Brush Cutters, Trimmers, Pruners, Pruning saws, Hedge trimmers, Ice drills, Blowers

Workshop Manual

101 90 75-26

Supplement to the workshop manual for brush cutters, trimmers pruners, pruning saws, hedge trimmers, ice drills, blowers 1999

Contents

The supplement includes new products and modifications to products after the Workshop Manual was printed in March 1997.

For complete information when servicing we recommend that the supplement is studied together with the Workshop Manual.

(Order number 101 90 74-26)

Husqvarna

General recommendations

The workshop used to carry out repairs must be equipped with safety devices in accordance with local directives.

No one may carry out repairs without first having read and understood the contents of this Workshop Manual.

The boxes below can be found in appropriate parts of this manual.

> WARNING!
> The warning box warns of the risk for personal injury if the instructions are not followed.

> NOTE!
> This box warns of damage to material if the instructions are not followed.

The machine is type approved for safety in accordance with applicable legislative demands with the equipment specified in the Operator's Manual. The assembly of other equipment or accessories or spare parts not approved by Husqvarna can result in the failure to meet these safety demands and that the person carrying out assembly bears responsibility for this.

Bear in mind:

- Do not start the engine without the clutch drum and shaft fitted. Otherwise there is a risk that the clutch can become loose and cause personal injury.
- Do not touch hot components, e.g. the muffler and clutch before they have cooled sufficiently to avoid burns.
- Avoid getting fuel or oil on your skin or in your mouth. Use barrier cream on your hands. This reduces the risk of infection and makes dirt easier to wash off.
  Long term contact with engine oil can represent a health hazard.
- Never start the engine indoors. Exhaust fumes are poisonous!
- Wipe up oil spills from the floor immediately to avoid slipping.
- Do not use tools that are worn or fit badly, for example on nuts and screws.
- Always work on a clean bench.
- Always work logically to ensure all parts are fitted correctly and that nuts and screws are tightened.
- Use the special tools where recommended in order to carry out the work correctly and efficiently.

Fire risk

Handle fuel with respect, as it is extremely inflammable.

Do not smoke and ensure there are no open flames or sparks in the vicinity.

Make sure there is a working fire extinguisher close at hand.

Do not try to extinguish a petrol fire with water.

Poisonous fumes

When using cleaning agents read the instructions carefully.

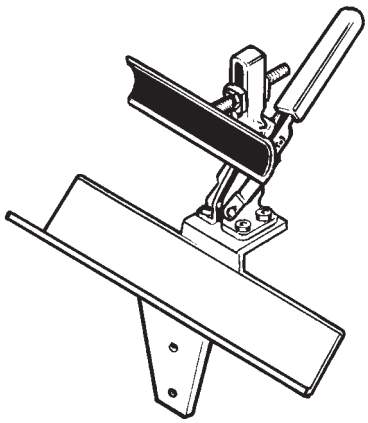
Ensure there is good ventilation when handling petrol and other volatile fluids.

The engine's exhaust fumes are poisonous. Test run the engine outdoors.

Special tools

Some of the work described in the Workshop Manual requires special tools. In each section where this is necessary there is a picture of the tool and an order number.

We recommend the use of special tools in order to avoid personal injury and to eliminate expensive damage to the parts in question.



502 51 03-01

Contact faces and gaskets

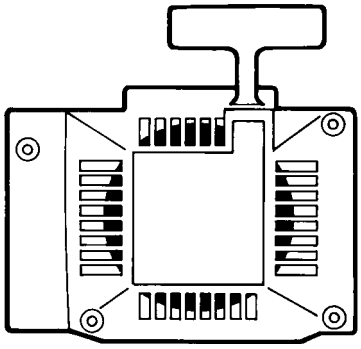
Ensure all surfaces are clean and free from gasket residue. When cleaning use a tool that will not damage the contact face. Any scratches or unevenness should be removed using a flat fine cut file.

Sealing rings

Always replace a sealing ring that has been dismantled. The sensitive sealing lip can easily be damaged resulting in inferior sealing capacity. Surfaces that the seal shall seal against must also be completely undamaged. Lubricate the sealing lip with grease before it is fitted and ensure that it is not damaged e.g. by shoulders and splines on a shaft. Use tape or a conical sleeve as protection. It is important that the sealing ring faces in the right direction for it to act as it is intended.

Starter

1.



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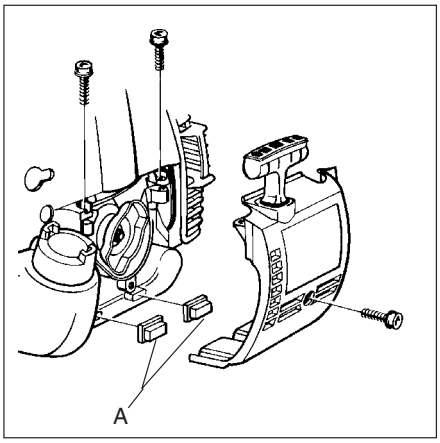


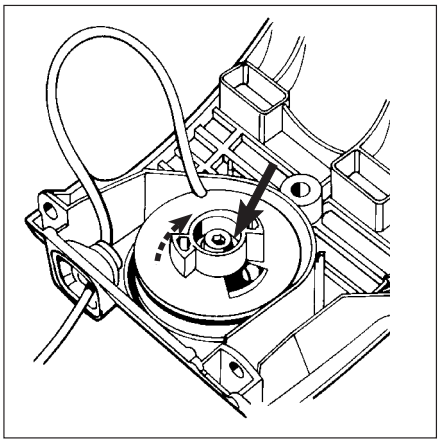
Models 322, 325

Dismantling

Remove the 3 screws and lift off the starter.

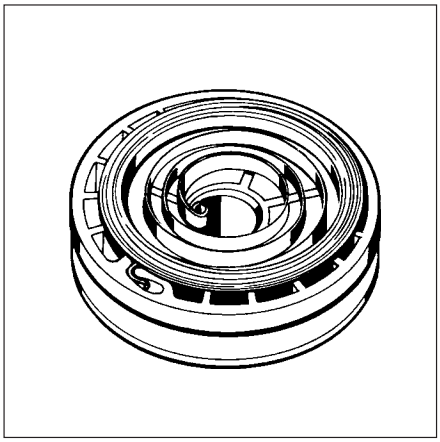
NOTE!

Ensure the bushings (A) that guide the starter towards the fuel tank are not lost.



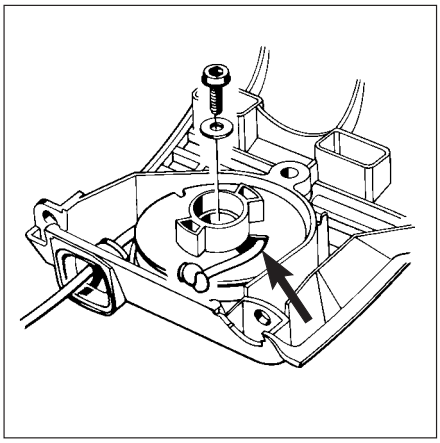
Offload the spring tension.

Remove the screw from the centre of the starter pulley and lift off the starter pulley.



Assembly

Clean the component parts and assemble in the reverse order as set out for dismantling.



Assemble the starter pulley.

Assemble a new starter cord.

NOTE!
A new starter cord can be fitted without the need of dismantling the starter!

Offload the spring tension in the same way as described for model 265.

Remove the screw in the centre of the starter pulley. Carefully lift out the starter pulley from the starter housing.

WARNING!
Wear protective glasses. The return spring lies tensioned in the starter and can fly out and cause personal injury with careless handling.

Assembly

Clean component parts before assembling.

Replace the return spring/starter pulley and starter cord, if necessary.

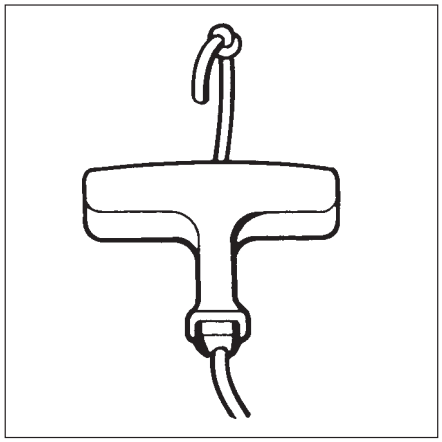
NOTE!
The return spring and starter pulley are supplied pre-assembled and are fitted in the starter housing as a single unit. Exercise care when opening the packaging so that the spring does not fly out.

Lubricate the spindle with a little grease and fit the starter pulley.

Position the washer and tighten the screw.

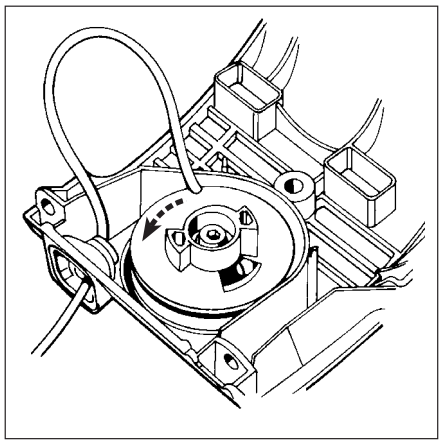
Assemble a new starter cord. Slide it into the starter pulley's slot as illustrated and then out through the cord guide in the starter housing.

Make sure the knot on the end of the cord is as small as possible!



Assemble the starter handle.

Assemble the starter handle in the same way as described for model 265, but tie a double knot, as the cord is lighter.



Tension the return spring.

Check the spring tension.

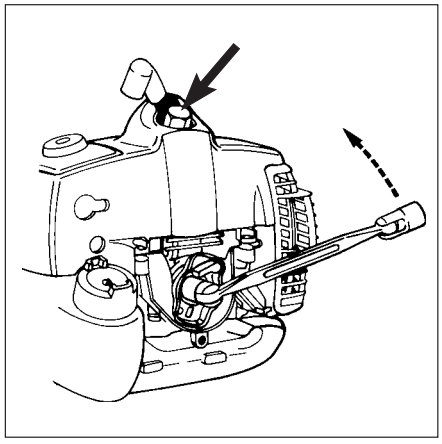
Fit the starter on the engine body.

Do not forget the guide sleeves for the fuel tank.

Tension the return spring. Pull out the starter cord fully and lift it out of the cut-out in the starter pulley.

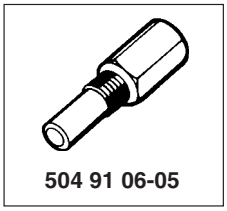
Now turn the starter pulley **anticlockwise,** 6 turns.

Check the spring tension. With the starter cord fully extended it should still be possible to turn the starter pulley further, *at least a half turn.*



Replacing the drive dogs

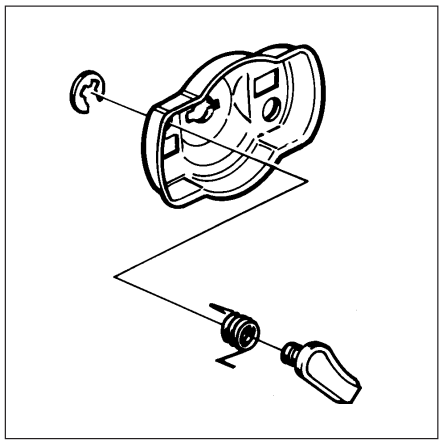
Dismantle the drive body.



504 91 06-05

Replacing the drive dogs

Fit the piston stop no 504 91 06-05 in the spark plug hole and loosen the nuts holding the drive body.

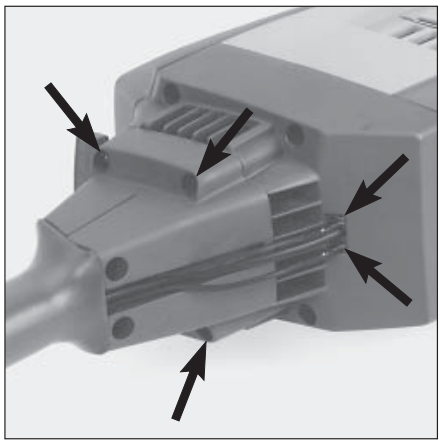


Remove the circlip and replace any damaged drive dogs or springs, if necessary.

Remove the circlip holdings the drive dog.

Lift out the drive dog and spring for replacement.

Assemble in the reverse order as set out for dismantling.



Models 32, Mondo, Mondo Mega

Dismantling

Disconnect the electrical cables.

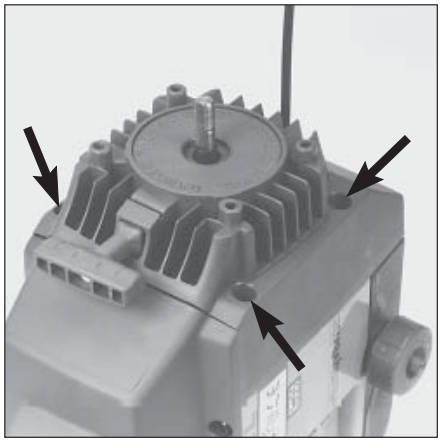
Remove the shaft complete with handle.

Models 32, Mondo, Mondo Mega

Dismantling

Disconnect the electrical cables by the engine body and remove the 4 screws (models Mondo and Mondo Mega have 3 screws) that hold the shaft and handle on the starter housing.

Lift off the shaft.



Dismantle the starter.

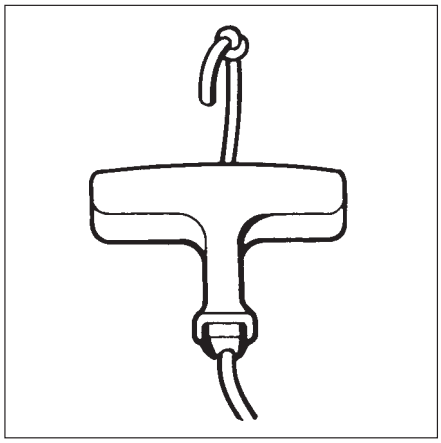
Remove the 4 screws and lift off the starter.

Model 32

Pull out the electrical cables from the starter housing using flat nose pliers.

Model Mondo

Also dismantle the screw by the spark plug.



Assembly

Assemble the starter handle.

Assembly

Assemble the starter handle in the same way as described for model 265.

Tie a double knot, as the cord is lighter than on model 265.

Model 18H

Dismantling

Dismantle the air filter, throttle cable and carburettor.

Remove the 4 screws holding the engine body and gear housing.

Model 18H

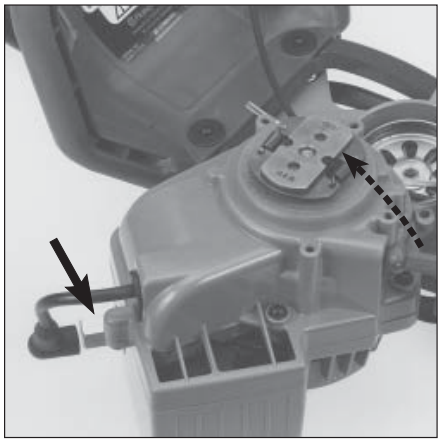
Dismantling

The starter is positioned between the crankcase and the cutting equipment drive.

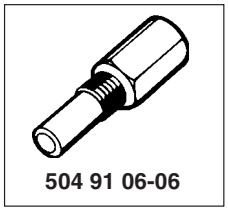
First dismantle the spark plug, air filter, throttle cable and carburettor.

Turn the trimmer upside down so that the screws holding the engine body are accessible.

Remove the 4 screws.



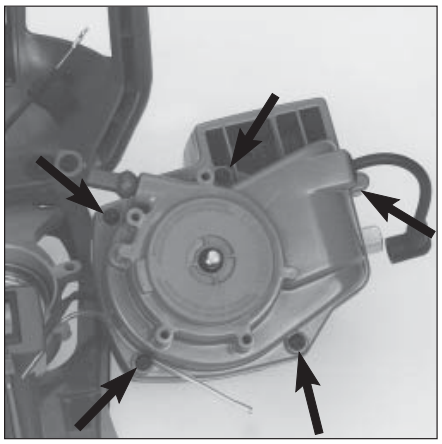
Dismantle the centrifugal clutch.



504 91 06-06

Assemble the piston stop no. 504 91 06-05 in the cylinder.

Unscrew the centrifugal clutch. First loosen it using a hammer and punch, **anticlockwise.**



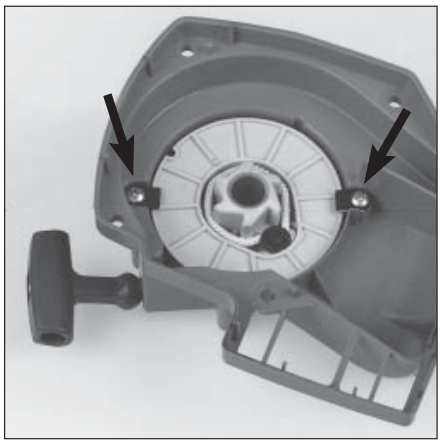
Dismantle the starter from the engine.

Dismantle the starter.

Remove the 5 screws holding the starter housing

Lubricate the ignition cable with a few drops of oil and remove the rubber grommet in the cover.

Lift off the starter housing.

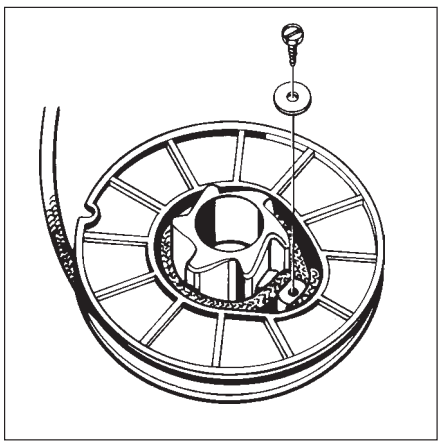


The following procedures are the same as for models 32, Mondo:

Remove the locking plates holding the starter pulley axially.

Offload the spring tension.

Dismantle the starter pulley and spring cassette from the starter housing.



Assembly (also see model Mondo)

Place a new spring cassette in position in the starter housing.

Replace the cord and attach as illustrated.

Assemble the starter pulley.

Assemble the starter handle (see model 265).

Tension the return spring.

Repeat tensioning the spring and fit the locking plates.

Models 140B, 141B

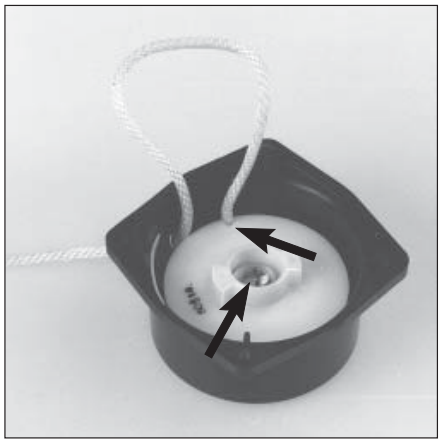
Dismantling

Remove the screws and lift off the starter.

Models 140B, 141B

Dismantling

Remove the 4 screws holding the starter against the engine body.



Offload the spring tension and remove the starter pulley from the starter housing.

Lift the starter cord out of the cut-out in the starter pulley.

Offload the spring tension by allowing the starter pulley to rotate backwards. Stop the pulley using your thumb.

Remove the screw and washer from the centre of the starter pulley.

Lift off the starter pulley.

Dismantle the return spring.

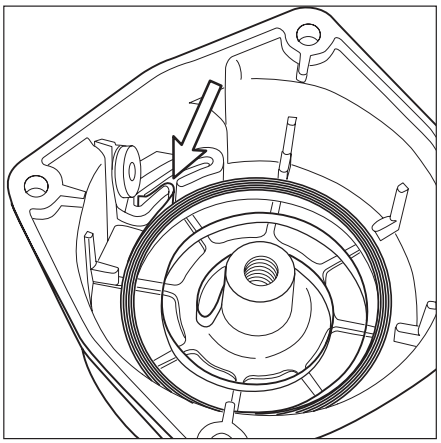
Clean and replace any damaged parts.

Carefully lift off the starter pulley and return spring.

WARNING!
Use protective glasses.

The return spring lies tensioned in the starter housing and can fly out and cause personal injury with careless handling.

Clean and replace any damaged parts.



Assembly

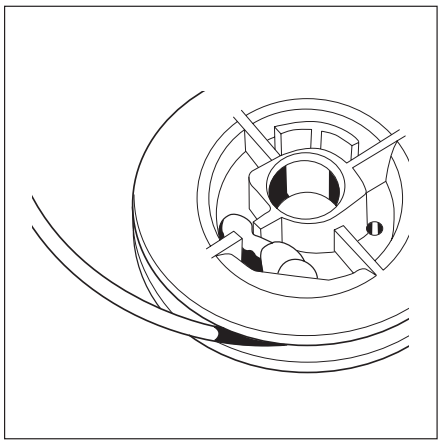
Fit a new return spring in the starter housing.

Assembly

Fit a new return spring in the starter housing. Exercise great care so that it does not fly out.

WARNING!
Use protective glasses.

Check that the spring's mounting is facing the right way!



Replace the starter cord and attach as illustrated.

Wind the cord 4 turns clockwise around the starter pulley.

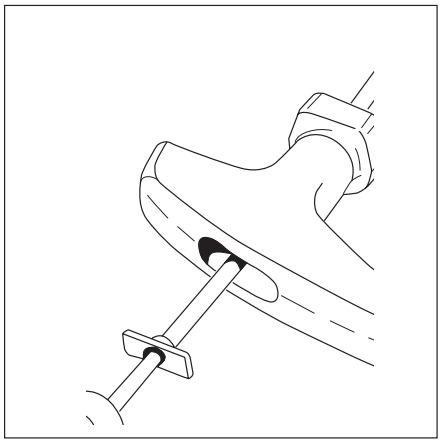
Lubricate the spindle and return spring and assemble the starter pulley.

Attach a new starter cord in the starter pulley as illustrated.

Wind the cord 4 turns **clockwise** around the starter pulley.

Lubricate the spindle and return spring with a few drops of oil.

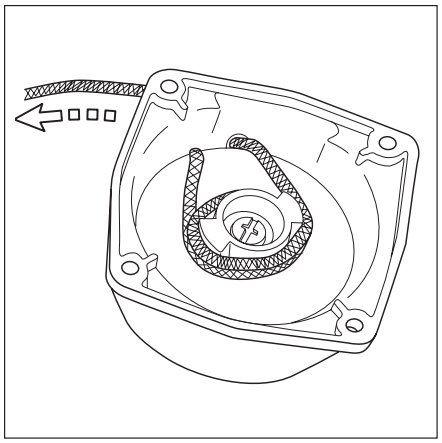
Place the starter pulley in position and tighten the screw in the centre. Do not forget the washer.



Assemble the starter handle.

Assemble the starter handle.

The collar on the washer should face towards the starter handle.

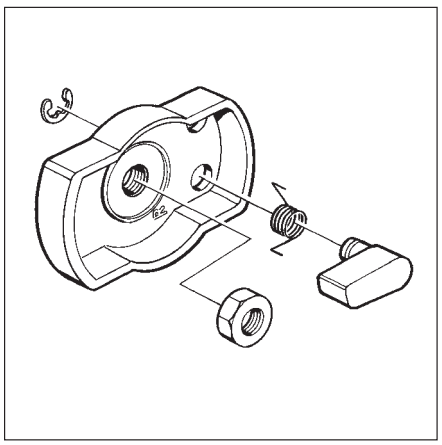


Tension the return spring.

Check that the pulley can be turned a further half turn with the starter cord fully extended!

Tension the return spring.

- Pull out the cord approx. 30 cm and stop the starter pulley using your thumb.
- Lift the starter cord up in the cut-out in the starter pulley.
- Wind the cord 2 turns **anticlockwise** around the hub on the starter pulley.
- Pull out the starter cord fully.



Models 140B, 141B

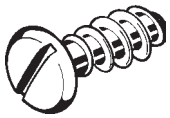
Drive dogs

Dismantle the drive from the crankshaft.

Replace the drive dogs if they are damaged or worn.

Assembly, general

Assemble the starter in the reverse order as set out for dismantling.



503 21 22-01

Replacing the drive dogs

See chapter 2. “Ignition system, flywheel” with regard to engines that have the drive dogs fitted on the flywheel.

Assembly, general

Assemble the starter

Pull out the starter cord a little. Place the starter in position. Release the starter cord and check that the drive dogs engage in the starter pulley.

Tighten the screws.

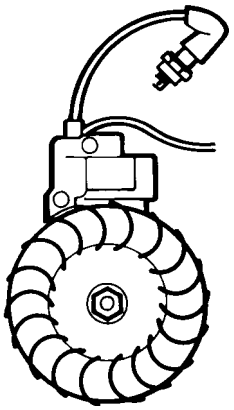
NOTE!
We recommend the use of an over dimensioned screw if the plastic threads in the crankcase have been damaged for some reason. (no. 503 21 22-01).

Replacing the drive dogs.

See chapter 2. “Ignition system, flywheel” with regard to engines that have the drive dogs fitted on the flywheel.

Ignition system

2.



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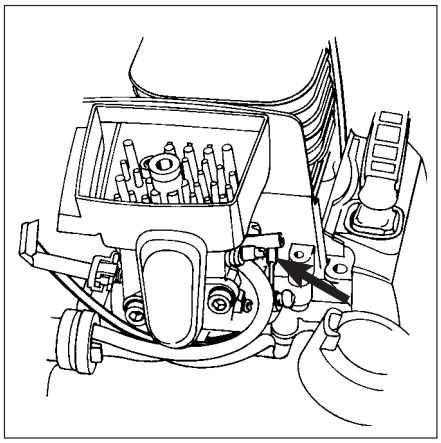


Dismantling

Models 322, 325

Dismantle the cylinder cover, guard over the muffler and spark plug.

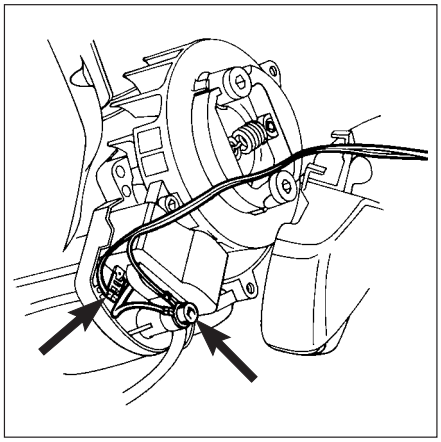
Unhook the throttle cable from the carburettor and remove the screws holding the clutch cover.

Dismantling

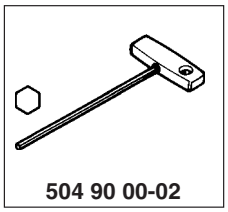
Models 322, 325

The following components must be dismantled for the ignition system to be accessible.

Cylinder cover, guard over the muffler and spark plug.



Remove the clutch cover and loosen the short-circuit cable from the ignition module.



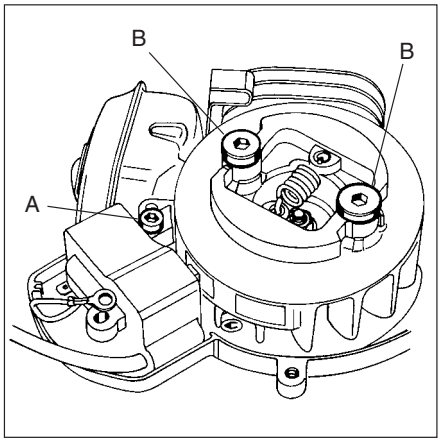
504 90 00-02

Disconnect the throttle cable from the carburettor.

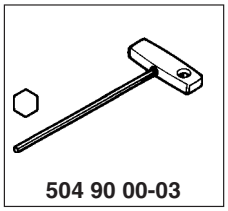
Remove the three screws holding the clutch cover.

Remove the clutch cover complete with the shaft from the engine.

Loosen both ends of the short-circuit cable from the ignition module.



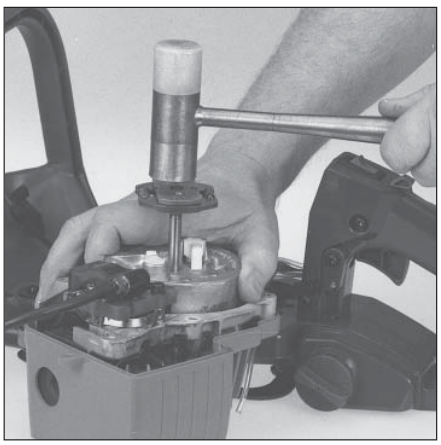
Dismantle the ignition module and the centrifugal clutch.



504 90 00-03

Remove the remaining screw (A) holding the ignition module and both screws (B) that hold the centrifugal clutch.

Lift off the clutch and ignition module.



Model 18H

Remove the spacer and washer and screw the clutch down on the crankshaft.

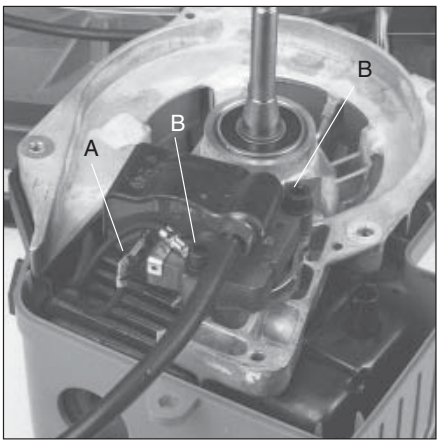
Hold the flywheel and sharply tap the clutch a few times until the flywheel releases.

Model 18H

Remove the long spacer and washer from the crankshaft.

Screw down the clutch a few turns on the shaft.

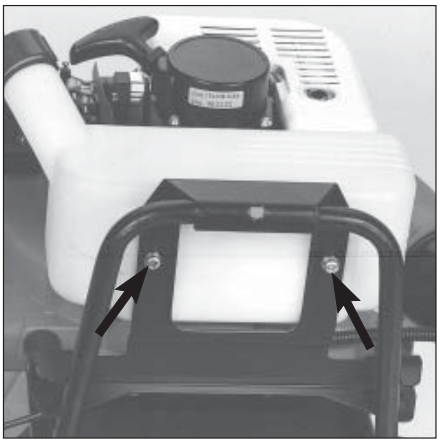
Hold the flywheel and sharply tap the clutch a few times until the flywheel releases.



Dismantle the ignition module.

Dismantle the ignition module.

Remove the short-circuit cable (A) and both screws (B).



Models 140B, 141B

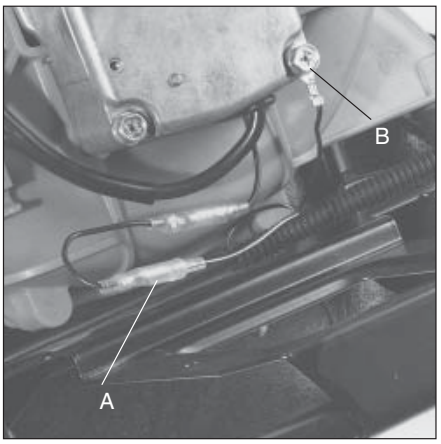
Dismantle the fuel tank.

Models 140B, 141B

Empty the fuel tank and pull off the fuel hoses from the carburettor.

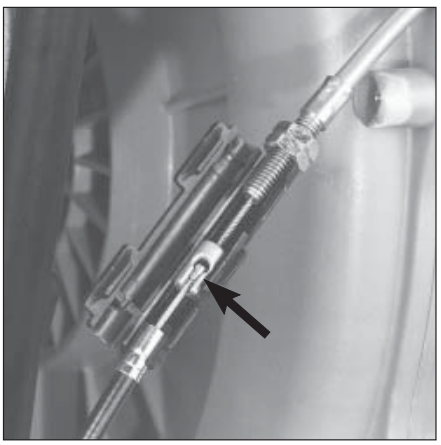
Note how the hoses are connected.

Remove the screws and lift off the fuel tank.



Pull apart the short-circuit cable connector and remove the earth cable.

Separate the connectors for the short-circuit cable (A) and remove the earth cable (B) by removing the crankcase screw.

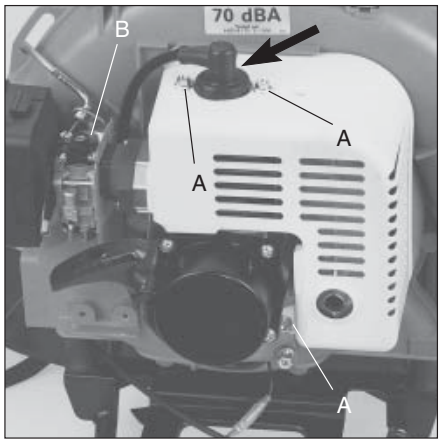


Fold open the protective sleeve and separate the throttle cable.

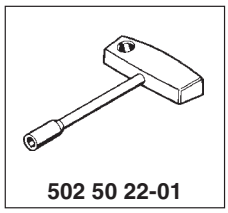
Open the protective sleeve over the cable joint and lift out the throttle cable running to the throttle.

Remove the blower pipe.

Loosen the hose clip and remove the blower pipe.



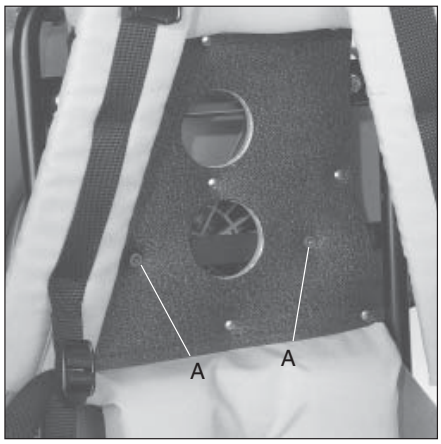
Dismantle the cylinder cover, heat guard around the cylinder and the rotary valve from the carburettor.



Lift off the spark plug cap and unscrew the spark plug.

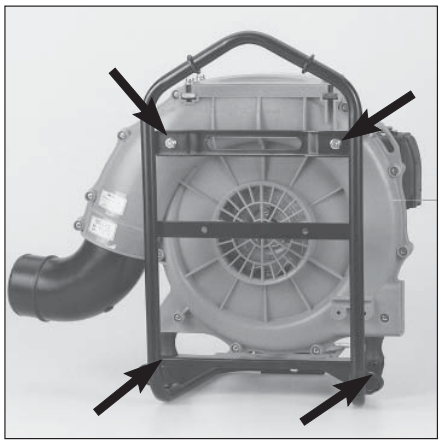
Remove the 3 screws (A) holding the cylinder cover and remove this and the heat guard from around the cylinder.

Dismantle the rotary valve (B) from the carburettor by removing the 2 screws holding the cover. Let the throttle hang from the throttle cable.



Dismantle the harness.

Remove the harness from the tubular frame by removing both screws (A).



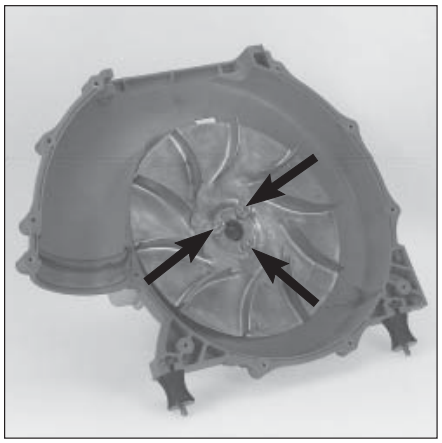
Remove the pipe bend.

Remove all screws and separate both halves of the fan housing.

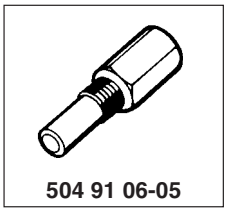
Remove the pipe bend.

Remove the cleaning cover and all the screws (12) holding both halves of the fan housing.

Separate the halves.

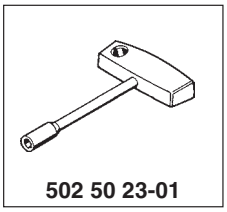


Dismantle the impeller

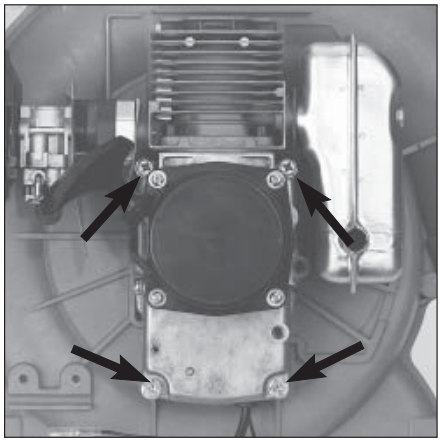


504 91 06-05

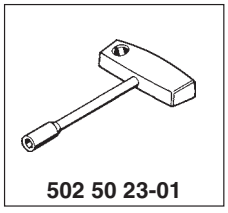
Screw in the piston stop no. 504 91 06-5 in the spark plug hole and remove the 3 screws holding the impeller using tool no. 502 50 23-01.



502 50 23-01



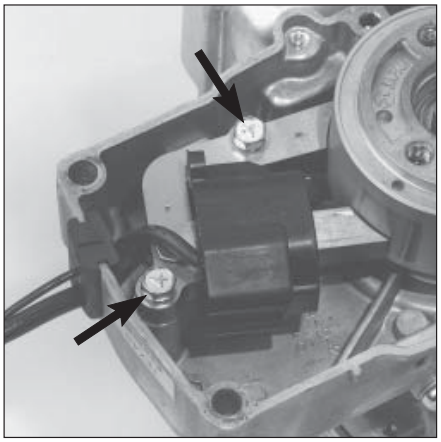
Dismantle the engine from the fan housing.



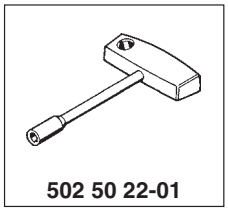
502 50 23-01

Remove the 4 screws holding the engine against the fan housing.

Lift off the engine.

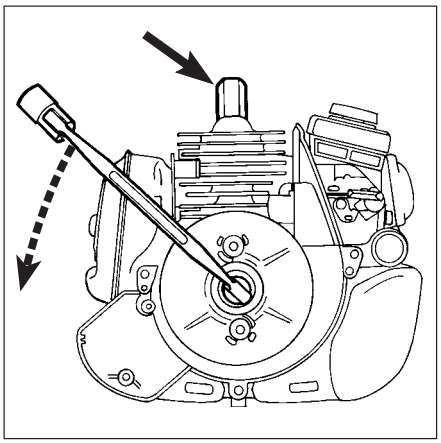


Remove the screws and lift off the ignition module.



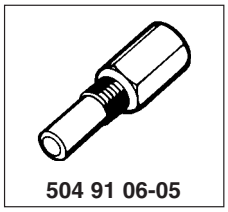
502 50 22-01

Remove the screws and lift off the ignition module with the ignition lead, short-circuit cable and grommet.



Dismantling the flywheel

Fit the piston stop no. 504 91 06-05 and remove the nut holding the flywheel and where appropriate the plate with drive dogs.



504 91 06-05

Dismantling the flywheel

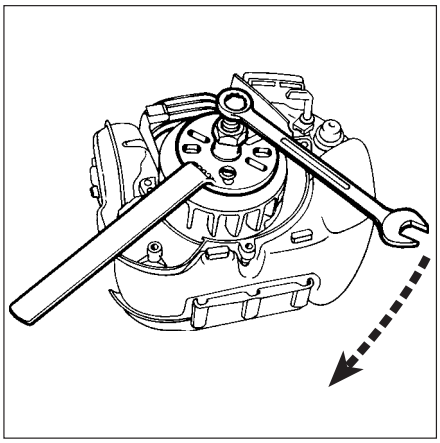
Assemble the piston stop no. 504 91 06-05 in the spark plug hole.

Ensure the piston stop is screwed down to the bottom.

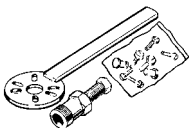
Remove the nut holding the flywheel and where appropriate the plate with drive dogs.

NOTE!

The piston stop cannot be used on model 122.



Dismantle the flywheel by using the flywheel puller.

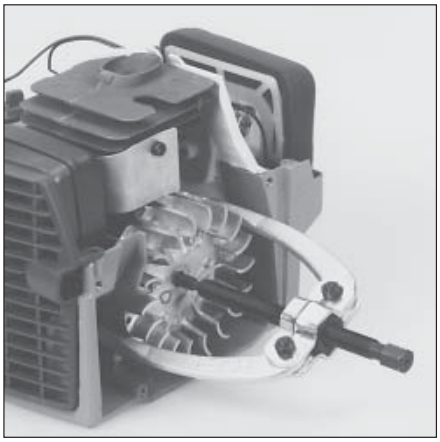


502 51 49-01

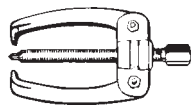
Dismantle the flywheel from the crankcase using the puller no. 502 51 49-01.

Gently knock the puller screw with a hammer, if the flywheel sits tightly on the crankshaft.

Select a suitable screwdriver and align the puller so that it does not pull at an angle.



Dismantle the flywheel by using the bearing puller.



504 90 90-01

Pull off the flywheel by using the bearing puller no. 504 90 90-01.

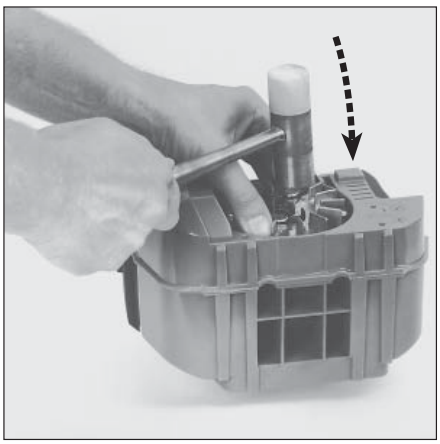
NOTE!

The puller arms should be placed by and opposite the magnet on the flywheel to avoid damaging it.

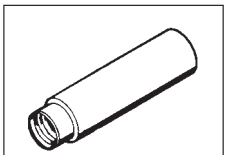
Is the flywheel extremely tight?

Lift up the engine body by holding the puller and then hit the puller screw a few times with a hammer.

Screw the nut on to the axle to protect the threads.



Dismantle the flywheel by using a hammer and push bar.



502 51 94-01

Snap off the springs and move the drive dogs to make space for the hammer.

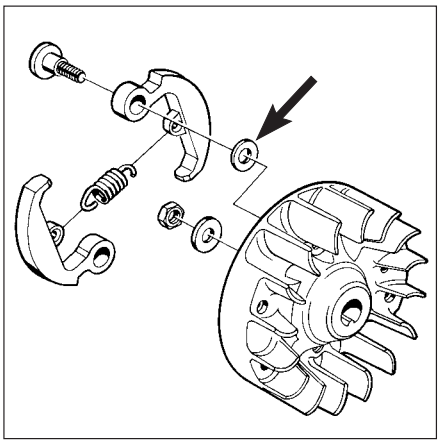
Hold the flywheel and lift up the engine body.

Use a hammer to hit the flywheel nut sharply a few times until the flywheel becomes loose on the axle.

Tip!

Use the push bar to protect the threads on the axle and at the same time as it will be easier to use the hammer.

Do not screw the push bar against the flywheel – leave approx. 2 mm.



Assembly

Models 322, 325

Assemble the centrifugal clutch.

NOTE!

Do not forget the washers between the flywheel and centrifugal clutch.

Assembly

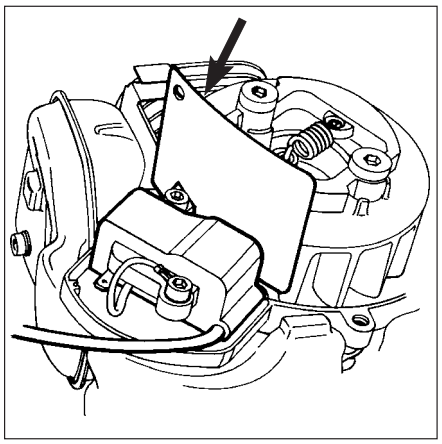
Models 322, 325

If the crankshaft has two keyways, the flywheel should be fitted in the right-hand keyway seen from the axle end.

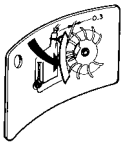
Assemble the centrifugal clutch.

NOTE!

Do not forget the washers between the flywheel and centrifugal clutch.



Assemble the ignition module and adjust the air gap to 0.3 mm.



502 51 34-02

Assemble the ignition module.

Wait to connect the short-circuit cable to facilitate the adjustment of the air gap. It should be 0.3 mm between the permanent magnets in the flywheel and the ignition module.

Now fit the short-circuit cable and the remaining parts in the reverse order as set out for dismantling.

NOTE!

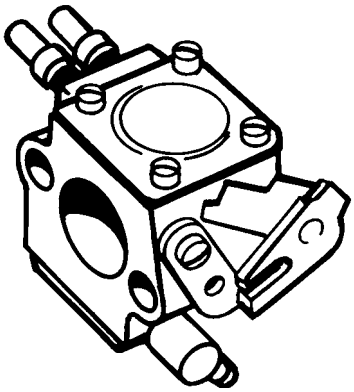
Do not forget the rubber bushings between the clutch cover and the fuel tank.

Technical data

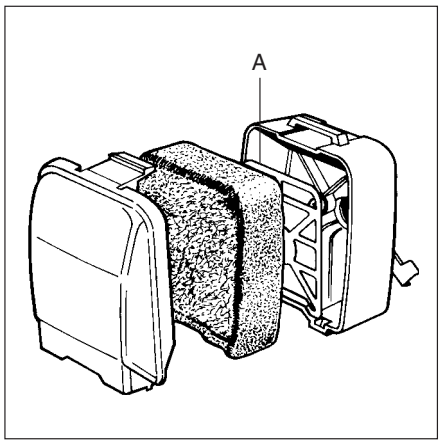
Model	Spark plug	Electrode gap mm/inch	Ignition system	Air gap mm/inch
Mondo	Champion RCJ8Y NGK BPM 6A	0.5/0.02	Phelon CD	0.3/0.012
122L	NGK BPM 6Y	0.6/0.024	Ikeda Denso Solid State	0.3/0.012
Mondo Max	Champion RCJ 8Y	0.5/0.02	Phelon CD	0.3/0.012
225L/LD	Champion RCJ 7Y	0.5/0.02	Walbro CD	0.3/0.012
232L	Champion RCJ 7Y	0.5/0.02	Walbro CD	0.3/0.012
Mondo Mega	Champion RCJ 8Y	0.5/0.02	Phelon CD	0.3/0.012
225R/RD	Champion RCJ 7Y	0.5/0.02	Walbro CD	0.3/0.012
232R	Champion RCJ 7Y	0.5/0.02	Walbro CD	0.3/0.012
322	Champion RCJ 7Y	0.5/0.02	Walbro CD	0.3/0.012
325	Champion RCJ 7Y	0.5/0.02	Walbro CD	0.3/0.012
235R	Champion RCJ 7Y	0.5/0.02	Walbro CD	0.3/0.012
240R	Champion RCJ 7Y	0.5/0.02	Electrolux ET	0.3/0.012
245R	Champion RCJ 7Y	0.5/0.02	Electrolux ET	0.3/0.012
250R	Champion RCJ 7Y	0.5/0.02	Electrolux ET	0.3/0.012
245RX	Champion RCJ 7Y	0.5/0.02	Electrolux ET	0.3/0.012
250RX	Champion RCJ 7Y	0.5/0.02	Electrolux ET	0.3/0.012
252RX	Champion RCJ 7Y	0.5/0.02	Electrolux ET	0.3/0.012
265RX	Champion RCJ 7Y	0.5/0.02	SEM GA6 CD	0.3/0.012
240RBD	Champion RCJ 7Y	0.5/0.02	Walbro CD	0.3/0.012
235P	Champion RCJ 7Y	0.5/0.02	Walbro CD	0.3/0.012
250PS	Champion RCJ 7Y	0.5/0.02	Electrolux ET	0.3/0.012
225E	Champion RCJ 7Y	0.5/0.02	Walbro CD	0.3/0.12
18H	Champion RCJ 8Y	0.5/0.02	Phelon Solid State	0.3/0.012
225H60/75	Champion RCJ 7Y	0.5/0.02	Walbro CD	0.3/0.012
140B, 141B	NGK BPM 7A	0.6–0.7/ 0.024–0.028	Kawasaki Transistor	0.4/0.016
132HBV	Champion CJ 8Y	0.6/0.024	Phelon CD	0.25–0.35/ 0.010–0.014
225BV/225HBV	Champion RCJ 7Y	0.5/0.02	Walbro CD	0.3/0.012

Fuel system

3.



Contents



Air filter

Remove the air filter cover and lift out the air filter for cleaning.

Air filter

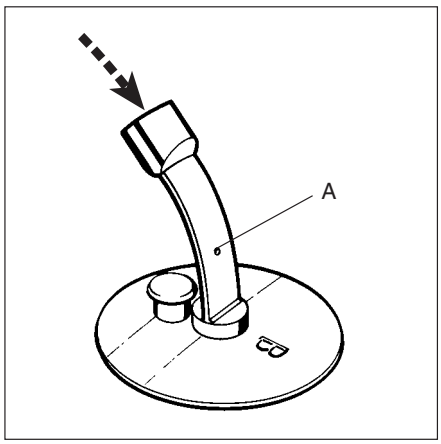
Model 141B

Press down the catch on the cover over the air filter housing and remove the cover and the air filter for cleaning.

Clean the filter in the same way as described above.

Fit the filter with the smooth side facing in towards the carburettor.

Ensure the support grille (A) is in position.



Tank venting

Model 141B

The tank ventilation is integrated in the fuel cap's gasket

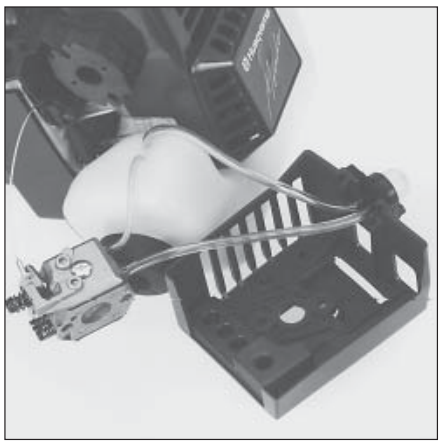
Blow through the flat hose to check that it is open.

Tank venting

Model 141B

The tank ventilation is integrated in the fuel cap's gasket and can easily be dismantled for replacement.

Pull off the flat hose from the pin on the rubber washer and blow through the hose to check that it is not blocked. Check that the hole (A) is open.



Primer pump

Models 322, 325, Mondo, 18H

The primer pump facilitates cold starts.

The pump cannot be repaired and must be replaced if it stops working.

Note how the fuel hoses are connected to simplify assembly.

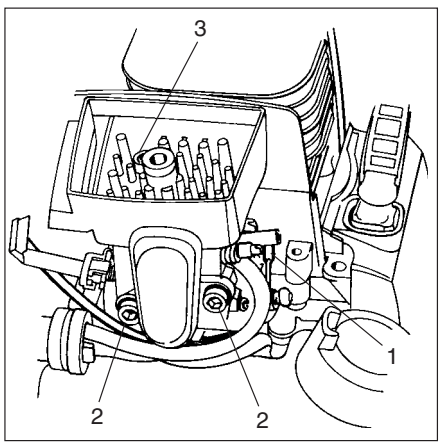
Primer pump

Models 322, 325, Mondo, 18H

The primer pump has the task of facilitating the start of the engine when cold. The pump fills the carburettor with fuel before attempting to start the engine. This also prevents vapour bubbles from blocking the narrow fuel channels.

If the pump does not work it must be replaced.

Note how the fuel hoses are connected to simplify assembly.



Carburettor

Models 322, 325

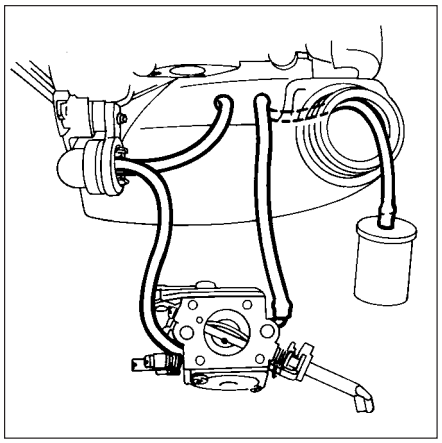
Disconnect the throttle cable from the carburettor.

Dismantle the carburettor.

Carburettor

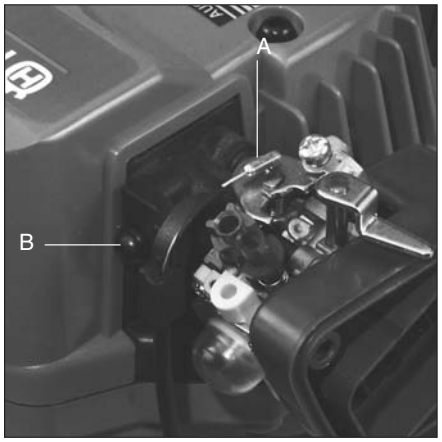
Models 322, 325

1. Disconnect the throttle cable from the lever arm on the carburettor.
2. Loosen the carburettor screws.
3. Remove the screws holding the air filter holder.



Lift off the carburettor and note how the fuel hoses are connected.

Lift off the carburettor and note how the fuel hoses are connected.



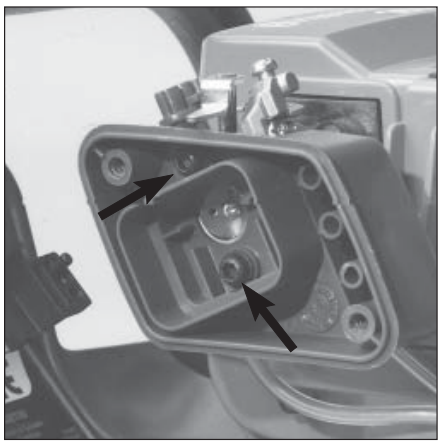
Model 18H

Disconnect the throttle cable from the carburettor.

Model 18H

Disconnect the throttle cable from the carburettor.

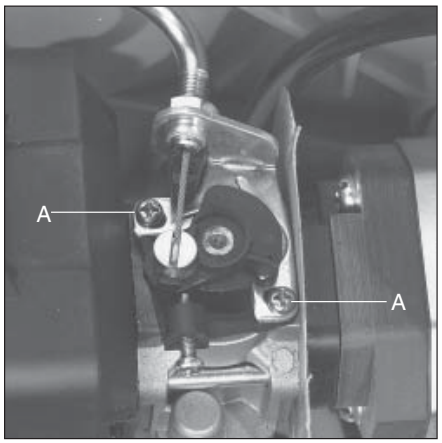
Remove the screw (B) and unhook the throttle cable from the lever arm on the carburettor (A).



Dismantle the carburettor from the cylinder.

Loosen the carburettor screws and lift out the air filter holder and carburettor.

Remove the fuel hoses from the carburettor.



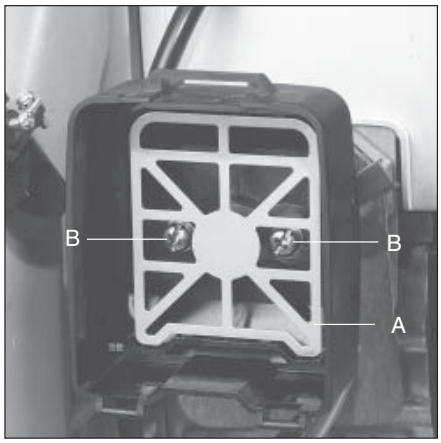
Model 141B

Dismantle the cover together with the rotary valve and cable bracket.

Model 141B

Loosen both screws (A) and lift off the cover together with the rotary valve and cable bracket.

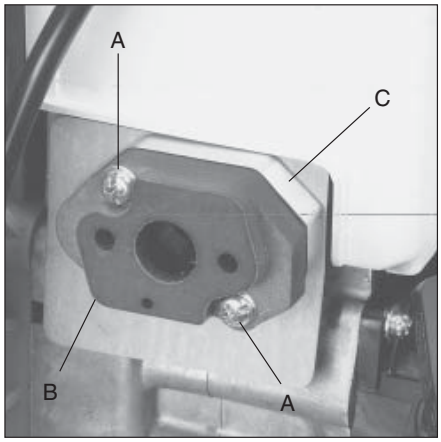
Let the parts remain hanging from the throttle cable if they are not damaged and do not need to be replaced.



Dismantle the carburettor from the cylinder.

Remove the air filter support (A) and both screws (B) that hold the carburettor on the cylinder.

Lift off the air filter holder and carburettor from the cylinder.



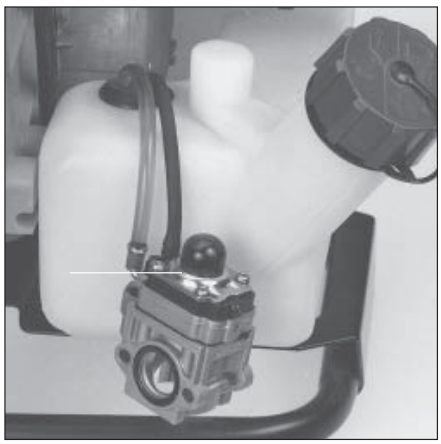
Remove the screws and lift out both distance pieces.

Inspect the fibre distance piece with regard to crack formation.

Replace the distance piece if necessary.

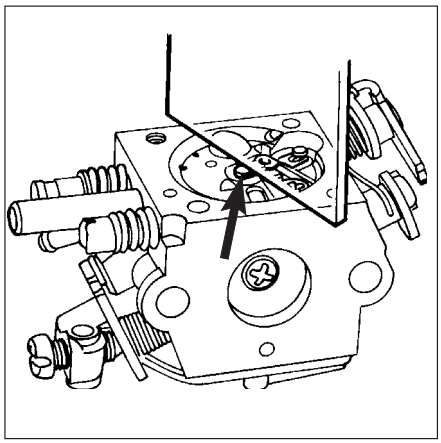
Remove the screws (A), the fibre distance piece (B) and the aluminium distance piece (C).

Inspect the fibre distance piece with regard to crack formation. Replace the distance piece if necessary.



Pull off the fuel hoses and lift out the carburettor.

Lift out the carburettor and note how both fuel hoses are connected to the carburettor (rubber hose on the straight nipple).



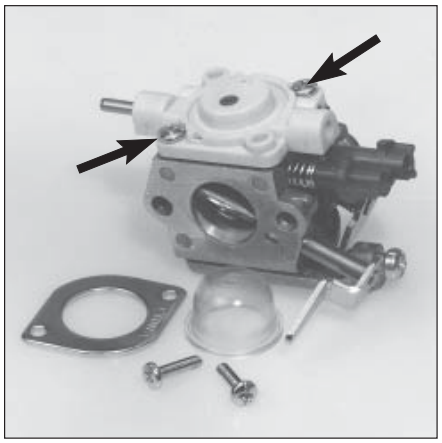
Assembling the carburettor - Zama

Design, function and servicing correspond with the Walbro carburettor.

Assembling the carburettor - Zama

Zama has the same design and function as the Walbro carburettor, which means that servicing is also carried out in the same way.

The lever arm should lie flush with the carburettor housing's contact face.



Dismantling, assembling Model 18H

The carburettor is made by Zama.

Dismantle the primer pump's bellows and cover over the control diaphragm.

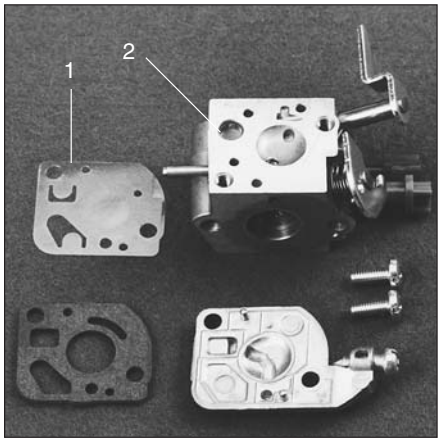
Dismantling, assembling Model 18H

The carburettor is made by Zama.

It has the same principle design as the Tillotson and Walbro carburettors.

Dismantle the primer pump's bellows and then the cover over the control diaphragm.

Inspect the control diaphragm and needle valve in the same way as previously described.



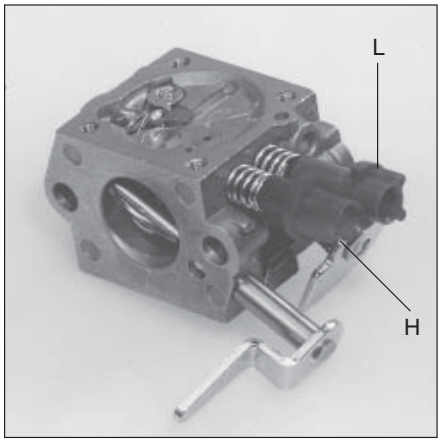
Dismatle te pump diaphragm and the fuel screen.

Remove the screws holding the cover over the pump diaphragm.

Lift off the cover, pump diaphragm and gasket.

Check the diaphragm (1) as described in the workshop manual.

Carefully remove the fuel screen (2) using, e.g. a needle.

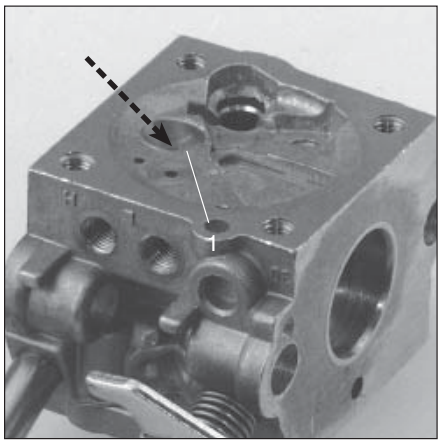


Unscrew the jet needles.

Unscrew the jet needles.

The plastic sleeves must first be removed using a screwdriver on carburettors with movement limiters.

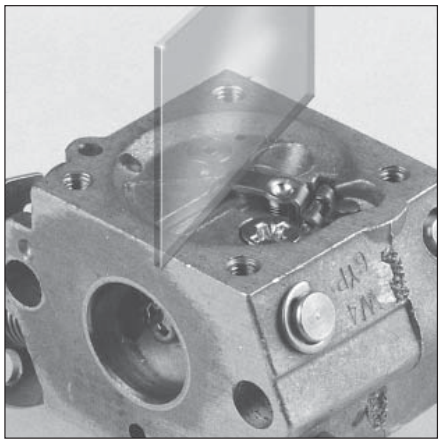
NOTE!
Note how the needles are positioned.
(For example, the H-needle is a little shorter than the L-needle).



Press out the main jet for possible replacement using a suitable punch.

The main jet can be pressed out for possible replacement using a suitable punch.

NOTE!
When the new jet is fitted it must not be pressed in further than so that the edge (1) on the jet lies flush with the carburettor housing.



Assemble the carburettor and pressure test it.

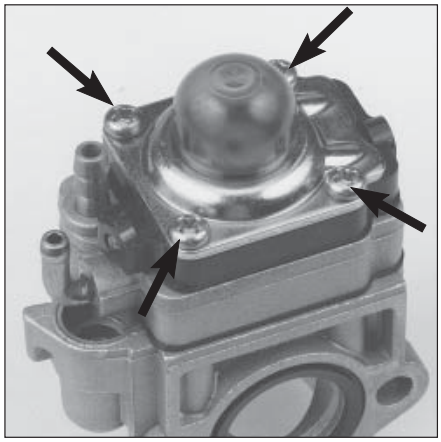
Wait to fit the movement limiters on the jet needles.

Assemble the carburettor in the reverse order as set out for dismantling.

The needle valve lever arm should be adjusted to a level flush with the carburettor housing's contact face.

NOTE!
The control diaphragm and pump diaphragm should lie closest to the carburettor housing!

Wait to fit the movement limiters on the jet needles.



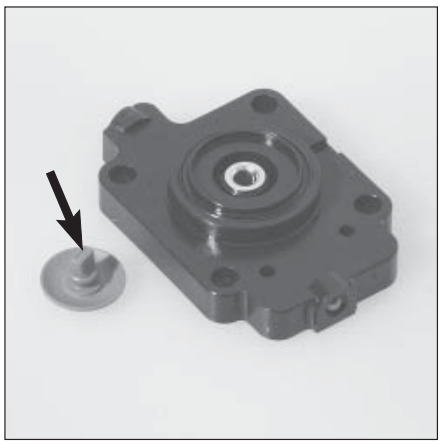
Dismantling, assembling
Model 141B

Remove the screws and lift off cover with the pump bellows.

Dismantling, assembling
Model 141B

This carburettor has a rotary valve instead of a throttle valve.

Remove the 4 screws and lift off cover with the pump bellows.



Lift off the cover above the control diaphragm and carefully remove the non–return valve. Check that it opens and closes.

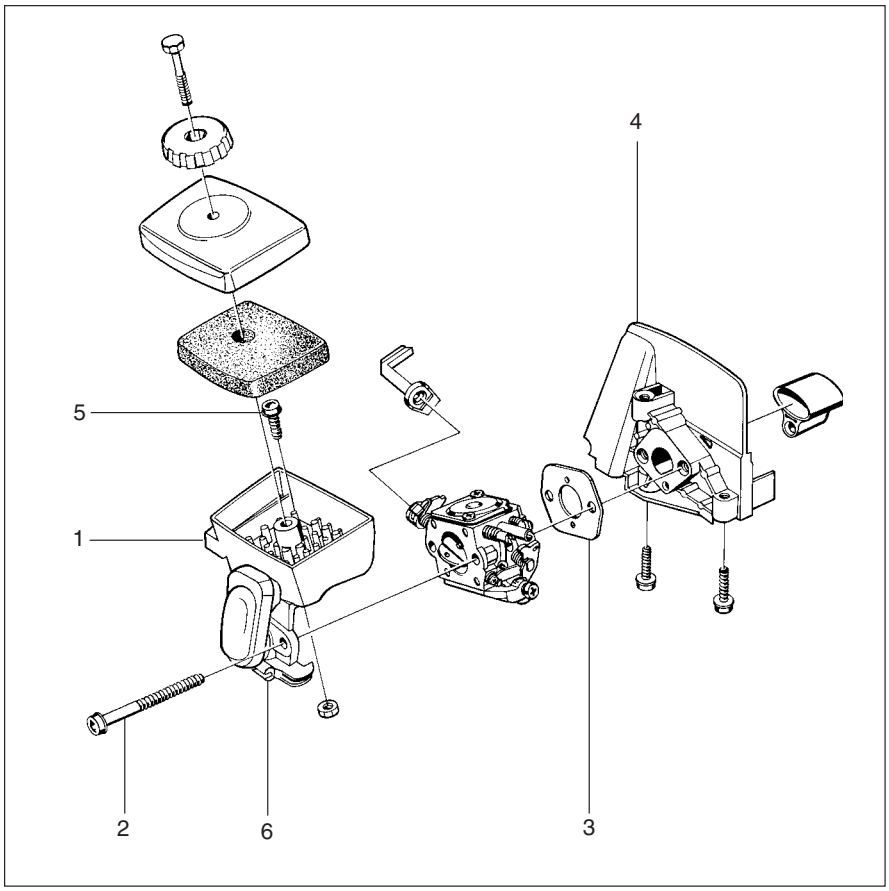
Continue to dismantle and assemble the carburettor in the same way as described for model 122.

Lift off the cover over the control diaphragm.

Carefully remove the non-return valve and check that it opens and closes by pressing together the valve's short sides with you thumb nail.

Hold the valve against a light to make it easier to see whether it closes fully.

Continue to dismantle and assemble the carburettor in the same way as described for model 122.



Assembly

Models 322, 325

1. First assemble the fuel hoses on the carburettor.

NOTE!
The hose, with the fuel filter in the tank, should be fitted on the carburettor's inlet side (pump chamber).

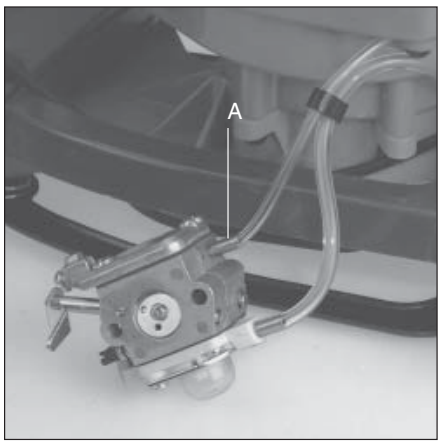
2. Keep the air filter holder (1) in position on the carburettor.
3. Slide in the carburettor screws (2).
4. Position the gasket (3) and screw together the entire carburettor assembly against the distance piece (4). Tighten the carburettor screws crosswise.

NOTE!
Do not forget the screw (5) that holds the air filter holder against the distance piece.

5. Connect the throttle cable to the lever arm on the carburettor.

   Make sure the cable enters the correct slot in the clutch cover and in the guide on the air filter holder (6).

Assemble the remaining parts in the reverse order as set out for dismantling.



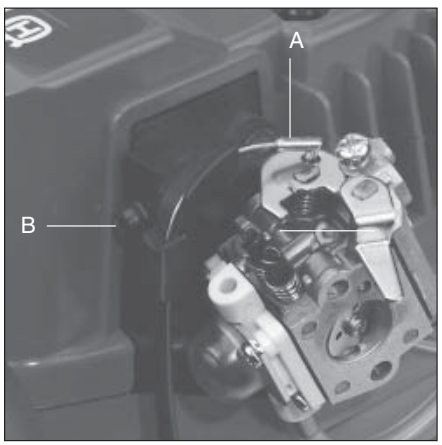
Model 18H

Connect the fuel hoses.

Model 18H

Connect the fuel hoses on the carburettor.

The thin hose (A) is connected to the nipple on the carburettor body (pump diaphragm).



Connect the throttle cable.

Tighten the air filter holder.

Clean or replace the air filter.

Connect the throttle cable (A) to the throttle valve's lever arm.

Secure the cable guide (B) on the distance piece.

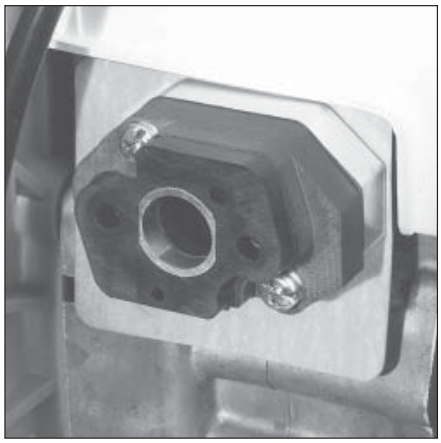
Tighten the air filter holder.

Do not forget the gasket between the carburettor and the distance piece!

Clean or replace the air filter before assembly.

Clean in tepid soapy water.

Fit the air filter cover.



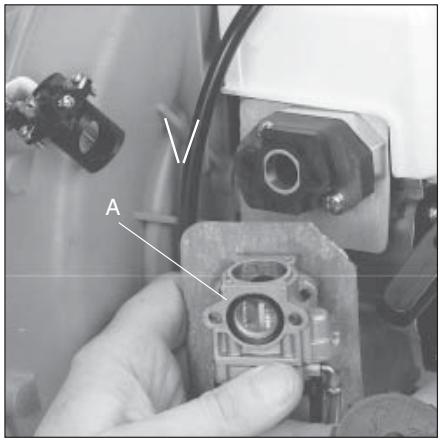
Model 141B

Fit the distance piece on the cylinder.

Model 141B

Pay special attention that the distance pieces and gaskets face the right way and do not block the impulse channel when fitted on the cylinder.

Secure the distance piece closest to the carburettor with a little grease. This facilitates carburettor assembly.



Turn the carburettor so that the recessed sealing ring (A) comes against the air filter holder.

Tighten the carburettor and air filter holder against the cylinder.

Slide down the rotary valve in the carburettor and screw on the cover.

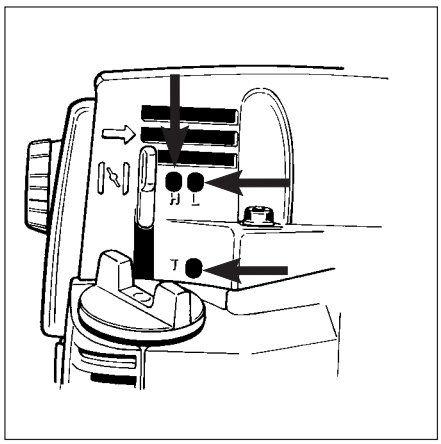
Check that the throttle works.

Turn the carburettor so that the recessed sealing ring (A) comes against the air filter holder.

Place the carburettor screws in the air filter holder (do not forget the choke valve) and then slide the carburettor on the screws.

Tighten the carburettor against the cylinder.

Slide down the rotary valve in the carburettor housing. Tighten the cover and check that the throttle is turned easily when accelerating and that it rests against the idling screw when the throttle is released.



Carburettor settings

WARNING!
The clutch and clutch cover must be fitted under all circumstances when testing the engine in connection with carburettor adjustment.
Otherwise there is a risk of the clutch becoming loose resulting in serious personal injury.

Function

The carburettor has the task of supplying a combustible fuel/air mixture to the cylinder.

The amount of this mixture is controlled by the throttle.

The mixture's composition of fuel and air is controlled by means of the adjustable needles "H" and "L".

The needles must be correctly adjusted in order for the engine to give maximum power at different speeds, run steadily while idling and to react quickly when accelerating.

The setting of the carburettor can vary a little depending on the humidity, temperature and air pressure.

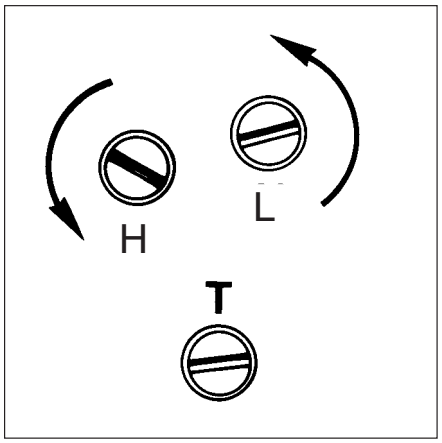
L = Low speed needle

H = High speed needle

T = Adjuster screw for idling

The fuel quantity in relation to the air flow permitted by the throttle opening is adjusted by the L and H-needles. Turning the needles clockwise gives a leaner fuel mixture (less fuel) and turning them anticlockwise gives a richer fuel mixture (more fuel). *A leaner* mixture gives *higher* revs while *a richer* mixture gives *less* revs.

- The T-screw regulates the position of the throttle while the engine is idling. Turning the screw clockwise gives a higher idling speed while turning it anticlockwise gives a lower idling speed.



Basic setting

The carburettor is set to its basic setting when test run at the factory. The basic setting is "richer" than the optimal setting (the max speed is 600–800 rpm under the recommended max. speed) and should be kept during the engine's first working hours. Thereafter the carburettor should be finely adjusted. The basic setting can vary between:

H = 1 to 1 1/4 turns (model 235 P: 3/4 – 1 turn, Mondo + Mega + Max, 18 H: 2 turns, 322, 325: 2 1/2 turns)

L = 1 to 1 1/4 turns (model 235 P: 3/4 – 1 turn, Mondo + Mega + Max, 18H: 2 turns)

Basic setting model 235 P

The pruner's engine can not be revved to the max speed as the cutting head's blades go against the stop and the engine slows. Consequently, the engine revs at max under load. The high speed needle H should not be changed from the basic settings (3/4 – 1 turn open). If the muffler smokes heavily, at the same time as the engine 4 strokes a,great deal the setting is too rich. Turn the H-needle clockwise until you find the setting that sounds right.

Fine adjustment

Fine adjustment of the carburettor should be carried out after the engine has been "run-in".

- The air filter should be clean and the cylinder cover fitted when adjustments are made.

  First adjust the L-needle, then the H-needle and finally the idling speed's T-screw.

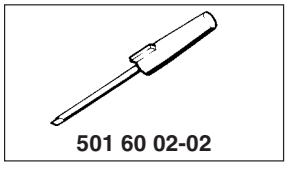
  The following speed recommendations apply:

  Idling speed = 2,500 rpm.

Max. speed

Model	During running in	After running in
265	10,900	11,500
252, 250 RX (R)	12,900 (11,900)	13,500 (12,500)
240	11,900	12,500
245	11,900	12,500
225	10,500	11,000
232	10,300	10,800
235	10,500	11,000
240 RBD	10,500	11,000
322, 325	12,500	12,500
122		10,800
32		7,000
Mondo		9,000
Mega / Max		9,000
250PS		
235 P	—	—
225 H60 / H75	10,500	11,000
18H	9,500	10,000
132HBV	7,100	7,600
140B, 141B		
225HBV	7,700	8,200

NOTE!
The max. recommended speed must not be exceeded. When checking the speed on a trimmer no part of the cord should be extended.
Check the speed using the tachometer 502 71 14-01.


501 60 02-02

- Carefully screw in (clockwise) the L and H-needles until they bottom. Now screw out (anticlockwise) the needles 1 turns. The carburettor now has the setting H = 1 and L = 1. Use the special screwdriver 501 60 02-02.
- Start the engine and run warm for 10 minutes.

NOTE!
If the cutting equipment rotates while idling the T-screw should be turned anticlockwise until it stops.

Low speed needle L

Find the highest idling speed by slowly turning the low speed needle clockwise and anticlockwise. When the highest speed has been found, turn the L-needle 1/4 turn anticlockwise.

High speed needle H

The high speed needle H affects the engine's power and speed. A too lean H-needle setting (H-needle screwed in too far) gives too little fuel to the engine resulting in damage to the engine.

Run the engine at full throttle for about 10 seconds. The H-needle is set correctly when the engine "splatters" a little.

If the muffler smokes heavily, at the same time as the engine splatters a great deal the setting is too rich. Turn the H-needle clockwise until you find the setting that sounds right.

NOTE!
A tachometer should always be used to find the optimal setting.
The recommended max. speed must not be exceeded.

Idling speed T-screw

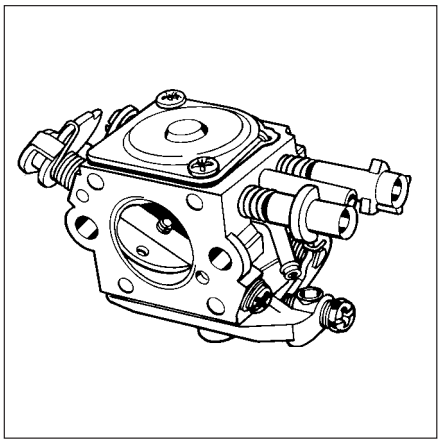
Let the engine idle for about 30 seconds or until the speed has stabilised. Adjust the idling speed T-screw until the engine idles without stopping.

- Turn the screw clockwise if the engine stops.
- Turn the speed anticlockwise to lower the speed.

Correctly adjusted carburettor

A correctly adjusted carburettor means that the engine accelerates without hesitation and it 4 strokes a little at full throttle.

- A too lean adjusted L-needle can cause starting difficulties and bad acceleration.
- A too lean adjusted H-needle results in lower power, bad acceleration and/or damage to the engine.
- A too rich setting of the "L" and "H" needles give acceleration problems or a too low working speed.



Carburettors in E-TECH and CARB-EPA designs (CARB-EPA only applies to USA)

On these types of carburettor the H and L-needles can be adjusted within extremely tight limits, to among others, comply with the stringent demands with regard to the hydrocarbon and nitrogen oxide content in the exhaust fumes.

The carburettor needles on these carburettors are fitted with plastic sleeves with movement limiters

To carry out adjustment when replacing needles or the entire carburettor the engine must be under load. This is achieved by fitting a Trimmy Fix with the specified length and diameter of trimmer cord. Consequently, the stated speed will be much lower than with "normal" carburettor adjustment when the motor may run freely.

After replacing the needles or the entire carburettor on a CARB-EPA approved engine, adjustment must be carried out according to the instructions below.

The combiguard or trim guard must be fitted when adjusting the H-needle.

After replacing the complete carburettor

1. Check that the plastic sleeve on the H-needle is turned as far as possible anticlockwise (richest fuel mixture). The sleeve sits freely on the needle and can be turned without affecting the needle's setting.

   Do not change the L-needle setting. This is adjusted at the factory and the plastic sleeve is already fixed on the needle.
2. Fit four trimmer cords Ø 3.3 mm on a Trimmy Fix.

   (Trimmy Fix M10, 531 00 38-69 for models 225, 232, 322L, 322R, 325L, 325L-X, 325R-X. Trimmy Fix M12, 502 13 87-02 for model 235).

   Maybe the hole needs to be enlarged a little to make fitting the trimmer cords easier.

   (Does not apply to models 225H60/H75 and 18H).
3. Cut the trimmer cord to the right length (measure the length to the edge of the Trimmy Fix).

   Model 225: 145 mm
   Model 232: 155 mm
   Model 235: 170 mm
   Models 322L/R, 325L/L-X/R-X: 142 mm

   Fit the Trimmy Fix on the machine.

   Model 322C must be run with Trimmy Hit VI and its standard cord (Ø 2.0 mm). Cut off the cord ends so that they are 146 mm long.

   (Does not apply to models 225H60/H75 and 18H).

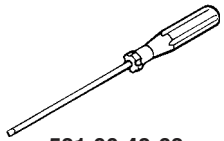
NOTE!
The spray guard must be removed from model 235.
Exercise care when the trimmer cord is rotating.

4. Start the engine. Adjust the idling speed T-screw if necessary.
5. Use screwdriver 531 00 48-63 to adjust the H-needle. The blade is 2 mm wide and goes through the plastic sleeve and only adjusts the needle.

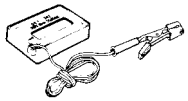
   Adjust the H-needle so that the max. speed 8400 ± 200 rpm is set.

   Use the tachometer 502 71 14-01 to check the speed.

   (Does not apply to models 225H60/H75 and 18H).



531 00 48-63



502 71 14-01

6. Run the engine warm for 2–3 minutes.
7. Check that the max speed is still 8400 ± 200 rpm. Adjust the H-needle if necessary.
8. Check that the plastic sleeve on the H-needle is turned as far as possible anticlockwise (richest fuel mixture).
9. Press in the plastic sleeve using a punch (Ø 5 mm).

The basic setting of the carburettor is now complete. Further fine adjustment, within the limits that the plastic sleeves on the needles permit, can be necessary.

Departures for models 225H60/H75, 18H

5A. Adjust the H-needle until the max speed is reached.

   Then turn the needle anticlockwise until the speed drops by 500 rpm.

6A. Run the engine warm at full throttle for 2–3 min.

7A. Check the idling speed and that the engine reacts quickly when accelerating.

7B. Adjust the H-needle until the max speed is reached. Then turn the needle anticlockwise until the speed drops by 500 rpm.

After replacing only the H-needle

1. Turn the L-needle as far as possible anticlockwise (richest fuel mixture).
2. Remove the plastic sleeve on the H-needle and unscrew the needle.
3. Carefully screw the new H-needle to the bottom and then loosen it a 1/2 turn. On models 322/325 the needle should be loosened approx. 2 1/2 turns.
4. Press a new plastic sleeve on the H-needle down to the first stop. The sleeve can now be turned without turning the needle.
5. Turn the plastic sleeve as far as possible anticlockwise (richest fuel mixture) without turning the needle.
6. Fit four trimmer cords Ø 3.3 mm on a Trimmy Fix.

   (Trimmy Fix M10, 531 00 38-69 for models 225, 232, 322L, 322R, 325L, 325L-X, 325R-X. Trimmy Fix M12, 502 13 87-02 for model 235).

   Maybe the hole needs to be enlarged a little to make fitting the trimmer cords easier.

   (Does not apply to models 225H60/H75).
7. Cut the trimmer cord to the right length (measure the length to the edge of the Trimmy Fix).

   Mod. 225: 145 mm Mod. 232: 155 mm
   Mod. 235: 170 mm Mod. 322L/R, 325L/L-X/R-X: 142 mm

   Fit the Trimmy Fix on the machine.

   Model 322C must be run with Trimmy Hit VI and its standard cord (Ø 2.0 mm). Cut off the cord ends so that they are 146 mm long.

   (Does not apply to models 225H60/H75 and 18H).

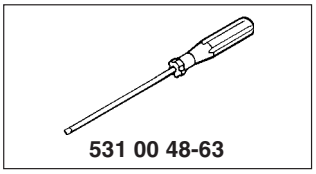
The spray guard must be removed from model 235. Exercise care when the trimmer cord is rotating.

8. Start the engine. Adjust the idling speed T-screw if necessary.
9. Use screwdriver 531 00 48-63 to adjust the H-needle. The blade is 2 mm wide and goes through the plastic sleeve and only adjusts the needle.

   Adjust the H-needle so that the max. speed 8400 ± 200 rpm is set.

   Use the tachometer 502 71 14-01 to check the speed.

   (Does not apply to models 225H60/H75 and 18H).
10. Run the engine warm for 2–3 minutes.



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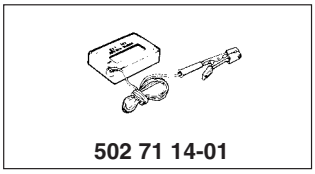


502 71 14-01

11. Check that the max speed is still 8400 ± 200 rpm. Adjust the H-needle if necessary.
12. Check that the plastic sleeve on the H-needle is turned as far as possible anticlockwise (richest fuel mixture).
13. Press in the plastic sleeve using a punch (Ø 5 mm).

The basic setting of the carburettor is now complete. Further fine adjustment, within the limits that the plastic sleeves on the needles permit, can be necessary.

Departures for models 225H60/H75, 18H

9A. Adjust the H-needle until the max speed is reached.

   Then turn the needle anticlockwise until the speed drops by 500 rpm.

10A. Run the engine warm at full throttle for 2–3 min.

11A. Check the idling speed and that the engine reacts quickly when accelerating.

11B. Adjust the H-needle until the max speed is reached. Then turn the needle anticlockwise until the speed drops by 500 rpm.

After replacing the H- and L-needles

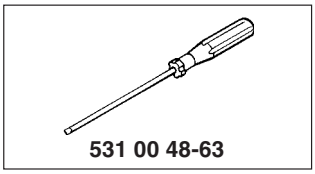
1. Remove the plastic sleeves from both needles and screw out the needles.
2. Carefully screw the new needles in until they bottom.

   Screw out the L-needle 2 turns. On models 322/325 the needle should be screwed out approx. 1 turn.

   Screw out the H-needle 1/2 turn. On models 322/325 the needle should be screwed out approx. 2 1/2 turns.
3. Press the new plastic sleeves on the needles until the first stop. The sleeves can still be turned without the needles turning.
4. Turn the plastic sleeve on the L-needle as far as possible clockwise (leanest fuel mixture).
5. Start the engine and let it idle.
6. Use screwdriver 531 00 48-63 to adjust the L-needle. The blade is 2 mm wide and goes through the plastic sleeve and only adjusts the needle.

   Adjust the L-needle so that the highest idling speed is obtained.

   Use the tachometer 502 71 14-01 to check the speed.
7. Check that the plastic sleeve on the L-needle is still turned as far as possible clockwise (leanest fuel mixture).
8. Press the plastic sleeve on the L-needle using a punch (Ø 5 mm).



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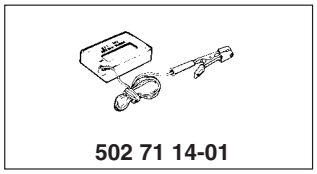


502 71 14-01

Now turn the L-needle as far as possible anticlockwise (richest fuel mixture).

9. Turn the plastic sleeve on the H-needle as far as possible anticlockwise (richest fuel mixture).
10. Fit four trimmer cords Ø 3.3 mm on a Trimmy Fix.

   (Trimmy Fix M10, 531 00 38-69 for models 225, 232, 322L, 322R, 325L, 325L-X, 325R-X. Trimmy Fix M12, 502 13 87-02 for model 235).

   Maybe the hole needs to be enlarged a little to make fitting the trimmer cords easier.

   (Does not apply to models 225H60/H75 and 18H).
11. Cut the trimmer cord to the right length (measure the length to the edge of the Trimmy Fix).

   Model 225: 145 mm Model 232: 155 mm

   Model 235: 170 mm

   Models 322L/R, 325L/L-X/R-X: 142 mm

   Fit the Trimmy Fix on the machine.

   Model 322C must be run with Trimmy Hit VI and its standard cord (Ø 2.0 mm). Cut off the cord ends so that they are 146 mm long.

   (Does not apply to models 225H60/H75 and 18H).

NOTE!
The spray guard must be removed from model 235. Exercise care when the trimmer cord is rotating.

12. Start the engine. Adjust the idling speed T-screw if necessary.
13. Use screwdriver 531 00 48-63 to adjust the H-needle. The blade is 2 mm wide and goes through the plastic sleeve and only adjusts the needle.

   Adjust the H-needle so that the max. speed 8400 ± 200 rpm is set.

   Use the tachometer 502 71 14-01 to check the speed. (Does not apply to models 225H60/H75).
14. Run the engine warm for 2–3 minutes.
15. Check that the max speed is still 8400 ± 200 rpm. Adjust the H-needle if necessary.
16. Check that the plastic sleeve on the H-needle is turned as far as possible anticlockwise (richest fuel mixture).
17. Press in the plastic sleeve using a punch (Ø 5 mm).

The basic setting of the carburettor is now complete. Further fine adjustment, within the limits that the plastic sleeves on the needles permit, can be necessary.

Departures for models 225H60/H75, 18H

13A. Adjust the H-needle until the max speed is reached.

   Then turn the needle anticlockwise until the speed drops by 500 rpm.

14A. Run the engine warm at full throttle for 2–3 min.

15A. Check the idling speed and that the engine reacts quickly when accelerating.

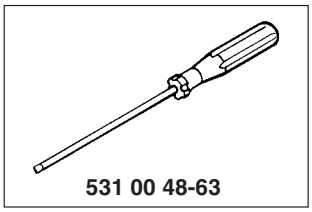
15B. Adjust the H-needle until the max speed is reached. Then turn the needle anticlockwise until the speed drops by 500 rpm.

After replacing only the L-needle

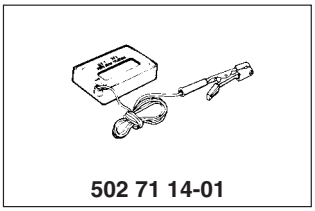
1. Turn the H-needle as far as possible clockwise (leanest fuel mixture).
2. Remove the plastic sleeve on the L-needle and unscrew the needle.
3. Carefully screw the new L-needle to the bottom and then loosen it 2 turns. On models 322/325 unscrew the needle 1 turn.
4. Press a new plastic sleeve on the L-needle down to the first stop. The sleeve can now be turned without turning the needle.
5. Turn the plastic sleeve as far as possible clockwise (leanest fuel mixture).
6. Start the engine and let it idle.
7. Use screwdriver 531 00 48-63 to adjust the L-needle. The blade is 2 mm wide and goes through the plastic sleeve and only adjusts the needle.

   Adjust the L-needle so that the highest idling speed is obtained.

   Use the tachometer 502 71 14-01 to check the speed.



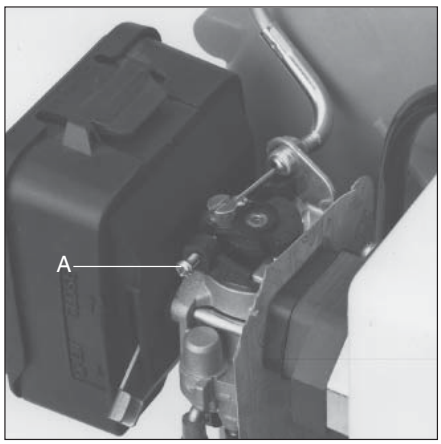
531 00 48-63



502 71 14-01

8. Check that the plastic sleeve on the L-needle is still turned as far as possible clockwise (leanest fuel mixture).
9. Press in the plastic sleeve using a punch (Ø 5 mm).

The basic setting of the carburettor is now complete. Further fine adjustment, within the limits that the plastic sleeves on the needles permit, can be necessary.



Model 141B

Only the idling speed can be adjusted on this model.

The idling speed should be approx. 2,500 rpm.

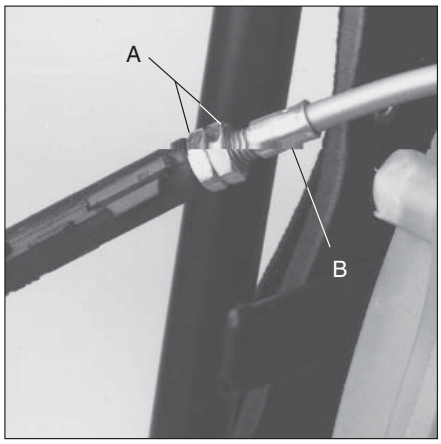
Model 141B

The carburettor on this model has no adjustable needles.

Only the idling speed can be adjusted with screw (A).

The right speed is approx. 2,500 rpm.

Adjust the idling speed when the engine is warm and has a clean air filter.



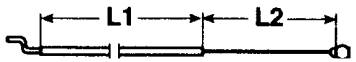
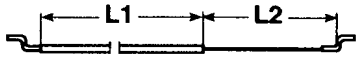
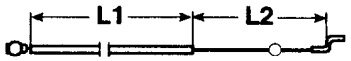
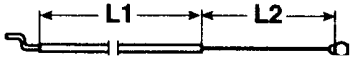
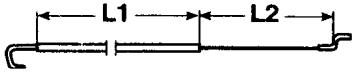
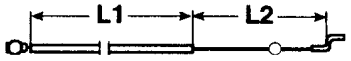
Check that the throttle cable has 0.5 – 1 mm of play.

When the throttle is in the idling position the throttle cable must have 0.5 – 1 mm of play.

Adjust the play by first loosening both locking nuts (A) and then turning the adjuster screw (B). The play is increased when the screw is screwed inwards and decreases when screwed outwards.

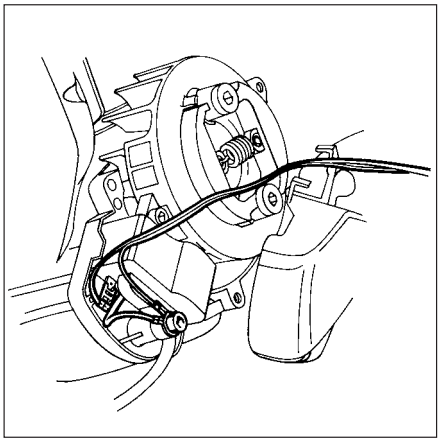
Tighten the locking nuts against each other after adjusting.

Throttle cable

Model		Order no.	L1 casing mm	L2 cable protrude mm	Serial no.	Nipples	Remarks
250R	– 1993	502 27 29-01	1000 ±5	120 ±1			Index finger throttle 502 28 06-01. The throttle cable runs under the engine. Steel casing.
250R	1994 –	502 27 29-06	965 ±5	162 ±1			Index finger throttle 502 28 06-01. Steel casing on cables replaced by 502 27 93-03.
250R	– 1996	502 27 93-03	965 ±2	152 ±1	>6520029		Index finger throttle 502 28 06-01. Brown Teflon casing.
250R	1997 –	502 27 93-04	640 ±2	115 ±1	>7180059		Index finger throttle 502 28 06-01. Brown Teflon casing. The cable runs through the crankcase. Replaced by 537 03 71-02 and 537 02 42-02
250R	1998 –	537 03 71-02	640 ±2	115 ±1	>8500001		Index finger throttle 502 28 06-01. Black plastic casing. Cable Ø 0.9. Kit with air filter holder and rubber bellows.
250R	1998 –	537 02 42-02	640 ±2	115 ±1	>8500001		Index finger throttle 502 28 06-01. Black plastic casing. Cable Ø 0.9.
250RX	1995–	502 27 29-07	795 ±5	133 ±1			Thumb throttle 502 28 37-01. Steel casing replaced by 502 28 60-03.
250RX	1996 –	502 28 60-03	810 ±2	116 ±1	>6450153		Thumb throttle 502 28 37-01. Brown Teflon casing.
250RX	– 1997	502 28 60-06	810 ±2	116 ±1			Thumb throttle 502 28 37-01. Brown Teflon casing. Cable Ø 0.9.
250RX 252RX	1997 – 1997 –	502 28 60-04	840 ±2	80 ±1	>7170157		Thumb throttle 502 28 37-01. Brown Teflon casing. The cable runs through the crankcase. Replaced by 502 28 60-05.
250RX 252RX	1997– 1997 –	502 28 60-05	840 ±2	80 ±1	>7420190 >7430001		Thumb throttle 502 28 37-01. Brown Teflon casing. The cable runs through the crankcase. Cable Ø 0.9. Replaced by 537 03 71-01 and 537 02 42-01.
252RX	1998 –	537 03 71-01	840 ±2	80 ±1	>8450073		Thumb throttle 502 28 37-01. Black plastic casing. Cable Ø 0.9. Kit with air filter holder and rubber bellows.
252RX	1998 –	537 02 42-01	840 ±2	80 ±1	>8450073		Thumb throttle 502 28 37-01. Black plastic casing. Cable Ø 0.9.

Throttle cable

Model		Order no.	L1 casing mm	L2 cable protrude mm	Serial no.	Nipples	Remarks
39R	– 1988	502 11 82-01	916 ±1	67 ±5			Index finger throttle 502 12 18-03
240/245R	– 1994	502 11 82-01	916 ±1	67 ±5			Index finger throttle with throttle lock 502 12 18-03
240/245R	1994 –	502 27 93-01	895 ±2	95 ±1	>4110001		Index finger throttle 502 28 06-01
245RX	– 1994	502 11 82-02	792 ±1	67 ±5			Index finger throttle 502 12 18-03
245RX	1994 –	502 27 93-02	795 ±2	97 ±1	>411001		Index finger throttle 502 28 06-01
245RX	1995 –	502 28 60-01	700 ±2	61 ±1	>5510267		Thumb throttle 502 28 37-01. Brown Teflon casing. Replaced by 502 28 60-08.
245RX	1997 –	502 28 60-08	700 ±2	61 ±1			Thumb throttle 502 28 37-01. Brown Teflon casing. Cable Ø 0.9.



Throttle

Models 322, 325

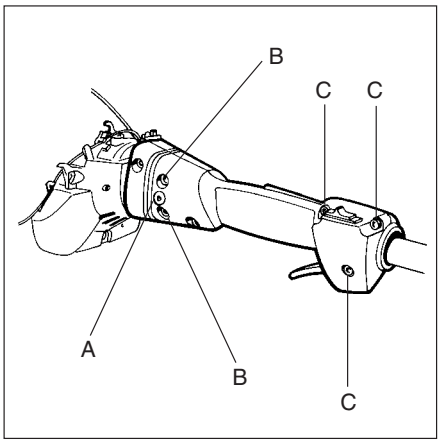
Separate the engine body and the clutch cover.

Throttle

Models 322, 325

We recommend that the throttle is dismantled from the engine and shaft in order to efficiently carry out service and repair work.

Separate the engine body and the clutch cover (see chapter “Ignition system”).



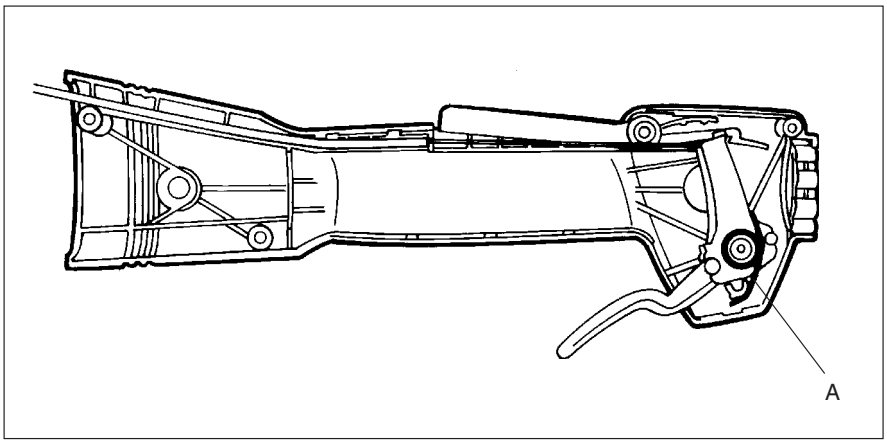
Pull away the shaft with the throttle from the clutch cover.

Remove the throttle from the shaft.

Remove both screws (A) (one on each side).

Loosen the screws (B) and pull off the shaft with the throttle from the clutch cover.

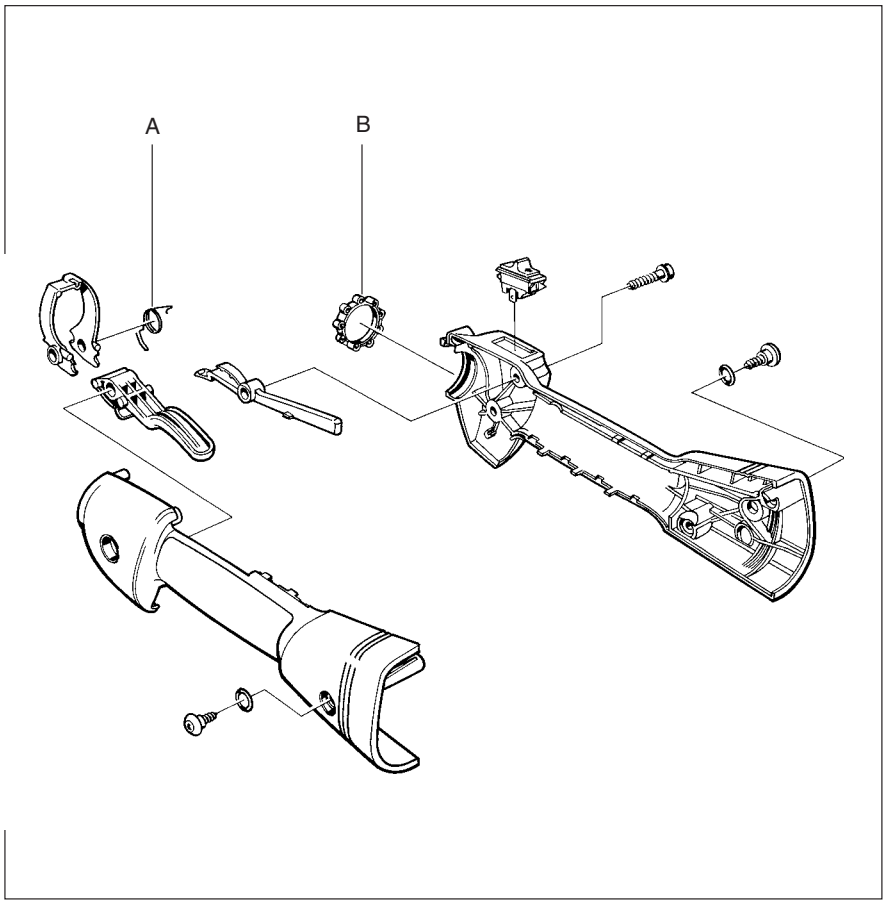
Loosen the 3 fronT-screws (C) (approx. 2 turns) holding the throttle halves and pull the throttle off of the shaft.



Remove the screws holding the throttle together and carefully separate the halves.

Note how the different parts are fitted. Pay special attention to which way the return spring (A) faces.

The stop contacts can be pried back using a small screwdriver if they need to be replaced.



Assembly of the throttle is done in the reverse order as set out for dismantling.

Position the parts in the left-hand handle half.

Ensure the return spring (A) is facing the right way.

Check that the throttle cable and the short-circuit cable are pressed correctly down in their channels so that they are not pinched when the two handle halves are screwed together.

Do not forget to put the vibration element (B) in position before the handle halves are put together. Lubricate the vibration element with soapy water. This facilitates fitting the throttle on the shaft.

Fit together the handle halves using the 5 screws, but do not tighten them fully before the throttle has been positioned on the shaft.

Assemble the remaining parts in the reverse order as set out for dismantling.

Model 18H

Remove the screws and lift off the handle half.

Model 18H

Remove the screws and note how they were placed, as they are of different lengths.

Remove the handle half.

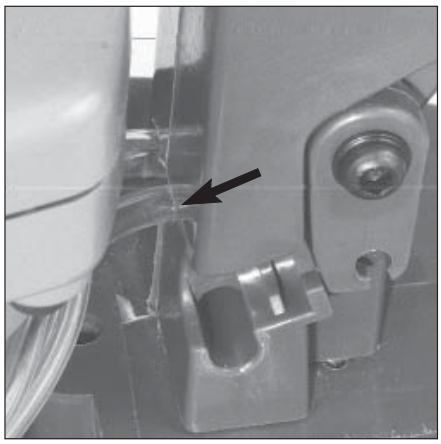
NOTE!
The lever arm for the throttle cable does *not* need to be dismantled.

Inspect and replace worn or damaged parts.

Assemble in the reverse order as set out for dismantling.

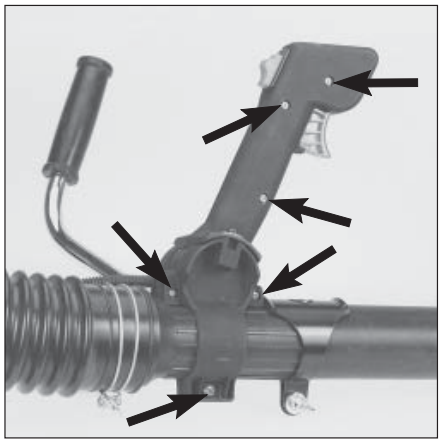
Inspect and replace worn or damaged parts.

Assemble in the reverse order as set out for dismantling.



NOTE!
Check that the fuel hose is not pinched and that the stop contact sits correctly.
Fit the throttle cable.

NOTE!
Check that the fuel hose is not pinched and that the stop contact sits correctly.
Fit the throttle cable.



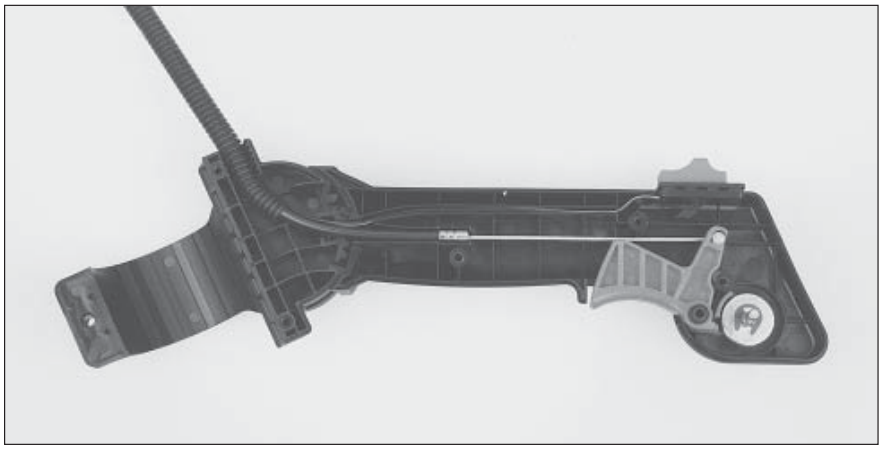
Model 141B

Remove the screws and separate the handle halves.

Model 141B

Remove the screws and separate the handle halves.

NOTE!
The screw for angling the handle does not need to be loosened or removed.



Worn or damaged parts can be easily replaced once the right-hand handle half has been removed.

Check when assembling that the short-circuit cable is not pinched between the two handle halves.

Technical data

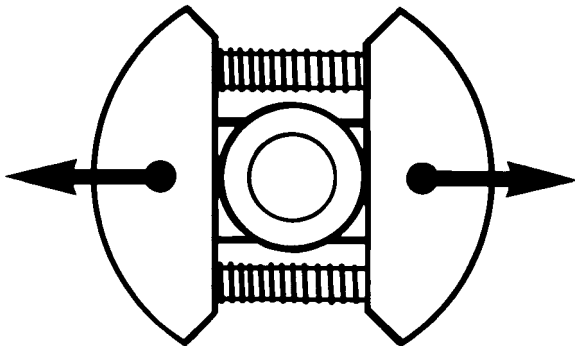
Model	Idling speed rpm	Max. speed rpm ◊	Carburettor type		Tank volume fuel, litre
			type	setting *	
Mondo	3,000	9.000	Walbro WT 380	H = 2 L = 2	0.48
122L	3,000	10.800	Walbro WYL	– –	0.40
Mondo Max	3,000	9,000	Walbro WT 380	H = 2 L = 2	0.48
225L/LD	2,700	11,000 – 12,000	Walbro WT 235 Walbro WT 270	H = 1 – 1 1/4 L = 1 – 1 1/4	0.50
232L	2,700	11,000– 12,000	Walbro WT 235 Walbro WT 270	H = 1 – 1 1/4 L = 1 – 1 1/4	0.50
Mondo Mega	3,000	9,000	Walbro WT 380	H = 2 L = 2	0.46
225R/RD	2,700	11,000– 12,000	Walbro WT 235 Walbro WT 270	H = 1 – 1 1/4 L = 1 – 1 1/4	0.50
232R / 235 R	2,700	11,000– 12,000	Walbro WT 235 Walbro WT 270	H = 1 – 1 1/4 L = 1 – 1 1/4	0.50
322	2,500	12,500	Zama EL 11	H = 2 L = 1	0.50
325	2,500	12,500	Zama EL 11	H = 2 L = 1	0.50
240R	2,700	12,500	Walbro WT 99	H = 1 – 1 1/4 L = 1 – 1 1/4	0.80
245R	2,700	12,500	Walbro WT 99	H = 1 – 1 1/4 L = 1 – 1 1/4	0.80
250R	2,700	12,500	Walbro HDA 86B Walbro HDA 142	H = 1 – 1 1/4 L = 1 – 1 1/4	0.80
245RX	2,700	12,500	Walbro WT 99	H = 1 – 1 1/4 L = 1 – 1 1/4	0.80
250RX	2,700	13,500	Walbro HDA 86B Walbro HDA 142	H = 1 – 1 1/4 L = 1 – 1 1/4	0.80
252RX	2,700	14,000	Walbro HDA 142	H = 1 – 1 1/4 L = 1 – 1 1/4	0.80
265RX	2,250	11,500	Tillotson HS 121A	H = 1 – 1 1/4 L = 1 – 1 1/4	1.00
240RBD	2,700	11,000– 12,000	Walbro WT 235 Walbro WT 270	H = 1 – 1 1/4 L = 1 – 1 1/4	0.60
235P	2,700	–	Walbro WT 235 Walbro WT 270	H = 3/4 – 1 L = 3/4 – 1	0.50
250PS	2,500	11,500	Walbro HDA 86B Walbro HDA 142	H = 1 – 1 1/4 L = 1 – 1 1/4	0.90
225E	2,700	11,000– 12,000	Walbro WT 270	H = 1 – 1 1/4 L = 1 – 1 1/4	0.50
18H	3,000	10,000	Walbro WT 379 Zama CIU-W4	H = 2 L = 2	0.21
225H60/75	2,700	11,000– 12,000	Walbro WT 406 Walbro WT 421	H = 1 – 1 1/4 L = 1 – 1 1/4	0.40
140B	2,500		Walbro HDA 110A	H = 1 L = 1	2.0
141B	2,500		Walbro WYK	–	2.0
132HBV	2,500	7,600	Walbro WT 141		0.60
225BV/225HBV	2,500	8,200	Walbro WT 235 Walbro WT 270	H = 1 – 1 1/4 L = 1 – 1 1/4	0.40

* Only basic setting. Applies to carburettor needles without plastic caps fitted.

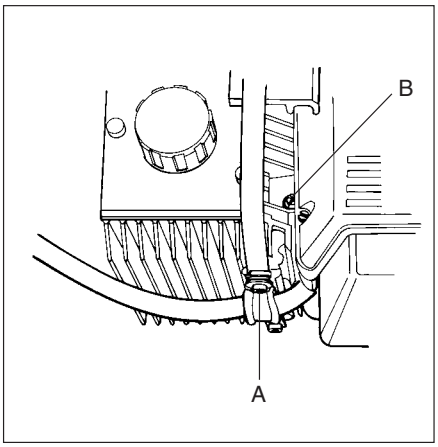
◊ Do not exceed the stated max speed. Risk of engine damage. The figures apply to a run-in engine. Reduce the speed by 600 – 700 rpm for an engine that has not been run-in.

Centrifugal clutch

4.



Contents



Clutch

Model 250PS

Unscrew the cable clamp (A) and the hose clamp (B).

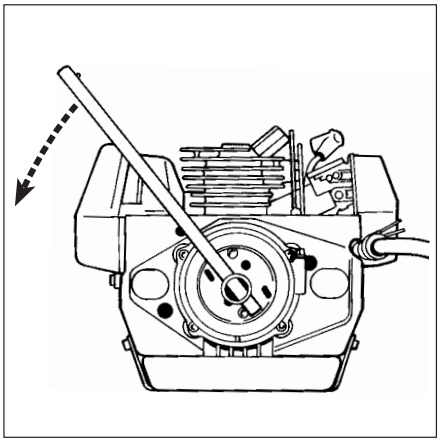
Turn the hydraulic oil tank clockwise and pull it off from the engine body.

Clutch

Model 250PS

The clutch on this model is positioned between the engine body and the hydraulic unit.

1. Unscrew the clamp (A) holding the control cable on the hydraulic oil tank.
2. Loosen the hose clamp (B).
3. Turn the hydraulic oil tank clockwise and pull it off from the engine body. (Bayonet fitting).

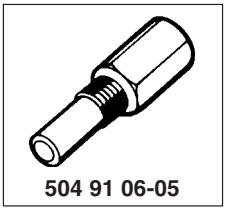


Remove the clutch nut and dismantle the clutch according to the instructions for model 250.

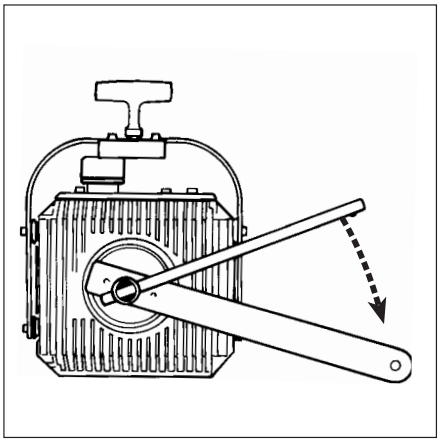
Dismantle the cylinder cover and replace the spark plug with piston stop no. 504 91 06-05.

Remove the clutch nut by turning it anti-clockwise.

Dismantle the clutch from the crankshaft and carry out an inspection and servicing as set out in the instructions for model 250.



504 91 06-05



Clutch drum

Model 250PS

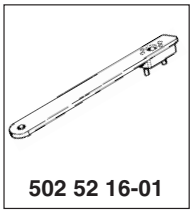
Dismantle the clutch drum from the hydraulic unit's axle

Clutch drum

Model 250PS

The clutch drum is screwed onto the hydraulic unit's axle.

Dismantle the drum by using the holding tool 502 52 16-01 and allen key 502 52 14-01.

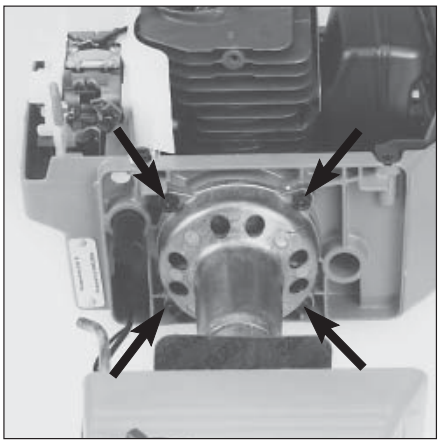


502 52 16-01

502 52 14-01

NOTE!
Turn the allen key clockwise.

Replace the clutch drum if the inner diameter exceeds 70.0 mm.



Clutch

Models 240/245

Separate the engine body and tank unit.

Unscrew the screws on the clutch housing and remove shaft unit.

Clutch

Models 240/245

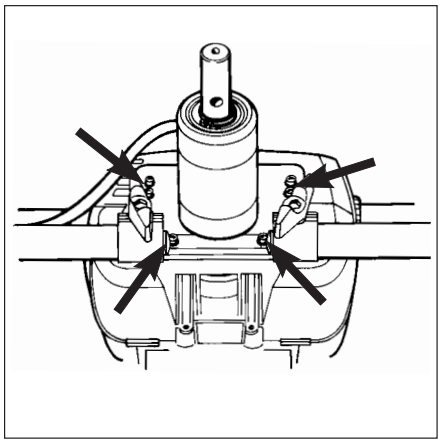
Separate the engine body and tank unit in the same way as described for model 250.

Remove the screws holding the clutch housing on the engine body and lift off the entire shaft unit.

The clutch can be one of two different designs. Firstly, a three shoe clutch of the same type as used on model 235. See this model for service measures. This clutch was introduced from the following serial numbers:

Model 240R no. 82 00 059, model 245R no. 81 70.180, model 245RX no. 81 60 227.

Secondly, the clutch can be a two shoe model as described in the workshop manual.



Clutch

Models 225 AI15, 225 AI25

Dismantle the gearbox from the engine body to access the clutch and clutch drum.

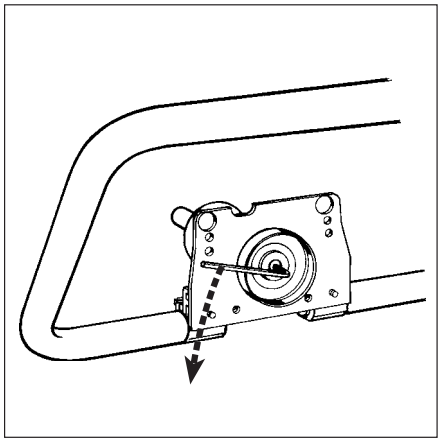
Also see the section in the workshop manual for models 225/232 concerning servicing the clutch.

Clutch

Models 225 AI15, 225 AI25

Remove the 6 screws holding the gear housing on the engine body and lift off the gearbox.

See the section in the workshop manual for models 225/232 with regard to dismantling, service and assembly of the clutch.



Clutch drum

Models 225 AI15, 225 AI25

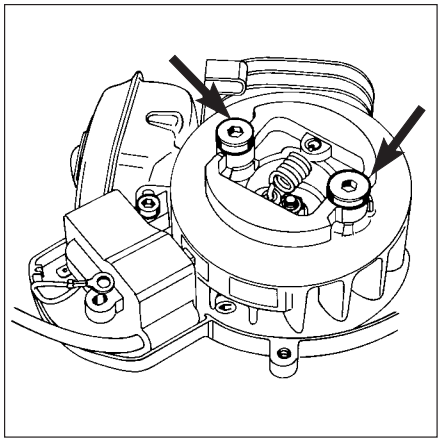
Dismantle the screw and lift out the clutch drum.

Clutch drum

Models 225 AI15, 225 AI25

The clutch drum can be removed once the screw in the centre is unscrewed anticlockwise.

Replace the clutch drum if the inner diameter exceeds 64.5 mm.



Clutch

Models 322, 325

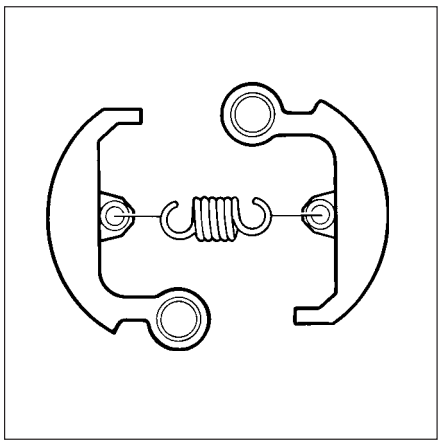
Dismantle the clutch by following the instructions in the chapter “Ignition system”.

Clutch

Models 322, 325

The centrifugal clutch is screwed to the flywheel.

Follow the detailed instructions in the chapter “Ignition system” when the clutch is to be dismantled.

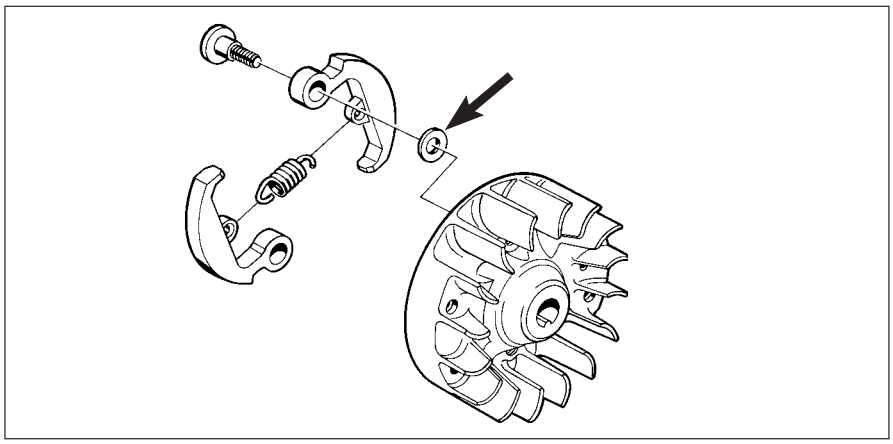


Twist apart the clutch and inspect the different parts with regard to wear or damage.

Twist apart the clutch.

Inspect the different parts with regard to wear or damage.

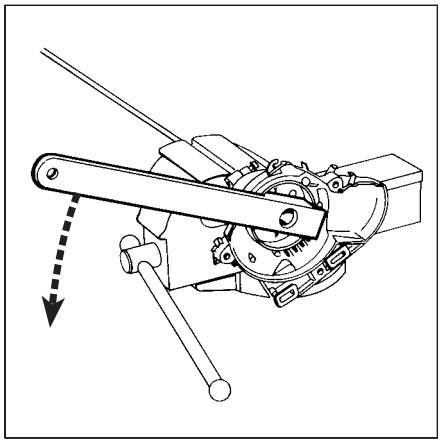
Pay special attention to the ends of the springs, which in addition to wear, can also show signs of cracking.



Connect the clutch shoes together with the spring.

NOTE!
Both clutch shoes should be replaced even if only one of them is showing signs of heavy wear. This is to avoid engine vibration caused by imbalance in the clutch.

Screw the clutch on the flywheel. Do not forget the washers between the flywheel and the clutch shoes.

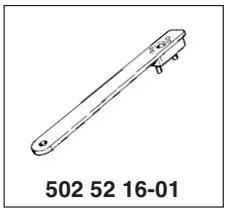


Clutch drum

Models 322/325

Separate the shaft from the clutch cover.

Dismantle the clutch drum using tool 502 52 16-01.



502 52 16-01

Clutch drum

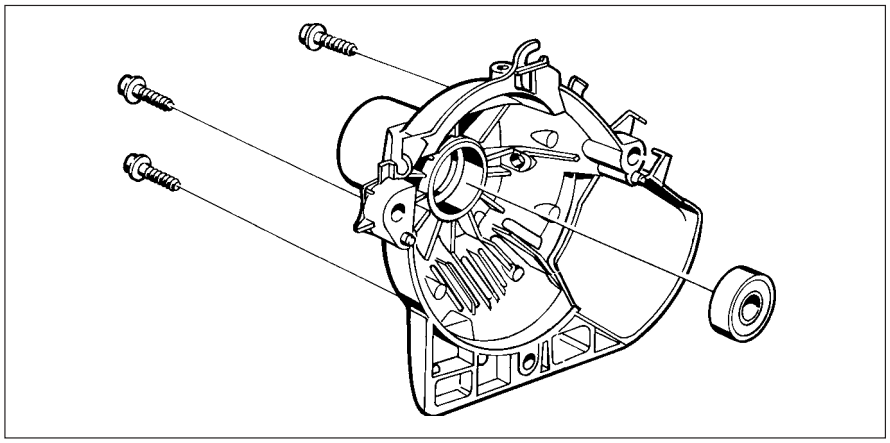
Models 322/325

Separate the shaft from the clutch cover.

Pull away the clutch cover complete with drive axle and clutch drum.

The drum is screwed on the drive axle and can be dismantled using tool 502 52 16-01.

The clutch drum should be replaced if the diameter exceeds Ø 64.0 mm



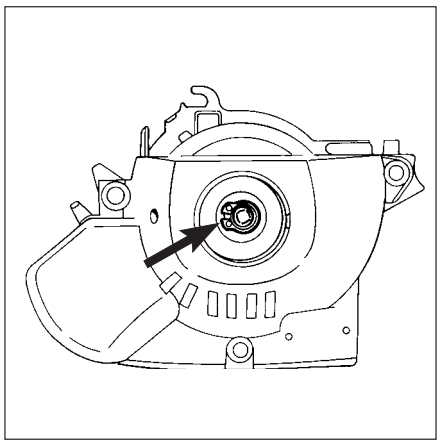
The bearing supporting the clutch drum in the clutch cover is glued in position with Loctite. To replace the bearing, heat the cover to approx. 70°C using a hot air gun and the glue will release.

Dismantle the bearing using an appropriate punch and hammer.

NOTE!
Dismantle the shaft's mounting clamps and rubber spacer in the clutch cover so that these parts are not damaged when the cover is heated.

Assemble in the reverse order as set out for dismantling.

Use Loctite intended for mounting bearings when the bearing is mounted in the clutch cover.



Model 322C

Dismantle the clutch cover and remove the shaft's mounting parts in the cover.

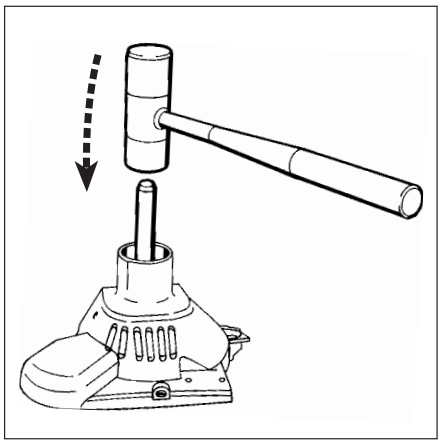
Remove the circlip.

Model 322C

Dismantle the clutch cover from the shaft.

Remove the shaft's mounting parts on the clutch cover.

Dismantle the circlip holding the clutch drum's spindle by the bearing.



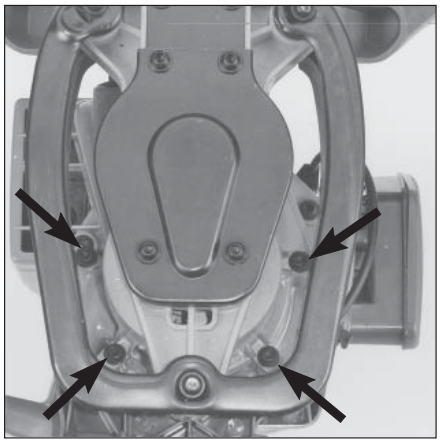
Press off the clutch drum.

Replace the bearing and fit the remaining parts in the reverse order as set out for dismantling.

Now press out the clutch drum using a suitable punch and hammer.

The bearing is replaced in the same way as described above.

Assemble in the reverse order as set out for dismantling.



Clutch

Model 18H

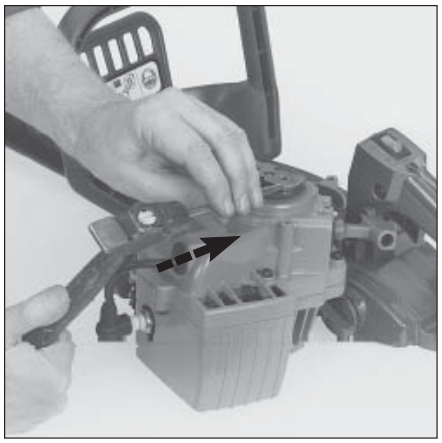
Remove the 4 screws and move the cutting equipment to one side.

Clutch

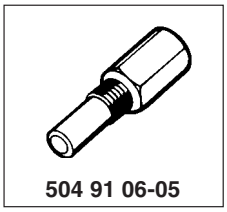
Model 18H

The cutting equipment must be dismantled from the engine body to access the clutch.

Remove the 4 screws and move the cutting equipment to one side.



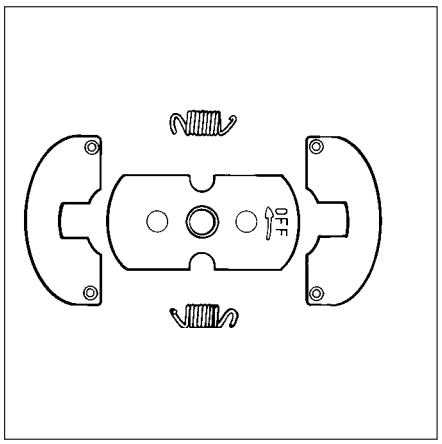
Dismantle the clutch using an appropriate punch and hammer.



504 91 06-05

Dismantle the clutch from the crankshaft using an appropriate punch and hammer.

If the clutch is sitting extremely tight and the compression force is not sufficient as a stop, the spark plug can be replaced by the piston stop no 504 91 06-05.



Dismantle the clutch and inspect the parts with regard to damage or wear. Replace requisite parts and assemble in the reverse order as set out for dismantling.

Dismantle the clutch by prying out the springs with a small screwdriver.

Inspect the clutch with regard to damage and wear.

NOTE!
Both clutch shoes should be replaced at the same time to prevent imbalance.

Assemble the clutch in the reverse order as set out for dismantling.

4 Centrifugal clutch

Clutch drum
Model 18H
See chapter “Attachments”.

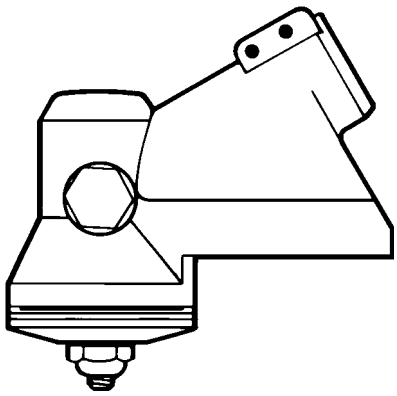
Clutch drum
Model 18H
See chapter “Attachments”.

Technical data

Model	Engage speed rpm	Wear limit clutch drum	Wear limit clutch shoe
Mondo	4,000	–	–
122L	3,900	Ø 58.0	Min. 0.5 mm of lining remaining
Mondo Max	4,000	–	–
225L/LD	3,700	Ø 64.5	Max 1 mm wear per shoe
232L	3,800	Ø 64.5	Max 1 mm wear per shoe
Mondo Mega	4,000	–	–
225R/RD	3,700	Ø 64.5	Max 1 mm wear per shoe
232R	3,800	Ø 64.5	Max 1 mm wear per shoe
322	3,800	Ø 64.0	Max 1 mm wear per shoe
325	3,800	Ø 64.0	Max 1 mm wear per shoe
235R	3,800	Ø 64.5	Max 1 mm wear per shoe
240R	3,700	Ø 65.0	Max 1 mm wear per shoe
245R	3,700	Ø 65.0	Max 1 mm wear per shoe
250R	4,300	Ø 70.0	Max 1 mm wear per shoe
245RX	3,700	Ø 65.0	Max 1 mm wear per shoe
250RX	4,300	Ø 70.0	Max 1 mm wear per shoe
252RX	4,300	Ø 70.0	Max 1 mm wear per shoe
265RX	3,500	Ø 80.0	Max 1 mm wear per shoe
240RBD	3,600	Ø 64.5	Max 1 mm wear per shoe
235P	3,900	Ø 64.5	Max 1 mm wear per shoe
250PS	4,300	Ø 70.0	Max 1 mm wear per shoe
225E	3,700	Ø 64.5	Max 1 mm wear per shoe
18H	4,600	–	–
225H60/75	5,400	Ø 64.5	Max 1 mm wear per shoe
225AI15, 225AI25	5,400	Ø 64.5	Max 1 mm wear per shoe

Angle gear

5.



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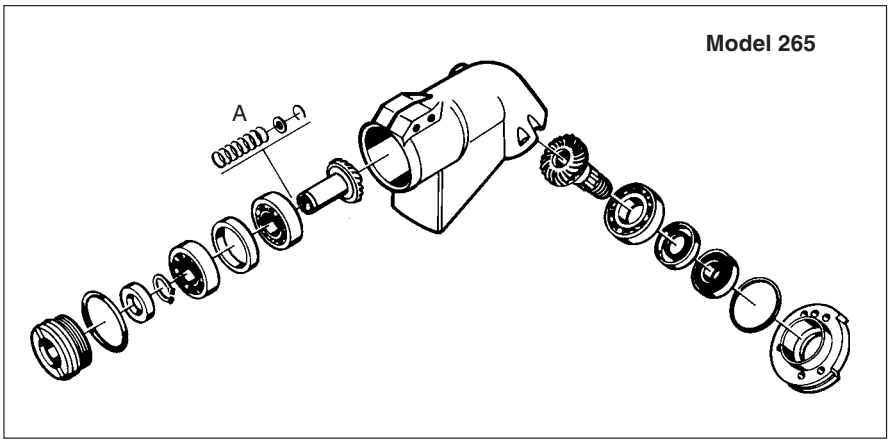
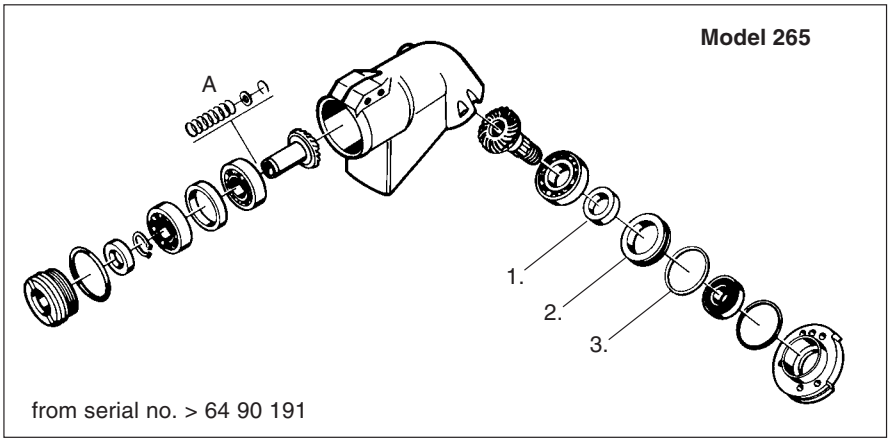
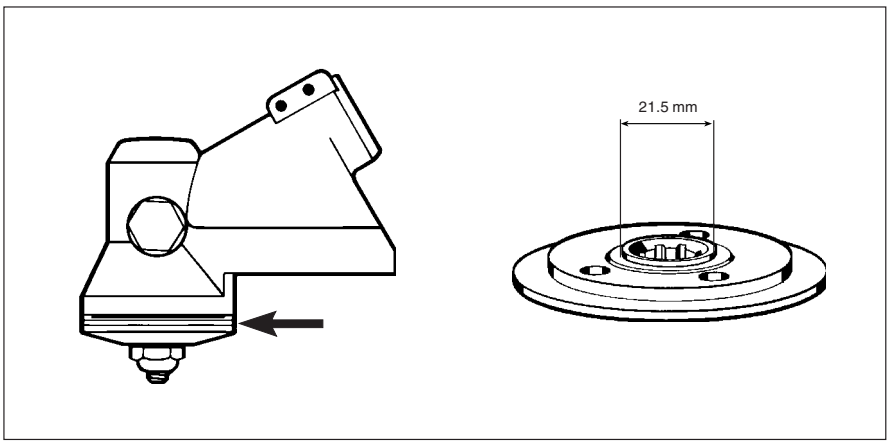






Dismantling, assembling

Models 250, 240/245

Remove the cover, O-ring and washer.

Assembly

Model 265

Fit the bearings on respective axles. It is easier if the bearing is heated to approx. 100°C.

NOTE!
Do not forget the circlip holding the bearing on the input axle.

Heat the gear housing to approx. 150°C and first lift the output axle in position and then the input axle.

Make sure the bearing bottoms in its seating.

The parts (A) *are only supplied with spare part gears.* This is so the gears can be fitted on the old 165R where drive axle also had a spline on the clutch drum.

The parts (A) prevent the drive axle from sliding down through the pinion gear towards the gear on the blade axle. Mounted inside the pinion gear axle.

In those cases the drive axle is threaded by the clutch drum these parts are *not* required.

From serial number 64 90 191 the sealing ring has been removed and replaced with the three parts listed below.

1. Steel spacer
2. Aluminium ring
3. O-ring

The operating temperature falls considerably when the sealing ring is removed and is replaced by the new components. In addition, the steel spacer prevents the blade axle from shifting upwards, e.g. with impact from below.

On later models of the angle gear (from serial number 62 60 067) another type of drive disc has been fitted to prevent grass and dirt from penetrating into the angle gear and destroying the sealing ring. The new drive disc has order no. 502 25 41-02.

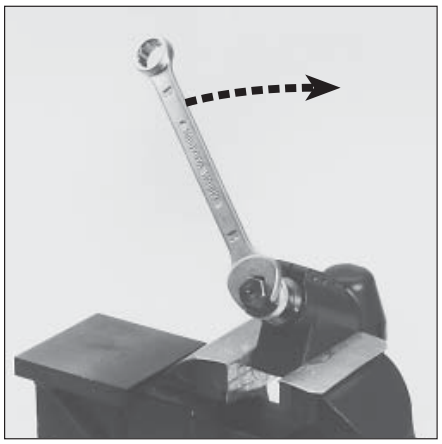
It can be fitted to angle gears that have cover with order no. 502 10 72-02 and 502 10 72-03. The centre hole in the cover is Ø 22 mm.

Dismantling, assembling

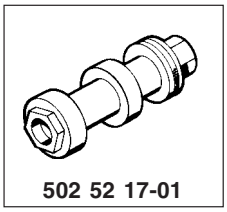
Models 250, 240/245

Remove the 3 screws holding the cover.

Lift off the cover, O-ring (240/245) and the washer that lies against the bearing.



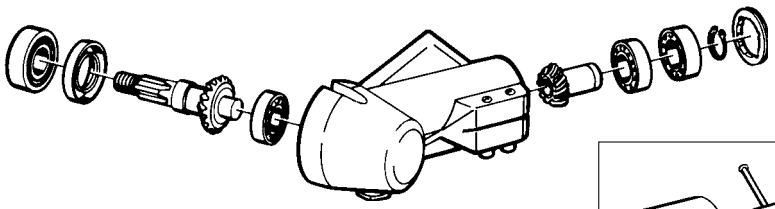
Unscrew the ring nut.

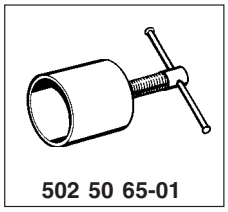


502 52 17-01

Unscrew the ring nut holding the input axle in position by using tool no. 502 52 17-01.

Model 250





502 50 65-01

Heat the gearbox and dismantle the input and output axles in the same way as described for model 265.

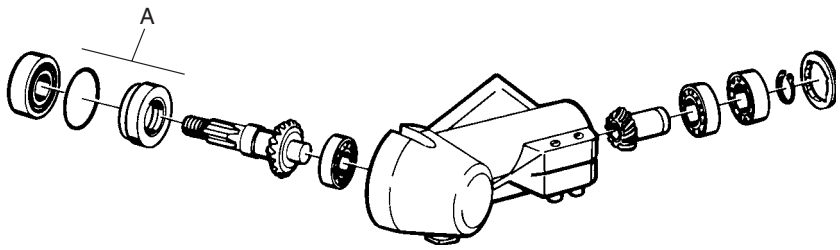
NOTE!
The input axle with pinion must be dismantled first. Use puller 502 50 65-01 when the output axle is dismantled.

Replace damaged parts.

Assemble the angle gear in the reverse order as set out for dismantling.

Fit the bearings on respective axles. It is easier if the bearing is heated to approx. 100°C.

Model 250



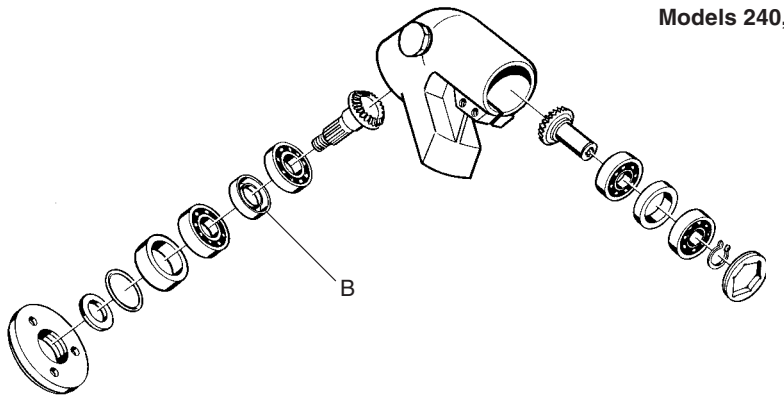
Serial no. > 710 00 065 (250RX)
Serial no. > 710 00 122 (250R)

NOTE!
Do not forget the circlip holding the bearing on the input axle. Make sure the bearing bottoms in its seating.

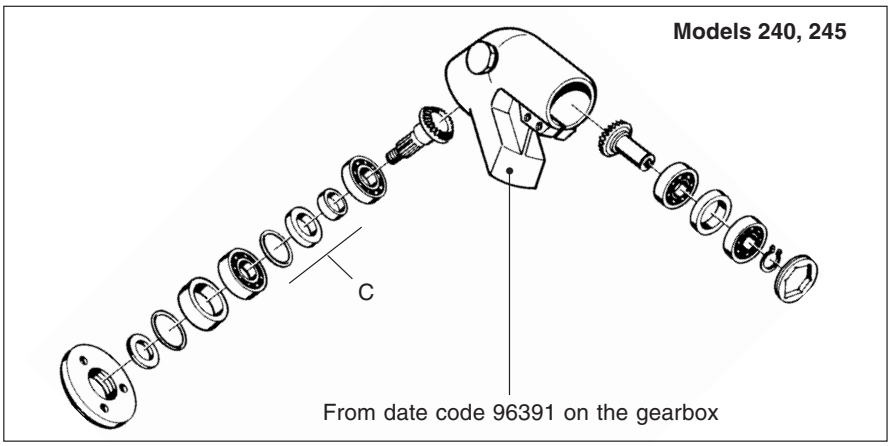
Heat the gear housing to approx. 150°C and first lift the output axle in position and then the input axle. Make sure the bearing bottoms in its seating.

NOTE!
The sealing ring on later models has been replaced by an O-ring and an aluminium sleeve (A).

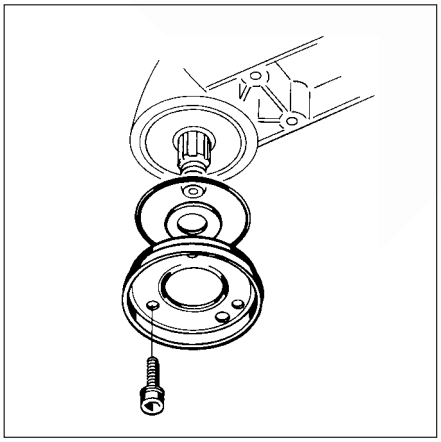
Models 240, 245



NOTE!
On the new angle gear design for models 240/245 the sealing ring (B) has been replaced by an O-ring, aluminium ring and a steel spacer.

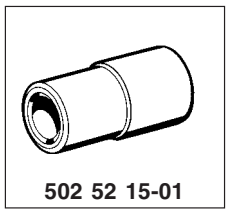


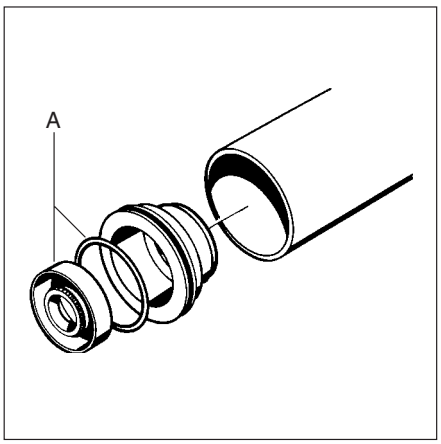
The operating temperature in the angle gear falls considerably when the sealing ring is removed and replaced by the new components (C). In addition, the steel spacer prevents the blade from shifting upwards, e.g. with impact from below.



Fit the cover.

NOTE!
Use centre punch no. 502 52 15-01 to centre the cover on the gearbox.
Use Loctite on the screws.

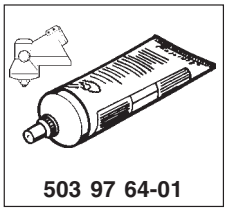




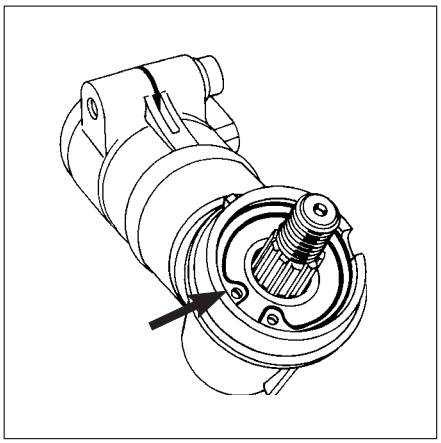
Check and possibly replace the sealing ring and O-ring (A) at the ends of the shaft.

Check that the sealing ring and O-ring (A), at the end of the shaft, are undamaged before the gear is fitted.

Do not forget to fill the gear housing 3/4 full with special grease 503 97 64-01.



WARNING!
Too much grease can mean that it will be pressed past the sealing rings. The temperature in the transmission can also be too high.



Dismantling/assembling

Models 322/325

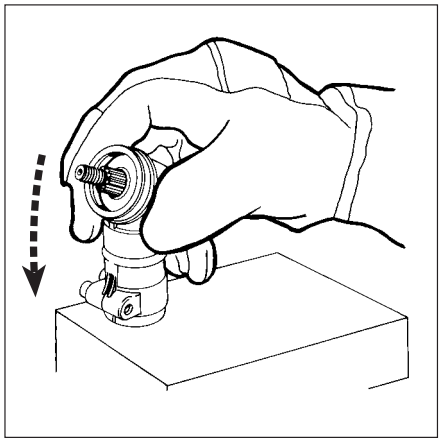
Remove the angle gear from the shaft.

Remove the circlips holding the bearings on the input respective output axles.

Dismantling/assembling

Models 322/325

1. Remove the cutting equipment and guard.
2. Loosen the screw holding the angle gear on the shaft and remove the angle gear.
3. Remove the circlips holding the bearings on the output axle (illustrated) and on the input axle using the circlip pliers.



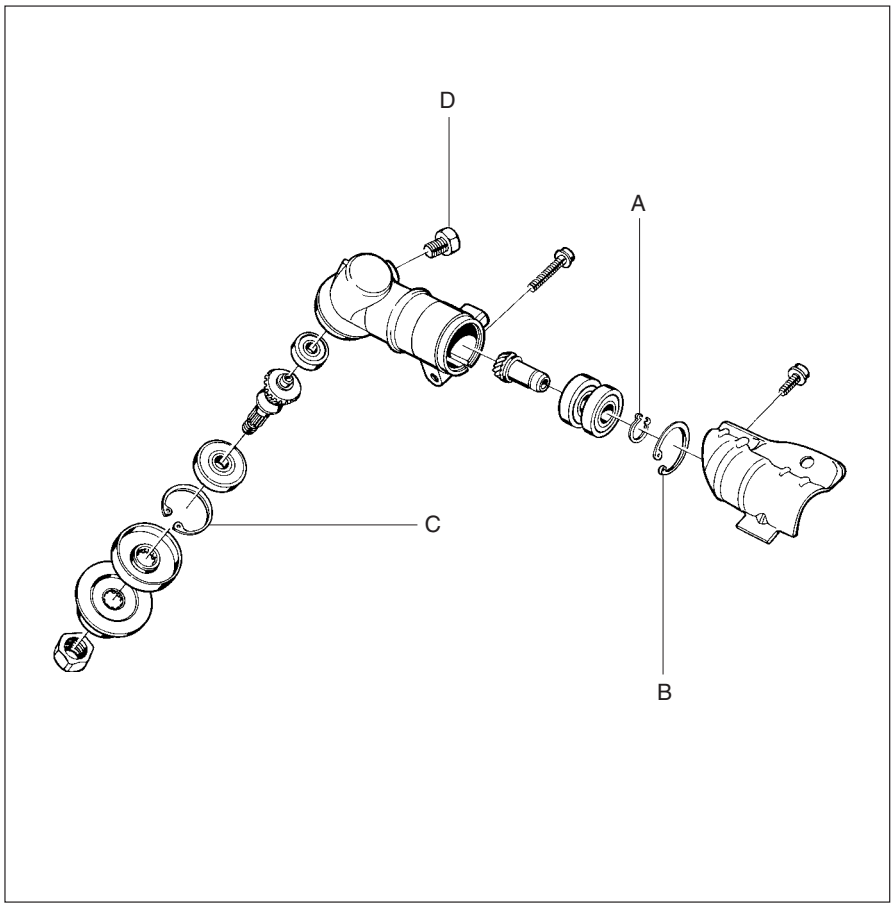
Heat the entire angle gear to approx. 110°C and first dismantle the input axle and then the output axle.

Heat the entire angle gear using a hot air gun to approx. 110°C.

Knock the gear against a wooden block so that the input axle and the bearing fall out.

Now lift out the output axle.

Wear protective gloves



Assembly

Clean all component parts and replace if damaged or worn.

Fit the bearings on respective axles. This is easier if the bearings are heated to approx. 110°C using a hot air gun.

NOTE!
Do not forget the circlip (A) holding the bearing on the input axle.

Heat the gearbox to approx. 110°C and first place the output axle in position and then the input axle.

Make sure the bearing bottoms in its seating.

Fit the circlips (B) and (C). Make sure they lie correctly in their grooves.

Assemble remaining parts in the reverse order as set out for dismantling.

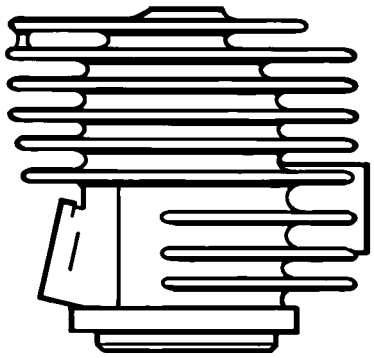
NOTE!
Do not forget to fill the gear housing to approx. 3/4 with gear housing grease 503 97 64-01 once the plug (D) has been removed.

Technical data

Model	Gear ratio	Axle thread	Blade hole diameter mm	Blade diameter mm	Angle degrees	Max. axle speed rpm
M ndo	1:1	3/8"x24(R)	–	–	30°	9,000
122L	1:1.33	M10x1.25	–	–	35°	8,100
Mondo Max	1:1.23	3/8"x24(L)	–	–	30°	7,300
225L/LD	1:1.40	M10x1.25	–	–	35°	8,500
232L	1:1.40	M10x1.25	_	_	35°	8,500
Mondo Mega	1:1.33	3/8"x24(L)	20.0	200	30°	7,300
225R/RD	1:1.40	M10x1.25	20.0	200–255	35°	8,500
232R	1:1.40	M10x1.25	20.0	200–275	35°	8,500
322	1:1.46	M10x1.25	25.4	200–255	30°	8,560
325	1:1.46	M10x1.25	25.4	200–255	30°	8,560
235R	1:1.53	M12x1.75	20.0	200–300	35°	7,800
240R	1:1.36	M12x1.75	20.0	200–300	30°	9,190
245R	1:1.36	M12x1.75	20.0	200–300	30°	9,190
250R	1:1.36	M12x1.75	20.0	200–300	30°	9,190
245RX	1:1.36	M12x1.75	20.0	200–300	30°	9,190
250RX	1:1.36	M12x1.75	20.0	200–300	30°	9,930
252RX	1:1.36	M12x1.75	20.0	200–300	30°	10,300
265RX	1:1.26	M12x1.75	20.0	200–300	25°	9,120
240RBD	1:1.40	M10x1.25	20.0	200–300	35°	7,800
235P	–	–	–	–	–	–
250PS	–	–	–	–	–	–
225E	1:1.40	M10x1.25	25.4	–	35°	8,500
18H	1:5.7	–	–	–	–	–
225H60/75	1:7.25	–	–	–	–	–
140B, 141B	–	–	–	–	–	–
132HBV	–	–	–	–	–	–
225BV/225HBV	–	–	–	–	–	–

Cylinder and piston

6.



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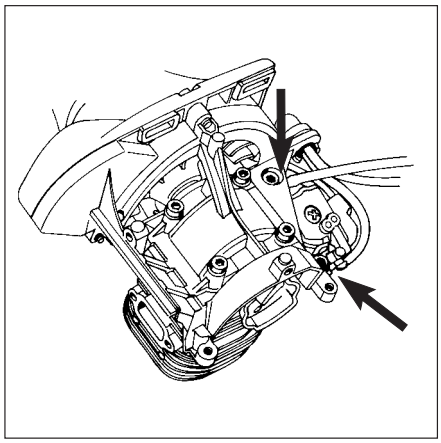


Dismantling

Models 322, 325

Dismantle all parts around the cylinder incl. the distance piece with attached carburettor.

Dismantling

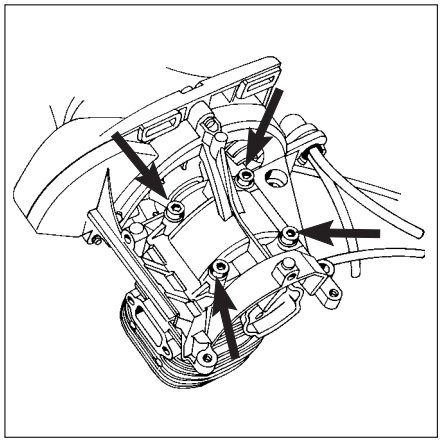
Models 322, 325

Dismantle the following parts:

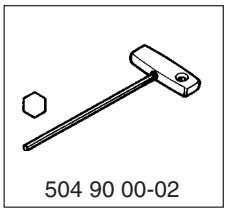
Cylinder cover, muffler grille, muffler with heat guard plate, starter and spark plug. Move the fuel tank.

Now remove the 2 screws holding the distance piece against the crankcase.

Remove the distance piece with the attached carburettor.



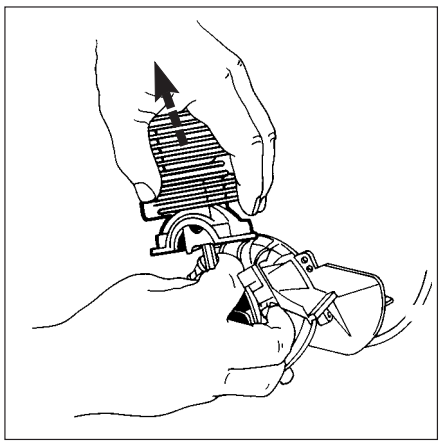
Remove the bolts holding the cylinder.



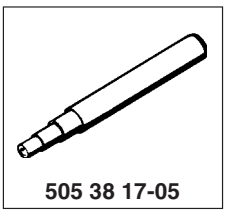
504 90 00-02

Remove the 4 bolts holding the cylinder against the crankcase.

Use tool no. 504 90 00-02.



Lift off the cylinder and remove the piston from the connecting rod

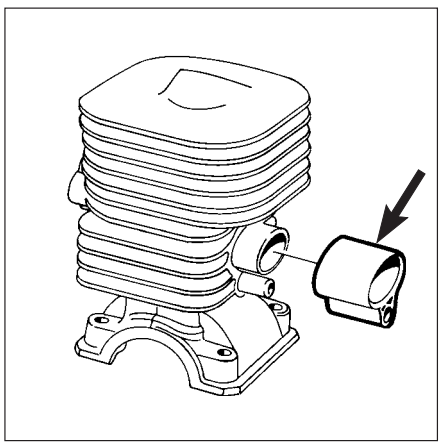


505 38 17-05

Pull the cylinder straight up without turning it. There is a risk that the piston rings may break.

A sealant has been used instead of a gasket on the base of the cylinder.

Dismantle the piston from the connecting rod.



Cleaning, inspection

Models 322, 325

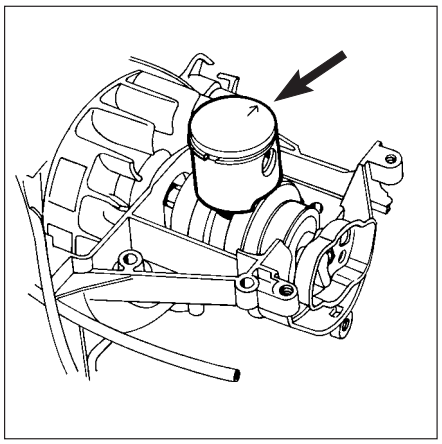
Clean and inspect the piston and cylinder. Check the rubber induction manifold with regard to crack formation and other damage.

Cleaning, inspection

Models 322, 325

Before the piston and cylinder are assembled the parts must be cleaned and inspected in the same way as described for models 250, 265. Also see section “Analysis and measures”.

Check that the rubber induction manifold between the cylinder and distance piece is not cracked nor has other damage that can cause leakage.



Assembly

Models 322, 325

Clean the sealant from the crankcase and assemble the piston on the connecting rod.

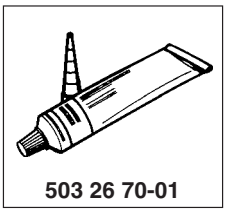
Assembly

Models 322, 325

Clean any sealant and grease from the crankcase.

Fit the piston on the connecting rod so that the arrow on the piston points towards the exhaust port.

Clean the contact surface at the base of the cylinder and apply a narrow bead of sealant no. 503 26 70-01 on the contact surface.

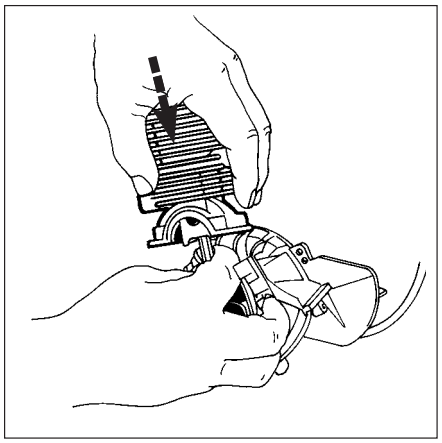


503 26 70-01

Clean any sealant and grease from the contact surface on the base of the cylinder.

Apply a narrow bead (1–1.5 mm) of sealant no. 503 26 70-01 on the contact surface.

NOTE!
Also apply sealant to the bearing seatings in the crankcase and cylinder if the old bearings are to be refitted.
No sealant is required if new bearings are fitted.



Carefully slide the cylinder over the piston and tighten the 4 bolts crosswise.

Lubricate the piston using a few drops of oil and carefully slide the cylinder over the piston.

NOTE!
Do not turn the cylinder, as the piston ring can easily be broken.

Tighten the 4 bolts crosswise.

Assemble the remaining parts in the reverse order as set out for dismantling.

Dismantling

Model 18H

Dismantle the spark plug, cylinder cover and carburettor.

Dismantling

Model 18H

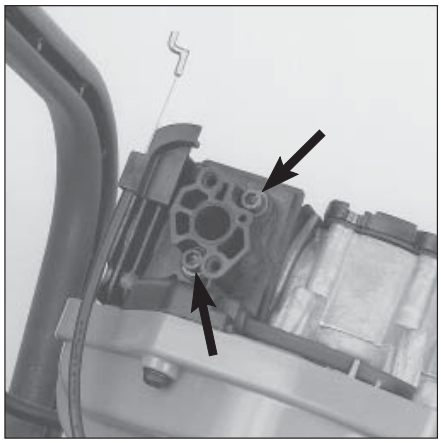
Dismantle the spark plug and cylinder cover.

Remove the air filter cover and air filter.

Loosen the two screws holding the air filter holder and carburettor.

Now lift off the carburettor.

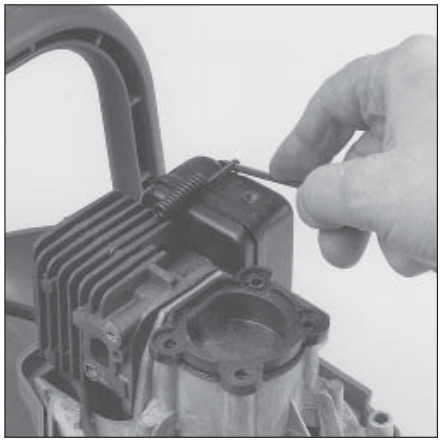
Cylinder and piston



Dismantle the carburettor's distance piece from the cylinder.

Remove both screws holding the carburettor's distance piece on the cylinder.

Carefully pry off the distance piece using a screwdriver.



Dismantle one of the springs holding the muffler.

Pry off one of the springs holding the muffler by using a small screwdriver.

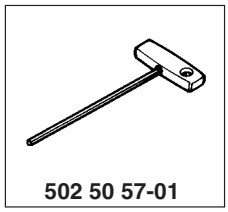
Move the muffler away, but let it remain suspended by the rear spring.

Dismantle the cylinder and connecting rod and piston.

Remove the 2 screws holding the cylinder with an allen key (3/16") no 502 50 57-01.

Lift off the cylinder with the muffler.

Remove the cover on the crankcase and lift off the piston and connecting rod.



502 50 57-01

Cleaning, inspection and assembly

Model 18H

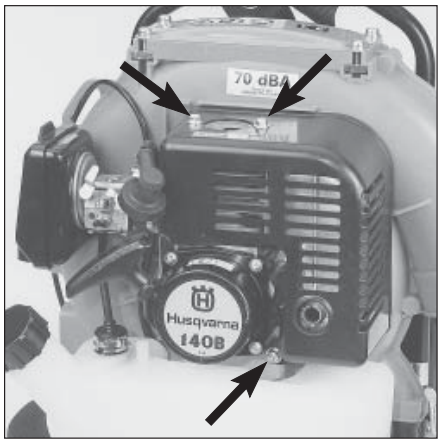
Performed in the same way as described for model Mondo.

Cleaning, inspection and assembly

Model 18H

Performed in the same way as described for model Mondo. (See Workshop Manual).

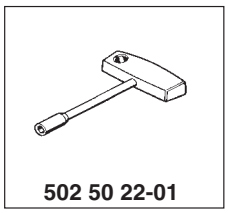
NOTE!
Hook the muffler in the rear spring before the cylinder is fitted. This facilitates assembly.



Dismantling

Models 140B, 141B

Dismantle the cylinder cover.



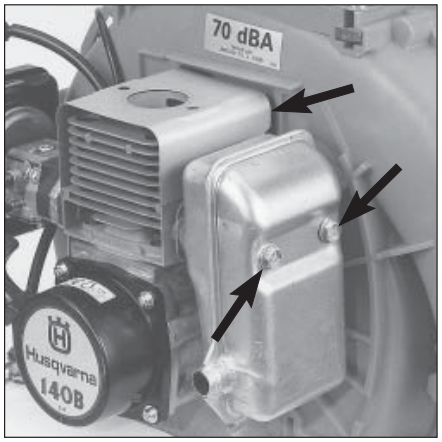
502 50 22-01

Dismantling

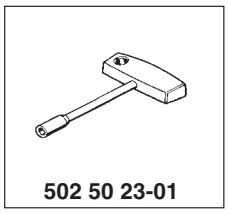
Models 140B, 141B

Remove the spark plug.

Unscrew the 3 screws and lift off the cover.



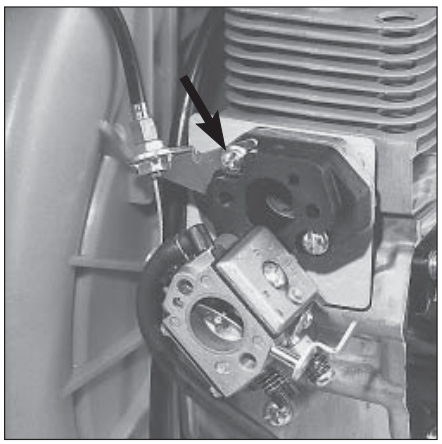
Remove the cooling air plate and dismantle the muffler.



502 50 23-01

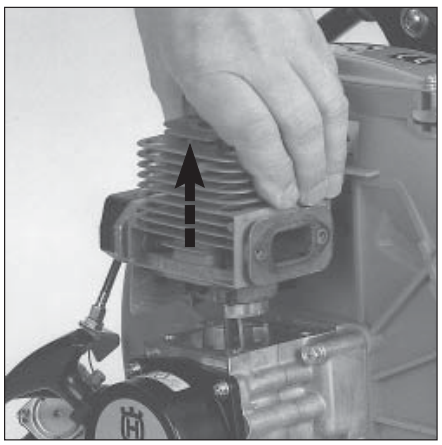
Lift off the cooling air plate above the cylinder.

Dismantle the muffler by removing the 2 screws.

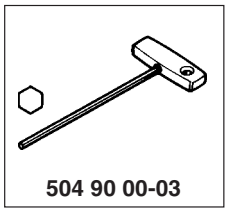


Dismantle the carburettor and throttle cable holder from the distance piece.

Dismantle the air filter, throttle cable holder and carburettor according to the instructions in the chapter



Loosen the screws and lift off the cylinder.



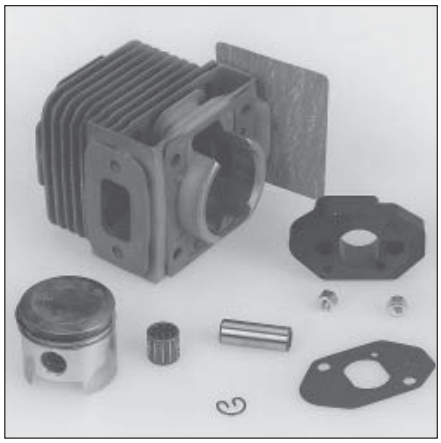
504 90 00-03

Loosen the 4 screws holding the cylinder against the crankcase.

Lift off the cylinder straight upwards so that the piston rings are not broken.

Dismantle the piston in the same way as described for models 250, 265 in the Workshop Manual.

Cylinder and piston



Cleaning, inspection

Models 140B, 141B

Clean and inspect the different cylinder and piston parts.

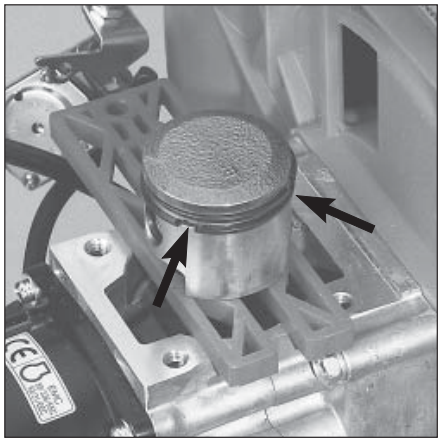
NOTE!
If the piston is to be dismantled from the connecting rod, the engine must first be dismantled from the fan so that one of gudgeon pin's circlips can be removed.
See chapter "Ignition system".

Cleaning, inspection

Models 140B, 141B

Clean and inspect the cylinder, piston, piston rings and gudgeon pin in the same way as described for models 250, 265 in the Workshop Manual. Also see section "Analysis and measures".

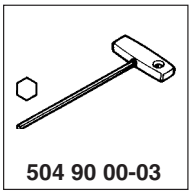
Scrape off any gasket residue from the base of the cylinder and crankcase as well as the contact surfaces for the distance piece on the carburettor side.



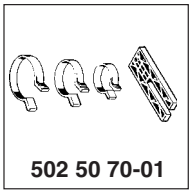
Assembly

Models 140B, 141B

Assembly takes place in the same way as described for model 122.



504 90 00-03



502 50 70-01

Assembly

Models 140B, 141B

Assembly takes place in the same way as described for model 122. (See Workshop Manual).

NOTE!
If the piston has been dismantled from the connecting rod it is assembled so that the locking pin comes towards the exhaust port. Use assembly kit no. 504 90 00-03 and tool 502 50 70-01 when the cylinder is fitted on the crankcase. Assemble remaining parts in the reverse order.

New piston. Inlet side.

New piston. Exhaust side.

Analysis and measures

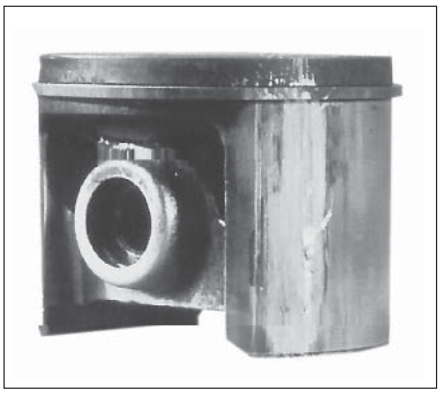
The two pictures to the left show what a new piston looks like, one on the inlet side the other on the exhaust side. Note that the machining marks from manufacturing are clearly visible.

Use these pictures as a reference when determining damage and wear.

Experience tells us that piston or cylinder failures due to manufacturing errors are extremely rare.

The reason is usually due to other factors, which is evident from the following.

Note the reasons for the breakdown, repair the damage and take the actions to prevent the same thing happening again.



Small to medium sized scores primarily in the middle of the exhaust port.

Insufficient lubrication

The piston has small to medium size score marks usually in front of the exhaust port. In extreme case heat development can be so great that material from the piston smears along the piston skirt and even in the cylinder bore.

Generally the piston ring is undamaged and moves freely in the ring groove

There can also be scores on the inlet side of the piston.

Reason:	Action:
● Incorrect carburettor setting. Recommended max. speed exceeded.	Check and change the carburettor setting.
● Incorrect oil mixture in the fuel.	Change the fuel.
● Fuel has too low octane value.	Change to a higher octane petrol.

Medium to deep scores along the entire piston skirt on the exhaust side.

The piston ring starts to stick or is completely stuck in its groove and has therefore not been able to seal against the cylinder wall, which has resulted in further, intensive temperature increases on the piston

Seizure scores along the entire piston skirt on the inlet and exhaust sides.

Heavy scoring along the entire piston skirt on the exhaust side.

Reason:	Action:
● Incorrect oil mixture in the fuel.	Change to a fuel with the correct oil mixture.
● Fuel has too low octane value.	Change to a higher octane petrol.
● Air leaks.	Replace damaged parts.
Cracked fuel pipe.	
Leaking inlet gaskets.	
Cracked manifold or inlet manifold.	
● Air leakage in engine body.	Replace leaking gaskets and shaft seals.
Leaking crankshaft seals.	
Leaking cylinder and crankcase gaskets.	
● Bad maintenance.	Clean the cooling fins and air intake.
Dirty cooling fins on the cylinder.	
Blocked air intake on the starter.	
Blocked spark arrest screen on the muffler.	Clean or replace the spark arrest screen.

For the best results we recommend Husqvarna two-stroke oil, which is specially developed for air-cooled two-stroke engines.

Mixing ratio: 1:50 (2%).

If Husqvarna two-stroke oil is not available another good quality two-stroke oil can be used.

Mixing ratio: 1:33 (3%) or 1:25 (4%).

Medium to deep scores on the exhaust side. The piston ring is stuck in the groove. Black discoloration under the piston ring due to blow-by.

Piston scoring caused by heavy carbon deposits

Too heavy carbon depositing can cause damage similar to that caused by insufficient lubrication. However, the piston skirt has a darker colour caused by the hot combustion gases that are blown past the piston.

This type of piston damage starts at the exhaust port where carbon deposits can become loose and trapped between the piston and cylinder wall.

Inlet side. The piston ring is stuck in the groove. Black discoloration under the piston ring due to blow-by.

Typical for this type of piston damage is brown or black discoloration of the piston skirt.

Cause:	Action:
● Wrong type of two-stroke oil or petrol.	Change the fuel.
● Incorrect oil mixture in the fuel.	Change to a fuel with the correct oil mixture.
● Incorrect carburettor setting.	Correct the carburettor setting

Exhaust side damaged by a broken piston ring. The piston ring parts damage the top section and cause score marks.

Piston damage caused by a too high engine speed

Typical damage associated with a too high engine speed is broken piston rings, broken circlips on the gudgeon pin, faulty bearings or that the guide pin for the piston ring has become loose.

Piston ring breakage

A too “lean” carburettor setting results in a too high speed and a high piston temperature. If the piston temperature rises above the normal working temperature the piston ring can seize in its groove, consequently it will not sit deep enough in its groove. The edges of the piston ring can then hit the top edge of the exhaust port and be smashed and also cause piston damage.

A too high engine speed can also cause rapid wear to the piston ring and play in the piston ring groove primarily in front of the exhaust port. The ring is weakened by the wear and can be caught in the port causing serious piston damage.

The guide pin for the piston ring has been pushed up through the top of piston.

Piston ring guide pin vibrated loose

A too high engine speed can cause the ends of the piston ring to hammer against the guide pin when the piston ring moves in its groove. The intensive hammering can drive out the pin through the top of the piston causing serious damage also to the cylinder.

Deep, irregular grooves caused by a loose circlip. Shown here on the piston's inlet side.

Damage caused by gudgeon pin circlips

A too high engine speed can cause the gudgeon pin circlips to vibrate. The circlips are drawn out of their groove due to the vibrations, which in turn reduces the circlips' tensioning power. The rings can then become loose and damage the piston.

Irregular grooves on the piston's inlet side caused by a broken roller retainer.

Bearing failure

A failure on the crankshaft bearing or on the connecting rod bearing is usually caused by a too high engine speed, resulting in the bearing being overloaded or over heating. This in turn can cause the bearing rollers or ball to glide instead of rotate, which can mean the roller or ball retainer breaks.

The broken debris can be trapped between the piston and cylinder wall, damaging the piston skirt.

Debris can also pass up through the cylinder's transfer channels and cause damage to the top and sides of the piston as well as the cylinder's combustion chamber.

Small score marks and a matt, grey surface on the piston's inlet side caused by fine dust particles.

Foreign objects

Everything other than clean air and pure fuel that enters the engine's inlet port causes some type of abnormal wear or damage to the cylinder and piston.

This type of increased wear shows on the piston's inlet side starting at the lower edge of the piston skirt.

The damage is caused by badly filtered air that passes through the carburettor and into the engine.

Inlet side.

Particles of dust and dirt from carbon-like deposits on the top of the piston and in the piston ring groove. The piston ring sits firmly in the groove. Piston material has been worn away.

The lower part of the piston skirt is thinner on the inlet side than on the exhaust side.

Cause:

- Faulty air filter. Small dust particles pass through the filter.
- The filter is worn out due to too much cleaning, whereby small holes have appeared in the material.
- Unsuitable filter maintenance, e.g. wrong method or wrong cleaning agent. Flock material becomes loose and holes appear.
- Air filter incorrectly fitted.
- Air filter damaged or missing.

Action:

Fit a finer grade filter.

Check the filter carefully for holes and damage after cleaning. Replace the filter if necessary.

Clean more carefully and use the right cleaning agent (e.g. tepid soapy water or Husqvarna Active Cleaning).
Change the filter.

Fit the filter correctly.

Fit a new air filter.

505 69 85-70

The piston scored and worn from the piston ring down on the inlet side.

Large, softer particles that penetrate into the engine cause damage to the piston skirt under the piston ring as the photograph shows.

Cause:

- Air filter incorrectly fitted.
- Air filter damaged or missing.

Action:

Fit the air filter correctly.

Fit a new air filter.

Extensive damage to the lower part of the piston's inlet side.

Larger, harder particles that enter the engine cause serious damage to the underside of the piston skirt.

Cause:

- Air filter damaged or missing.
- Parts from the carburettor or intake system have become loose and entered the engine.

Action:

Fit a new air filter.

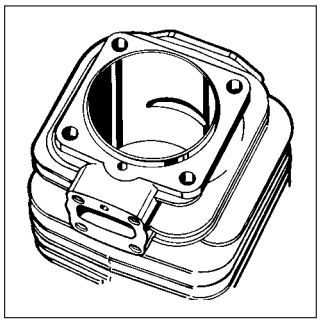
Regular service and inspection.

Service tips

Defect:	Action:
Broken cooling fins, damaged threads or sheared bolts by the exhaust port.	In bad situations – replace the cylinder. Repair the threads using Heli-Coil.
Seizure marks in the cylinder bore (especially by the exhaust port).	Polish the damaged area using a fine grade emery cloth so that the coating of aluminium disappears. With deep seizure score marks the piston and cylinder should be replaced.
Surface coating in the cylinder bore worn out (primarily at the top of the cylinder).	Replace the cylinder and piston.
The piston shows signs of seizure score marks.	Carefully polish the damaged area using a fine file or fine grade emery cloth. Before the piston is refitted the cylinder should be polished as above. With deep score marks the piston and cylinder should be replaced.
Piston ring burnt in its groove.	Carefully loosen the piston rings and clean the groove well before refitting. Carbon deposits in the groove impair the important heat transfer between the piston and cylinder. Check the wear on the piston ring by placing it in the lower part of the cylinder.

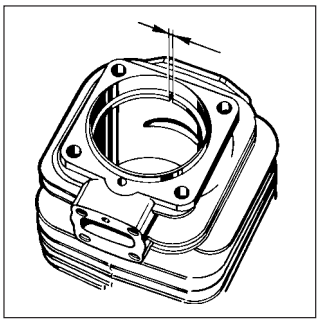
Wear tolerances

Cylinder bore



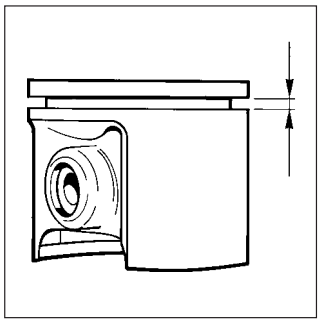
When the surface coating is worn and aluminium appears.

Piston ring gap



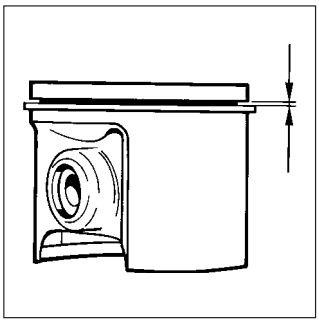
Max. 1.0 mm with the piston ring inserted in the lower part of the cylinder.

Piston ring groove



Max. height on a new piston ring + 0.10 mm.

Piston ring play



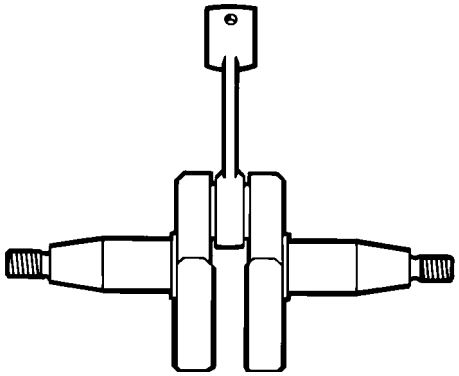
Max. 0.15 mm. Clean the groove carefully before measuring.

Technical data

Model	Displacement cm^3	Cylinder diameter mm	Stroke length mm
Mondo	24.0	34.5	26.4
122L	22.5	32.0	28.0
Mondo Max	24.0	34.5	26.4
225L/LD	25.4	34.0	28.0
232L	30.8	35.0	32.0
Mondo Mega	24.0	34.5	26.4
225R/RD	25.4	34.0	28.0
232R	30.8	35.0	32.0
322	21.7	32.0	27.0
325	24.5	34.0	27.0
235R	36.3	38.0	32.0
240R	40.2	40.0	32.0
245R	44.3	42.0	32.0
250R	48.7	44.0	32.0
245RX	44.3	42.0	32.0
250RX	48.7	44.0	32.0
252RX	50.8	45.0	32.0
265RX	65.1	48.0	36.0
240RBD	36.3	38.0	32.0
235P	36.3	38.0	32.0
250PS	48.7	44.0	32.0
225E	25.4	34.0	28.0
18H	18.0	29.5	26.4
225H60/75	25.4	34.0	28.0
140B, 141B	40.2	40.0	32.0
132HBV	31.7	36.9	30.2
225BV/225HBV	25.4	34.0	28.0

Crankshaft and crankcase

7.

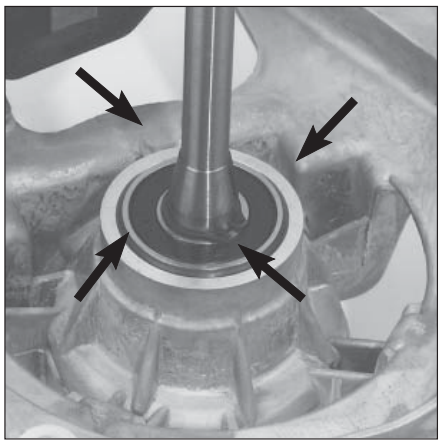


Contents

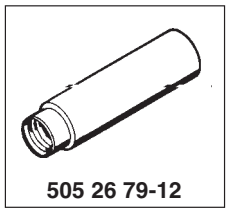
Replacing the sealing ring ignition side

Model 250PS

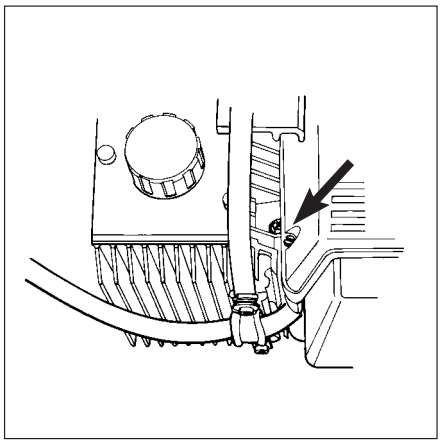
Dismantle the fuel tank.



Dismantle the cylinder cover, starter and flywheel.



505 26 79-12

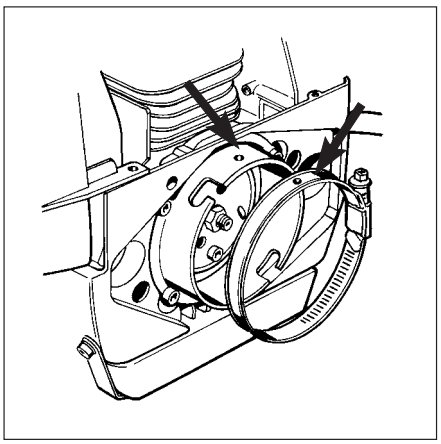


Replacing the sealing ring clutch side

Model 250PS

Dismantle the hydraulic oil tank, the adapter between the engine body and the hydraulic oil tank and the clutch.

Now replace the sealing ring in the same way as described for model 250 (see the Workshop Manual).



Assembling the crankcase

Model 250PS

See model 250 in the Workshop Manual.

Screw the hydraulic oil tank adapter in the engine body.

Place the hose clip on the adapter.

Replacing the sealing ring ignition side

Model 250PS

First dismantle the fuel tank, which is placed outside of the starter.

Remove the 4 screws (two on each side) holding the tank on the crankcase.

Let the tank remain suspended by the fuel hose.

Dismantle the cylinder cover.

Remove the screws and lift off the starter.

Dismantle the flywheel by using the push bar no 505 26 79-12.

The sealing ring is now accessible for replacement in the same way as described for model 250 (see the Workshop Manual).

Replacing the sealing ring clutch side

Model 250PS

Dismantle the hydraulic oil tank from the engine body. See chapter “Centrifugal clutch” in the Workshop Manual.

Remove the clutch.

See chapter “Centrifugal clutch” in the Workshop Manual.

Dismantle the adapter between the engine body and the hydraulic oil tank by removing the 4 screws.

Now replace the sealing ring in the same way as described for model 250 (see the Workshop Manual).

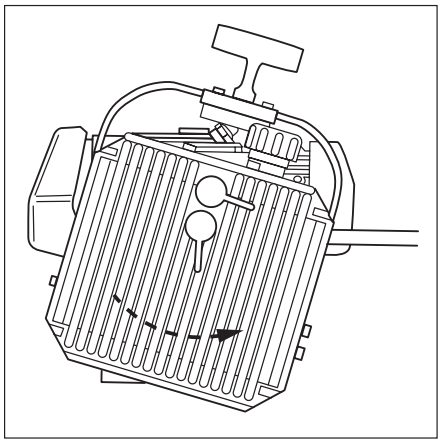
Assembling the crankcase

Model 250PS

Follow the same assembly procedure as described for model 250 in the Workshop Manual.

Screw the hydraulic oil tank adapter in the engine body.

Place the hose clip on the adapter so the little tab enters the hole in the adapter. Only tighten the hose clip so that it cannot be turned. This facilitates the assembly of the hydraulic oil tank.

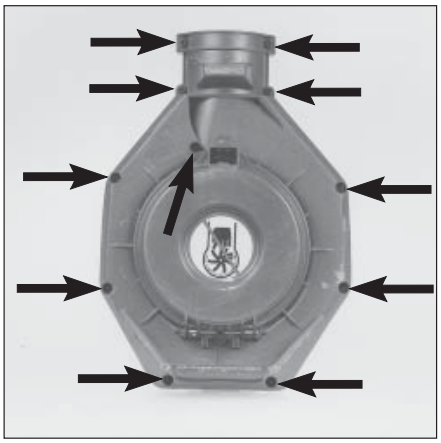


Slide the hydraulic oil tank in the adapter as far as it will go and then turn it anti-clockwise. (Bayonet fitting).

Tighten the hose clip.

Slide the hydraulic oil tank in the adapter as far as it will go and then turn it anti-clockwise. (Bayonet fitting).

Tighten the hose clip.



Dismantling/assembling the crankshaft

Model 225HBV

Dismantle the lower half of the blower unit.

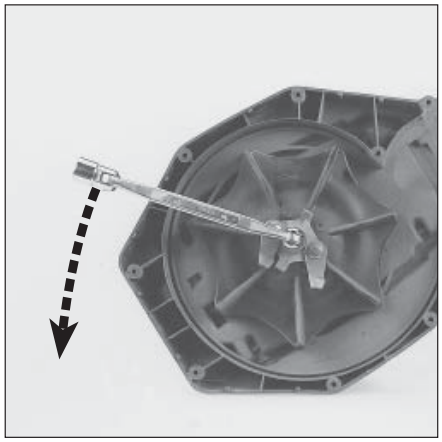
Remove the steel rail.

Dismantling/assembling the crankshaft

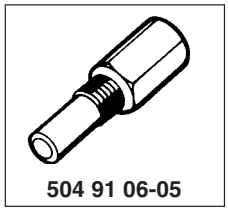
Model 225HBV

Remove all screws (11) holding the lower half of the blower unit and lift off this.

Remove the steel rail.



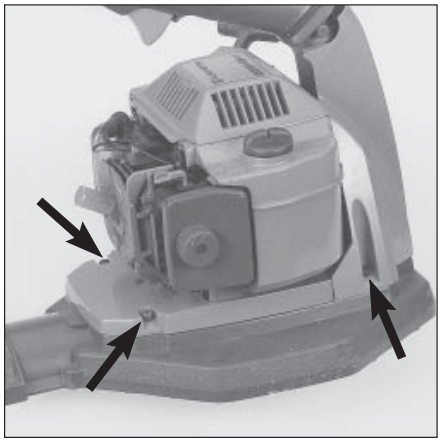
Dismantle the blades and impeller.



504 91 06-05

Replace the spark plug with piston stop (no. 504 91 06-05).

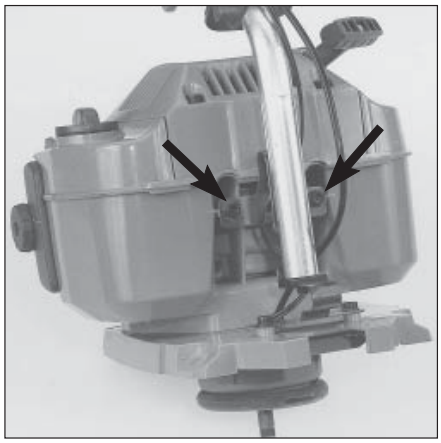
Unscrew the centre nut and lift off the blades and impeller.



Dismantle the upper half of the blower unit and lift off the cover over the handle.

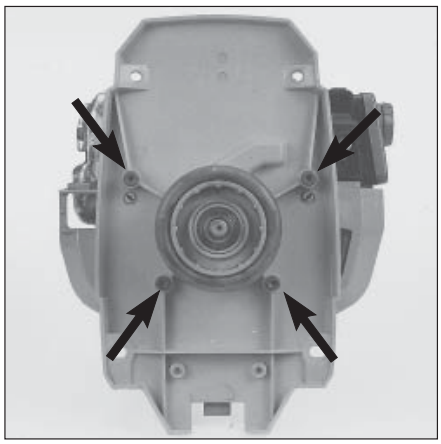
Remove the 4 screws (2 on each side) holding the upper half of the blower unit.

Lift off the cover over the handle.



Remove the 2 screws holding the handle on the crankcase.

Remove the 2 screws holding the handle on the crankcase.

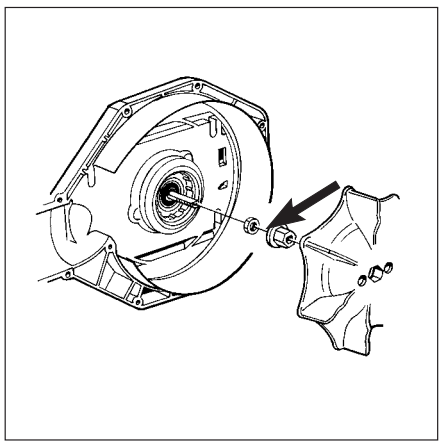


Separate the engine body and handle part and dismantle all components around the crankcase.

Remove the 4 screws.

Separate the handle part and engine body.

Dismantle all components around the crankcase. See respective chapters in the Workshop Manual and Supplement,

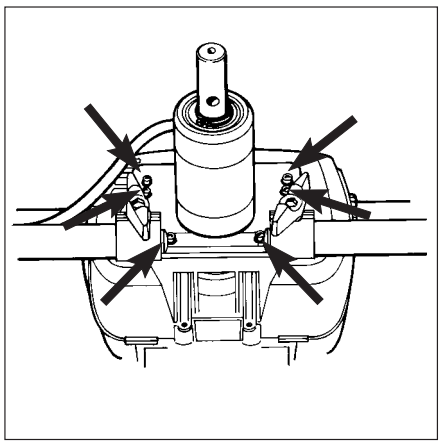


Dismantle and assemble the crankcase in the same way as described for models 225/232/235 in the Workshop Manual.

Dismantle and assemble the crankcase in the same way as described for models 225/232/235 in the Workshop Manual.

NOTE!
Check when assembling that the throttle cable and short-circuit cable are not pinched.

Do not forget the spacer nut that should lie closest to the crankcase!



Dismantling/assembling the crankshaft

Models 225AI15, 225AI25

Dismantle the gearbox from the engine body.

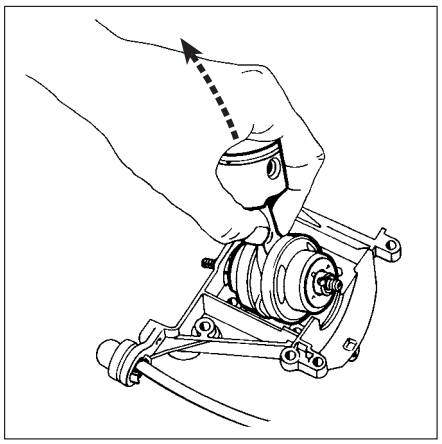
Dismantle and assemble the crankcase in the same way as described for models 225/232/235 in the Workshop Manual.

Dismantling/assembling the crankshaft

Models 225AI15, 225AI25

Remove the 6 screws holding the gearbox on the engine body and lift off the gearbox.

Dismantle all components around the crankcase and dismantle and assemble the crankshaft in the same way as described for models 225/232/235 in the Workshop Manual.



Dismantling, the crankshaft

Models 322, 325

Dismantle all components so that only the crankcase and crankshaft remain.

Now lift the crankshaft out of the crankcase.

Dismantling, the crankshaft

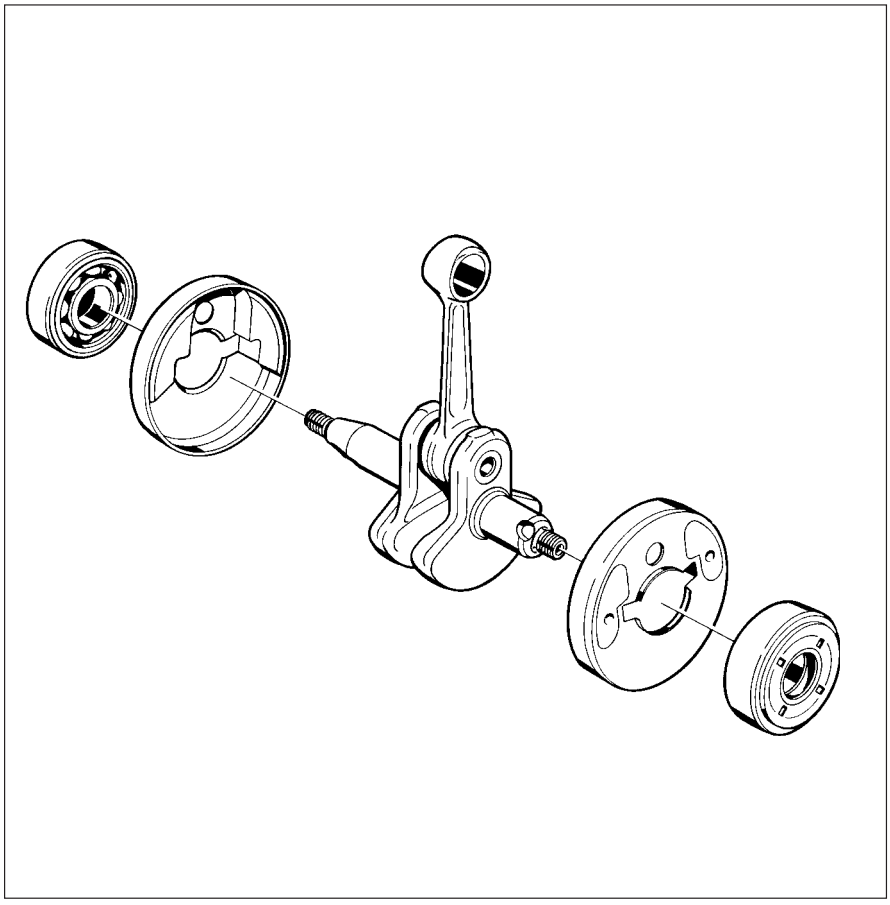
Models 322, 325

Dismantle all components so that only the crankcase and crankshaft remain.

See respective sections for detailed information if necessary.

Now lift the crankshaft out of the crankcase.

Remove the bearing (sliding fit) and the spacer washers.



Assembling, the crankshaft

Models 322, 325

Check the crankshaft as set out in the section “Checking the crankshaft” in the Workshop Manual.

Clean the contact surfaces on the crankcase.

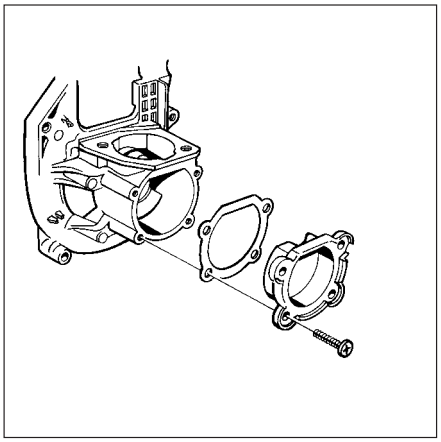
Fit new bearings on the crankshaft with the open side facing in towards the crank disc.

Lubricate the big-end bearing with a few drops of engine oil and position the crankshaft in the crankcase.

Assemble all the remaining parts in the reverse order as set out for dismantling.

See respective sections if necessary.

Leakage test the crankcase according to the instructions in the section “Leakage testing the crankcase”.



Dismantling the crankcase

Model 18H

Dismantle all components so that only the crankcase and crankshaft remain.

Remove the cover over the crankcase.

Dismantling the crankcase

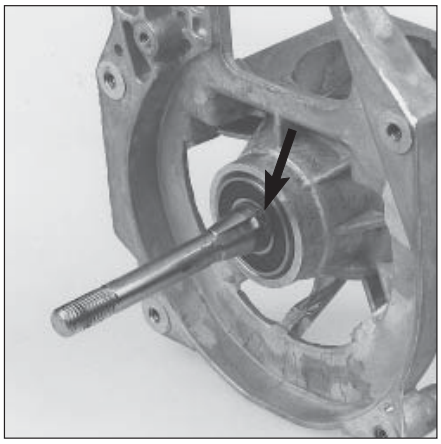
Model 18H

Dismantle all components so that only the crankcase and crankshaft remain.

See respective chapters if necessary.

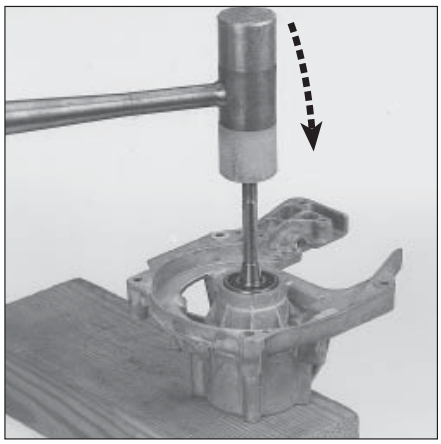
NOTE!
Mark which end of the crankshaft should face the piston.

Remove the cover over the crankcase. Carefully pry up with a screwdriver. Sealant has been used on both sides of the gasket.



Remove the circlip.

Remove the circlip on the spindle using circlip pliers.

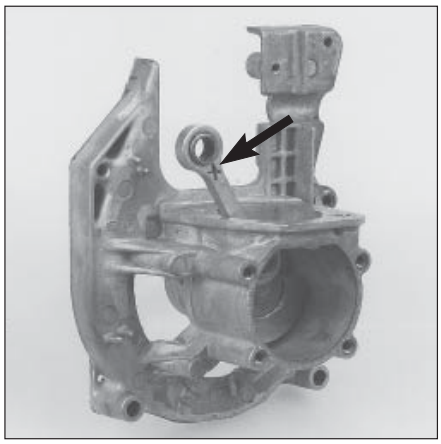


Dismantle the crankshaft from the crankcase.

Dismantle the bearing and sealing rings.

Place a wooden block under the crankcase and press out the crankshaft by using a plastic hammer.

NOTE!
Turn the crankshaft so that the crank disc does not hit the crankcase.
Dismantle the bearings and sealing rings in the same way as described for model 32 in the Workshop Manual.



Assembling the crankcase

Model 18H

Fit a new sealing ring and circlip in the crankcase.

Fit the crankshaft's bearing.

Fit the crankshaft in the crankcase and the circlip on the crankshaft.

Fit the connecting rod on the crankshaft journal.

Assembling the crankcase

Model 18H

Fit a new sealing ring in the crankcase.

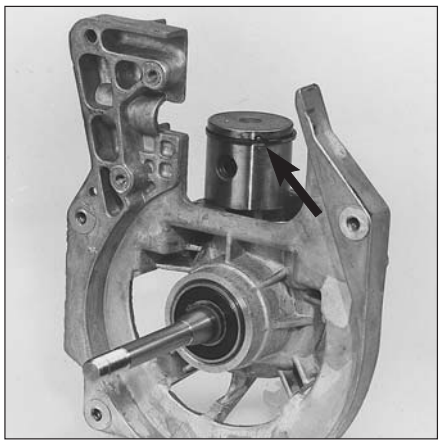
Fit the circlip and check that it lies correctly in its groove.

Fit the crankshaft's bearing.

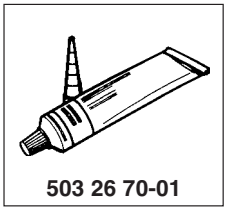
Fit the crankshaft in the crankcase and the circlip on the crankshaft.

Fit the connecting rod on the crankshaft journal. Turn it so that the marked end faces towards the piston.

Assembly takes place in the same way as described for model 32 in the Workshop Manual.



Fit the piston on the connecting rod and the remaining parts in the reverse order as set out for dismantling.

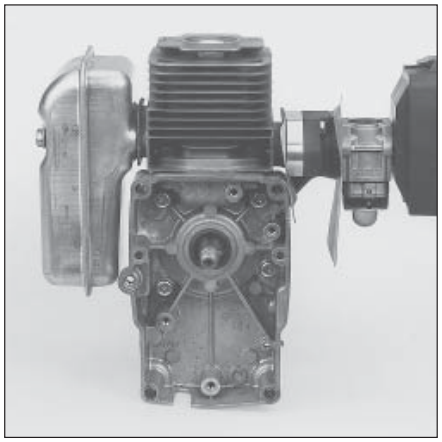


503 26 70-01

Fit the piston on the connecting rod so that the piston ring's locking pin comes opposite the inlet port on the cylinder.

Assemble remaining parts in the reverse order as set out for dismantling.

NOTE!
Use sealant on both sides of the gasket on the cover over the crankcase.



Dismantling the crankcase

Models 140B, 141B

Dismantle all components so that only the crankcase and crankshaft remain.

Dismantling the crankcase

Models 140B, 141B

Dismantle all components so that only the crankcase and crankshaft remain.

See respective chapters if necessary.

TIP!

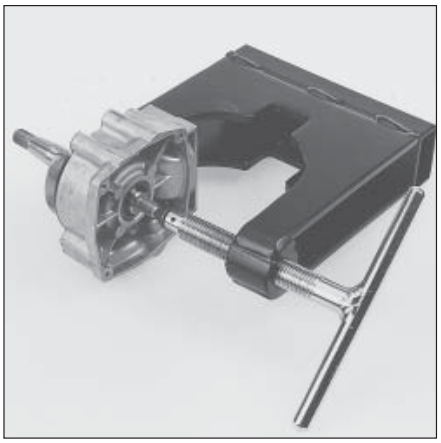
Note which way, e.g. the muffler is fitted to avoid uncertainty when assembling.

Remove the key in the crankshaft and the 4 crankcase screws.

Lift off the fan side crankcase half.

Remove the key in the crankshaft and the four screws holding together the crankcase halves.

Lift off the fan side crankcase half.

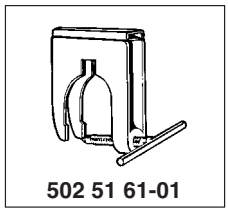


Dismantle the crankshaft.

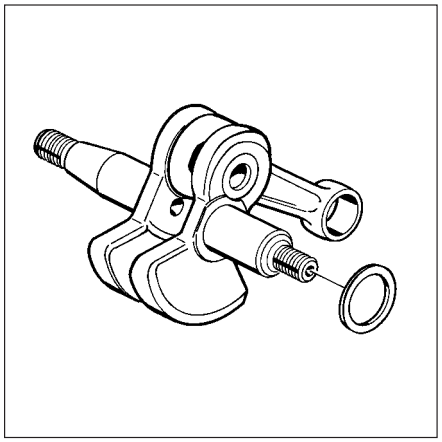
Dismantle the bearing and sealing rings.

Press out the crankshaft from the starter side's crankcase half using puller no. 502 51 61-01.

Dismantle the bearing and sealing rings after the crankcase half has been heated to approx. 150°C using a hot air gun.



502 51 61-01



Assembling the crankcase

Models 140B, 141B

Heat the crankcase halves and position the bearing.

Fit the sealing rings.

Fit the crankshaft in the starter side's crankcase half.

Assembling the crankcase

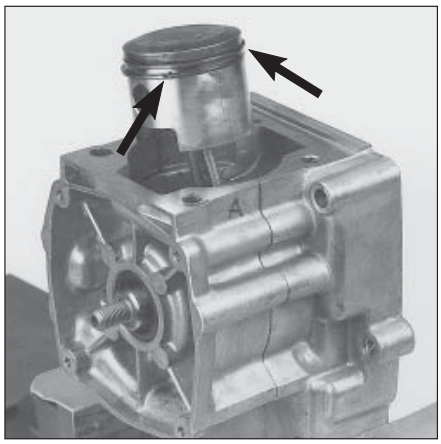
Models 140B, 141B

Heat the crankcase half to approx. 150°C using a hot air gun and position the bearing.

Fit the sealing rings with the metal case facing outwards.

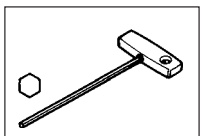
Fit the crankshaft in the starter side's crankcase half before the bearing has time to cool.

NOTE!
Do not forget the spacer washer between the crankshaft and the bearing.

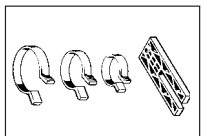


Position the fan side's crankcase half and tighten the 4 crankcase screws.

Fit the piston with the locking pin facing the exhaust port on the cylinder.



504 90 00-03



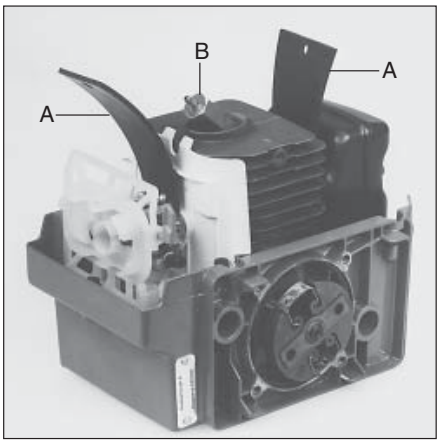
502 50 70-01

Place a new crankcase gasket in position. Secure it with a little grease so it does not slide out of position.

Position the fan side's crankcase half and tighten the 4 screws.

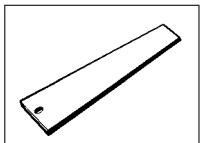
Fit the piston so that the locking pin faces the exhaust side of the cylinder.

Assemble remaining parts in the reverse order as set out for dismantling.

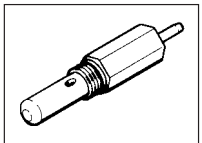


Leakage testing the crankcase

Fit the two sealing plates (A) and the pressure test nipple (B).



502 54 11-01



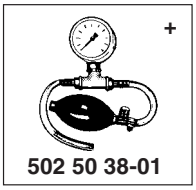
503 84 40-01

Leakage testing the crankcase

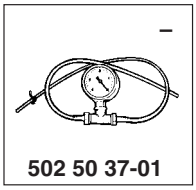
Fit one sealing plate (A) 502 54 11-01 between the carburettor and the induction manifold and a plate between the cylinder and the muffler.

Fit the pressure test nipple (B) 503 84 40-01 in the spark plug hole.

Connect the pressure gauge or vacuum gauge and check for leakage.



502 50 38-01



502 50 37-01

Connect the pressure gauge 502 50 38-01 to the nipple and pump a pressure of 50 kPa (0.5 kp/cm^2) in the crankcase.

Max. permitted leakage: 20 kPa (0.2 kp/cm^2) per 30 seconds.

Connect the vacuum gauge 502 50 37-01 to the nipple and lower the pressure in the crankcase to 50 kPa (0.5 kp/cm^2).

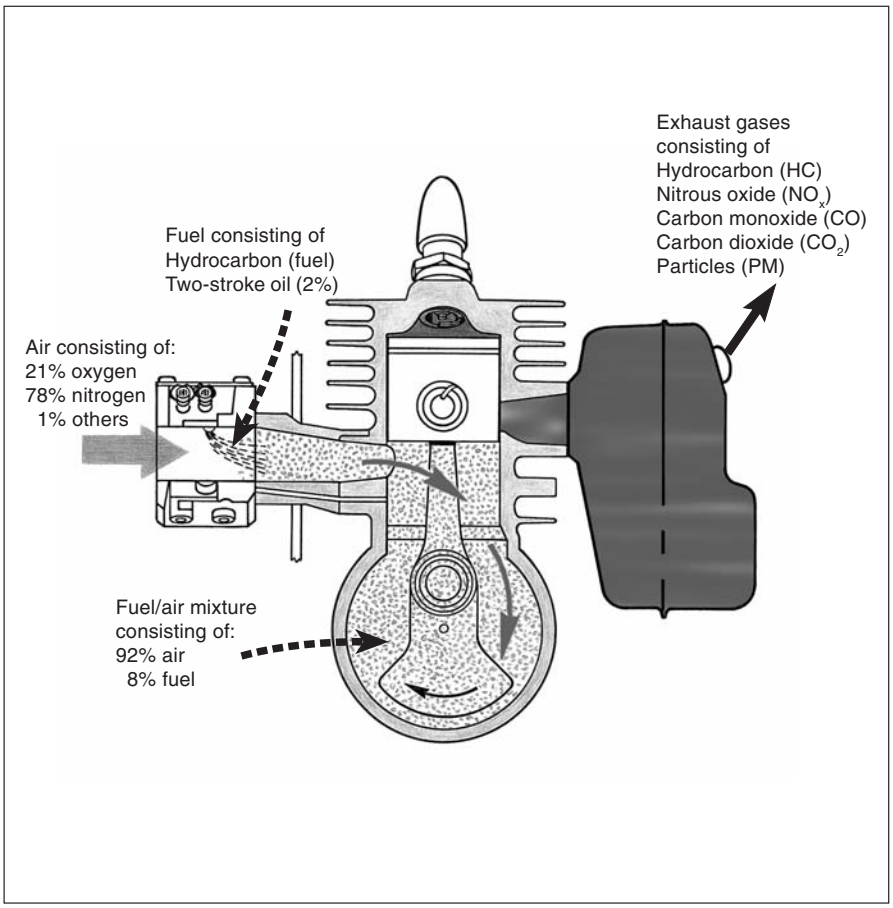
Max. permitted leakage:

20 kPa (0.2 kp/cm^2) per 30 seconds.

NOTE!
When pressurising the crankcase, leakage can occur on the induction manifold on those models that have a rubber induction manifold even if the limit of 0.5 kp/cm^2 is not exceeded. Let the sealing compound (Silicone) cure before the crankcase is pressurised or depressurised.

Any leakage can be difficult to localise if the crankcase is depressurised.

When leakage has been established with a vacuum, you can apply a slight overpressure (0.1–0.3 kp/cm^2) and at the same time apply a layer of thin oil on the joints and the sealing ring's contact surfaces on the crankcase to make leak detection easier. Bubbles clearly mark the position of the leakage.



Husqvarna E-TECH

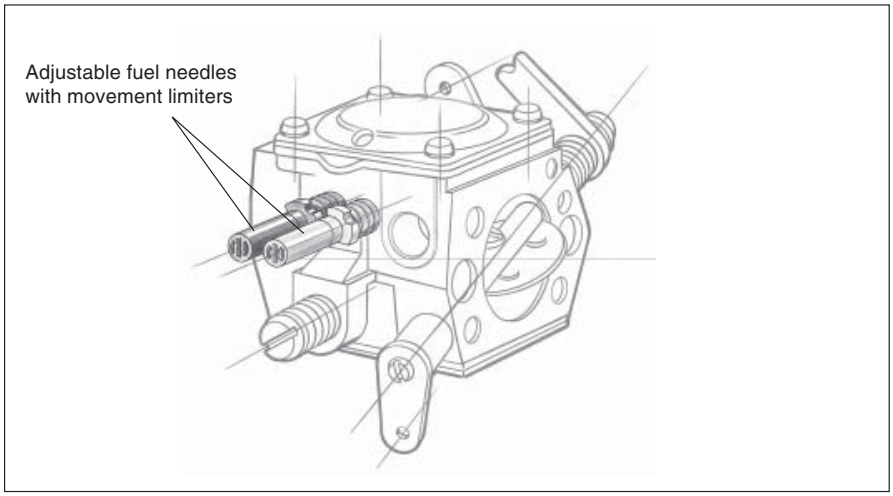
In 1996 Husqvarna presented a new, improved two-stroke engine as a part of the company's efforts to produce engines that emit smaller amounts of hazardous substances.

The new engine was given the designation E-TECH and was first used in a new brush cutter model.

More stringent environment regulations in the USA, which primarily involve a lowering of the hydrocarbons, nitrous oxides and carbon monoxide content, brought about the new engine design.

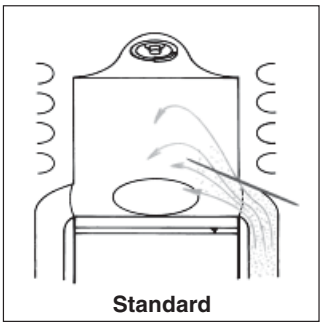
Environment degradation is reduced through decreasing the amount of unburnt gases (flushing losses) in the exhaust fumes.

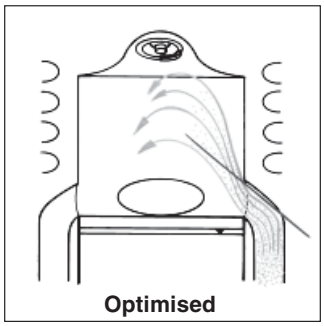
Comparison between a E-TECH engine model and the three year older engine design model 125 shows that the CO content has been halved and the hydrocarbons and nitrous oxide contents have been reduced by close to 70%. In addition a powerful increase in output is gained.



What makes the E-TECH engine design unique is not a specific design solution but rather several solutions interacting to reduce flushing losses in the engine.

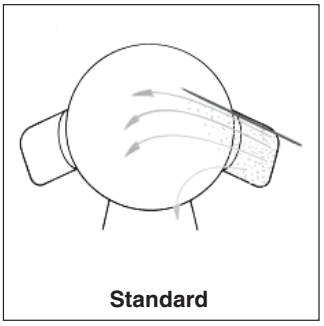
The carburettor's job is to mix the air and fuel in the right proportions to give a combustible mixture, irrespective of the speed and work load. The carburettor's adjustable needles have been fitted with movement limiters to prevent the engine from being run with a too "rich" fuel/air mixture. (Also see chapter "Fuel system").

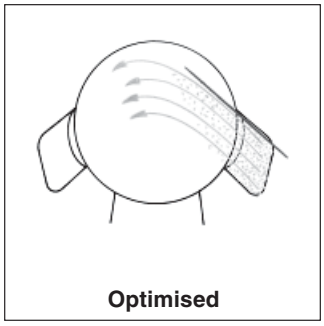


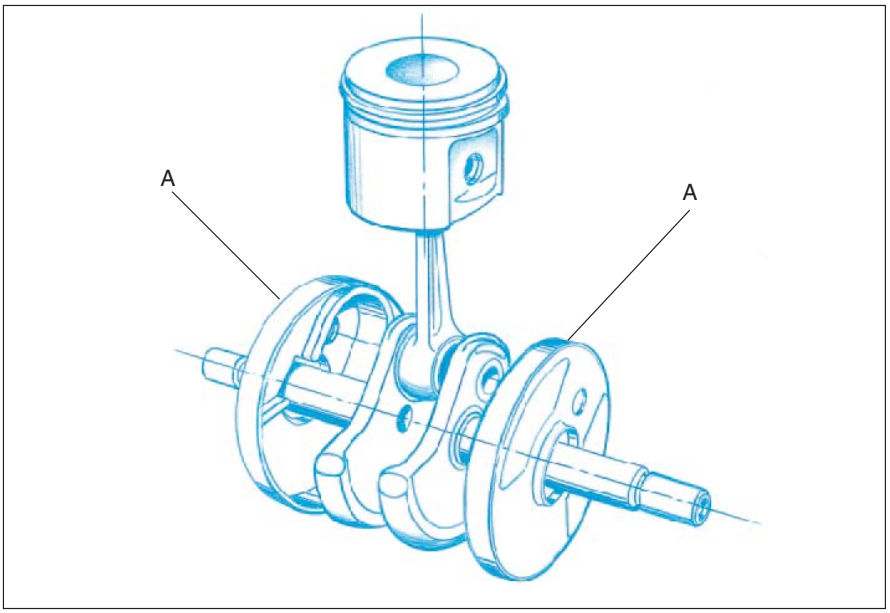


The design of the flushing channels and flushing ports have a large effect on the flushing losses.

By finely adjusting the channels' cross section area and angle to the rear edge of the cylinder as well as modification of the channel's last upward section, flushing can be made more efficient (preventing a part of the oxidising gases from passing directly out in the exhaust channel).



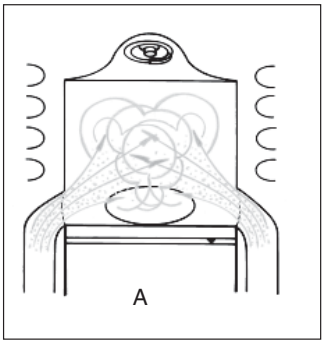


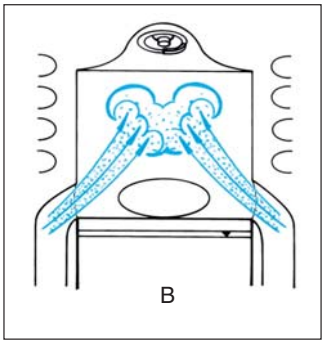


By reducing the area of the muffler's discharge opening the counter pressure is increased and a smaller amount of unburnt exhaust fumes come out of the muffler. Oxidising gases that flow up from the crankcase meet greater resistance from the exhaust fumes and a small amount reach the combustion chamber. A disadvantage of the increased counter pressure is the engine output decreases.

The crankcase pressure has been increased in the E-TECH engine so that a larger amount of oxidising gases can be pumped through the flushing channels to compensate for the output loss.

This has been achieved by filling the crankshaft's crank discs (A) to reduce the "dead" non active volume in the crankcase.



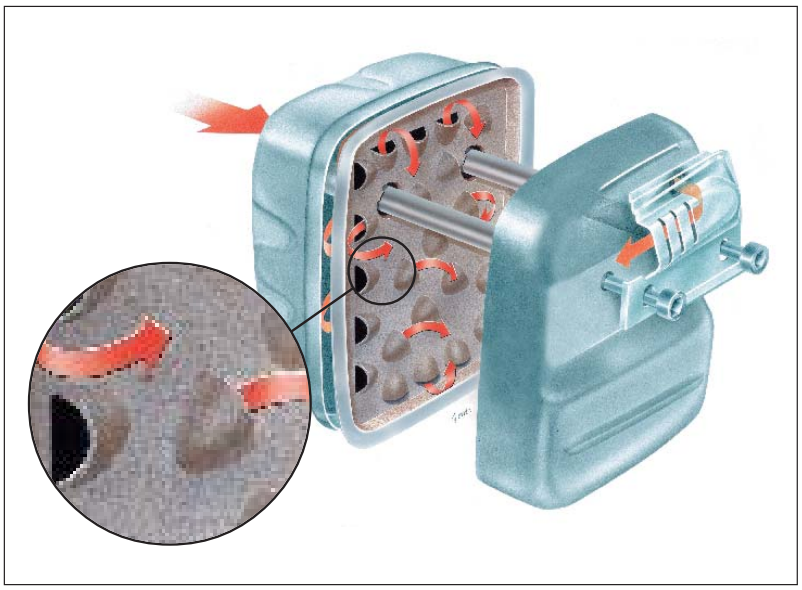


The consequence of a higher flush pressure is a more concentrated jet of oxidising gas up in the combustion chamber compared with a lower flush pressure.

The result is more efficient combustion and less flushing losses.

A = Low crankcase pressure

B = High crankcase pressure



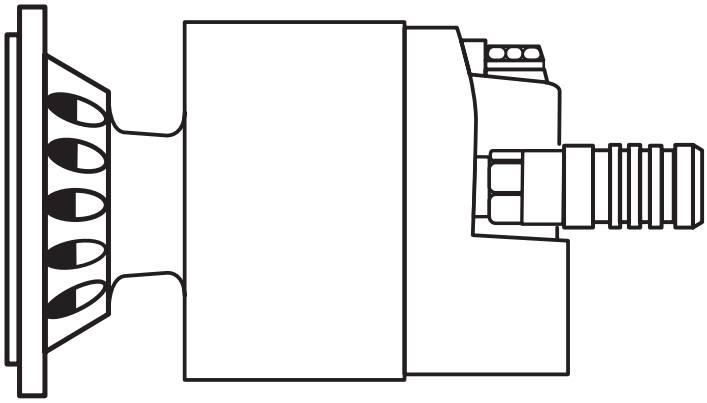
The remaining flushing losses and other exhaust residue are converted in the E-TECH engine's catalytic converter muffler.

The metallic lightweight catalytic converter is designed around a special baffle plate of metal in the muffler.

The plate is covered with a catalytic agent and fitted with specific thermodynamic conditional channels and guides to give the best gas flow over the catalytic agent.

Hydraulic unit

8.



Contents

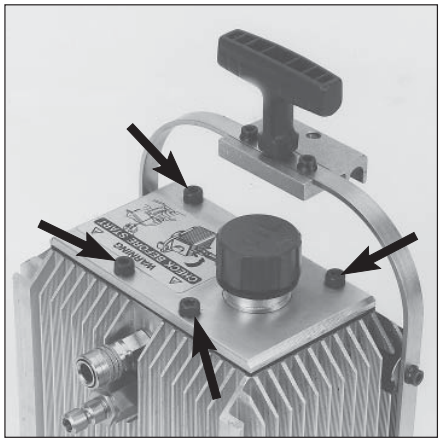
Hydraulics is an ideal solution to get a long and flexible power transmission between the engine and the cutting equipment.

This has been utilised on model 235P, which is used for, e.g. tree pruning and on the pruning saw model 250PS. The power from the combustion engine is transferred to the hydraulic pump via a centrifugal clutch and from the pump to the cutting equipment via a flexible hydraulic hose.

NOTE!

The hydraulic pressure is high, and demands immense care if leakage around connections has occurred. Replace the gaskets and tighten the connections immediately once a leakage has been discovered.

Cleanliness is extremely important with all work on the hydraulic system.



Hydraulic pump

Dismantling, assembling
Model 250PS

Dismantle the hydraulic oil tank from the engine unit and then the clutch drum.

Remove the cover on the tank and drain off the hydraulic oil.

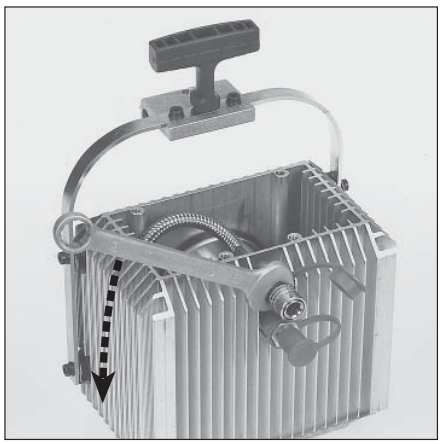
Hydraulic pump

Dismantling, assembling
Model 250PS

Dismantle the hydraulic oil tank from the engine unit and then the clutch drum as described in the chapter “Centrifugal clutch”.

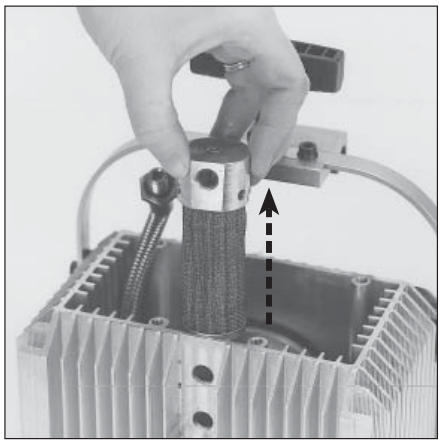
Remove the 4 screws and lift off the cover on the tank.

Drain off all the hydraulic oil.



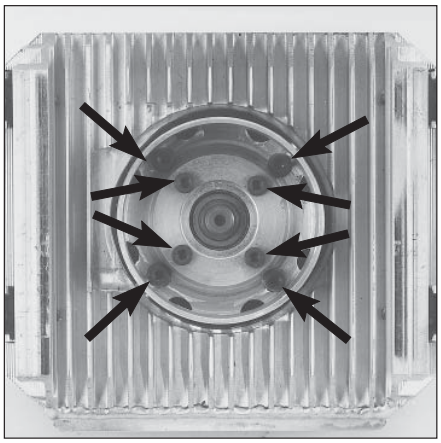
Unscrew the upper quick coupling and press the hydraulic oil hose in the tank.

Unscrew the upper quick coupling and press the hydraulic oil hose in the tank.



Dismantle the diffuser.

Remove the lower quick coupling and lift out the diffuser from the tank.



Remove the engine adapter.

Remove all 8 screws holding the engine adapter on the hydraulic pump.

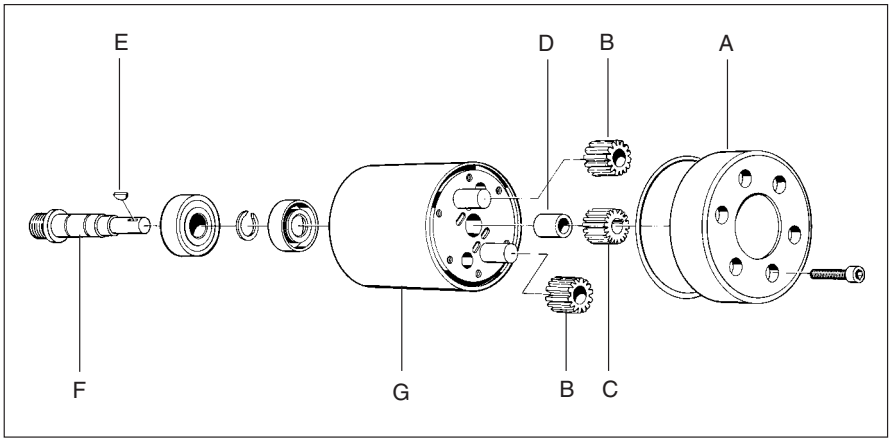
Start with the 4 inner screws.

Note how the pins on the adapter are placed (half past 1 resp. half past 7).

Lift up the hydraulic pump together with the cover disc from the tank.

Lift up the hydraulic pump together with the cover disc from the tank.

Check that the rubber collar is undamaged and keeps tight. Otherwise fit a new collar.



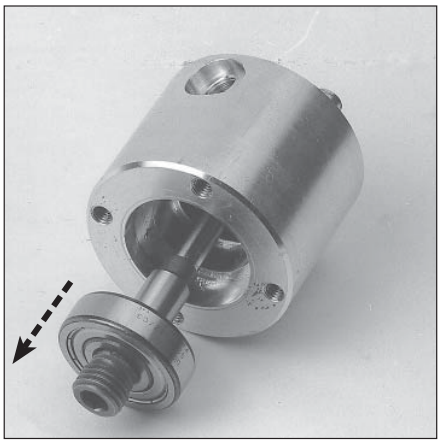
Unscrew the hose from the hydraulic pump and remove the 6 screws holding the cover (A).

Remove the cover and both impellers (B).

NOTE!

Note on which axle and in what pump chamber in the cover that resp. impellers are fitted so that these are given the same placement in subsequent assembly.

Remove the gear (C) and bearing sleeve (D).



Remove the axle from the pump housing.

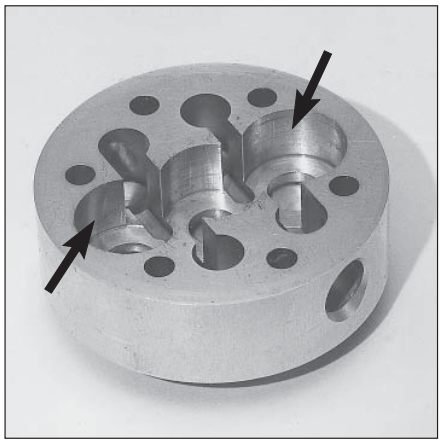
Replace damaged parts and assemble in the reverse order as set out for dismantling.

Remove the key (E) from the pump axle (F).

Heat the pump housing (G) using a hot air gun to approx. 120°C. Now press out the axle with the bearing from the pump housing.

Use a suitable punch and hammer to knock the sealing ring out of the pump housing.

Replace damaged parts and assemble in the reverse order as set out for dismantling.



Check that the pump chambers are free from damage.

If this is not the case, replace both impellers and cover.

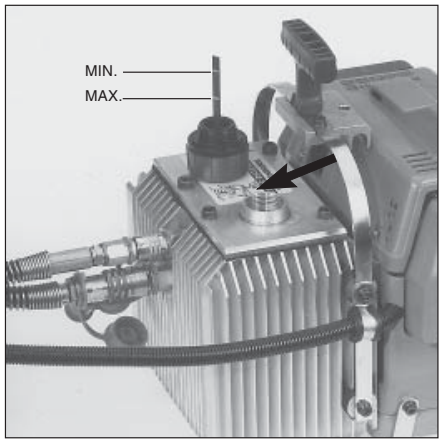
Assemble all remaining parts in the reverse order as set out for dismantling.

Check that the pump chambers in the cover are not scratched. If this is not the case, the cover and both impellers must be replaced.

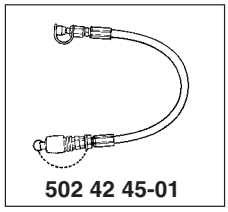
The impellers must not show signs of cracking or other damage. Replace both impellers at the same time if necessary.

Assemble all remaining parts in the reverse order as set out for dismantling.

Make sure all hose connections are tight.



Fill with hydraulic oil to the correct level.



502 42 45-01

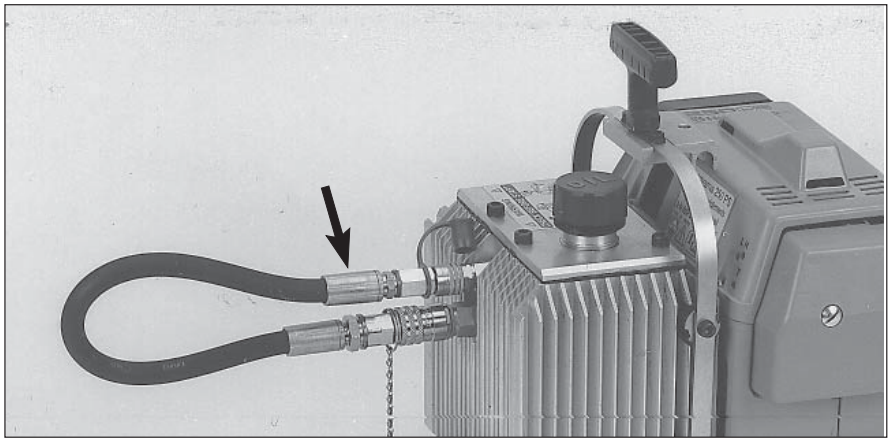
Fill with hydraulic oil to the correct level.

Use oil of the quality ISO VG32 at air temperatures under +20°C and ISO VG45 at air temperatures above +20°C.

NOTE!

The oil's flash point should exceed +160°C. The oil must not be electrically conductive.

Check the oil level when the machine has been run for 2-3 min and fill with more oil so that the level lies between min. and max. on the oil dipstick if necessary.



Test running

Fit the test running hose no. 502 42 45-01 on the upper and lower quick couplings.

Make sure the couplings make correctly.

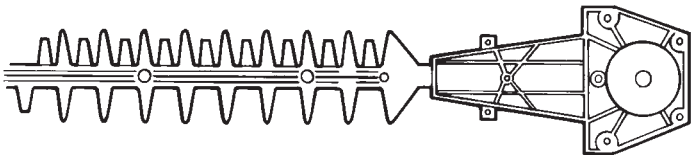
Start the engine and test the pruning saw.

WARNING!

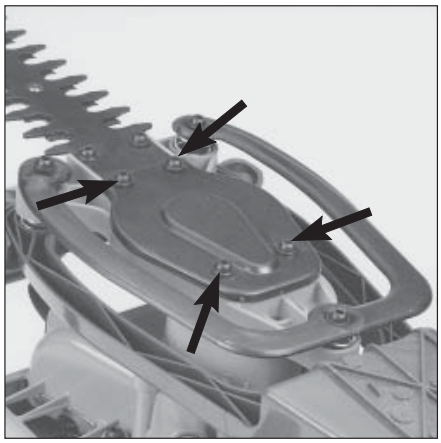
Never start the pruning saw without the hydraulic oil tank and hoses fitted. If the tank is not fitted the couplings can become loose and cause personal injury.

Attachments

9.



Contents

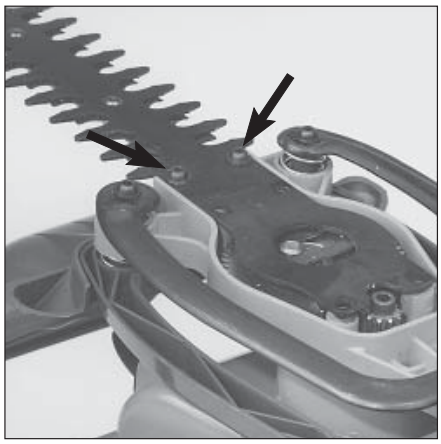


Hedge trimmer
Model 18H

Remove the cover over the gearbox.

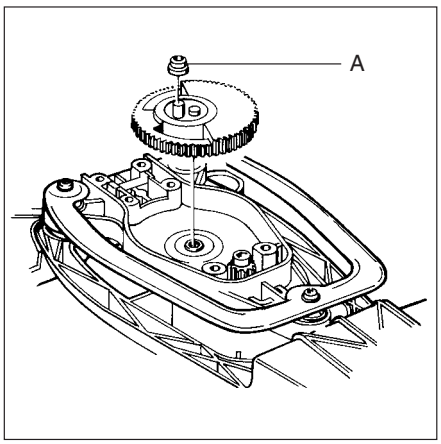
Hedge trimmer
Model 18H

Remove the 4 screws and lift off the cover over the gearbox.



Remove the cutting equipment.

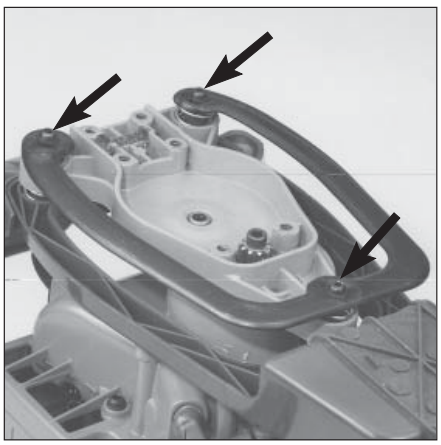
Unscrew the 2 screws and lift off the cutting equipment.



Lift off the gear.

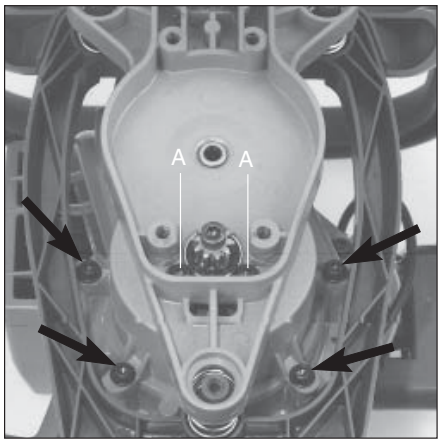
Lift off the gear.

NOTE!
Do not lose the small bearing sleeve (A).



Dismantle the steel loop and springs.

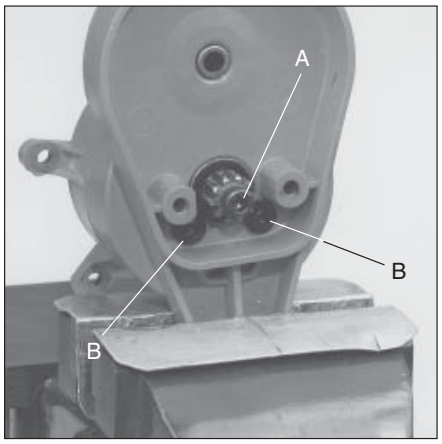
Remove the 3 screws and lift off the steel loop together with the springs.



Dismantle the clutch housing.

Unscrew the 4 screws and lift off the gearbox.

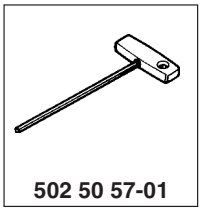
NOTE!
The screws (A) do not need to be removed.



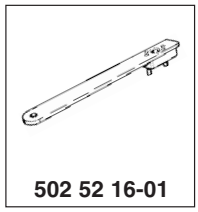
Dismantle the clutch drum and the screws (B).

Dismantle the clutch drum. Loosen (anti-clockwise) the axle (A) using the allen key 502 50 57-01 (3/16") and possibly tool no. 502 52 16-01.

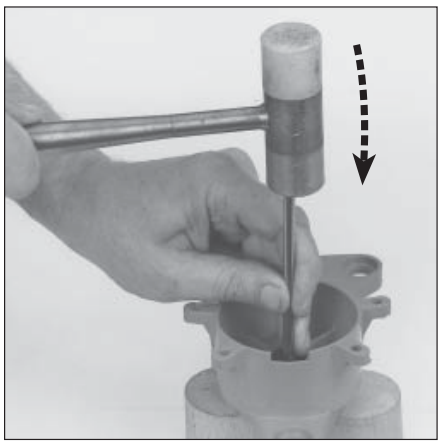
Remove the screws (B).



502 50 57-01



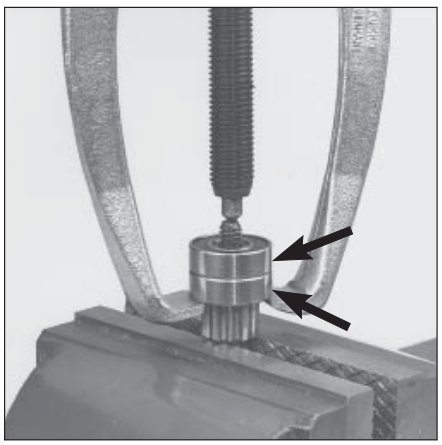
502 52 16-01



Press out the gear with the bearing from the gearbox.

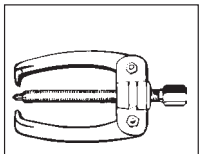
Press out the gear with the bearing from the gearbox.

Use a suitable punch and hammer.



Pull the bearing off of the clutch axle.

Pull off both bearings at the same time from the clutch axle by using a small puller, e.g. no. 504 90 90-01.



504 90 90-01

Assembly

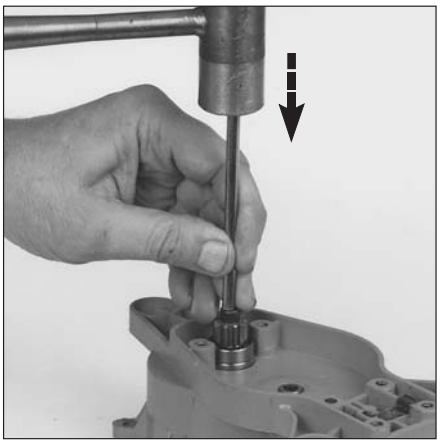
Fit a new bearing on the clutch axle. Lubricate with grease.

503 62 12-01

Assembly

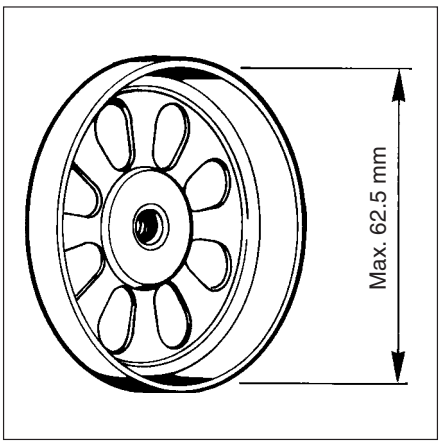
Fit a new bearing on the clutch axle.

NOTE!
Lubricate the bearings with grease and fit them on the axle so that the bearings' open faces are opposite each other.



Fit the bearing together with the clutch axle in the gearbox.

Press in the bearings together with the clutch axle into the gearbox by using a suitable punch and hammer. Tighten both screws that prevent the bearings from sliding out of their seatings.



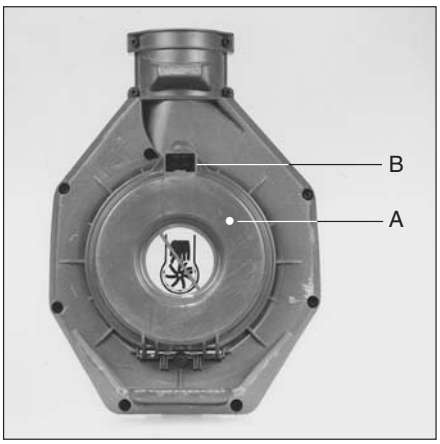
Check the wear on the clutch drum before assembling. The diameter must not exceed 62.5 mm.

503 62 12-01

Check the wear on the clutch drum before assembling. The diameter must not exceed 62.5 mm.

Fit the clutch drum on the axle and assemble the remaining parts in the reverse order as set out for dismantling.

Do not forget to grease the gear.



Blower

Model 225HBV

Fold up the cover (A) if the fan and fan housing are to be cleaned.

When replacing the impeller the fan housing is split once the 11 screws have been removed.

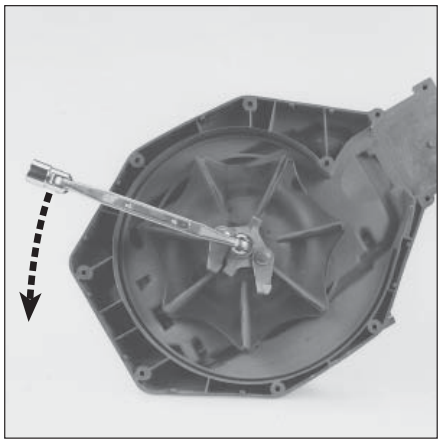
Blower

Model 225HBV

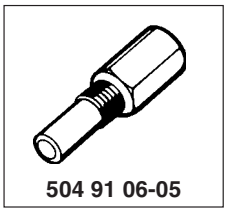
The blower unit consists of a radial fan that rotates in a fan housing.

To just clean, fold up the cover (A). Slide a screwdriver in at (B) to move the locking spring.

If the impeller is to be replaced the 11 screws and fan housing cover must be removed.



Replace the impeller if it is damaged. Otherwise the risk of damage due to vibration is great.



504 91 06-05

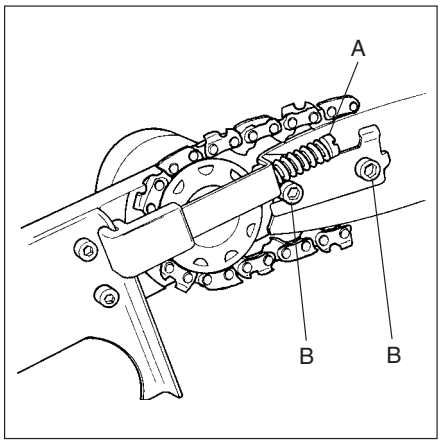
Replace the impeller if one or more of the fan blades are damaged.

Replace the spark plug with piston stop no. 504 91 06-05.

Remove the nut (anticlockwise) and lift off the impact blades that disintegrate the garden waste when the vacuum device is fitted. Remove the impeller.

Assemble in the reverse order as set out for dismantling.

NOTE!
The sheet rail at the periphery of the air shell should be positioned so that the bevelled corners face outwards.



Pruning saw

Model 250PS

Dismantling

Remove the guard over the drive sprocket.

Loosen the chain adjuster screw (A) and remove the screws (B).

Pruning saw

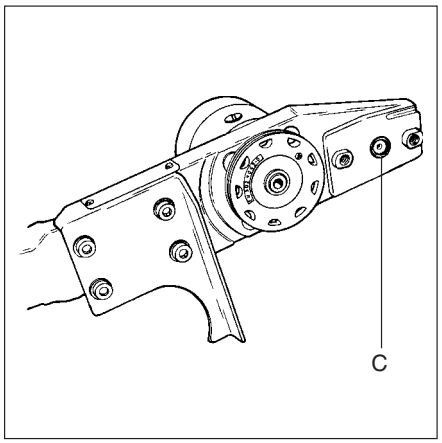
Model 250PS

Dismantling

The cutting equipment consists of a chain, bar and hydraulic motor.

Remove the 2 screws holding the guard over the drive sprocket and loosen the chain adjuster screw (A).

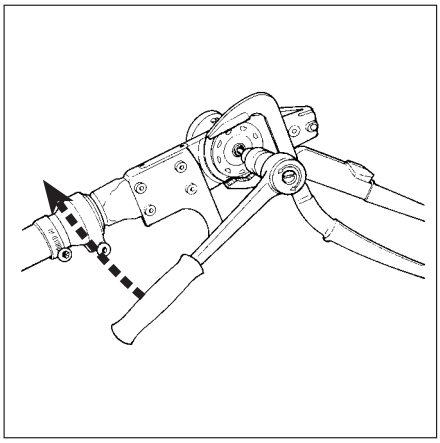
Remove the screws (B).



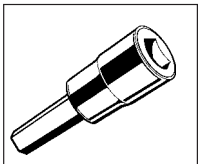
Dismantle the chain adjuster, chain and bar.

Lift off the chain adjuster, chain and bar.

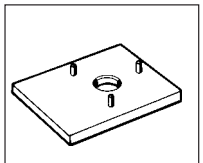
NOTE!
Do not lose the small O-ring (C) that lies behind the bar.
Exercise care so that the gasket that lies inside the chain adjuster is not damaged.



Dismantle the drive sprocket from the hydraulic motor.



502 52 13-01



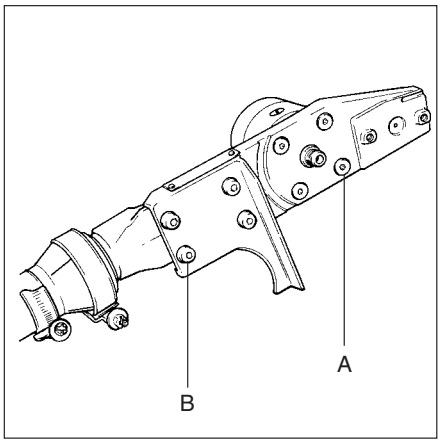
502 52 23-01

Dismantle the drive sprocket from the hydraulic motor.

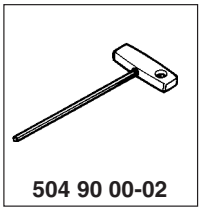
Hold the sprocket by using a pipe wrench and turn the hydraulic motor's axle clockwise using the allen key no. 502 52 13-01.

Tip!

The drive sprocket can be extremely tight and thereby difficult to hold with a pipe wrench. If so, use holding tool no 502 52 23-01.

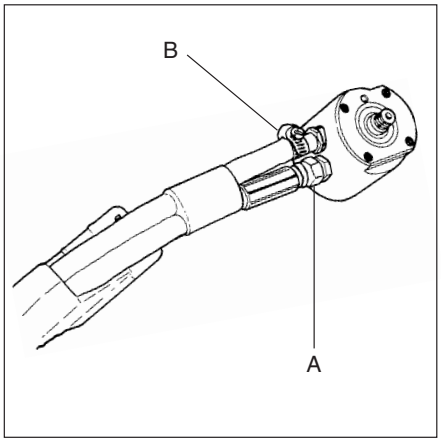


Dismantle the hydraulic motor and bar mounting.



504 90 00-02

Remove the 4 screws (A) holding the hydraulic motor and the 4 screws (B) holding the bar mounting against the ball joint bracket.



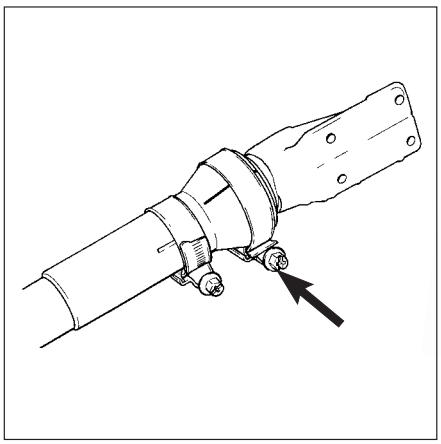
Loosen the hoses to the hydraulic motor and pull off the rubber sleeve holding the hoses together.

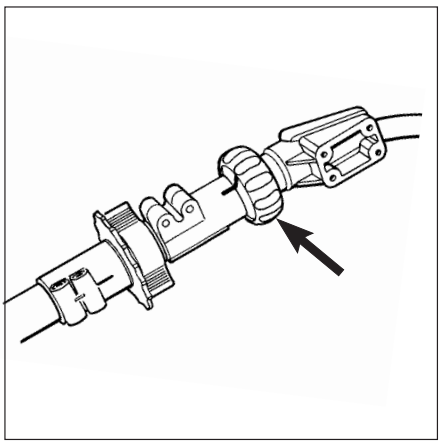
Loosen the hoses from the hydraulic motor.

Pressure hose = hose coupling (A).

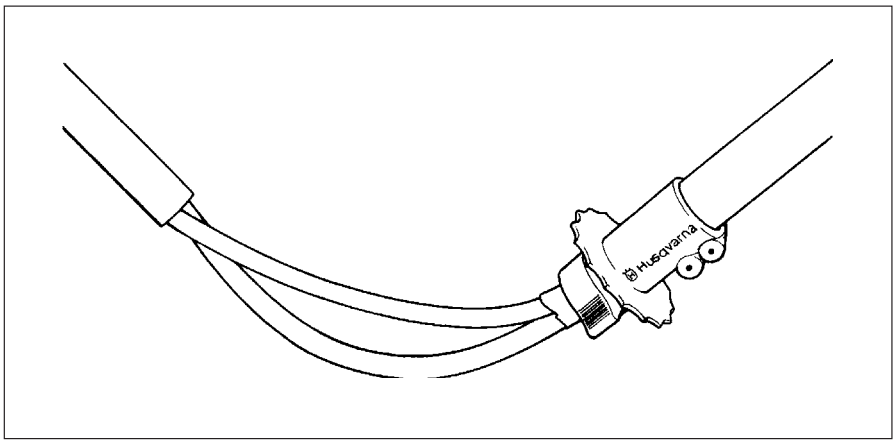
Return hose = hose clip (B).

Pull off the rubber sleeve holding the hoses together.





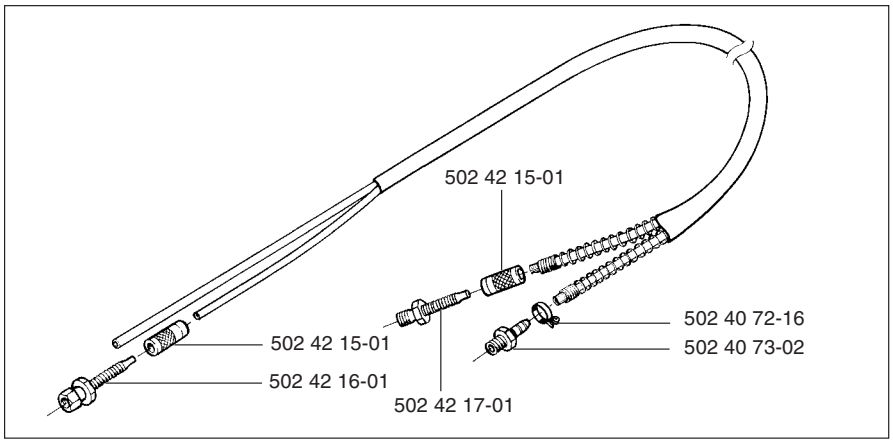
Dismantle the ball joint for replacement if necessary by removing the screw clip or the fluted ring nut (newer models).



Pull apart the handle tube so that one hose at a time can be pulled through the first tube. Start with the return hose.

Take off the handle lock if necessary.

Now pull the hoses through the remaining handle tubes.

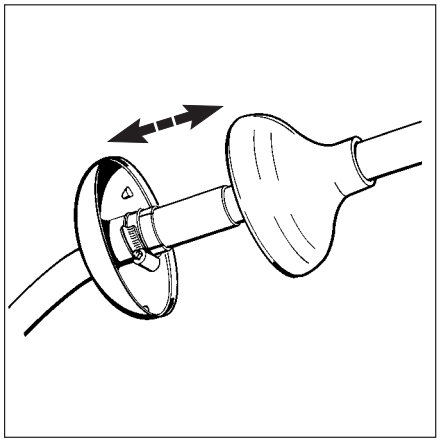


If the hydraulic hose has ruptured or is likely to rupture close to a hose coupling it can be saved if cut square where ruptured and fitted with a special repair hose coupling.

Screw the outer, left-hand threaded sleeve of the house coupling on the hydraulic hose as far as possible. Possibly lubricate with oil or grease.

NOTE!
The black outer casing must not be creased.

Now screw on the inner, right-hand threaded part of the hose coupling in the outer part.



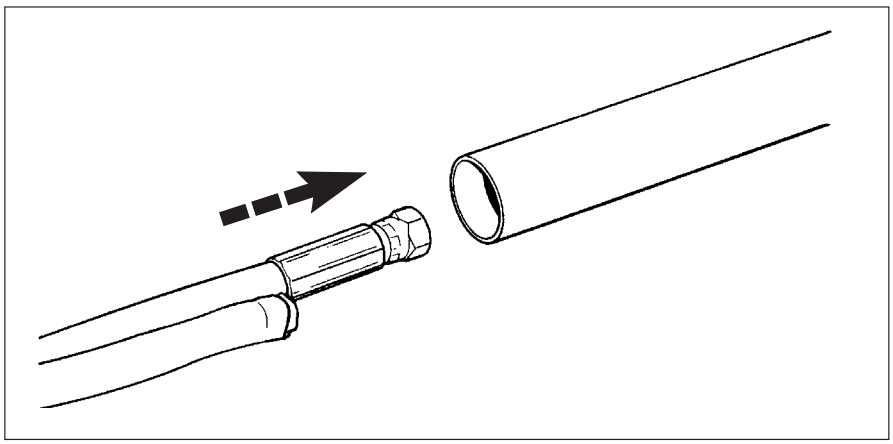
Replace the hose guide cover if it is damaged.

Separate the halves using a screwdriver, loosen the hose clip and pull off the cover.

The hose guide cover on the lowest handle tube can easily be replaced if damaged.

Insert a screwdriver in the cut-out in the joint between both cover halves and twist apart.

Loosen the hose clip and pull off the cover.



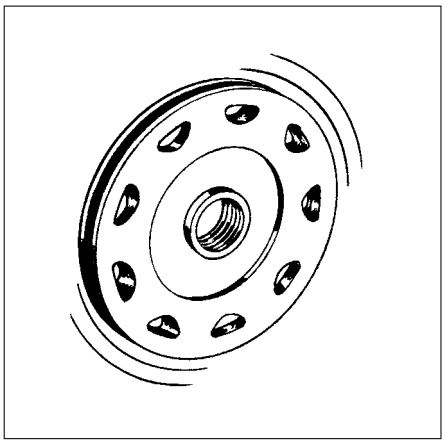
Assembly

Assemble the hoses in the reverse order as set out for dismantling.

Slide both hoses through the handle tube simultaneously.

Assembly is simplified if the hoses are powdered and the pressure hose is placed a little before the return hose.

NOTE!
When the ball-joint is fitted the locking pin on the screw clamp should fit in the hole on the ball-joint.



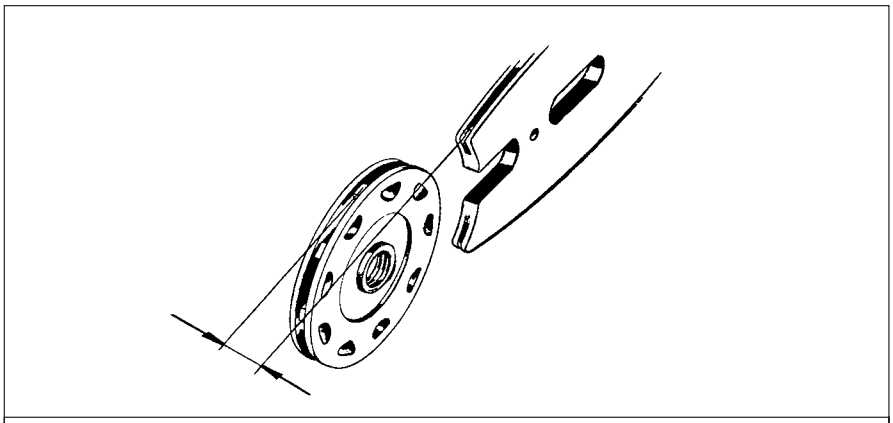
Chain sprocket and bar

Check that the chain sprocket rotates centrically. If this is not the case the sprocket should be replaced with a new one.

Chain sprocket and bar

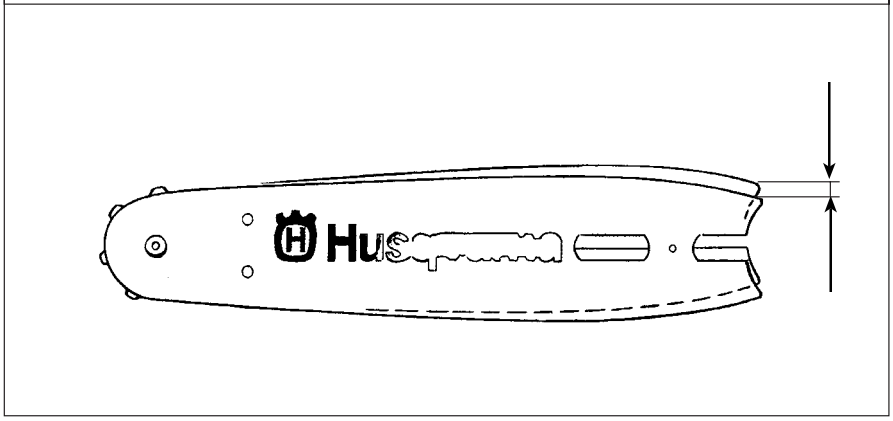
Check that the chain sprocket rotates centrically, i.e. the chain's tension is the same during its entire rotation.

If this is not the case the chain sprocket should be replaced with a new one.

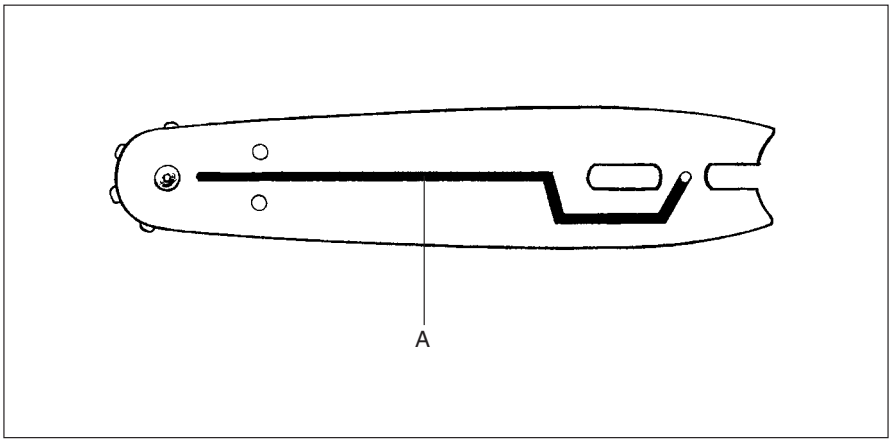


Check that the chain groove in the bar and gear are in line. If this is not the case the wear on the sprocket, chain and bar will be abnormally large and the service life short.

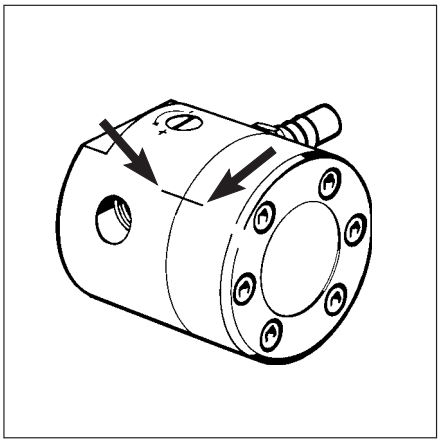
Replace the bar mounting and/or the chain sprocket to rectify the fault.



Check that the bar's guides are on the same level. If this is not the case the saw cut will be askew and wear on the chain uneven. If so, replace the bar and chain.



Blow out the oil channel (A) in the bar with compressed air to ensure the nose wheel and chain receive sufficient lubrication.



Hydraulic motor

Dismantling

Observe the greatest degree of cleanliness when dismantling and assembling the hydraulic motor. The smallest impurities can cause downtime.

NOTE!
To obtain the maximum motor power it is important that the cover and gear are in the same position after servicing as before.

1. Make a mark on the motor housing and cover.

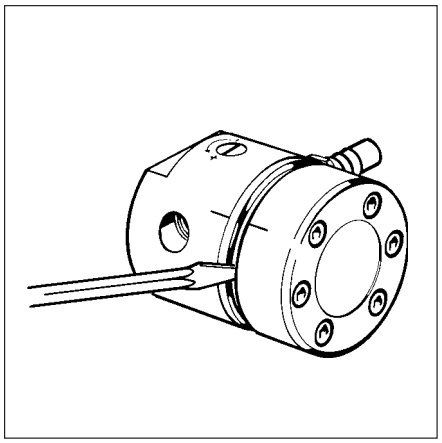
Hydraulic motor

Dismantling

Observe the greatest degree of cleanliness when dismantling and assembling the hydraulic motor. The smallest impurities can cause downtime.

NOTE!
To obtain the maximum motor power it is important that the cover and gear are in the same position after servicing as before.

1. Make a mark across the joint between the motor housing and cover so that the parts have the same relative positions after servicing.

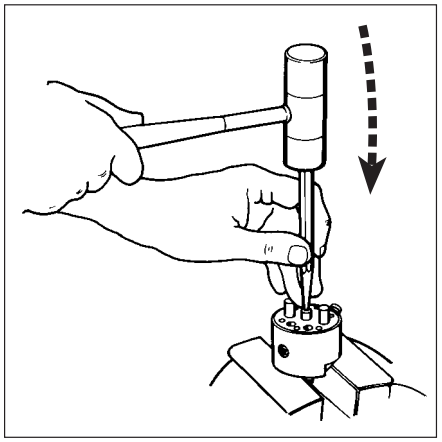


2. Remove the screws and separate the cover from the motor housing.

2. Remove the six screws holding the cover.

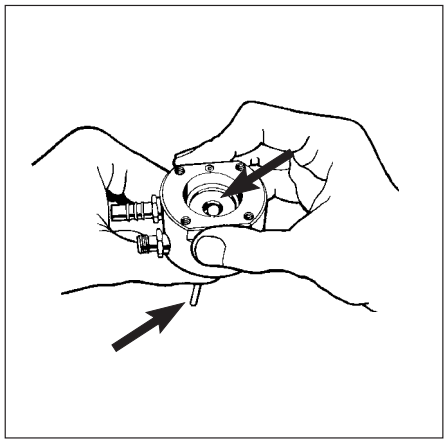
   Carefully press apart the cover and motor housing using a screwdriver.

NOTE!
Move the impeller over to the cover by means of a screwdriver. Make sure the gears keep their relative positions.

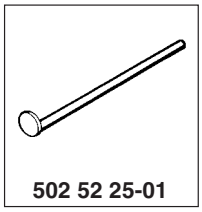


3. Remove the gear and key.
4. Dismantle the pump axle and its bearing.
5. Dismantle the sealing ring.

3. Remove the gear and key.
4. Press out the axle and bearing from the pump housing using a brass punch or similar material that is softer than the axle.
5. Dismantle the sealing ring.



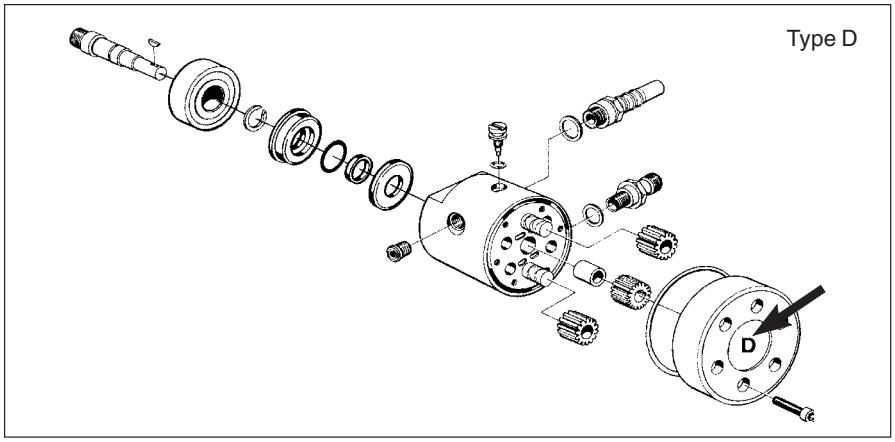
6. Dismantle the cover plate in the bottom of the bearing seating.



502 52 25-01

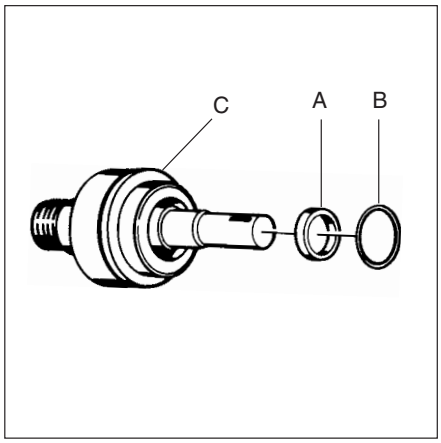
6. Remove the cover plate positioned in the bottom of the bearing seating using punch no. 502 52 25-01.

   Insert the punch through the axle hole from the bearing side and place the washer on the punch under the cover plate. Knock the punch against the bench. Move the punch around the cover plate to prevent the washer from turning and jamming in the bearing seating when dismantled.



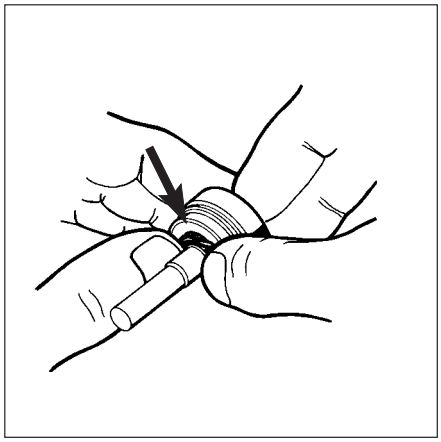
Assembly

The axle seal on motors marked with a “D” on the cover have a hydraulic seal instead of the conventional axle seal to withstand a higher return line pressure, which can be up to 40 bar in many cases, in order to use the hydraulic motor together with an external hydraulic system. This modification was introduced into production from the middle of 1995 (see the serial number plate on the pruning saw).



1. Place the seal retainer on the axle with the flange facing the bearing.

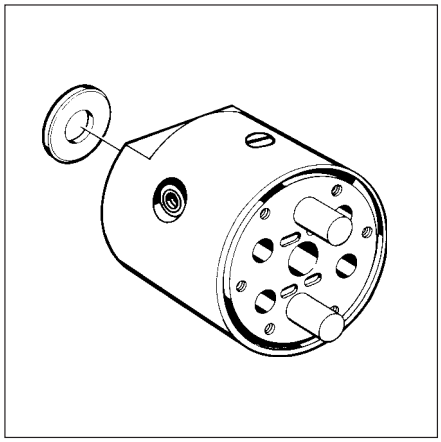
1. Place the seal retainer (C) on the axle with the flange facing the bearing.



2. Slide the sealing ring (A) into position.
3. Press down the O-ring (B) correctly in the gap between the sealing ring and the seal retainer.

2. Lubricate the axle with a few drops of oil and slide the sealing ring (A) carefully over the axle's sealing surface.
3. Press down the O-ring (B) between the sealing ring and the seal retainer. Use your thumb nail!

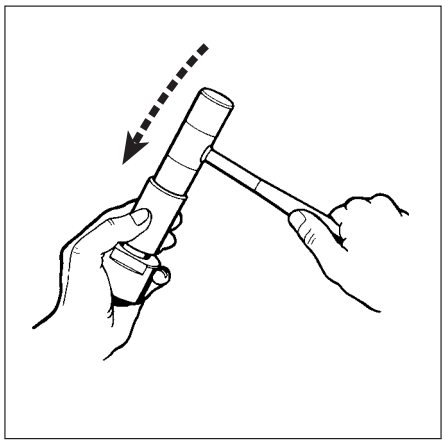
NOTE!
Check that the O-ring sits correctly in the gap between the sealing ring and retainer.



4. Place the cover plate, with the chamfer facing inwards, in position on the motor housing.

4. Place the cover plate in position in the motor housing. The chamfer should face inwards to facilitate assembly.

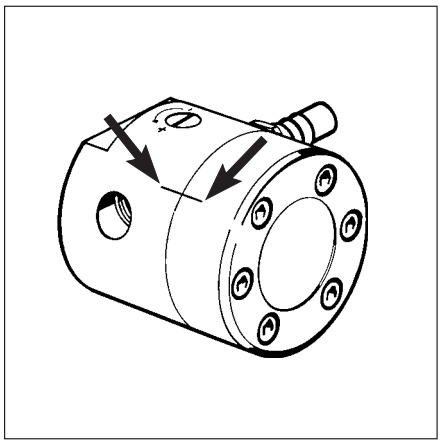
NOTE!
Motors manufactured before the middle of 1995 (no "D" marking on the cover) have a metal disc placed on the outside of the sealing ring. This disc must *not* be fitted when the above mentioned seal type is used.



5. Fit the axle with the bearing fitted in the motor housing.
   Check that the axle can rotate freely.

502 52 24-01

5. Press in the axle with the bearing fitted in the motor housing. Hold the housing in your hand and press in the bearing using sleeve no. 502 52 24-01. Check that the axle can rotate freely.



6. Check that the O-ring is undamaged and fit the key in the axle. Place the gear and pump impeller in position in the cover and secure it in place on the motor housing.

6. Check that the O-ring, which seals between the cover and the motor housing, is undamaged.

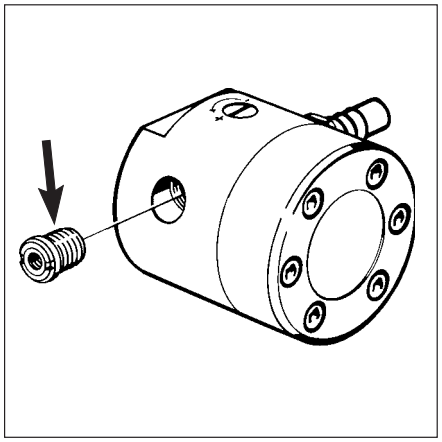
   Fit the key on the axle.

   Place the gear and impeller in position in the cover so that they come in the same position relative to each other as before servicing.

   Fit the cover on the motor housing. Rotate the axle so that the key enters the gear.

   Make sure the marking on the cover aligns with the mark on the motor housing.

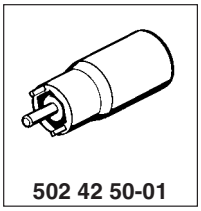
   Tighten the screws crosswise and diagonally.



In connection with the introduction of the hydraulic seal type “D” the relief valve must be replaced with one that has a higher opening pressure.

This valve has order no. 503 83 17-01.

Use tool no. 502 42 50-01 to replace the valve.

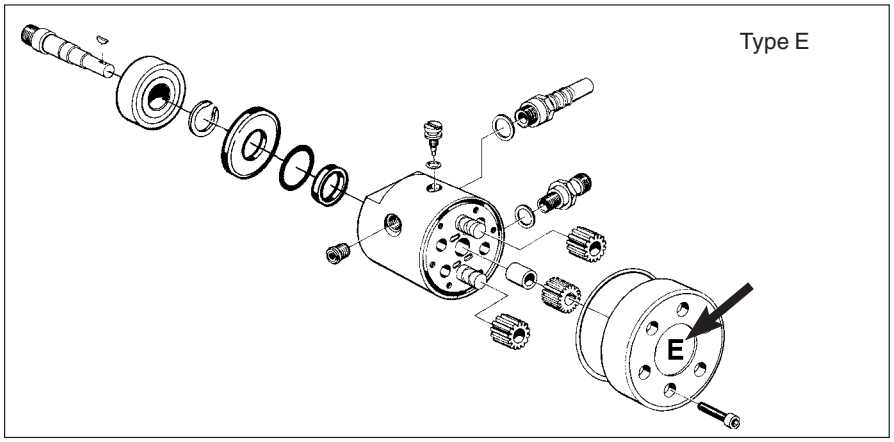


502 42 50-01

In connection with the introduction of the hydraulic seal type “D” the relief valve must be replaced with one that has a higher opening pressure (40 bar).

This valve has order no. 503 83 17-01.

Use tool no. 502 42 50-01 to replace the valve.



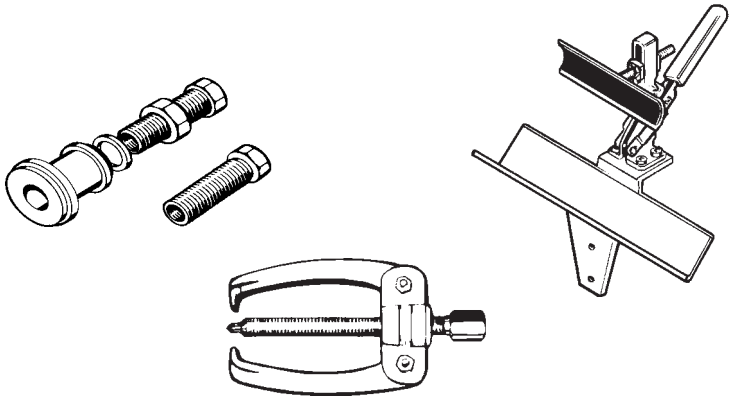
The hydraulic motors with the designation “E” punched on the cover have a slightly different seal mounting compared with type “D”.

On these motors the hydraulic seal is the same as on the “D” type, but is fitted directly in the motor housing without the seal holder (C).

The new mounting, type “E”, has been introduced into production from serial number 709 50 33 on the handle.

Tools

10.



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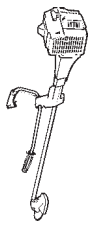
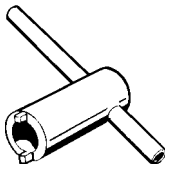
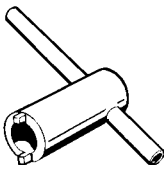
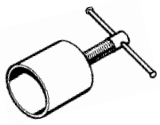
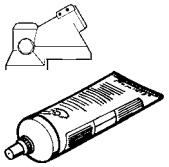
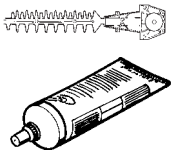
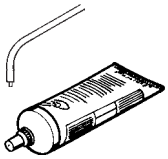
	Angle gear, gearbox					
Model	 502 51 11-01	 502 51 68-01	 502 50 65-01	 503 97 64-01	 503 62 12-01	 503 80 17-01
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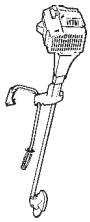
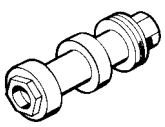
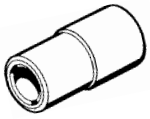
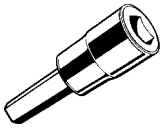
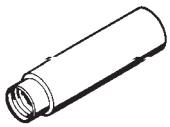
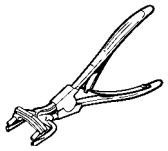
252	●		●	●		
250	●		●	●		
240/245			●	●		
225/232/235				●		
240RBD				●		●
122				●		
32				●		
Mondo Mega				●		
Mondo						●
Mondo Max				●		
250PS						
235P						
225 H60/H75					●	
18H					●	
322						●
325				●		
140B, 141B						

	Angle gear, gearbox		Centrifugal clutch			
Model	 502 52 17-01	 502 52 15-01	 502 52 13-01 (4 mm) 502 52 14-01 (6 mm)	 502 52 16-01	 505 26 79-12	 502 50 49-01
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250	●	●		●	●	
240/245	●	●				
225/232/235				●		
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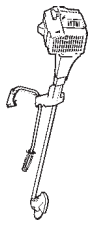
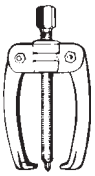
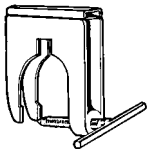
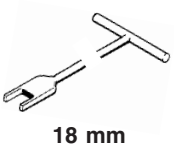
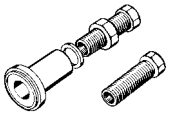
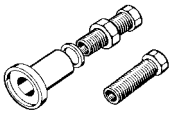
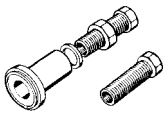
Mondo Mega						
Mondo						
Mondo Max						
250PS			●	●		
235P				●		
225 H60/H75						
18H				●		
322				●		
325				●		
140B, 141B						

	Bearing	Crankcase	Vibration damper	Crankshaft		
Model			 18 mm			
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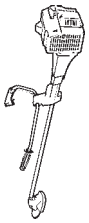
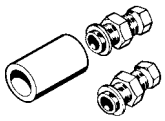
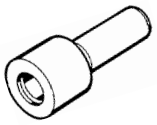
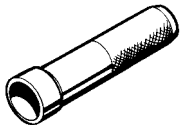
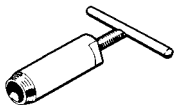
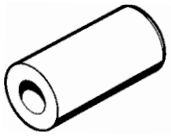
265	●	●				●
252		●	●		●	
250		●	●		●	
240/245	●			●		
225/232/235						
240RBD	●					
122						
32						
Mondo Mega						
Mondo						
Mondo Max						
250PS		●	●		●	
235P						
225 H60/H75						
18H	●	●				
322						
325						
140B, 141B		●				

	Crankshaft	Sealing ring				
Model	 502 50 30-09	 504 91 28-06	 505 38 17-09	 504 91 40-01	 502 50 53-01	 504 91 28-00
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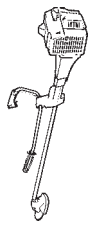
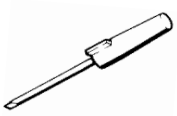
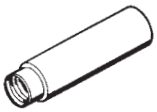
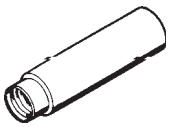
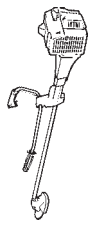
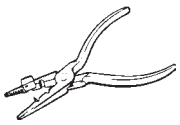
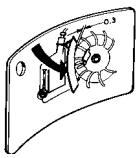
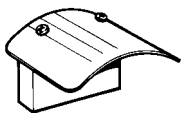
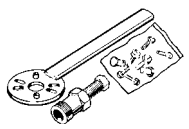
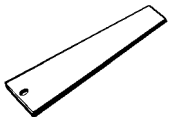
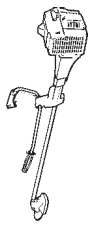
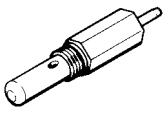
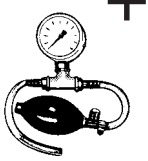
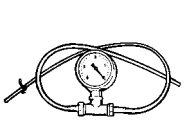
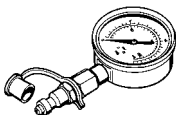
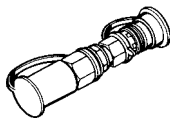
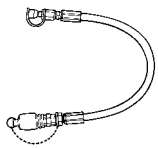
252	●	●	●	●		●
250	●	●	●	●		●
240/245		●	●			
225/232/235						
240RBD						
122			●			
32						●
Mondo Mega						●
Mondo						●
Mondo Max						●
250PS		●	●	●		●
235P		●				
225 H60/H75			●			
18H						
322						
325						
140B, 141B						

	Fuel system			Ignition system		
Model	 502 50 83-01	 501 60 02-02	CARB EPA E-tech  531 00 48-63	 502 51 94-01	 505 26 79-12	 502 71 13-01
265	●	●				●
252	●	●				●
250	●	●				●
240/245	●	●	●			●
225/232/235	●	●	●	●		●
240RBD	●	●	●			●
122	●	●				●
32	●	●	●			●
Mondo Mega	●	●	●			●
Mondo	●	●	●			●
Mondo Max	●	●	●			●
250PS	●	●			●	●
235P	●	●	●			●
225 H60/H75	●	●	●			●
18H	●	●	●			●
322	●	●	●			●
325	●	●	●			●
140B, 141B	●	●				

	Ignition system					Leakage testing
Model	 502 50 06-01	 502 51 34-02	 531 00 48-61	 531 00 48-62	 502 51 49-01	 502 54 11-01
265	●	●			●	●
252	●	●				●
250	●	●				●
240/245	●	●				●
225/232/235	●	●				●
240RBD	●	●				●
122	●		●	●		●
32	●	●		●		●
Mondo Mega	●	●				●
Mondo	●	●		●		●
Mondo Max	●	●				●
250PS	●	●			●	●
235P	●	●				●
225 H60/H75	●	●				●
18H	●	●				●
322	●	●				●
325	●	●				●
140B, 141B	●	●			●	●

	Leakage testing			Hydraulic unit		
Model	 503 84 40-01	 + 502 50 38-01	 − 502 50 37-01	 502 52 28-01	 502 52 30-01	 502 42 45-01
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252	●	●	●			
250	●	●	●			
240/245	●	●	●			
225/232/235	●	●	●			
240RBD	●	●	●			
122	●	●	●			
32	●	●	●			
Mondo Mega	●	●	●			
Mondo	●	●	●			
Mondo Max	●	●	●			
250PS	●	●	●	●		●
235P	●	●	●	●	●	
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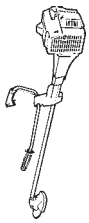
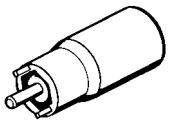
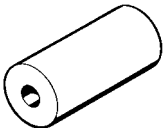
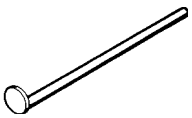
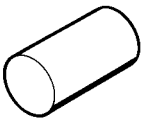
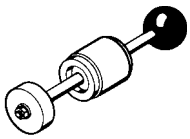
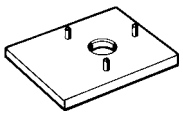
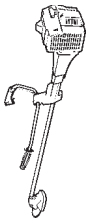
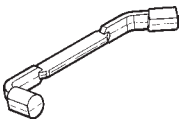
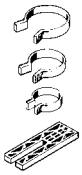
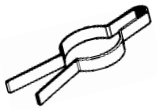
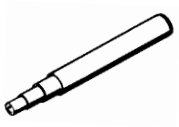
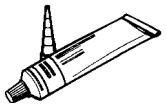
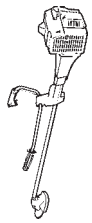
140B, 141B	●	●	●			



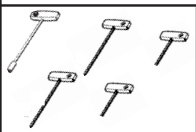
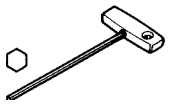
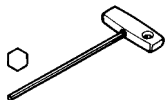
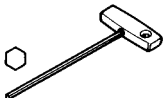
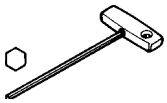
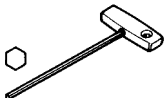
Attachments

Model	 502 42 50-01	 502 52 24-01	 502 52 25-01	 502 52 26-01	 502 52 27-01	 502 52 23-01
265						
252						
250						
240/245						
225/232/235						
240RBD						
122						
32						
Mondo Mega						
Mondo						
Mondo Max						
250PS	●	●	●			●
235P				●	●	
225 H60/H75						
18H						
322						
325						
140B, 141B						

	Cylinder/piston					Workshop equipment
Model	 504 91 06-05	 502 54 15-01	 502 50 70-01	 531 00 48-65	 505 38 17-05	 503 26 70-01
265		●	●		●	
252	●		●		●	
250	●		●		●	
240/245	●		●		●	●
225/232/235	●		●		●	●
240RBD	●		●		●	●
122			●	●	●	●
32	●		●		●	
Mondo Mega	●		●		●	●
Mondo	●		●		●	●
Mondo Max	●		●		●	●
250PS	●		●		●	
235P	●		●		●	●
225 H60/H75	●		●		●	●
18H	●		●		●	●
322	●		●		●	●
325	●		●		●	●
140B, 141B	●		●		●	



Workshop equipment

Model	 *504 90 00-01–04 + 502 50 22-01 =* 504 90 00-06	 3 mm 504 90 00-04	 4 mm 504 90 00-02	 5 mm 504 90 00-03	 6 mm 504 90 00-01	 3/16" 502 50 57-01
265			●			
252		●	●			
250		●	●			
240/245		●	●			
225/232/235			●			
240RBD			●			
122						
32						●
Mondo Mega						●
Mondo			●			●
Mondo Max						●
250PS		●	●			
235P			●			
225 H60/H75			●			
18H						●
322			●	●		
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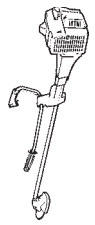
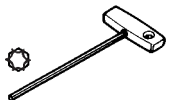
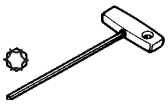
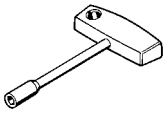
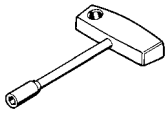
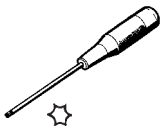
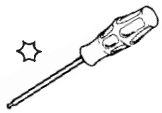
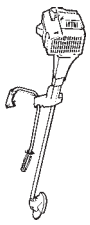
140B, 141B			●	●		

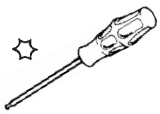
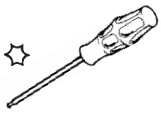
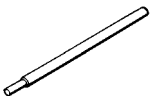
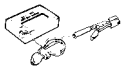
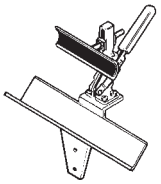


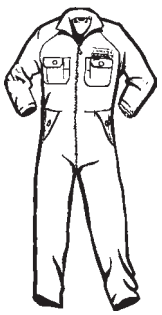
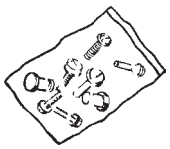
Workshop equipment

Model	 25 x 150	 30 x 200	 8 mm	 10 mm		 M6
	502 71 27-01	502 71 31-01	502 50 22-01	502 50 23-01	502 51 67-01	502 50 88-01
265						
252						
250						
240/245			●			
225/232/235						
240RBD						
122						
32						
Mondo Mega						
Mondo						
Mondo Max						
250PS						
235P						
225 H60/H75						
18H						
322						
325						
140B, 141B			●	●		



Workshop equipment

Model	 M 5 502 50 87-01	 M 4 502 50 86-01	 502 02 61-02	Degreasing agent  505 69 85-70	 502 71 14-01	 502 51 03-01
265	●			●	●	●
252	●	●		●	●	●
250	●	●		●	●	●
240/245	●	●		●	●	●
225/232/235	●			●	●	●
240RBD	●			●	●	●
122			●	●	●	●
32				●	●	●
Mondo Mega				●	●	●
Mondo				●	●	●
Mondo Max				●	●	●
250PS	●	●		●	●	
235P	●			●	●	●
225 H60/H75	●			●	●	
18H				●	●	
322	●			●	●	●
325	●			●	●	●
140B, 141B	●			●	●	

	Workshop equipment					
Model	 502 51 54-01	 502 21 58-01	Size S: 101 64 23-48 M: 101 64 23-50 L: 101 64 23-52 XL: 101 64 23-54 XXL: 101 64 23-56			
265	●		●			
252		●	●			
250		●	●			
240/245			●			
225/232/235			●			
240RBD			●			
122			●			
32			●			
Mondo Mega			●			
Mondo			●			
Mondo Max			●			
250PS			●			
235P			●			
225 H60/H75			●			
18H			●			
322			●			
325			●			
140B, 141B			●			