CLUTCH CABLE REPLACEMENT GUIDE

FOR THE

FOLLOWING PRODUCTS

2003 ONWARDS

SP470

2004 Onwards

Briggs & Stratton Sprint Engine

RV150 Engine

Dear Customer

If after reading this guide you feel that you are either unsure of what is required, or feel that you do not have the correct tools to undertake the job yourself, then please contact your local service centre, who with their competent and knowledgeable staff, would we are sure be happy to undertake any remedial work requested.

Your local Service Centre, can be found by contacting the help line on 0870 240 2114 and quoting your postcode.

Yours Sincerely

Andrew Hutchinson
Technical Support
Clutch Cable replacement for SP470

To change the clutch cable on these machines, it will involve tipping the machine upside down. As a result of this, you will need to observe certain general and safety precautions prior to undertaking this task.

Chose an appropriate firm surface to work on, Not a high quality patio, which could be stained by machine fluids.

**WARNING:** before carrying out any work on the machine, you must observe certain safety precautions. Make sure you have disconnected the H.T lead from the spark plug (it is a simple push fit) before you undertake **ANY** work on a rotary mower.

Disconnect the H.T. lead from the spark plug located at the front of the engine (it is a simple push fit. Using a box spanner or spark plug spanner unscrew and remove the spark plug form the engine.

The air filter cover and filter element/sponge will need also to be removed. There are 2 variants depending the type of engine fitted.

**A. Briggs & Stratton Sprint** air filter is located above the fuel tank on the front right hand side, and secured with a single flat headed screw from above.

**B. Sumec SV150 & RV150** air filter is on the front right hand side of the engine, secured with a single clip to the rear of the cover, push this in and the cover will release.
The oil and petrol will also need to be drained. This can be achieved in the following way depending on the type of engine fitted.

### Fuel removal

#### Briggs & Stratton engines

In order to drain the old fuel one has to tilt the mower to the side of the fuel tank (about 45 degrees) to get as much of the fuel out as possible. For the fuel which remains in the tank a good idea is to poke a rag into the fuel tank (do not force it in as you could damage the fuel pick up pipe). Allow the fuel to soak into the rag remove it, and repeat this until the old fuel is removed. Again arrange safe disposal of the old fuel soaked rags.

#### Sumec SV150 & RV150 engines

On the bottom of the carburettor on both models there are two screw fittings, one on the very bottom of the float bowl which holds the bowl to the carburettor, and one at an angle.

Using a 10mm spanner (a ring spanner is best) release the screw which lies at an angle on the float bowl. Once the screw is loose, fuel will begin to seep out. You can either simply remove the screw and allow the full contents of the tank to drain through onto the machine chassis and then the floor, or have a small collection tub ready to place underneath to collect the fuel.

### Oil Removal

For Briggs & Stratton engines and Sumec SV150 & RV150 (two options).

**Option 1**

1. On the underside of the lawnmower there is a square recessed bolt (Briggs & Stratton) which requires a 3/8 square wrench extension bar. The drain bolt is situated to one side of the main crankshaft (blade shaft), and on power drive machines there is a black plastic guard covering the belt. Within this guard you will see a small recess, the oil drain plug is at the top of here. For the **SV150 & RV150** the drain plug is a 13mm bolt head
2. Once this bolt is located it should be turned anti clockwise to release.
Or Option 2 Only

1. Draining the oil from above through the oil fill tube.

2. Undo the fill dip stick and tilt the machine back onto the rear left hand corner (three wheels will be clear of the ground), and make sure a suitable tray is on the ground or being held by an assistant. As the angle increases the oil will pour out of the fill and into the tray.

Any spilt fluids should be wiped off of the machine, and can be washed away from most surfaces using warm soapy water.

To release the clutch cable form the clutch lever, follow the inner clutch cable down from the black lever until you reach the outer cable retainer/adjuster. Release the screws a couple of turns and slide the retainer upwards to allow the outer cable to be released.

Cut free any cable ties that secure the cable to the handles.

Follow the cable back to the top, and unhook the “Z” from the clutch operating lever.

Raise the rear stone guard. You will see an inspection hatch, this is held in by two clips at the top and two at the bottom. Ease this hatch out (you may require a small flat bladed screwdriver to aid you).

N.B You will not be able to remove this cover on E/S machines, as this will contain the battery.
Place a piece of cardboard or material over a workbench or similar solid surface, and turn the machine upside down upon this (you may require assistance with this action).

The blade will need to be removed. To do this use a 9/16 ring spanner over the centre bolt, wrap a piece of rag around one end of the blade (or use gloves). Hold it now rotate the spanner anticlockwise to release.

This may be stiff and if so use a mallet to gently tap the spanner first to start the bolt moving.

When removing the blade mark the top to ensure you refit it the correct way up.

The belt guard is secured with two pozi headed screws to the rear and one 13mm nut at the front. Remove these and lift free the belt guard.

Remove this and lift free the guard.
Looking down on the transmission you will see the hook of the tension spring.

Using a small piece of wire, thread it under the hook, pull upwards and rest it on the plastic side panel.

You will now be able to ease the belt off the front pulley by turning the central pulley. Once freed from the front pulley, ease the belt from the rear transmission pulley (again this may still be a little stiff).

Remove the belt completely.
Move the height adjuster lever to the maximum setting.

You will now be able to rotate the transmission 90° towards the rear.

You will now be able to see the end of the clutch cable, the spring and the outer securing point/retaining clip.

OPTION 1

If the outer cable simply pushes into the raised pillar on the transmission….

N.B. Picture is not taken from specific model.

Gently take the outer cable and pull it free from the pillar.

N.B. Picture is not taken from specific model.
Unhook the spring or “Z” at the end of the inner cable (depending on what was fitted) from the actuator arm.

N.B. Picture is not taken from specific model.

OPTION 2

Place your free hand through the inspection hatch at the rear and grasp the outer cable as close to the transmission unit as possible.

(Image taken when viewed through the inspection hatch).

When looking down from the top you can see the two clips, it is difficult to press both together at the same time to release the cable, so we suggest using either long nose pliers or a long shafted flat bladed screwdriver.

Press one side in, gently holding the pressure from beneath, then press the other side in, and the cable outer will release (be patient this may take more than one attempt).

Once freed you will be able to ease the inner from the slot in the location pillar and then to ease the spring from the lever.
Pull the entire clutch cable out through the rear of the mower.

Refitting The New Cable: Verify the part numbers on both the old and new cables. Normally the part numbers are printed on the outer black sheath.

Take the end of the clutch cable with the “Z” and feed this through the chassis from within the rear. Allow only about 20cm to remain visible from within the rear.

Clutch Cable Attachment Option 1.

For the simple push fit clutch cable, hook the spring end of the clutch cable onto the actuator arm, then feed the inner cable through the slot, then push the outer fully home into the pillar.

N.B. Picture is not taken from specific model.

Clutch Cable Attachment Option 2.

Take the spring and hook this into the actuating arm, then feed the inner wire through the slot in the cable retainer. Now slide the outer back up towards the retainer then push it fully home to catch.
Pull the excess cable through the mower towards the handles.

Move the height adjuster lever forward to the lowest setting.

**N.B.** make sure that the transmission actuating arm is in front of the axle and not behind, or you will not be able to rotate the transmission into the correct position.

For machines that have the push fit connection to the top of the transmission pillar, it would pay at this time to slip your fingers under the transmission and casing brace, just to verify that the outer cable is still fully home in the pillar (with all the movement it can sometimes start to slip out).

**N.B.** Picture is not taken from specific model.
A good precaution is to temporarily reattach the outer cable to the cable retainer/adjuster at the top of the cable.

This will give both ends of the outer a positive location and help prevent the cable coming adrift.

N.B. Picture is not taken from specific model.

Feed the drive belt, onto the rear transmission pulley, and then over the front. Again you may need to rotate the centre blade holder, to assist in seating the belt onto the pulley.

Now refit the tension spring into the front corner of the transmission unit, with the assistance of your added flexible wire.

Should the spring come totally free from the mower, the location for the lower end can be seen from within the inspection hatch as the picture shows.
Reinstall the belt guard, and secure using the correct fixings.

Refit the cutter blade, making sure you have this the correct way up. Secure with the washer and bolt. 38/43 ft/lb.

Turn the machine the correct way up and place it back onto the floor.

Insert the “Z” bend into the clutch lever.

If the adjuster has already been fitted (depending on type of clutch cable used) you will need to gently remove the cable adjuster from the retainer, to give sufficient free play in the inner to attach the “Z” bend.

Slide your fingers down the inner cable until you reach the start of the outer. Pull this down and then place into the cable retainer/adjuster bracket.
Grasp the retainer/adjuster and slide it down the handle until the slack of the inner cable has been taken up.

Tighten the screw on the retainer/adjuster.

Test the machine by engaging the clutch lever and pull the machine backwards. The rear wheels should lock. When the lever is released the rear wheels should freely rotate again.

Lift the rear stone guard, insert the inspection hatch plate, and push it fully home.

Refit the air filter assembly
Spark Plug
Reconnect the H.T. lead
Refill the engine with clean fresh fuel
Refill the engine with the correct level of oil
Briggs & Stratton Sprint 0.6 litre of SAE 30 oil
Sumec SV150 & RV150 0.6 litre of SAE 30 oil

Ensure that all tools are clear of the machine, before starting the machine.