means special care must be taken to avoid a hazard to the driver or bystanders.

The Tractor

NEVER allow the machine to be used by children, or any person unfamiliar with the controls – particularly the Foot Brake.

ALWAYS remember that the user is responsible for accidents or hazards to other people and their property.

ALWAYS inspect the Blades, Blade Bolts and Cutter Assembly for wear or damage before you use your machine. Replace any worn or damaged blades or bolts with genuine Westwood spare parts.

ALWAYS remember – on Multi Bladed Machines, rotating one Blade can cause the others to move. Take care.

ALWAYS make sure the machine is in a safe condition to operate – and never use it unless the Guards provided are correctly fitted.

ALWAYS check nuts and bolts for tightness and lubricate moving pivoting points.

ALWAYS make sure the **Cutter and Power Take-off drives are disengaged** before starting the engine. This is a safety measure.

NEVER run the engine in a confined space where dangerous Carbon Monoxide exhaust fumes can collect.

NEVER try to change the governor setting of your engine – it has been set for optimum performance.

ALWAYS stop the engine and disengage the PTO Drive before refuelling and before removing the Grass-Collector Box.

ALWAYS disengage the PTO Drive from the attachment when transporting or not in use.

ALWAYS stop the Engine, remove the Ignition Key and disconnect the Spark Plug Leads before doing any of the following:
- ✓ Checking, cleaning or working on the Cutter Unit.
- ✓ Working on any Drive Belt System.
- ✓ Inspecting the Cutter Unit for damage after striking an object.
- ✓ Making repairs.

ALWAYS check immediately if the machine starts to vibrate abnormally.

ALWAYS use genuine Westwood spare parts.

NEVER mow on slopes steeper than 15° with the 2WD and 25° with the 4WD models.

Safety cont.

ALWAYS do the following before getting off your Tractor:
- ✓ Disengage the Cutter Drive.
- ✓ Disengage the PTO Drive.
- ✓ Put the Gear-Lever in 'Neutral'.
- ✓ Set the Parking Brake.
- ✓ Set Throttle to 'Slow' and allow to idle for a few seconds – then turn off using Ignition Key.
- ✓ Stop the Engine and remove the Ignition Key.

Refuelling your Tractor

ALWAYS use ordinary lead-free petrol, never Super Unleaded or Ultra Low Sulpher Fuel (ULSF).

ALWAYS refuel outdoors and before starting the engine. Under no circumstances refill the tank with the engine running.

NEVER smoke while refuelling or refuel when the engine is hot.

ALWAYS re-fill carefully, and mop up any spillage. Do not operate any electrical equipment, lights etc. until the petrol vapours have cleared – as this can create a source of ignition.

NEVER fill the tank up to the brim – leave a small space for the fuel to expand as it warms up.

ALWAYS store fuel in approved containers specifically designed for the purpose.

ALWAYS replace fuel tank and container caps securely to prevent ignition of fuel.

Using your Tractor

NEVER allow anyone near the machine while it is in operation.

ALWAYS avoid sharp turns, especially at high speed – even on a gentle slope. Your Tractor is designed with considerable stability, but rough ground can affect the tilt of the machine quite dramatically. Bear this in mind.

ALWAYS drive within your Tractor's capabilities – it already allows you to mow large areas of grass very effectively in a surprisingly short time.

ALWAYS take care when pulling heavy loads. Use only the hitch point provided. Limit loads to those you can control safely. Avoid sharp turns and reverse with care.

NEVER take your Tractor onto the Public Highway - It is illegal!

Mowing with your Tractor

ALWAYS mow in daylight or in good artificial light only.

NEVER mow while people, especially children, or pets are nearby.

ALWAYS wear substantial footwear while using your Tractor.

NEVER wear loose clothing, or anything that could become trapped in the machine's moving parts.

ALWAYS inspect the area thoroughly before cutting grass. Make sure it is clear of debris like stones, sticks, toys, wire or anything else that could be picked up and thrown out by the Blades.

ALWAYS pinpoint hazards like manhole covers, tree stumps, roots, holes or depressions in the ground so they can be avoided.

ALWAYS stop the Blades if the machine is about to travel over any surface other than grass.

NEVER mow across a slope – always go up and down.

ALWAYS take care on steep or wet slopes.

NEVER exceed the maximum towing weight.

Troubleshooting (Electrical)

Fuses (Fig 45, 46, 47 & 48)

The fuse box on your Westwood tractor is located under the dashboard above the battery. If you believe that a fuse has blown, disconnect the battery and check the windows on each of the fuses. If the thin metal strip is broken , then the fuse has blown (Figure 47 & 48). If this is a persistent problem - consult your dealer.

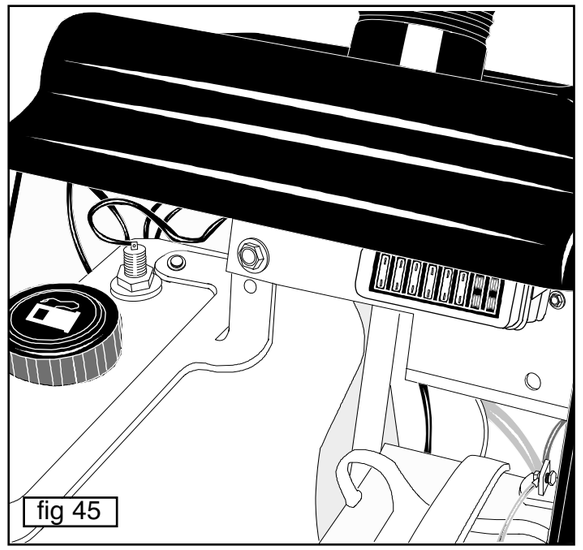


fig 45

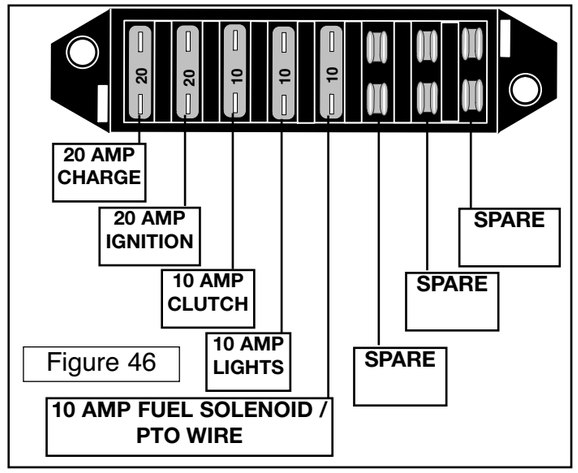


Figure 46

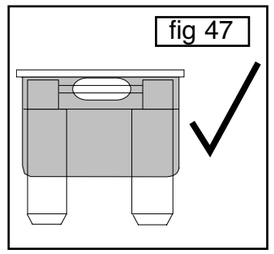


fig 47

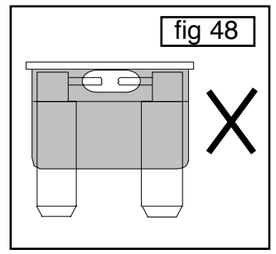


fig 48

Troubleshooting (Starting & Running)

Engine Fails to Turn Over:
CHECK:
- ✓ That the battery terminals are connected (Page 12).
- ✓ That fuse 2 (yellow, 20amp ignition fuse) has not blown or been dislodged.
- ✓ That the battery is charged.

IF THIS IS NOT THE CASE CONTACT YOUR TRACTOR DEALER.

If the Engine Turns Over and Does Not Start:
CHECK:
- ✓ That the ignition is turned on and park brake is engaged.
- ✓ That the fuel tank is full and the Petrol Tap is turned ON (if fitted).
- ✓ That the Spark Plug Lead is connected.
- ✓ That the outlet in the fuel tank is not blocked.
- ✓ That the Spark Plug is clean and set to the correct gap (see engine manufacturer's handbook for relevant Spark Plug data).
- ✓ That the Fuel Filter is not blocked (see Engine – Air and Cooling).
- ✓ That fuse 5 (red, 10amp) has not blown or been dislodged.

IF THIS IS NOT THE CASE CONTACT YOUR TRACTOR DEALER.

If The Engine Misfires, Loses Power or Stalls in Use:
CHECK:
- ✓ That you have not run out of fuel.
- ✓ That the Air Filter Pre-cleaner is not blocked (see Engine – Air and Cooling).
- ✓ That the cooling air intakes are not blocked.
- ✓ If the ignition lights have gone off – check yellow 20amp fuse, fuse 2 on the fuse holder.
- ✓ That fuse 5 (red, 10amp) has not blown or been dislodged.

IF THIS IS NOT THE CASE CONTACT YOUR TRACTOR DEALER.

If the Cutter Deck Fails to Operate:
CHECK:
- ✓ That fuse 3 on the Fuse Holder (red, 10amp Clutch fuse) has not blown.
- ✓ Whether you have got off the seat – the safety switch will disengage the cutter.
- ✓ If the battery has lost charge and will no longer hold the clutch in operation.

IF THIS IS NOT THE CASE CONTACT YOUR TRACTOR DEALER.

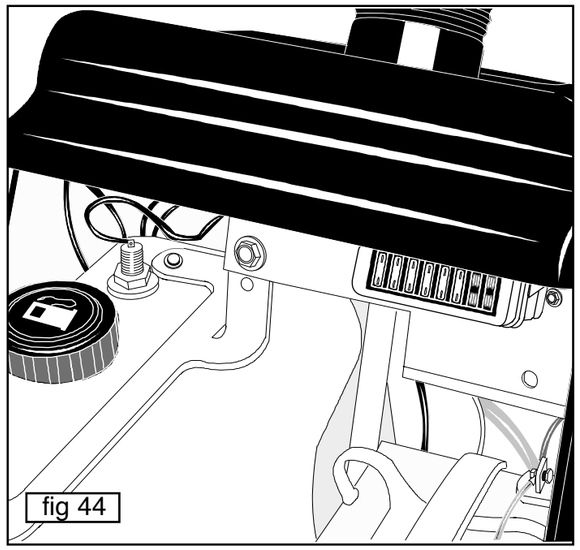


fig 44

Controls

Seat Adjustment (Fig 2)
The seat on your tractor is adjustable forward and backward to suit the operator. Simply lift the seat latch at the front of the seat and slide the seat forward or backward as appropriate. Always ensure the seat is latched back into position before driving off.

Ignition (Fig 3)
The "key start" controls the ignition and a starter button controls the engine start. The engine cannot be started without the park brake being on. Insert the key and turn, then press the start button, this will activate the starter. To stop the engine, turn the key to the left (having first switched off both the cutter and Power Take-off). To prevent unauthorised use, always remove the key after use. THE IGNITION SHOULD ALWAYS BE TURNED OFF BEFORE THE TRACTOR IS RE-STARTED.

Choke (Fig 4)
An independent choke is fitted to some models. This choke should be used in conjunction with a fast throttle setting when starting the engine from cold. It should be cancelled as soon as possible. Do not use the choke when starting a warm engine.

Throttle (Fig 4)
The lever is pushed up for FAST( ) and down for SLOW ( ). On some models the choke control is above the fast setting, a cold engine is started on the choke setting, a warm one on the FAST setting. The choke setting should be cancelled as soon as possible. The engine should be operated on the FAST setting at all times.

Battery Charge Light (Fig 5)
This light will illuminate when the ignition is turned on and will go out once the engine has started to indicate that the battery is being charged. If the light should illuminate for more than 2 minutes with the engine running this probably indicates a charging fault. If the first 20A fuse has not blown your dealer should be contacted.

Low Fuel Warning (Fig 5)
When the petrol gets low on your tractor a warning light will appear to tell you to fill up again as the tractor is about to run out of petrol.

Hour Meter & Service Light (Fig 5)
Your Westwood Tractor is equipped with an hour meter, which is linked to the service light. The service light will come on 5 hours before your service is due. This will need to be reset once the service has been carried out and the next service interval will be calculated from the reset time.

The Hour Meter is displayed by holding down the light switch and turning on the ignition. All the time the light switch is held down the hours will be displayed in 12.5-hour increments. On releasing the light switch the display will revert to normal use.

Electronic Slope Alert (ESA) (Figure 5)
Should your tractor be fitted with 4WD it will have ESA. This is set to an angle of 25 degrees at the factory. If this angle is exceeded then the display will flash and a warning siren will sound.
The exceptional traction of 4WD will allow you to cut in very slippery conditions, and it also allows the tractor to ascend very steep slopes. If the slope alarm sounds DO NOT attempt to cut or drive at a greater angle than the one you are on. As all terrains and conditions vary, great care should be maintained when operating the tractor. DO NOT take the tractor into an area where it could become unstable.

On no account should slopes steeper than 25⁰ be driven on.

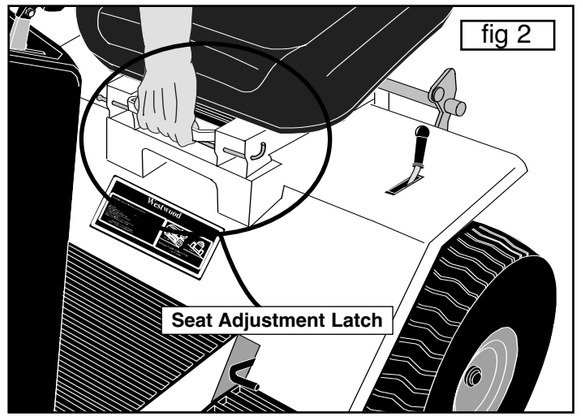


fig 2

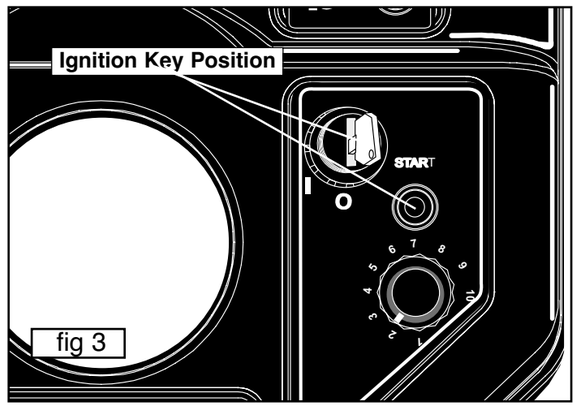


fig 3

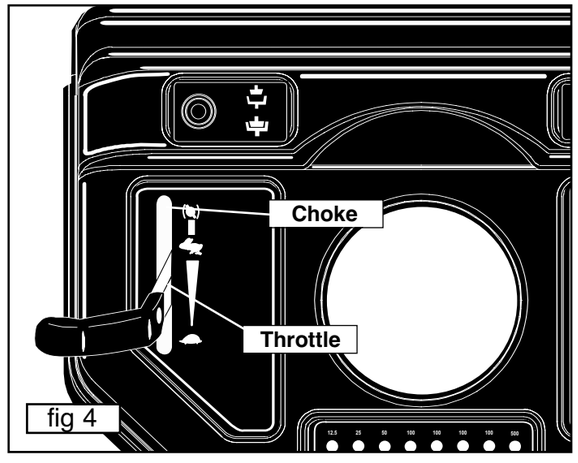


fig 4

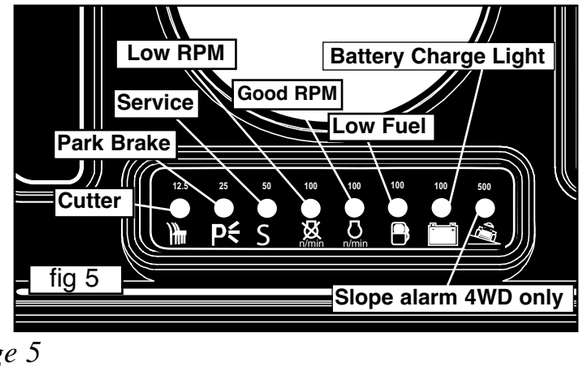


fig 5

Controls cont.

Drive Controls - Hydrostatic (Fig 6)

The forward speed of the tractor is controlled by footpedal '**A**'. Reversing is controlled by footpedal '**B**'.

Moving Off / Reversing (Fig 6 & 7)

To move off, ensure your feet are off pedals '**A**' and '**B**' and then release the parking brake by either pushing the hand lever '**D**' to the forward position (V20/50) or by depressing the Clutch/brake pedal '**C**'. Now gently depress pedal '**A**' and you will move off. The further you depress pedal '**A**' the faster you will go. Its function is similar to that of a car accelerator except that it controls the hydrostatic transmission and does not affect the speed of the engine.

To reverse simply depress pedal '**B**' and the tractor will begin to reverse. As with the forward pedal, the speed of reversing is increased as the pedal is pushed further.

Moving Off - Manual Gears (Fig 7 & 8)

The Gear Lever is on the right-hand side mudguard, with the gear positions indicated. To select a gear, first press the Clutch/brake Pedal '**C**' (situated on the right hand side) and then with the Gear Lever, choose your gear. Then slowly release the pedal. You will begin to move. To change gear, press the Clutch/brake pedal fully down again, your tractor will stop, then select another gear and release the pedal. Use low gears (1 and 2) until you've got the feel of the gears and the workings of the Clutch/brake pedal.

Stopping (Fig 6 & 8)

To stop the tractor simply release either pedal '**A**' or '**B**' and the natural braking of the hydrostatic system will bring the tractor to a standstill. For smooth braking release either pedal gradually, for an emergency stop remove foot rapidly. On manual models, simple depress pedal '**C**' and shift the Gear Select Lever to neutral.

Parking (Fig 6, 7, 8, 9A & 9B)

Remove your foot from pedals '**A**' and '**B**' (as you would to stop normally) or change to Neutral (manual gearbox tractor only) and then simply pull the parking brake lever '**D**' to the upright position (V20/50). On the S or T Series tractor push the clutch/brake pedal '**C**' right down, then push the park brake plunger '**E**' down. Still holding down the park brake plunger, release the clutch/brake pedal. The park Brake is now held on. To release the parking brake, simply push the pedal down – and the parking brake will release automatically, returning brake control to the pedal. When you turn off the engine, the natural braking of the hydrostatic system will add to the effect of the brake. It's like leaving your car in gear.

A Light will illuminate on the dash next to the 'P' symbol to show the park brake has been engaged.

Note: the engine will not start unless this is illuminated. The engine will turn over but not start.

fig 6

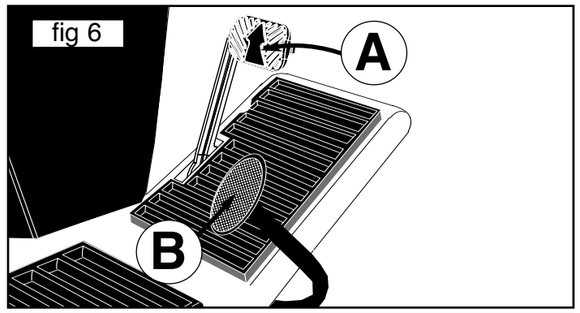


fig 7

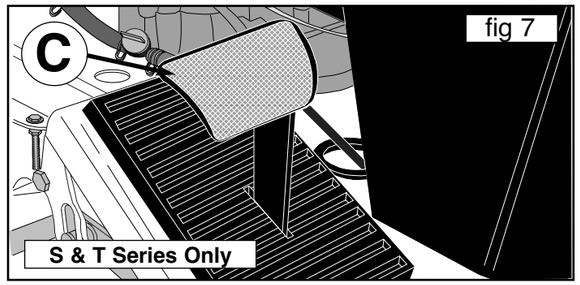


fig 8

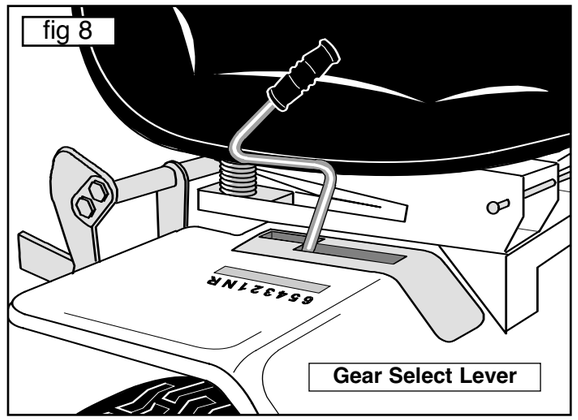


fig 9A

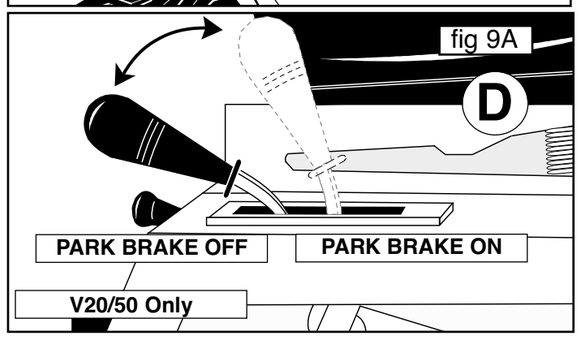
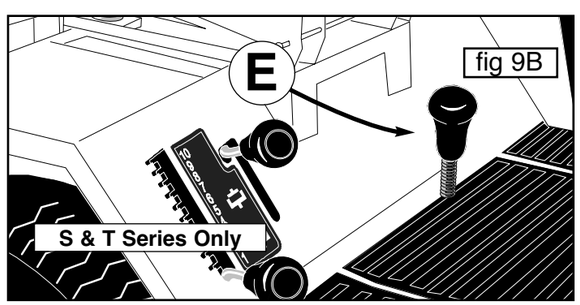


fig 9B



Troubleshooting (Tyres & Wheels)

Persistent Flat Tyres

This is an inevitable problem faced by around 5% of Westwood users. Like all garden machinery, the most common cause of punctures are THORNS! Blackthorn, Hawthorn and Rose are usually the problem and will puncture any tyre not fitted with very expensive guards. There are less expensive ways to overcome this problem, it is advisable to check and avoid these possible causes:

The rim of the wheel has been damaged causing the seal on the tube-less tyre to be broken. There are 2 solutions:

- ✓ If the damage is not severe, treat with Tyre Sealant (Pt No. 52903501).
- ✓ If the damage is significant it is necessary to order a new wheel from your dealer.

If you have Hawthorn, Blackthorn or Wild Rose in your garden – this will puncture any tyre. It makes sense to check any area you intend to cut or drive over and to remove any branches. THE LONG-TERM SOLUTION IS TO TREAT ALL FOUR TYRES WITH TYRE SEALANT.

IF YOUR TYRES SPIN OR LOSE GRIP CHECK:

- ✓ That all tyres are inflated to their correct pressures (see page 15).
- ✓ Are you going too fast for the conditions?

Removal of Front Wheel (Fig 41)

- ✓ Apply Parking Brake.
- ✓ Place chocks under the wheels that are to remain on the ground.
- ✓ Remove the plastic hubcap.
- ✓ Use a 19mm socket/spanner to loosen the wheel nut whilst on the ground – DO NOT REMOVE.
- ✓ Place a jack under the front axle at the jacking point Figure 41 (on the side appropriate to the wheel that is to be removed). Jack the tractor up until the wheel to be removed is well clear of the ground.
- ✓ Remove the wheel nut and washer and keep safe.
- ✓ Taking care not to dislodge the tractor from the jack, pull the wheel off.

When the tyre is repaired, replace the wheel preferably using a new M12 Nyloc nut (Part No. 04822400). Tighten to a torque setting of 5.25Kg.m (38lb/ft). Check to ensure wheel turns freely.

Removal of Rear Wheel (Fig 42 & 43)

- ✓ Apply Parking Brake.
- ✓ Place chocks under the wheels that are to remain on the ground.
- ✓ Loosen the the four wheel nuts.
- ✓ Place a jack under the jacking point shown in Fig 42 (on the side appropriate to the wheel that is to be removed). Jack the tractor up until the wheel to be removed is well clear of the ground.
- ✓ Remove the wheel nuts using a 19mm spanner /socket. Once removed, keep safe and remove the wheel.
- ✓ When replacing the wheel re-tighten the nuts to 5.25kg.m (38lb/ft).

fig 41

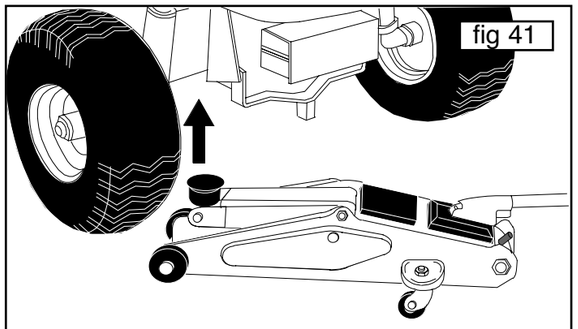


fig 42

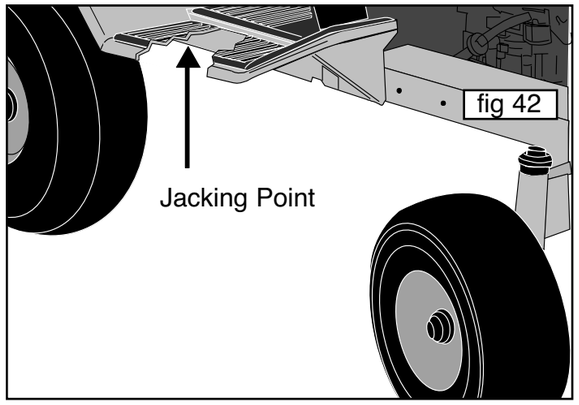
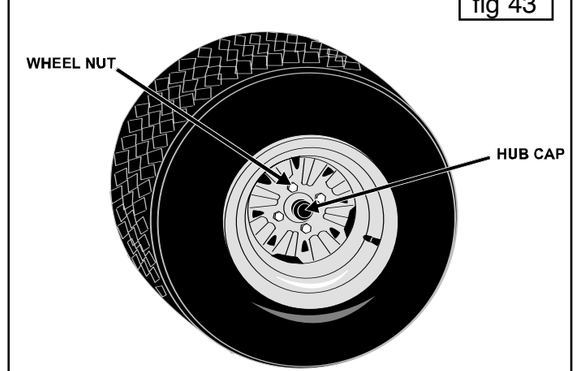


fig 43



Troubleshooting (Grass Collecting)

Grass Collection

If your Collector appears not to be picking up satisfactorily, check the following:

- ✓ The PTO lever is engaged.
- ✓ That the PTO pulley beneath the seat is turning – if not, call your dealer.
- ✓ That the Collector Belt is not reversed (if it is correct, the brush revolves against the forward direction of the tractor (Figure 40).
- ✓ That the Brush Height Adjustment Lever is not set too high or too low.
- ✓ That there is not a build up of congealed grass on the leading edge of the Brush Guard.
- ✓ That the Brush is not clogged.
- ✓ That the Collector Belt is not slipping, if it is then adjust the tension or replace the worn or damaged belt. See page 9.
- ✓ That the Collector Net is not clogged. If so, wash or brush with a stiff hand brush.
- ✓ That the Brush is not damaged.

If you are still experiencing difficulties with collection please contact your dealer.

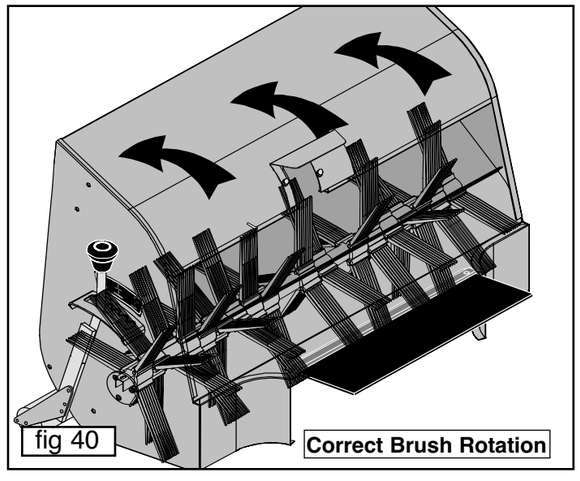


fig 40 **Correct Brush Rotation**

Controls cont.

Freewheel Control - Hydrostatic (Fig 10)

The natural braking of hydrostatic transmission means that it is not possible to easily push or freewheel the tractor. To disengage, first make certain that the machine is on a flat even surface. Release the Parking Brake by either moving the handbrake lever forward '**D**' or depressing pedal '**C**'. Locate the bypass valve, situated alongside the rear right wheel. Disengage by pulling out the lever. You will now be able to push the tractor at a speed not exceeding 2 mph. Make sure you disengage the Neutral Valve by pushing the lever back BEFORE starting your tractor.

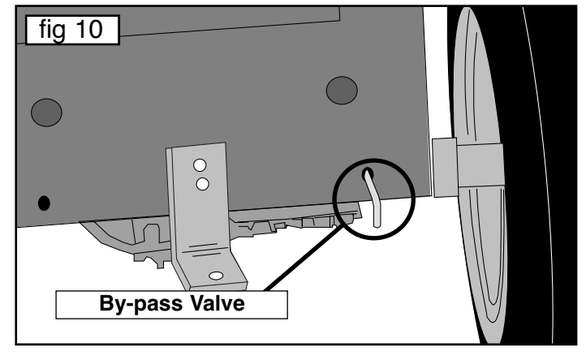


fig 10 **By-pass Valve**

WARNING: After using the freewheel control, make sure it's pushed back-in fully - otherwise your tractor won't drive!

Differential Lock - V20/50 (Fig 11)

The V20/50 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 '**F**' (Figure 11) 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.

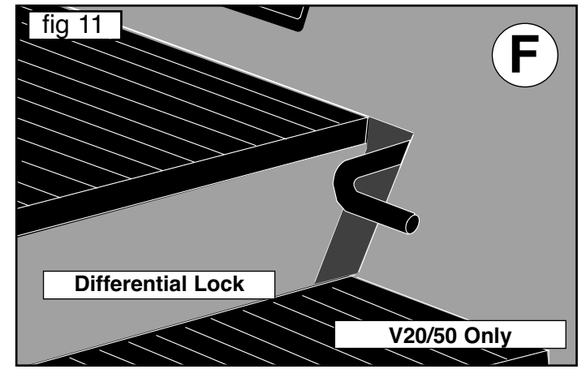


fig 11 **Differential Lock** **V20/50 Only**

NEVER attempt to steer the tractor when the diff-lock is engaged. Always ensure the differential lock is released before manoeuvring in closed area.

Cutter On/Off Switch (Fig 12)

The cutter switch controls the electromagnetic blade clutch. To switch the cutter on, push the switch and then release it, this will engage the cutter deck. To stop the cutter deck, push the switch again. Although the cutter deck is automatically switched off when the engine is stopped or when the operator gets off the seat, it is not good practice to rely on these features, 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. The cutter deck will only work whilst the operator is sat on the seat. NOTE: As an additional safety feature the headlights will flash whilst the cutter deck is running unless the lights are turned on.

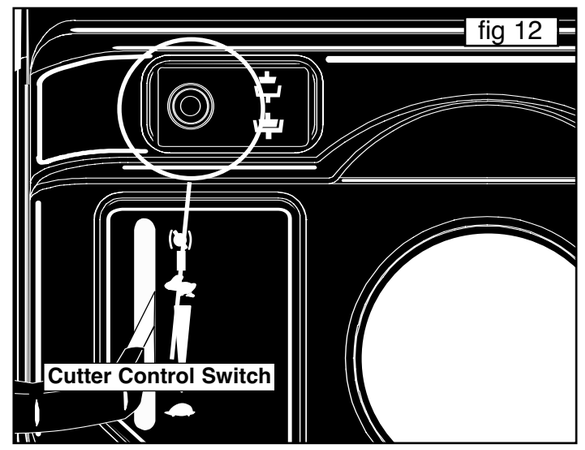
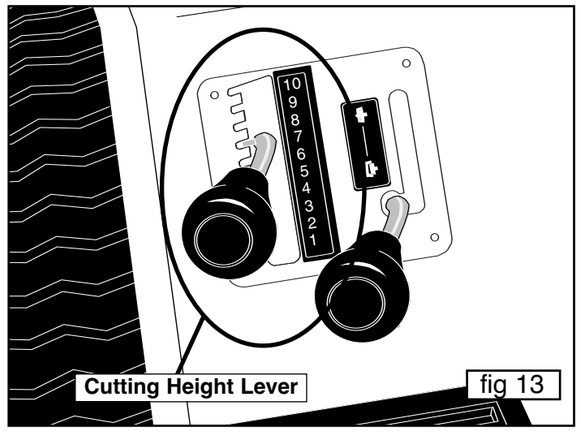


fig 12 **Cutter Control Switch**

Cutting Height Lever (Fig 13)

The Cutter Height Lever is located at the right hand side on the rear body. The height is simply adjusted by pushing **DOWN** for a lower cut or pulling **UP** for a higher cut. There are 10 possible cutting heights, which are represented by numbers with 1 being LOW. We recommend that positions 3 or 4 are used for mowing lawns and 8 or 9 for very long grass and paddocks. When mowing in wet conditions it is advisable to select a slightly higher cutting position than would normally be used.



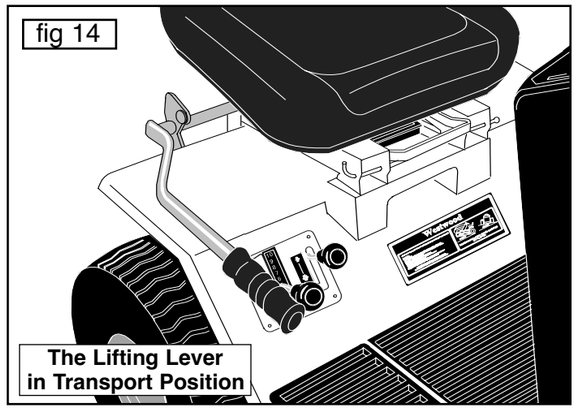
Cutting Height Lever fig 13

WARNING: Always have the deck running before lowering and starting to cut.

Controls cont.

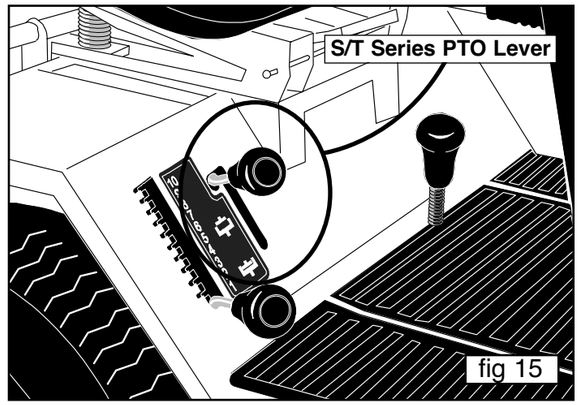
PGC Lift Lever (Fig 14)

Using the lever (figure 14) raise or lower the Powered Grass Collector to either the Transport position or the Collecting position. This lever is located on the right of the driver on the S or T Series tractor and to the left of the driver on the V20/50.



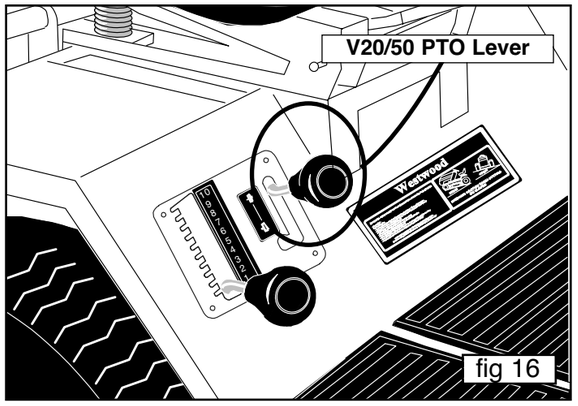
Power Take-Off - S/T Series (Fig 15)

To engage the PTO drive, the PTO lever is lifted up out of its locator, moved to the left and released to find its own height. To disengage the PTO pull the lever up and to the right. Always have this lever in the 'disengaged' position when it is not in use. DO NOT PUT HANDS NEAR MOVING PULLEYS AND BELTS.



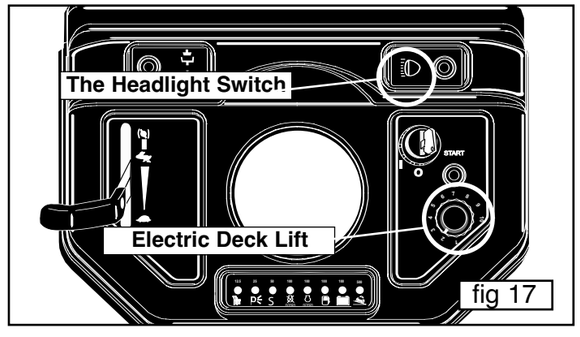
Power Take-Off - V20/50 (Fig 16)

To engage the PTO, push the lever down and to the left, then release the lever upwards. The PTO lever is pushed down and to the right into its locator to disengage. Always have this lever in the 'disengaged' position when it is not in use. DO NOT PUT HANDS NEAR MOVING PULLEYS AND BELTS.



Lights (Fig 17)

Pressing the push button turns ON the headlights. Turn the headlights OFF by pressing the button again.
The headlights will not operate without the ignition switch turned on. NOTE: As an additional safety feature the headlights will flash whilst the cutter deck is running unless the lights are turned on.



RPM (Fig 5)

Your Westwood Tractor is equipped with an engine RPM monitoring system to ensure that the correct engine speed is maintained at all times. This consists of a green light showing the engine is running above 2600 RPM, which is the minimum engine speed is recommended for good grass cutting and collection. Below 2600 RPM the green light will go out and a red one will illuminate next to it. If during a mowing session the low RPM light comes on, then you must either raise the cutter deck or reduce your mowing speed to allow the engine RPM to increase.

Electric Deck Lift (where fitted) - (Figure 17)

The cutting height is adjusted by turning the rotary switch anti-clockwise to lower the deck and clockwise to raise the deck. The height indicator around the switch (Figure 17) shows the deck position (1-lowest to 10-highest).
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 the height control, this will avoid "scalping" the lawn.

Troubleshooting (Cutter Levelling)

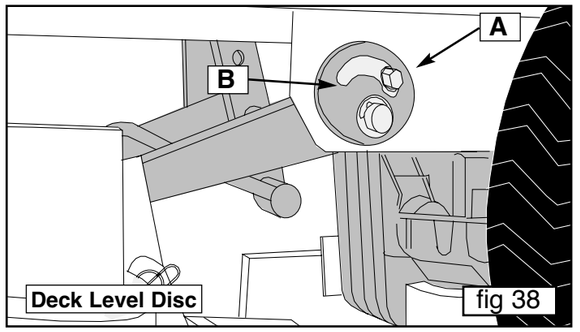
Levelling Side to Side

Tractors up to serial No. 41224

This adjustment is best done with the deck in a position three up from its lowest cut – check the level both sides and levelling is then achieved by adjusting the left side (as you are sat on the Tractor) of the deck at 2 points.

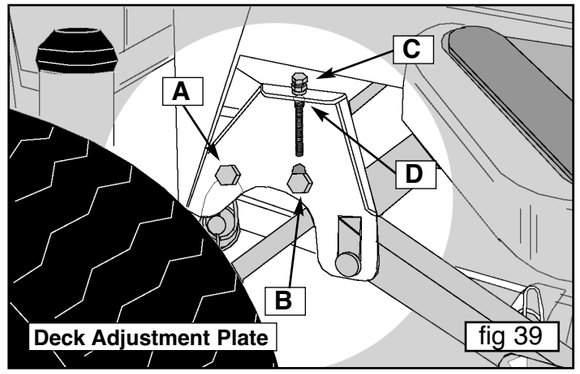
REAR ADJUSTMENT (Figure 38)

1. Find the Deck Level Disc (Figure 38) near the back (near side) wheel. This has a concentric slot in which the Deck Levelling Rod is located.
2. Using a 13mm spanner, loosen the M8 Nyloc nut (A) securing this stud just enough to permit some movement.
3. Now lift or depress the Deck depending on the adjustment you wish to achieve. This will move the stud up or down the disc – the higher up and nearer the centre of the disc 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 (Figure 39)

1. Having levelled the rear of the Deck, check if the front is level. If not, find the Deck Adjustment Plate (Figure 39) which is forward of the Cutter Deck near the front (left) wheel.
2. Before making adjustments, loosen the two sets of nuts and bolts (A & B).
3. Using a 13mm spanner, loosen (upper) locknut (C).
4. Now adjust the height by using a ratchet or spanner to turn the Nyloc nut (D) clockwise (up) to raise the Deck or anti-clockwise (down) to lower it.
5. When level is achieved, tighten lock nut (C), re-tighten nuts and bolts A & B.
6. Raise and lower the cutter deck and then re-check level.



DECK LEVEL SYSTEM FOR 'S' & 'T' SERIES

Tractors from serial No. 50104

Side to Side Level

This adjustment is best done with the deck in a position three up from its lowest cut – check the level both sides and levelling is then achieved by adjusting the left side (as you are sat on the Tractor) of the deck at 2 points.

Rear Adjustment

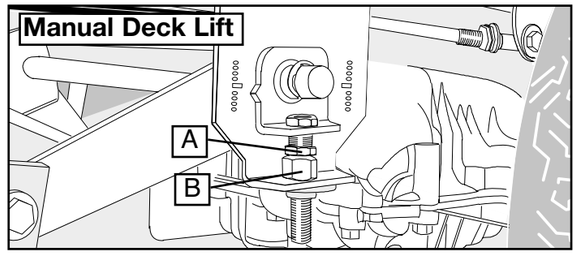
Locate the top lock nut (A) and loosen this off using a 17mm Spanner. Now wind the adjuster nut (B) either up or down using a 19mm Spanner to alter the height of the deck on the left hand side to match that on the right hand side. Use the marks on the plate as a guide as to how much to raise or lower the deck. When the deck is level at the rear tighten the lock nut securely

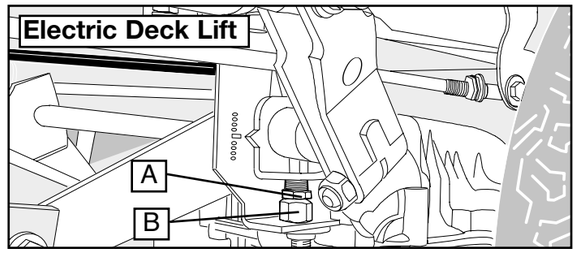
Front Adjustment

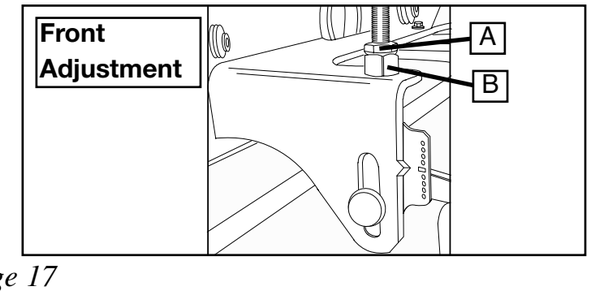
Locate the top lock nut (A) and loosen this off using a 17mm Spanner. Now wind the adjuster nut (B) either up or down using a 19mm Spanner to alter the height of the deck on the left hand side to match that on the right hand side. Use the marks on the plate as a guide as to how much to raise or lower the deck. When the deck is level at the front tighten the lock nut securely.

Raise and then lower the cutter deck and then re-check the level. If it is still incorrect re adjust as required

NOTE: 38, 44 and 50" Mulch decks must be set 10mm higher at the front than the back







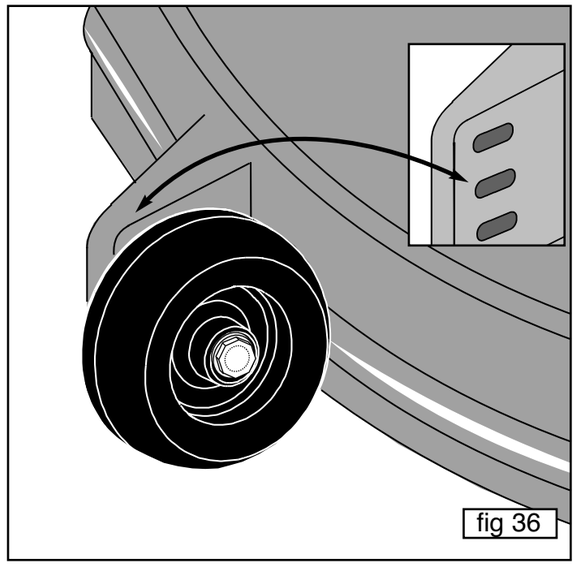
Troubleshooting (Cutter Levelling)

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.

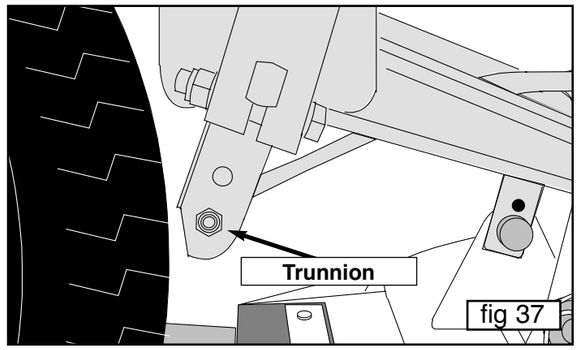
Levelling Front to Back

You need two people for this operation – one to lift the Deck while the other removes or relocates the adjuster Trunnion.

1. Ensure that the Anti-Scalp Wheels are all set to the same height – if not, rectify (Figure 36).
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 rear offside wheel you will find the Trunnion (Figure 37) 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 'in-effect' lengthen the Rod.
4. To free the Trunnion, use a 17mm spanner or socket to remove the M10 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 first and relocate the Trunnion and secure – then check the effect. Repeat and re-check if necessary.



For best results, 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.



Powered Grass Collector (PGC)

Fitting the Net (Fig 18)

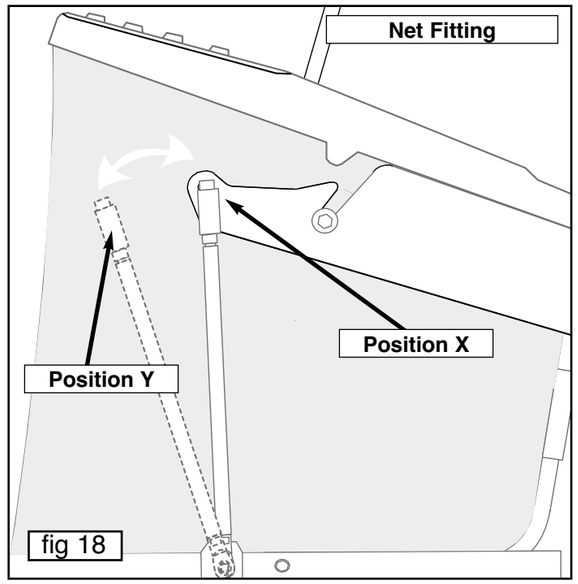
Fit the Net as shown in Figure 18 with the net rod in position 'X'. To remove the net, release the net rod and secure in the removal position 'Y'.

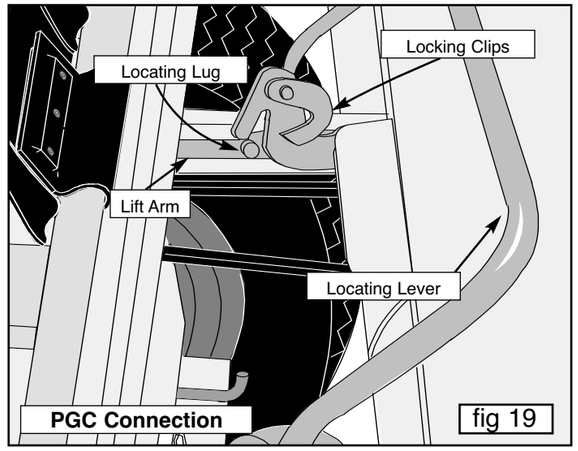
PGC Connection (Fig 19)

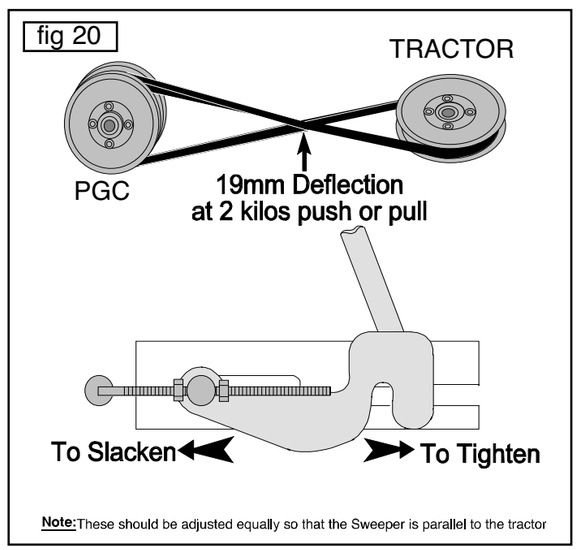
To connect the Powered Grass Collector (PGC) to the tractor, ensure that both are on an even surface with the locking levers on the collector facing the Lift Arms on the tractor. Lift the seat and the PTO flap so that both are resting in the upright position. Move the Collector manually to the tractor; lower the lift arms using the lift lever. Locate the collector channels with the Lift Arms and push until it stops at its limit.

Installing the Drive Belt (Fig 20)

Place the drive belt over the PTO pulley of the Powered Grass Collector, and then feed it underneath the PTO flap. The lower half is pulled left and under the Belt Hook then fed around the PTO pulley. Be sure that this is installed the right way round otherwise the brush will work in reverse and collection will be poor. Lock the Locating Lever over the Lift Arm Lugs (this also tightens the PTO Drive Belt). Rotate the Locking Clips over the Locating Lugs to securely lock the Powered Collector in place. To disconnect, reverse this procedure. ALWAYS CHECK BELT TENSION IS 19mm DEFLECTION AT 2KGs PRESSURE. REFER TO PAGE 14 FOR ADJUSTMENT INSTRUCTIONS.







Using your Westwood Tractor

Adjusting the Sweeper Height (Fig 21)

Using the sweeper Height Lever select the position appropriate to the conditions and the height of 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 start to collect (normally the middle adjustment hole). Do not set the brushes too low - this will lead to scarifying and a very untidy finish as well as shortening brush life.

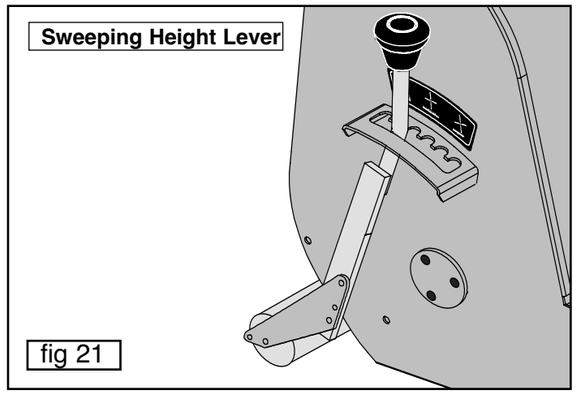


fig 21

To Tip Cuttings (Fig 22)

When the collector is full, raise the collector to the transport position. Drive to your tipping area, reverse to the grass pile, and select neutral if the tractor is manual. Then extend the tipping lever and pull it towards the seating position. This pivots the collector and so empties the collector. Once the grass is off-loaded return the collector to the upright position and put the tipping lever in its original position.

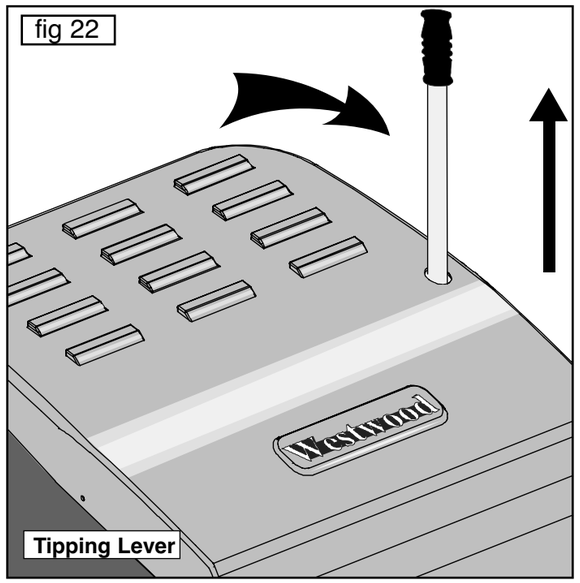


fig 22

Standard Grass Collection

When cutting the grass and collecting follow these simple steps:

1 Always run the engine at maximum speed.

2. Lower the sweeper to the working position.Remember - TO GET THE BEST SWEEPING PERFORMANCE AND TO PRESERVE THE BRUSHES SELECT THE HIGHEST SETTING THAT WORKS.
3. Engage the sweeper drive.
4. Engage the cutter deck drive.
5. Lower the deck to the desired height of cut.

Sometimes when cutting long grass or a paddock, it may be better to cut the grass and disperse the clippings directly to the ground. Alternatively remove collector net, fit the deflector accessory and spread the cut grass prior to final collection.

Troubleshooting (Cutting)

The information contained on this, and the following pages is given on the understanding that Westwood accepts no responsibility for work carried out by a customer or for any damage thus caused, whether or not the service instructions have been misunderstood. To be sure that your warranty terms are not breached, service work should only be carried out by your dealer.

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.
- ✓ That either the Cutter Switch or the Safety Switch on the seat is not faulty – if so, call your dealer.
- ✓ Is the battery low? – The Clutch Engage Switch will only operate if the battery is well charged.
- ✓ Has fuse No.3 failed?

Uneven Cutting

Check:

- ✓ That all tyres are inflated to their correct pressures.

S/T Series: (FRONT: 0.8 – 1.1KGF/cm (12 – 16PSI)
(BACK: 0.7 – 1.1KGF/cm (10 – 12PSI)

V20/50: (FRONT: 0.8 – 1.1KGF/cm (12 – 16PSI)
(BACK: 0.43 – 0.7KGF/cm (6 – 10PSI)

- ✓ That the front axle is pivoting freely.
- ✓ The deck suspension brackets are moving freely and not locking up.
- ✓ That the deck is level from side to side and back to front (see Cutter Deck Levelling).
- ✓ That one or more of the cutter blades are not worn or damaged – if this is the case, it is necessary to call your tractor dealer.

Uneven Cut (Cuts Shorter One Side than the Other)

Check:

- ✓ That the tyres are all inflated to the correct pressures (see above).
- ✓ That the front axle is pivoting freely.
- ✓ That the deck suspension brackets are moving freely and not hitching up.
- ✓ That the side deck level adjustment is correct (page 17).

Cut is Uneven or Untidy in One or More Sectors

Check:

- ✓ That the Cutter Deck is levelled correctly front to back (page 16).
- ✓ 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 Rod is correctly applied (page 12, figure 27)
- ✓ That the Cutter Belt Tension is correct (see page 13)
- ✓ That the Cutter Deck is not clogged with wet cuttings.
- ✓ That the Cutter Drive Belt is not worn.

We do not recommend that customers attempt to change cutting blades themselves, remember that it is never worthwhile to have blades re-ground. It is cheaper and better to replace blades – re-grinding is likely to affect the hardening of the blade and its balance.

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 up from its lowest position.

If the Cutter Deck seems to require levelling, first check these other possible causes:

- ✓ Are the tyres correctly inflated? – If not, rectify using the figures opposite as a reference.
- ✓ Are the Cutter Deck Hanger Brackets (figure 38 & 39) moving freely or are they hitching up. 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 lubricate.
- ✓ Is the front axle pivoting freely? – If not, it may require lubrication or adjustment.
- ✓ Is there any impact damage that has bent or distorted the Deck or Suspension Brackets? (a matter for your dealer).

Routine Maintenance

PTO Main Drive Belt

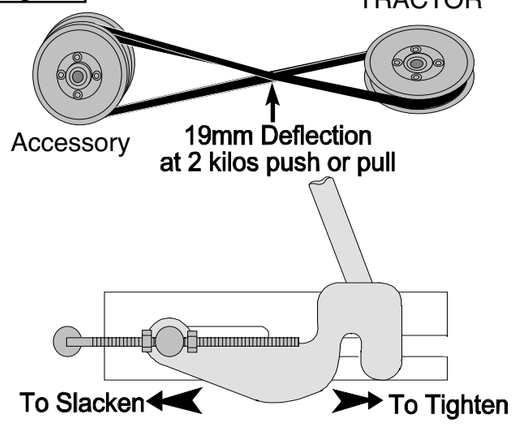
The PTO drive belt is self-tensioning when the drive is engaged. If this belt does require any adjustment it should be carried out by your dealer; anyone not familiar with this setting may cause serious damage or even injury when using a machine with badly adjusted belts.

Accessory Drive Belt Installation (Fig 34, 35)

1. Lift the PTO Guard.
2. Place the drive belt over the PTO pulley of the Powered Grass Collector.
3. The lower half of the belt is pulled left and through the belt hook.
4. Feed the belt around the PTO pulley clockwise.
5. Lock the Locating Lever over the Lift Arm Lugs.
6. Check Belt Tension - (19mm deflection 2kgs pressure).
7. Rotate the locking clips over the Locating Lugs.

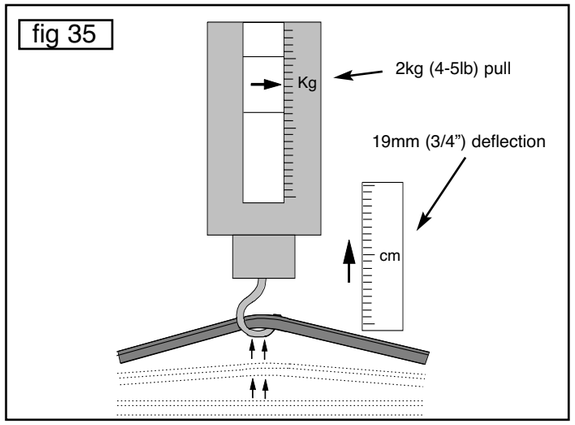
If the Belt Tension is incorrect, movement of the sweeper Locking Levers on the threaded rod can adjust it. Ensure the lock nuts are suitably tightened after adjustment. Belt tension should be set in the working position.

fig 34



Note: These should be adjusted equally so that the Sweeper is parallel to the tractor

fig 35



Mulch Mowing

Mulch Mowing (Fig 23)

Mulching can save time, avoids creating piles of rotting cuttings and feeds your lawn. When Mulch mowing it is necessary to observe certain rules:

1. Reduce the height of the grass by no more than 1/3rd its height in each pass. If the grass has grown long make several passes to achieve the cut height you require.
2. Run the engine at maximum speed.
3. Mow often, particularly in spring and early summer. Short clippings of 25mm (1") or less decompose more quickly.
4. If an unsightly residue of cuttings is being left – increase the cutting height.
5. Drive forward at a speed that does not cause the engine speed to drop.
6. Vary the mowing pattern from cut to cut.
7. Always keep the underside of the cutting deck clean to ensure good grass flow.
8. Always check that the blades are sharp and in good condition – never attempt to sharpen or replace them yourself. New Westwood blades are not expensive; it is good practice to ask your dealer to change them.

High Grass Mulch Deck - (Fig 24)

The real alternative when cutting long or paddock grass is the "high grass mulch" deck. When using the high grass mulch deck please ensure the following:

1. When cutting very tall grass set the deck at the higher settings 7-9.
2. Drive forward at a speed that does not cause the engine speed to drop.
3. Regularly check the cutter deck drive belt tension in accordance with the instructions (page 13).

fig 23

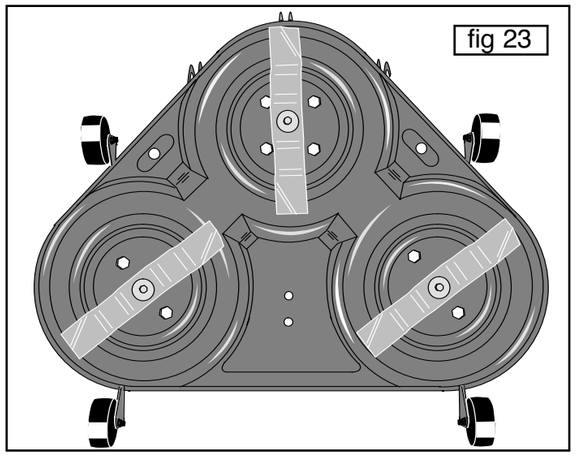
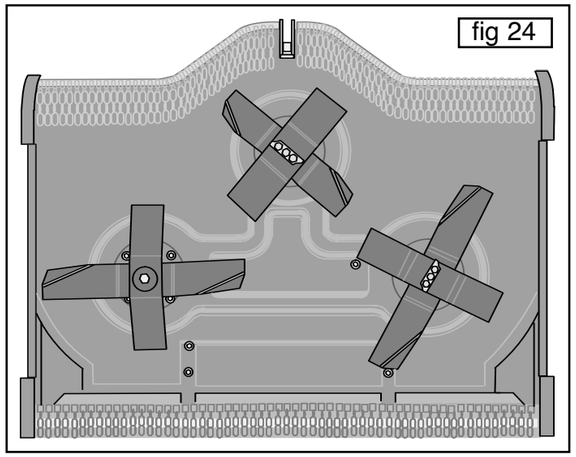
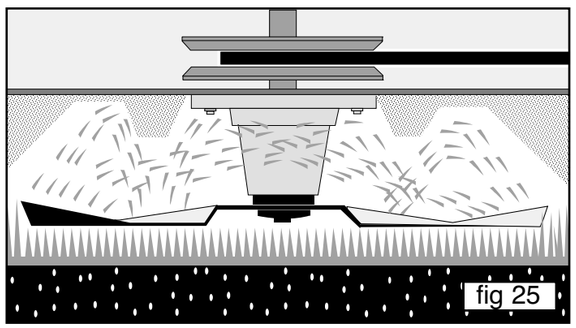


fig 24





Engine Maintenance

Please refer to the engine manufacturer's handbook enclosed with this manual.

Battery Maintenance (Fig 26)

The battery fitted to your tractor is a low maintenance sealed unit. Should your battery require charging for any reason please note that sealed lead acid batteries require a special 2 stage charging unit. Any battery charged on a standard battery charger will fail prematurely. Your dealer will be able to supply a battery charger specifically designed for the battery fitted to your tractor. The battery charger part number is 44-95628-00. If your tractor does not start, refer to the troubleshooting section in this manual.

Cutter Deck Maintenance

REMOVAL OF CUTTER DECK (Fig 27, 28, 29 & 30)

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

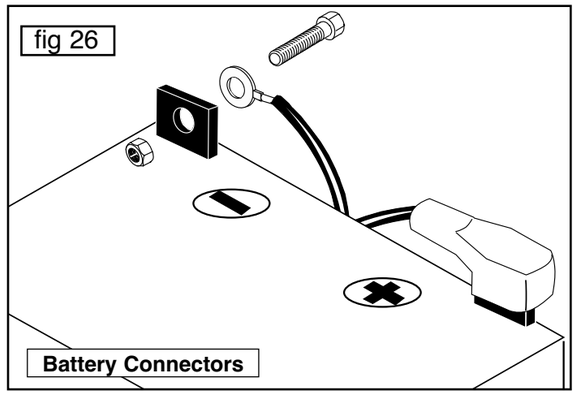
Follow this sequence:

1. Lower the cutting deck to its lowest position (see Controls - Page 7).
2. De-tension the Cutter Drive Belt with the lever under the left running board (Figure 27).
3. Remove the 3 securing pins from the front of the deck (Figure 28 - A, B & C) by undoing the Rue Clips (Figures 29 & 30) and removing them.
4. Remove the 2 securing pins from the back of the deck (Figure 28 - 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 (Figure 28 - F).
8. Remove the fifth wheel - G (V20/50 only).

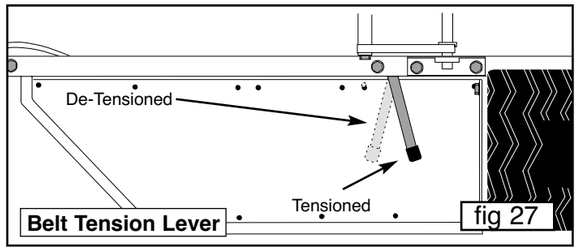
To Clean the Cutter Deck

Remove the deck as instructed, stand it on its side and hose off accumulated cuttings. DO NOT SPRAY WATER DIRECTLY ONTO BEARING HOUSINGS. To prevent a drop in performance it may be necessary to routinely check for this grass build up, particularly at the beginning of the season when the grass is lush and wet. It is best to regularly check and clean the Cutter Deck as often as possible, this can be done by either removing the Deck or raising the tractor safely on a ramp.

fig 26



Battery Connectors



Belt Tension Lever

fig 27

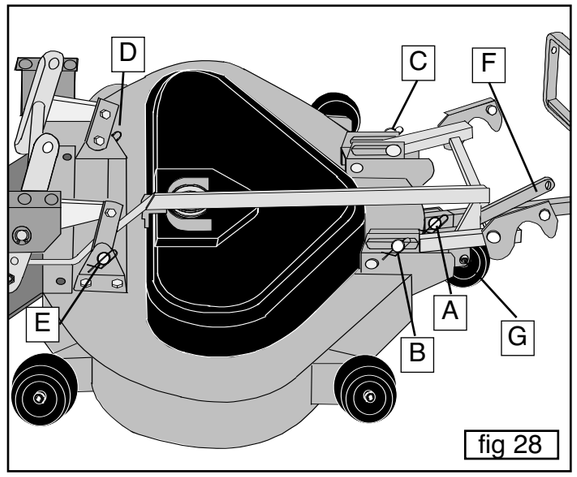


fig 28

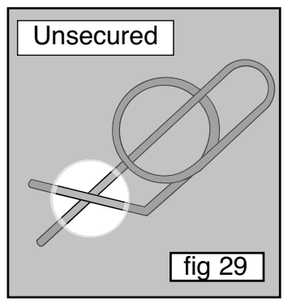


fig 29

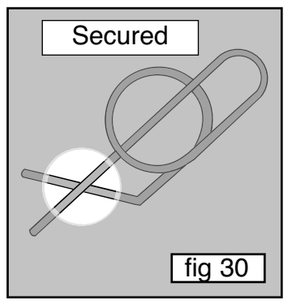


fig 30

Engine to Cutter Drive Belt Tension

The correct tension of the Cutter Drive Belt is critical. If incorrectly set it can lead to engine damage and invalidate warranty.

To check the tension put the deck in a middle cutting height position.

1. Select a midway position on the belt, using a spring balance; apply a 2Kg (4-5lbs) pull (figure 31).
2. 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 (page 12, figure 27) forward.
2. Taking care not to burn yourself on a hot exhaust, locate the Trunnion at the end of the Belt Tension Rod – lift the bonnet and look to the front (nearside) close to the exhaust (see Figure 32).
3. Remove the spring clip and washer holding the Trunnion in place on the Deck Tension Cradle (Figure 33) and release the Trunnion so it can be turned.
4. Both the Trunnion and the Belt Tension Rod are threaded. The belt tension is increased by turning the Trunnion towards the end of the Rod and reduced 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.

Transmission Drive Belt

The transmission drive belt is self-tensioning. When the hand brake is released and the drive belt engaged, the belt will retain its tension correctly. When the drive is dis-engaged using the hand brake, the park brake engages. This setting is adjustable but should be carried out by your dealer, anyone not familiar with this setting may cause serious damage to the transmission.

fig 31

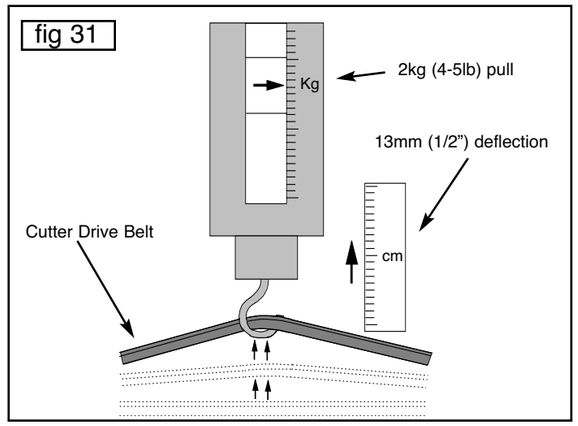
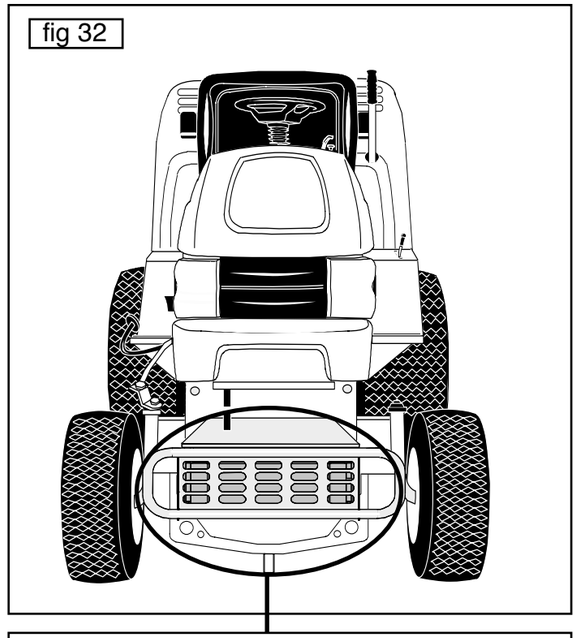
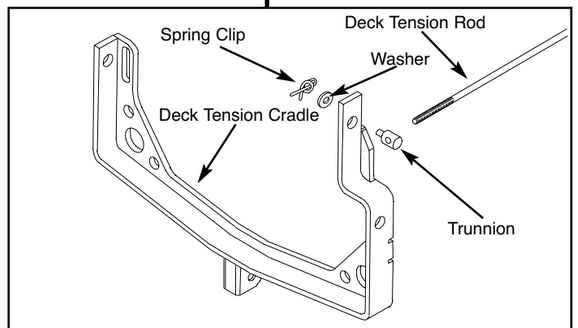


fig 32





Deck Tension Cradle

fig 33