

Technical Information

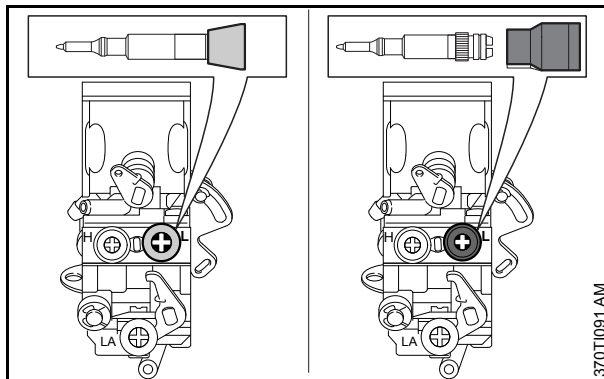
51.2012

Cut-off machines STIHL TS 410, 420– Type 4238

Overview

1. Carburettor
2. Carburettor adjustment
3. Summary

1. Carburettor



Left: previous carburettor C1Q-S118C without limiter cap on the low speed adjusting screw

Right: new carburettor C1Q-S118D with limiter cap on the low speed adjusting screw

Due to new national emission standards, the previous carburettor C1Q-S118C – 4238 120 0600 without limiter cap on the low speed adjusting screw 4238 122 6800 will be replaced by the new C1Q-S118D version with limiter cap 4144 121 2700 on the low speed adjusting screw 4238 120 6800.

This reduces the adjustment options of the low speed adjusting screw for the user.

Overview of carburettor settings

- Basic setting for service, see 2.3
- Standard setting for the user, see 2.5

1.1 Spare parts supply

The previous carburettor C1Q-S118C is no longer available. The new version C1Q-S118D can also be used for older machines.

The previous part number 4238 120 0600 is being retained for the new carburettor C1Q-S118D.

The previous low speed adjusting screw 4238 122 6800 remains available for older machines.

2. Carburettor adjustment

The specific national safety regulations and the safety instructions in the instruction manual must be observed when the machine is operated.

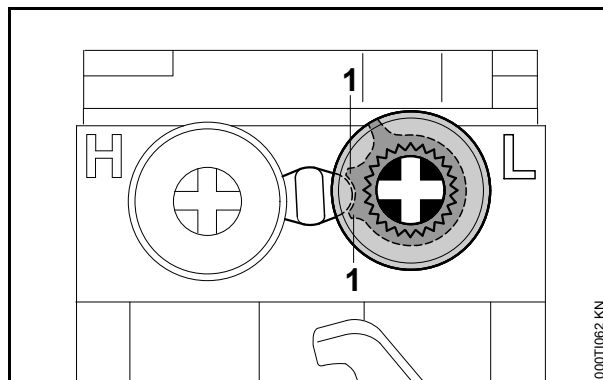
2.1 Removing the limiter cap


As with the high speed adjusting screw (H), the limiter cap must be removed when replacing the low speed adjusting screw (L) or cleaning the carburettor.

The removed limiter cap must not be reused as it is damaged when pulled off.

- Lever the limiter cap (L) off the low speed adjusting screw with puller 5910 890 4501

2.2 Fitting the limiter cap



- Align a **new** limiter cap between the two snap fittings (1) and press on until it engages in the noticeable **1st** position
- Install the carburettor
- Implement basic setting for service, see  2.3

2.3 Basic setting for service

After servicing or replacement of the adjusting screws, it is necessary to perform a basic setting of the carburettor.

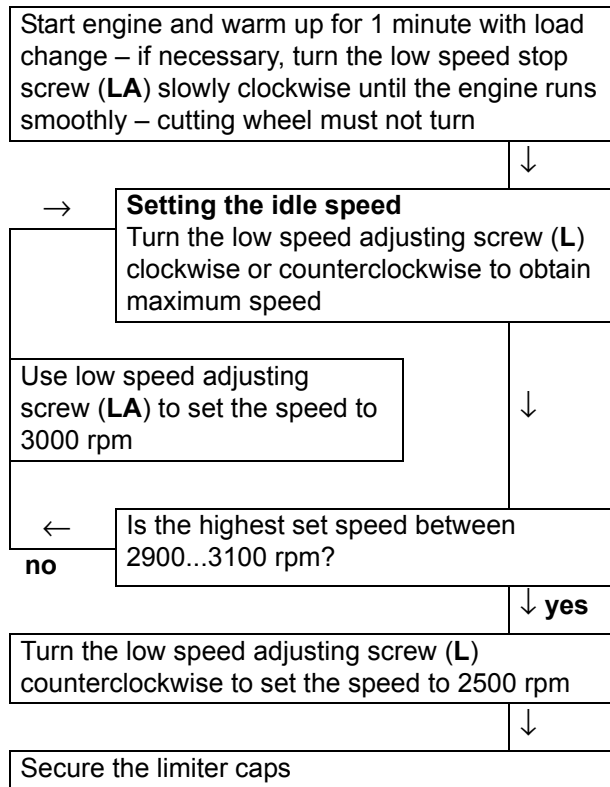
- Check the air filter – clean or replace if necessary
- Check the spark arresting screen in the muffler (present only in some countries) – clean or replace if necessary
- Carry out basic setting of the adjusting screws – set adjusting screws by turning counterclockwise starting with the screws firmly seated

Settings – Basic setting with limiter caps fitted	H	L
Previous carburettor C1Q-S118C with limiter cap on high speed adjusting screw (H)	1 1/2	1
New carburettor C1Q-S118D with limiter cap on high speed adjusting screw (H) and limiter cap on low speed adjusting screw (L)	1 1/2	1

2.3.1 Adjustment

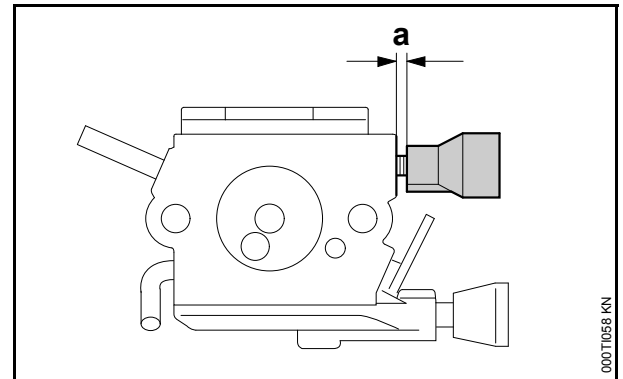
Set speed with speed tester or engine analyser STIHL MDG 1 (select from software "Other STIHL products" / "Speed tester").

For speeds with no range indication, set the speeds within the tolerance range of ± 100 rpm.



2.4 Securing the limiter caps

- Press the limiter caps onto the adjusting screws until they engage in the noticeable **2nd** position



- Do **not** press on the limiter cap until it touches the carburettor housing as this would damage it, maintain distance **a = 1 mm**

2.5 Standard setting for the user

There is no difference in the standard setting between the previous carburettor C1Q-S118C and the new carburettor C1Q-S118D.

Settings – Standard setting with secured limiter caps	H	L
Previous carburettor C1Q-S118C with limiter cap on high speed adjusting screw (H)	3/4	1
New carburettor C1Q-S118D with limiter cap on high speed adjusting screw (H) and limiter cap on low speed adjusting screw (L)	3/4	3/4

Note

If the previous carburettor C1Q-S118C is replaced by the new carburettor C1Q-S118D, copy this chapter and hand it over to the customer. It contains the new adjustment instructions for carburettors with limiter caps on high speed adjusting screw (H) and low speed adjusting screw (L).

2.5.1 Standard setting

- Switch off the engine
- Check the air filter – clean or replace if necessary
- Check the spark arresting screen in the muffler (present only in some countries) – clean or replace if necessary
- Turn the high speed adjusting screw (**H**) counterclockwise to the stop – max. 3/4 turn)
- Turn the low speed adjusting screw (**L**) clockwise to the stop – then turn it 3/4 turn counterclockwise

2.5.2 Setting the idle speed

- Make standard setting
- Start engine and let it warm up

Engine stops when idling

- Turn the low speed stop screw (**LA**) clockwise until the cutting wheel begins to run – then turn it back 1 turn

Cutting wheel runs when idling

- Turn the low speed stop screw (**LA**) counterclockwise until the cutting wheel stops running – then turn 1 turn more in the same direction

Speed erratic when idling; poor acceleration (despite adjustment to LA setting)

The idle setting is too lean.

- Turn the low speed adjusting screw (**L**) approx. 1/4 turn counterclockwise until the engine runs and accelerates smoothly – max. up to the stop

Idle speed cannot be increased sufficiently via the low speed stop screw (**LA**), engine stops when changing from part-load to idle speed

The idle setting is too rich.

- Turn low speed adjusting screw (**L**) approx. 1/4 turn clockwise.

Whenever the low speed adjusting screw (**L**) is adjusted, it is usually also necessary to adjust the idle speed stop screw (**LA**).

2.5.3 Correcting the carburettor setting for use at high altitudes

The setting may have to be marginally corrected if engine performance is unsatisfactory at high altitudes:

- Make standard setting
- Let the engine warm up
- Turn the high speed adjusting screw (**H**) slightly clockwise (leaner) – max. up to the stop

After descending from a high altitude, restore the carburettor setting to the standard setting.

If the carburettor setting is not reset to the standard setting, this will increase the risk of engine damage through lack of lubrication or overheating due to the setting being too lean.

3. Summary

Item	Part Name	Previous	New	Rem.
1	Carburettor C1Q-S118C; including Item 3; other parts as previously, see spare parts list	4238 120 0600	---	1)
2	Carburettor C1Q-S118D; including Items 4, 5; other parts as previously, see spare parts list	---	4238 120 0600	2)
3	Low speed adjusting screw	4238 122 6800	---	3)
4	Low speed adjusting screw including Item 5	---	4238 120 6800	
5	Cap	---	4144 121 2700	

Modification to be introduced continuously

Remarks

- 1) Previous version of part no longer available from factory
- 2) New version of part can also be used for older machines
- 3) Previous version of part remains available for older models