Technical Information

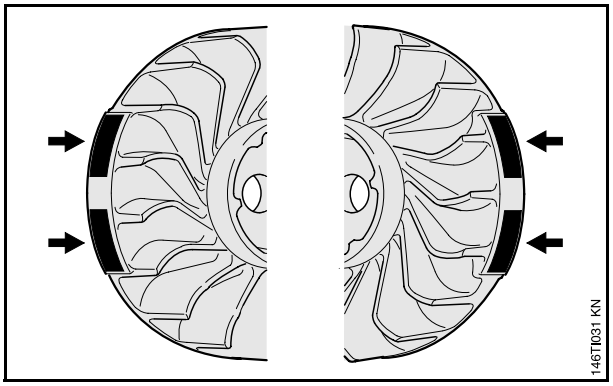
10.2006

New STIHL special tools

Contents

1. New tachometers EDT 7 and EDT 8

1.1 New ignition systems



The new ignition systems used on some models can be identified by their flywheels with **two** pairs of magnetic poles.

The development of new ignition systems has made it necessary to use new tachometers.

The principle of operation underlying the new ignition systems is different from that of the "standard" ignition system.

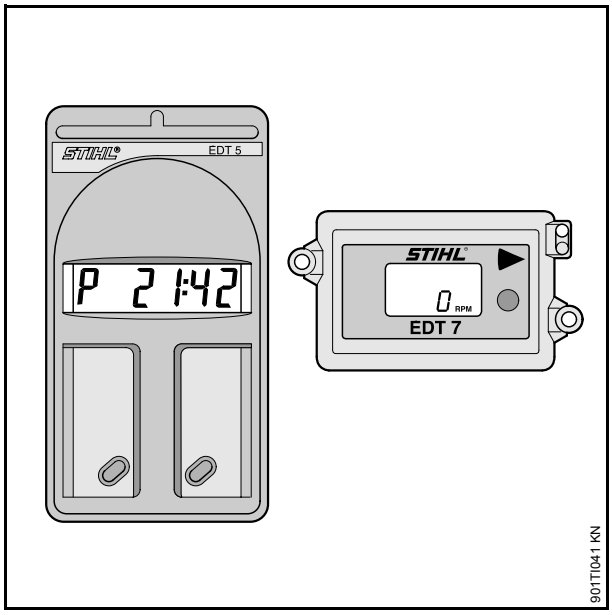
Both pairs of poles are used to generate electrical pulses. One pair of poles is used to generate the energy for ignition. The other pair is used to generate pulsating electrical power which can be used for various purposes, depending on the design of the ignition system.

The second pair of poles generates a relatively high impulse voltage which is registered by the tachometer and used for indication of the speed, depending on the instrument's electrical design. This means that, for every revolution of the flywheel, the tachometer can indicate two revolutions of the power unit, which effectively constitutes a measuring error.

The new tachometers are designed and built in such a way that they only process and indicate the **ignition pulses** of the new ignition systems.

The purposes for which the second electrical pulse is used are described in the Technical Information bulletins issued when a power tool with newly developed ignition system is launched on the market.

1.2 Tachometer EDT 7



Left: Previous version **EDT 5** –
Part No. 5910 850 1006
Right: New version **EDT 7** –
Part No. 5910 850 1008

The new tachometer EDT 7 supersedes the previous version EDT 5. Both versions are characterized by the fact that they can be adjusted to the operating principle and ignition system of the engine concerned by changing the setting.

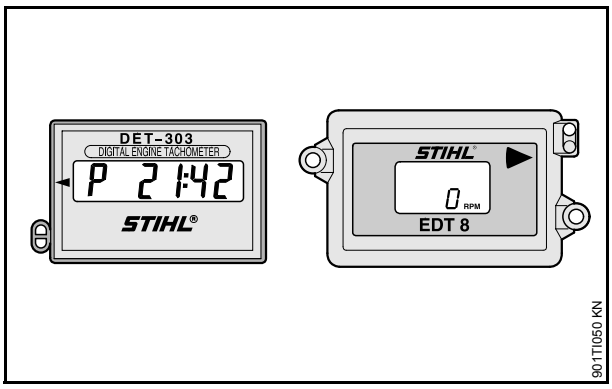
Features of the EDT 7:

- Used for engines with **one** cylinder
- Used with two-stroke and four-stroke engines with one ignition pulse for each revolution of the crankshaft. Can be adjusted for one pulse per two revolutions.
- Storage and indication of the maximum speed
- Operation and adjustment of settings via a single button

Operation of the EDT 7 is described in a manual supplied with the unit.

The previous tachometer EDT 5 can continue to be used for "standard" STIHL ignition systems.

1.3 Tachometer EDT 8



Left: Previous version **DET-303** –
Part No. 0464 801 0000
Right: New version **EDT 8** –
Part No. 5910 850 1009

The new tachometer EDT 8 supersedes the previous version DET-303.

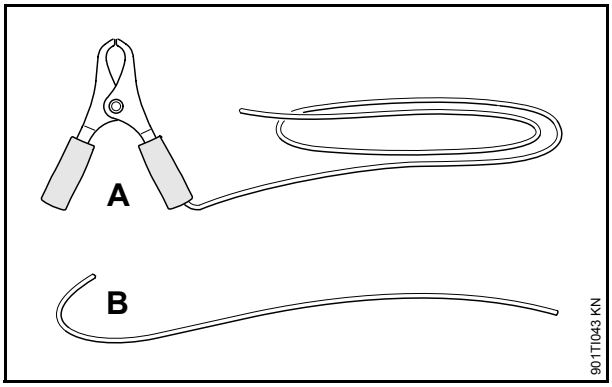
Features of the EDT 8:

- Used for engines with **one** cylinder
- Used with two-stroke and four-stroke engines with one ignition pulse for each revolution of the crankshaft
- The setting **cannot** be changed

Operation of the EDT 8 is described in a supplement enclosed with the unit (see also 1.7).

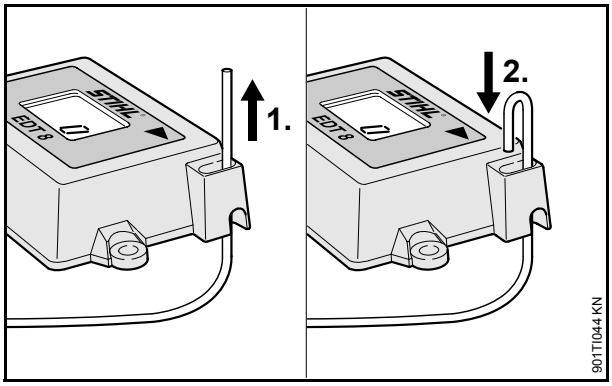
The previous tachometer DET-303 can continue to be used for "standard" STIHL ignition systems.

1.4 Antennas supplied with the units



The two new tachometers are supplied complete with two antennas of different lengths:

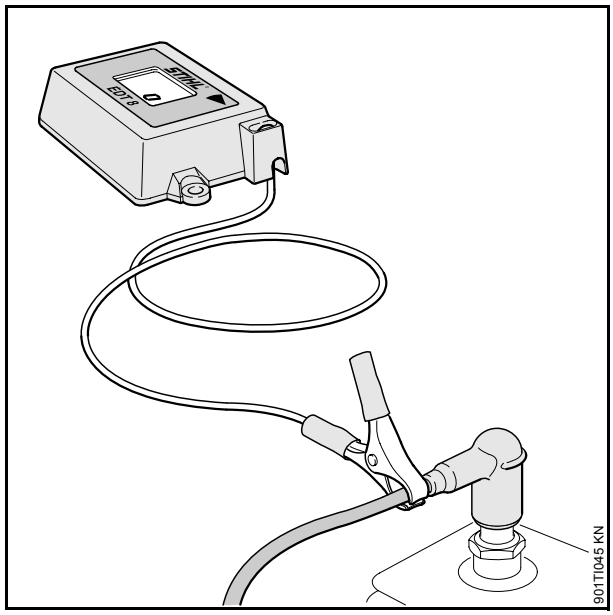
- Test line (**A**) with a length of approx. 24 in (60 cm) and a terminal which is clamped directly onto the insulation of the ignition lead or spark plug boot.
- Short antenna (**B**) with a length of approx. 6 in (15 cm) for measurement without contact.



Both the test line and the antenna can be attached to the housing in the same simple way, as illustrated above.

1.5 Method

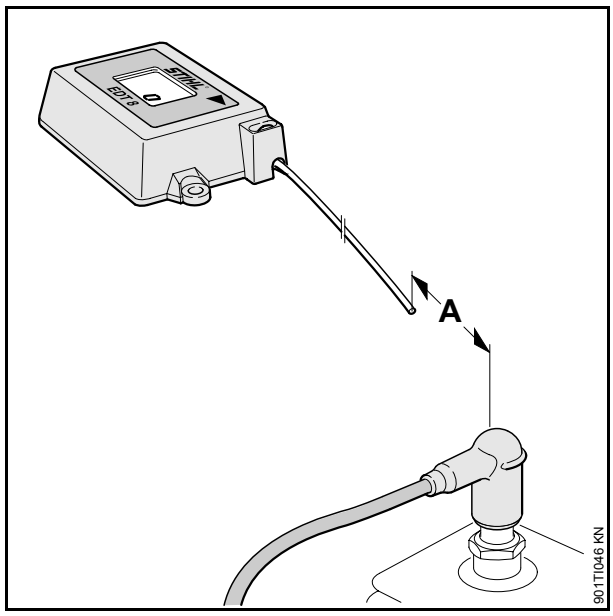
1.5.1 Measurement with test line



Pulses should be measured with the test line. This method yields the most accurate results.

- Clamp the test line onto any point on the insulation of the ignition lead or spark plug boot.

1.5.2 Measurement with short antenna



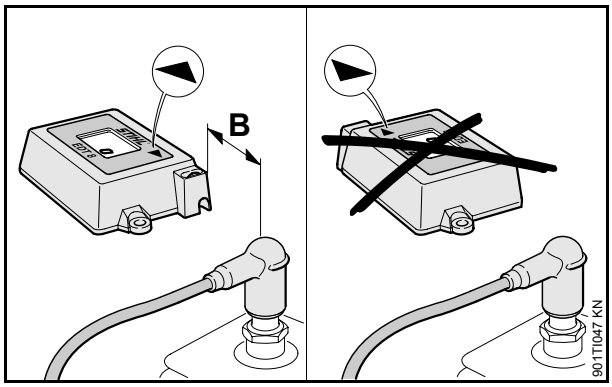
This method is useful for measuring the speed of engines in which it is difficult or impossible to clamp the test line onto the ignition lead or spark plug boot.

During measurement:

- Ensure that distance (**A**) remains between 4 and 8 in (10 and 20 cm).
- Direct the antenna towards the pulse-conducting parts of the ignition system.

Steady indication of the speed on the display means that the tachometer is properly aligned.

1.5.3 Measurement with built-in antenna



This method is useful if a test line cannot be used and when the measurement must be made close to the engine or to the pulse-conducting parts of the ignition system.

During measurement:

- Keep distance (**B**) as short as possible (max. 2 to 4 in (5 to 10 cm)).
- Direct the **built-in** antenna and the **arrow** on the unit towards the pulse-conducting parts of the ignition system.

Steady indication of the speed on the display means that the tachometer is properly aligned.

Preference should be given to the measurement methods outlined in 1.5.1 and 1.5.2.

1.6 Battery life

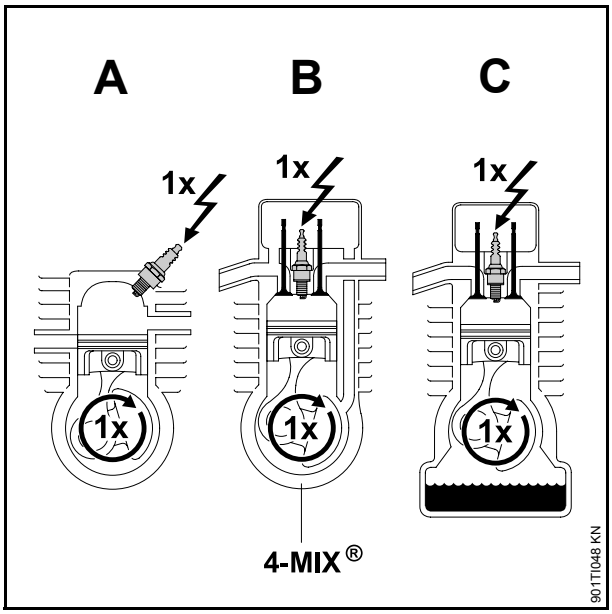
The battery in the two new tachometers cannot be replaced. The battery has a service life of approximately ten years in normal use.

1.7 Pictograms in the supplement for the EDT 8

Operation, the essential technical data and the unit's use are explained by means of drawings and pictograms in the supplement enclosed with the EDT 8.

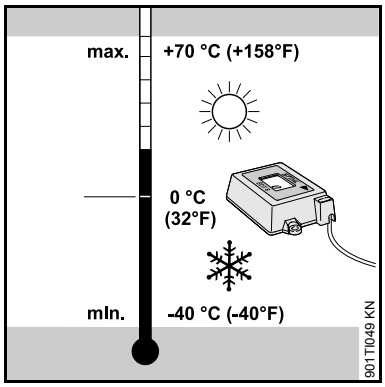
1.7.1 Explanation of pictograms

Use



A	Two-stroke engine with one cylinder and one ignition pulse for each revolution of the crankshaft.
B	STIHL 4-MIX® engine with one cylinder and one ignition pulse for each revolution of the crankshaft. Four-stroke engine with lubrication by the fuel mixture.
C	Four-stroke engine with one cylinder and one ignition pulse for each revolution of the crankshaft. Engine with separate lubrication.

Technical data



–40 °C to +70 °C –40 °F to +158 °F	Operating temperature range

0–16 000 1/min 0–16,000 rpm	Maximum range for indication of the speed

Disposal

	Electrical devices must not be disposed of as household waste. The device, accessories and packaging should be recycled in an environment-friendly manner.

1.8 Hour meter

The new EDT 7 and EDT 8 tachometers do not have an hour meter function

1.9 Summary

Item	Part name	Previous	New	Remarks
1	Tachometer EDT 5	5910 850 1006	- - -	1)
2	Tachometer DET-303	0464 801 0000	- - -	1)
3	Tachometer EDT 7	- - -	5910 850 1008	
4	Tachometer EDT 8	- - -	5910 850 1009	

Remarks

1) Previous version of part only remains available while stocks last.

Last Technical Information on STIHL special tools: 23.2005

Technical Documentation
D1/MTK-na