Technical Information

STIHL®

T.36.86

Engineering Changes on Model 024 Chain Saws (Series 1121)

1. Winter operation
2. Frontal chain tensioner (Wood Boss)
3. Crankcase kit with chain tensioner
4. Rewind starter

1. Winter operation:

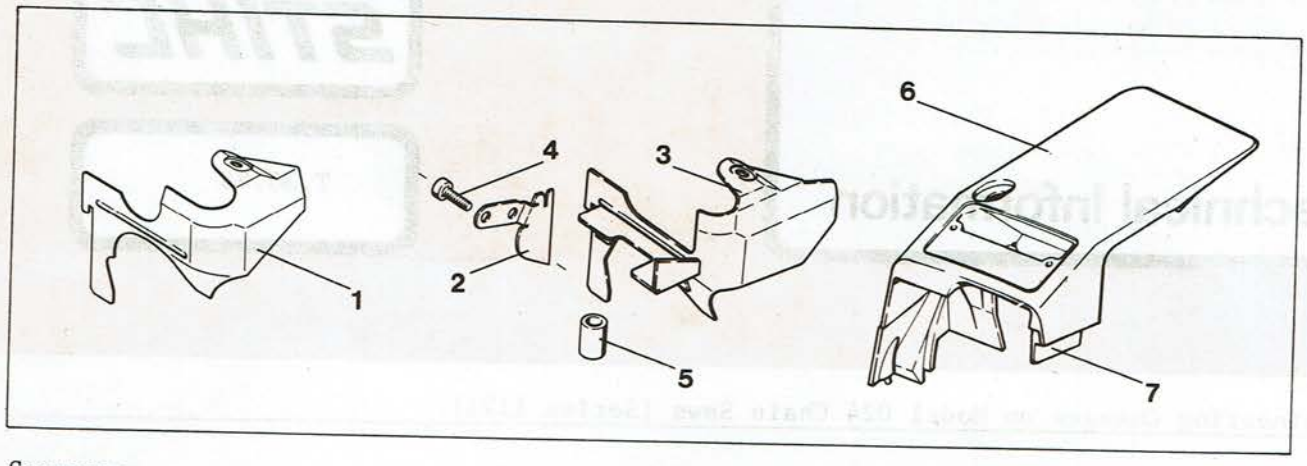
The following special accessories have been modified, or newly developed, in order to improve the preconditions for trouble-free operation in extremely cold weather.

- Shroud, 1121 080 1602, has been developed to supplement the standard carburetor preheating, the intake air preheating kit and the air deflector. It is intended for use at temperatures below about -20^0C (-4^0F). The special contour of this shroud, and an integral rubber cover, ensures that only heated air from around the cylinder is drawn in instead of cold outside air.

- The previous Air Deflector, 1121 084 1405, has been deleted and replaced by a modified Air Deflector Assembly, 1121 080 3000, which features an additional sealing lip.

- The new Air Deflector Assembly, 1121 080 3000, will be included in the Blanking Plate Kit, 1121 007 1007, (from machines up to No. X 14 701 713). The name of the kit has been changed to "Air Deflector Kit".

In the future, the Carburetor Box Cover, 1121 140 1905, supplied with the intake air preheating kit, will not include the Prefilter, 1121 124 0810, or the two Self-Tapping Screws, 9099 021 0160.



Summary:

Part Name	Original version	New version	Key	Rem.	WG	MAM H	MAM V
Air deflector	1121 084 1405	---	1	1)			
Blanking plate kit	1121 007 1007	---		1)			
Air deflector kit	---	1121 007 1007		2)	7580	1	1
included in each of above:							
Blanking plate	-*-	-*-	2	3)			
Air deflector assy.	---	1121 080 3000	3	4)	5080	1	10
Socket head screw M 5 x 16	9022 341 0980	9022 341 0980	4				
Hose	1121 084 7300	1121 084 7300	5				
Shroud	---	1121 080 1602	6	5)	5080	1	1
including:							
Rubber cover	---	1121 084 1601	7		5080	1	1
Plug	---	1121 791 1400		6)			

Modification to be introduced: in progress

Remarks:

1) Original part is no longer available from the factory.

2) Special accessory for machines up to No. X 14 701 713 .

3) Not available as a separate item.

4) Special accessory for machines from No. X 14 701 714 .

5) Special accessory for temperatures below approx. $-20^{0}C$ ($-4^{0}F$).

6) Special accessory (see repair note).

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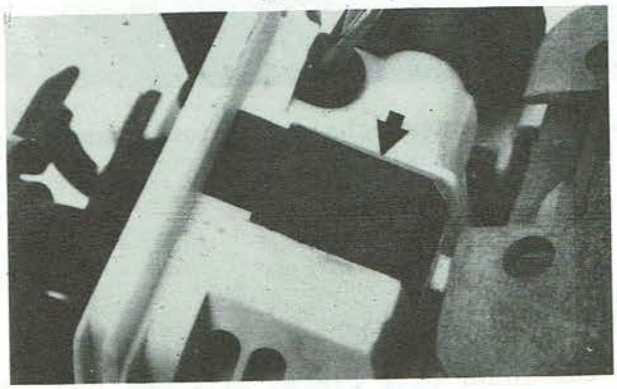
Service note:

The Rubber Cover, 1121 084 1601, can be bonded to the standard Shroud, 1121 080 1600, for operation in areas where the temperature only occassionally drops below $-20^{0}C$ ($-4^{0}F$). This, combined with the intake preheating kit, further improves the flow of warm intake air.

To bond the rubber cover in position, remove the shroud and clean and degrease the area where the adhesive is to be applied. Use an adhesive which is heat resistant up to about $+60^{0}C$ ($140^{0}F$) to obtain a durable bonded joint. The shroud can be used with the rubber cover in position all year round.



Notes on repairs:

The catch in the tank housing will be damaged if force is used to pry the Flap, 1121 791 1300 (carburetor preheating), out of its seat in the tank housing, i.e. without pressing down the sprung tongue. The flap will not snap into position when it is refitted and remains loose.

In such a case, the Sealing Plug, 1121 791 1400 (special accessory), can be fitted in place of the flap to avoid having to replace an otherwise intact tank housing. The plug completely seals the opening and has to be removed when carburetor preheating is required.

2. Frontal chain tensioner (Wood Boss):

The frontal chain tensioner will be reintroduced as a favorably priced alternative on the Wood Boss versions of model 024 saws from machine number X 15 548 174 . The new Tensioning Screw, 1121 664 1600, and Tensioner Slide, 1121 640 1900, have been adapted to suit the crankcase with lateral chain tensioner. The Thrust Pad, 1125 664 1400, is used in both the frontal and lateral chain tensioners.

Furthermore, the Chain Sprocket Cover, 1125 648 0402, and Guard, 1125 656 1500, will be replaced by a new sprocket cover with an integrally cast chip guide. The original sprocket cover and guard can also be fitted to these machines. This simplifies inventories. The new sprocket cover, with integrally cast chip guide, is not available as a spare.

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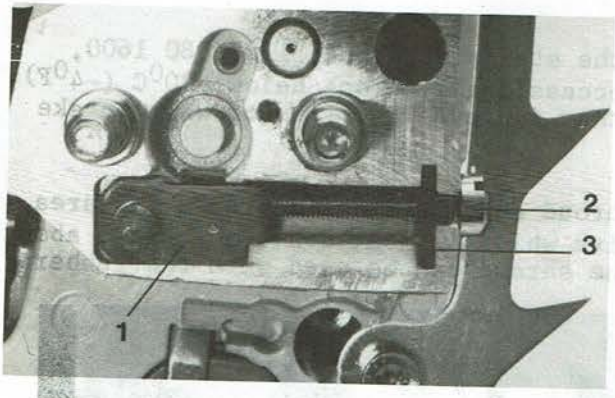
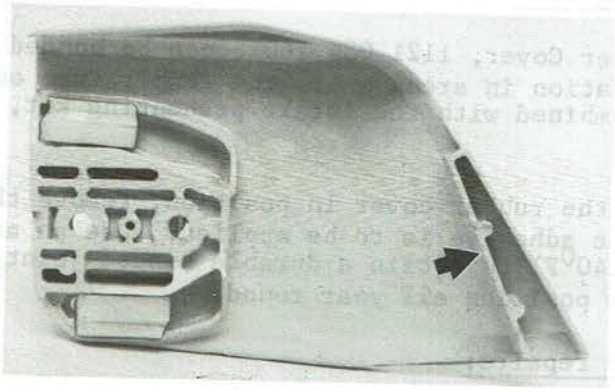


Parts of frontal chain tensioner mounted:
1 = Tensioner slide
2 = Tensioning screw
3 = Thrust pad



New chain sprocket cover, with integrally cast chip guide, for Wood Boss versions

Notes on repairs:

If the Inner Side Plate, 1122 664 1000, is fitted on the crankcase in place of the Bumper Strips, 1121 648 6610, the Cover, 1121 021 1100, must be replaced by Cover, 1121 021 1101.

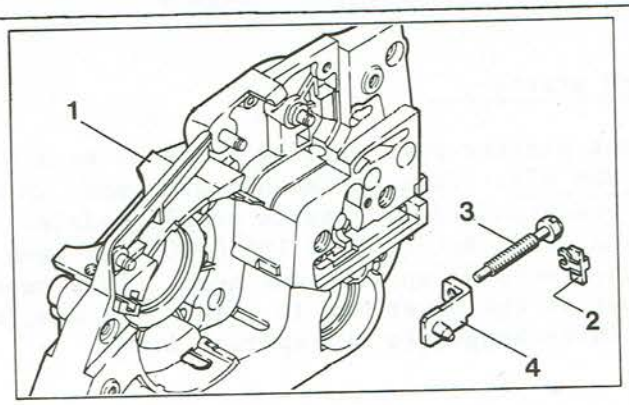
Summary:

Part Name	Original version	New version	Key	Rem.	WG	MAM H	MAM V
Tensioning screw	1125 664 1600	1121 664 1600		1)	5660	1	1
Tensioner slide	1125 640 1900	1121 640 1900		1)	5640	1	1
Thrust pad	1125 664 1400	1125 664 1400		1)			
Spur gear	1125 663 3200	---					
Cover plate	1125 664 2200	---					
Pan head screw M 4 x 8 (2x)	9041 216 0630						

Modification to be introduced: from machine No. X 15 548 174 .

Remark:

1) Parts included in Chain Tensioner Parts Kit, 1121 007 1021



3. Crankcase kit with chain tensioner:

For some time the crankcase kit with Chain Tensioner, 1121 007 1009, has contained the parts of the new frontal chain tensioner instead of those of the lateral chain tensioner (T.39.85). The parts of the new chain tensioner have been adapted to suit the crankcase for the lateral chain tensioner and are available in a Chain Tensioner Parts Kit, 1121 007 1021.

This change, reduces to a minimum, the work involved in replacing a crankcase with the original-type frontal chain tensioner.

Summary:

Part Name	Original version	New version	Key	Rem	WG	MAM H	MAM V
Crankcase kit with chain tensioner consisting of:	1121 007 1009	1121 007 1009					
Crankcase, complete with bearings	1121 020 2107	1121 020 2107	1				
Collar stud (2x)	0000 953 6605	---					
Thrust pad	1125 664 1400	1125 664 1400	2	1)			
Tensioning screw	1125 664 1600	1121 664 1600	3	1)	5660	1	1
Tensioner slide	1125 640 1900	1121 640 1900	4	1)	5640	1	1
Side plate	1122 664 1000	---					
Chain sprocket cover	1125 648 0402	---					
Guard	1125 656 1500	---					
Self-tapping screw	9039 488 0340	---					
Hex. nut	0000 955 0801	---					
Pan head screw M 4 x 8	9041 216 0630	---					
Cover plate	1125 664 2200	---					
Spur gear	1125 664 3200	---					
Cover	1121 021 1101	---					

Modification to be introduced: in progress

Remarks:

1) Parts included in Chain Tensioner Parts Kit, 1121 007 1021

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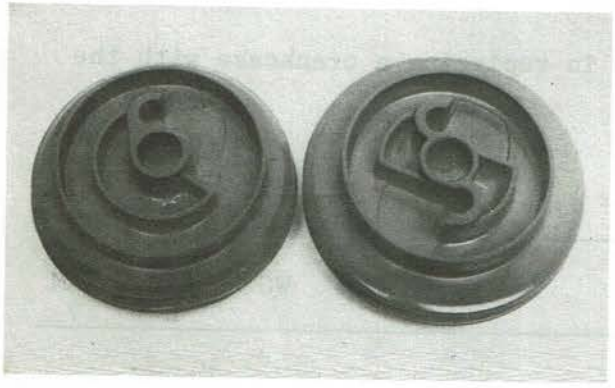
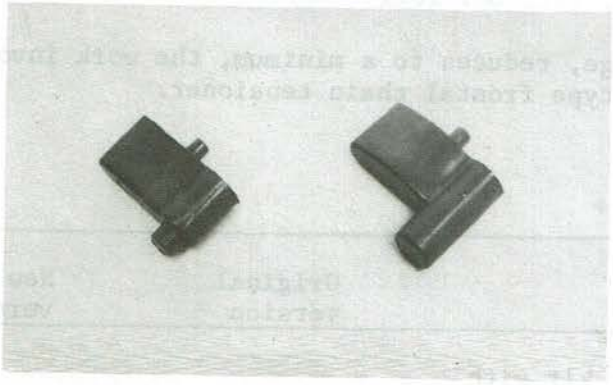
4. Rewind starter:

The present starter pawl will be replaced by a new Pawl, 1125 195 7200, from machine No. X 15 806 979. This change has been made in the interests of improving the starter's function and standardizing parts on all models. The new pawl has a longer guide pin. In addition, Rope Rotor, 1120 195 0400, has been replaced by a new version, 1125 195 0401, with a second "spare" pawl seat. This means the pawl can now be fitted in the second seat if the other one is worn. The new, modified parts and the original parts are not interchangeable as separate items.



Left: Original rope rotor
Right: New rope rotor



Left: Pawl, 1118 195 7200
Right: Pawl, 1125 195 7200

A new Rope Rotor/Pawl Kit, 1121 007 1020, will be supplied as a replacement for the original Rope Rotor, 1120 195 0400, up to the end of 1987. This is to ensure that the new pawl is installed, together with the new rope rotor, on model 024 saws. The new rope rotor is, however, also available as a separate item.

The Repair Kit, 1121 900 5000, available as a special accessory, contains the original and new starter pawls and will remain so equipped up to the end of 1190.

Summary:

Part Name	Original version	New version	Key	Rem.	WG	MAM H	MAM V
Rope rotor/pawl kit consisting of:	---	1121 007 1020			5000	1	1
Rope rotor	1120 195 0400	1125 195 0401		1)	5190	1	1
Pawl	1118 195 7200	1125 195 7200		2)	5190	10	100

Modification to be introduced: from machine No. X 15 806 979 .

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Remarks:

1) New rope rotor/pawl kit will be supplied as a replacement for present rope rotor after factory stocks have been exhausted.

2) Original part remains available as a spare.

NOTE: T.I.37 & T.I. 38, 1986 apply to limited market areas and are therefore not being released on a general basis.

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Technical Information

STIHL®

T.33.85
(T. 30. 85.)

Engineering Changes on Model 024 Chain Saws (Series 1121)

1. Winter operation
2. Shroud
3. Oil pump
4. Friction pad
5. Insulating tube

1. Winter operation:

The gasoline engines in Stihl chain saws are designed to operate in a wide range of conditions (i.e. in air temperatures of +45 °C to -40 °C /115 °F to -40 °F). However, as on all other carburetor engines, (i.e. even those in motor vehicles), running problems can be experienced in winter operation. The cause of these problems is usually carburetor and air filter icing. This can occur at temperatures above freezing (from about +10 °C/50 °F, depending on humidity). The reason for this is the high flow speed of the intake air which extracts heat from the components it flows through (air filter and carburetor). The devices, components and measures described below create the prerequisites for trouble-free winter operation of model 024 chain saws.

1.1 Carburetor preheating:

A carburetor preheating system has been developed for the 024 to optimize running behavior and help prevent carburetor icing. It will be installed as standard equipment on saws with heated handles from machine number X 14 701 714 and on all other versions in the future.

It features a flap in the tank housing which can be opened to change the air flow to the carburetor so that heated air is drawn in from around the cylinder. This has required changes to the following parts - some of which have been given new part numbers:

The tank housing now has a rectangular opening at the top of the carburetor box. This opening is covered by a spring steel flap which can be opened as required, i.e. with a screwdriver.

Flap in Tank Housing, 1121 350 0801

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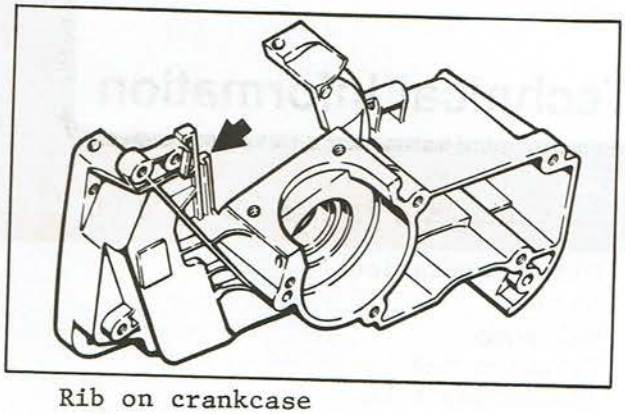
Only the new Tank Housing, 1121 350 0801, with Flap, 1121 791 1300, will be supplied as a replacement in the future.

There is now a rib on the Crankcase, 1121 020 2106, at the fan side (below the annular buffer mounting). The purpose of this rib is to divert the cold intake air over the outside surface of the cylinder so that it is heated. Moreover, the rib functions as a guide for the new Air Deflector, 1121 084 1405, (see 1.2). Any existing stocks of the original crankcase can be used up.



Rib on crankcase

Summary:

	Original version	New version	Remarks
Crankcase	1121 020 2106	1121 020 2106	1)
Tank housing including:	1121 350 0800	1121 350 0801	1)
Flap	---	1121 791 1300	

All other parts are as before.

1) Only the new parts will be supplied as spare parts in the future.

1.2 Intake air preheating kit:

In connection with the introduction of the carburetor preheating system, the previous Intake Air Preheating Kit, 1121 007 1000, will be deleted and replaced by Kit, 1121 007 1006. The new kit now consists of the carburetor box cover with seal, the cover plate for the fan housing and the necessary fastening screws. The previous air control cover (polymer) has been deleted from the kit.

Furthermore, the Prefilter, 1121 084 0810, will be included with the Carburetor Box Cover, 1121 140 1905, for intake air preheating.

If carburetor icing occurs in extremely cold conditions in spite of carburetor preheating and the intake air preheating kit, the situation can be corrected by fitting the new Air Deflector, 1121 084 1405. This air deflector is installed as standard on saws with heated handles and special Scandanivia versions, but is only available as an option for other saws.

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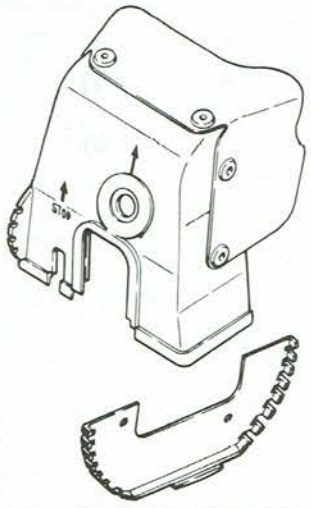
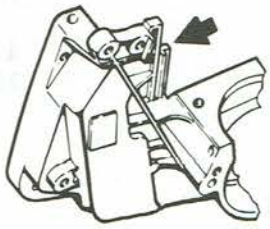
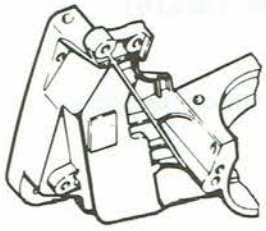
Intake air preheating kit	Special accessory for machines with: Crankcase version
	Air deflector 1121 084 1405  
	Air control cover 1121 080 0900  

Air Deflector, 1121 084 1405, can be used on machines from number X 14 701 714 providing the latest type crankcase is fitted (see 1.1). The Air Control Cover, 1121 080 0900, previously included in the intake air preheating kit, remains available as a special accessory for machines up to number X 14 701 713 as well as machines with crankcases that have no integrally cast rib.

A Blanking Plate Kit, 1121 007 1007, is available to enable the new Air Deflector, 1121 084 1405, to be installed in these machines. The blanking plate is necessary to give the crankcase the contour required to use the air deflector. Assembly instructions are included with each kit.

Cover plate fitted

Summary:

	Original version	New version	Key	Remarks
Intake air preheating kit including items 1 and 4	1121 007 1000	---		1)
Intake air preheating kit including items 1,2,3	---	1121 007 1006		

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	Original version	New version	Key	Remarks
Carburetor box cover including:	1121 140 1905	1121 140 1905	1	
Prefilter	---	1121 124 0810	2	
Self-tapping screw(2.6x6.5)	---	9099 021 0160	3	
Air control cover including:	1121 080 0900	---	4	2)
Retaining pin	1121 084 7200	---	5	
Retaining pin	1121 084 7201	---	6	3)
Air deflector	---	1121 084 1405		4)
Blanking plate kit including:	---	1121 007 1007		
Socket head screws (M5x16)	---	9022 341 0980		
Hose	---	1121 084 7300		

All other parts are as before.

Remarks:

1) Previous version no longer available. Any existing stocks can be updated to match new version by removing the air control cover and installing the prefilter.

2) Remains available as a special accessory.

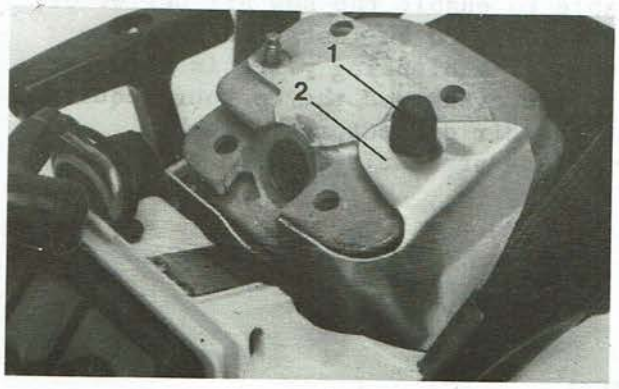
3) This retaining pin (slightly larger diameter) is intended only for attachment of the air control cover to the latest-type cylinders on which the diameter of the mounting holes has been increased from 6mm to 7mm (0.24 in. to 0.28 in.).

4) Special accessory for machines with crankcase having integrally cast rib. Blanking Plate Kit, 1121 007 1007, is necessary to fit air deflector on machines with crankcase that have no rib.

1.3 Notes for service and users:

To fit the air deflector, first remove the carburetor box cover, release the slotted nut and take off the shroud. Pull off the spark plug terminal and unscrew the spark plug.

Remove the cap (1) from the stud and slide the air deflector (2) downward between the cylinder and carburetor box cover. It is important to ensure that the stud projects through the bore and the air deflector is held by the rib on the crankcase.



Air deflector fitted.

Refit the cap and assemble the other parts in the reverse sequence. Installation of the air control cover is described in detail in T.12.85.

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Generally speaking, the air deflector and air control cover can be left in place during the summer. However, it is advisable to remove them in case of high outside temperatures or high loads.

The carburetor preheating flap must be closed at temperatures above approx. +20 °C (70 °F) since vapour locks might otherwise form in the fuel and thus impair engine running behavior.

Opening flap

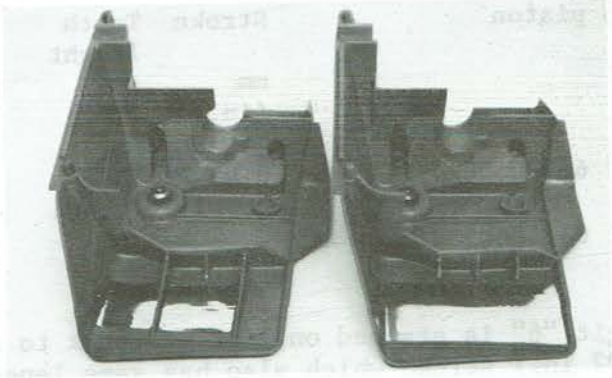
Closing flap

The Cover Plate, 1121 084 8200, in intake air preheating kit, may be fitted only at outside temperatures below approx. -10 °C (+14°F) when working in powder or drifting snow. If it is left in place at higher outside temperatures, it can impair engine running behavior and cause overheating.

2. Shroud:

As a result of the delction of two ribs on the inside of the Shroud, 1121 080 1600, one Reflector Foil, 1119 084 8300, will be fitted from machine number X 14 306 564 in place of the two Reflector Foils, 1121 084 8300, previously used.

Only Reflector Foil, 1119 084 8300, will be supplied as a spare in the future. The foil is simply cut into three pieces for use in ribbed shrouds.



Shroud, 1121 080 1600
Left: Original version
Right: New version

Summary:

	Original version	New version
Shroud	1121 080 1600	1121 080 1600
including: Reflector foil	1121 084 8300 (2x)	1119 084 8300 (1x)

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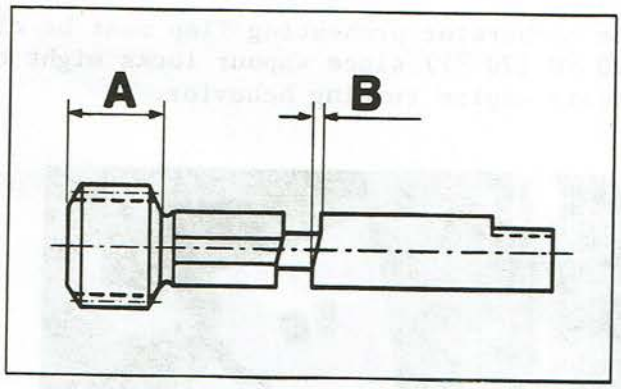
3. Oil pump:

A new version of the Pump Piston, 1121 647 0600, has been in production for some time. It has a stroke of 0.55 mm (0.02 in.) instead of 0.65mm (0.025 in.). In the future, only pump pistons with a 0.5mm (0.02 in.) stroke will be supplied as spares under this part number. The oil feed rate obtained with this piston is approx. 5 cc/min (0.17 fl. oz/min). This change-over to a 0.5mm (0.02 in.) stroke reduces the consumption of chain oil and helps protect the environment.



A = Tooth length
B = Stroke

If a higher oil feed rate is required, i.e. for ripping or very dry wood, the original pump piston (0.65mm/0.025 in. stroke) is available as a special accessory under the new part number, 1121 647 0605.

Service note:

The following table simplifies identification of the various pump pistons:

	Original version		Present version		Future version	
Pump piston	Stroke mm (in.)	Tooth lenght mm (in.)	Stroke mm (in.)	Tooth length mm (in.)	Stroke mm (in.)	Tooth length mm (in.)
1121 647 0600	0.65 (0.025)	11.8 (0.46)	0.5 (0.02)	7.8 (0.31)	0.5 (0.02)	7.8 (0.31)
1121 647 0605	-	-	0.65 (0.025)	11.8 (0.46)	0.65 (0.025)	7.8* (0.31)

*Digit "6" is stamped on flat of shank to avoid confusion with version with 0.5mm (0.02 in.) stroke which also has same length of tooth.

Summary:

	Original version	New version
Oil pump assembly including:	1121 640 3200	1121 640 3200
Pump piston (0.65m/0.025 in. stroke)	1121 647 0600	---
Pump piston (0.5mm/0.02 in. stroke)	---	1121 647 0600
Pump piston (0.65mm/0.25 in. stroke)	---	1121 647 0605 (special accessory)

all other parts are as before.

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4. Friction pad:

An integrally cast rib on the crankcase now prevents sawdust accumulating in the area of the lower friction pad. For this reason, the original Friction Pad, 1121 648 6605, (with lug) will be replaced by Friction Pad, 1121 648 6610.

Only Friction Pad, 1121 648 6610, will be supplied as a replacement in the future. This means that the crankcase and chain sprocket cover are equipped with four identical friction pads. Any existing stocks of Friction Pad, 1121 648 6605, can be used up irrespective of the crankcase.

Summary:

	Original version	New version
Friction pad (with lug)	1121 648 6605	---
Friction pad	1121 648 6610 (3x)	1121 648 6610 (4x)

5. Insulating tube:

The ignition and ground leads are fitted on an approx. 50mm (2 in.) long insulating tube to protect them from damage. For reasons of standardization, the present Tube, 1121 442 0401, will be replaced by the nominally longer version, 1119 405 8000, as soon as existing stocks have been exhausted.

Summary:

	Original version	New version
Insulating tube (50mm/2 in.)	1121 442 0401	---
Insulating tube (52mm/2.05 in.)	---	1119 405 8000

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Technical Information

STIHL®

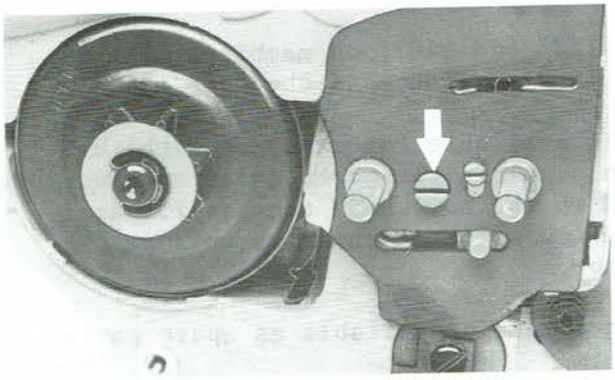
T.39.85

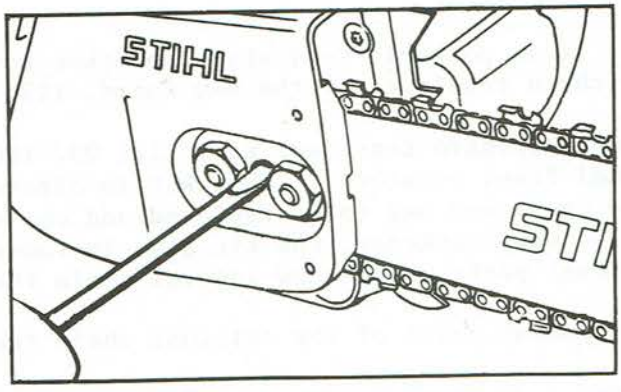
Engineering Changes on Model 024 Chain Saws (Series 1121)

1. New lateral chain tensioner
2. Shroud mounting
3. Brace on handlebar

1. New lateral chain tensioner:

The new chain tensioner will be introduced on model 024 chain saws from machine number X 15 039 262. As on the 034, lateral access to the tensioner through the sprocket cover further improves operator convenience by making chain tensioning much easier.





New lateral chain tensioner

The crankcase had to be modified in the area of the bar mounting face to facilitate installation of the lateral chain tensioner. A new sprocket cover with an additional lateral hole is also installed. The contour of the cover on the chain brake has been modified to suit the new side plate.

In the future, only the new Crankcase, 1121 020 2107, will be supplied as a spare part in the place of the original Crankcase, 1121 020 2106. The present chain sprocket Cover, 1119 648 0400, will be superseded by 1125 648 0402, but remain available as an alternative for machines with the original chain tensioner. The new Cover, 1121 021 1101, replaces Cover, 1121 021 1100, which no longer is available.

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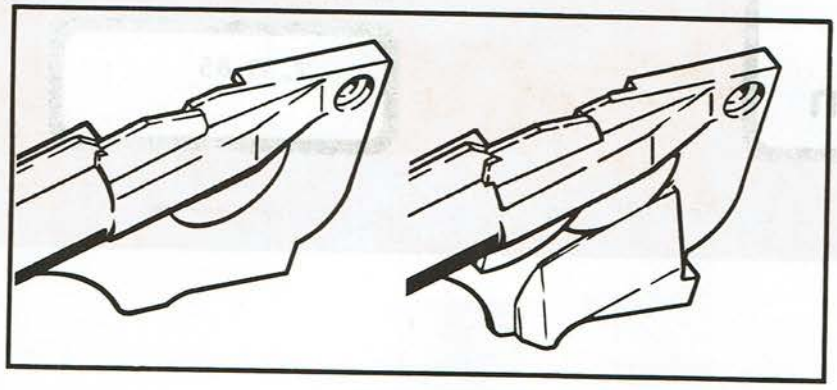
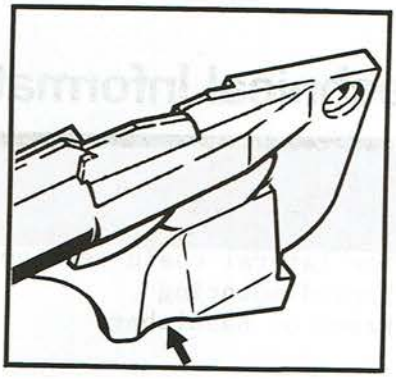


Cover, 1121 021 1100
Left: Original version
Right: Interim version



Cover, 1121 021 1101 (new, with modified contour to locate side plate)

Note: It is possible to install sprocket Cover, 1125 648 0402, on machines with a front chain tensioner if the new Guard, 1125 656 1500 is fitted at the same time.

A crankcase/chain tensioner Kit, 1121 007 1009, is available for machines with the original front tensioner. This kit is offered to simplify the parts ordering procedure when a crankcase has to be replaced and converted to the new chain tensioner. Apart from the new crankcase, the kit also includes the new sprocket cover as well as the individual parts of the new lateral chain tensioner.

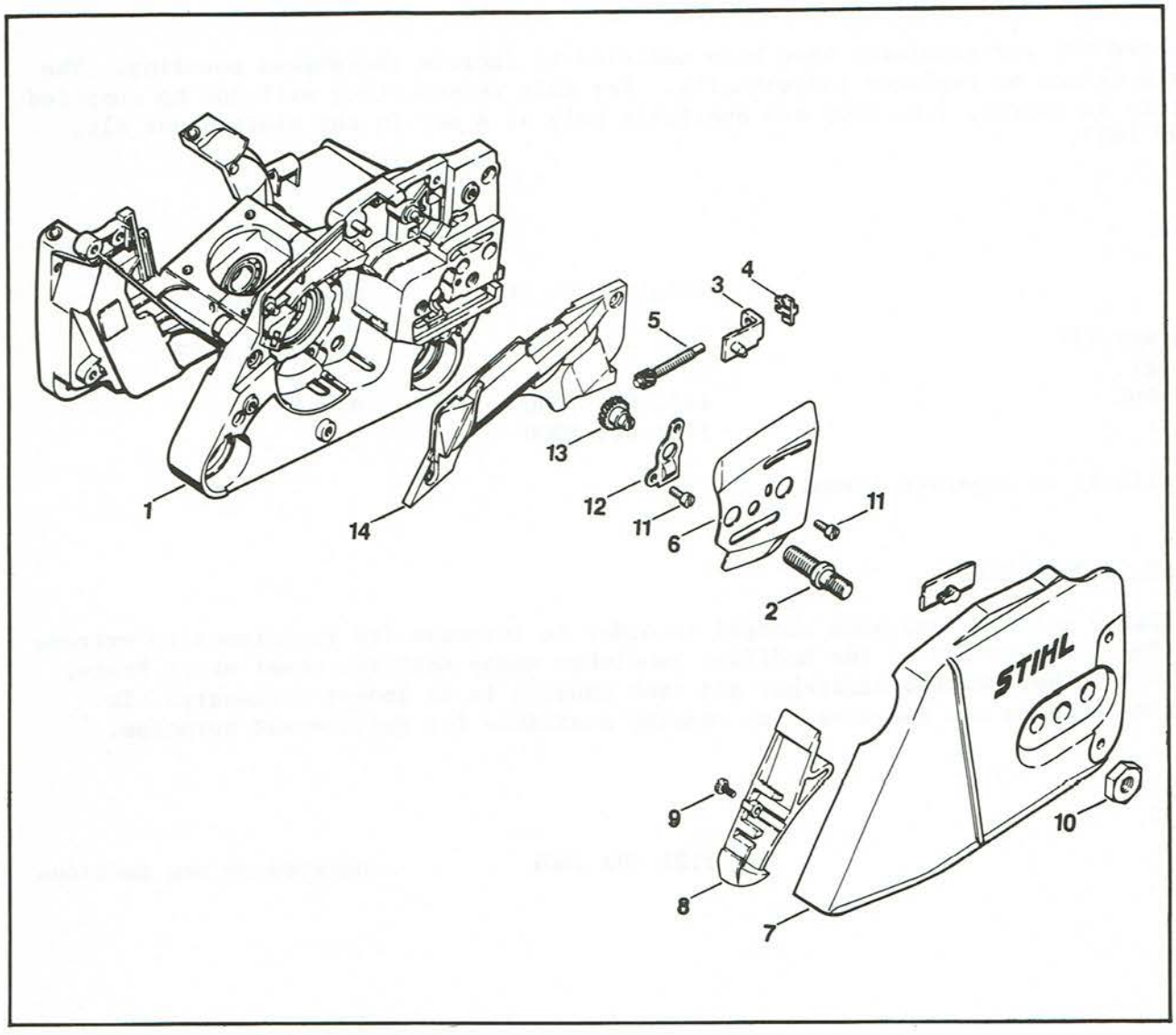
The component parts of the original chain tensioner remain available as spare parts.

Summary:	Original version	New version	Key
Crankcase, complete with bearings	1121 020 2106	1121 020 2107*	1
Collar screw	0000 953 6605 (1x)	0000 953 6605 (2x)	2
Collar screw	1121 664 2400	---	
Tensioning nut	1120 664 1500	---	
Tensioner slide	---	1125 640 1900	3
Guide	1121 664 2800	---	
Thrust pad	---	1125 664 1400	4
Pan head screw (M5x50x35)	9043 319 8100	---	
Tensioning screw	---	1125 664 1600	5
Bumper strip	1121 648 6610 (4x)	1121 648 6610 (2x)	
Side plate	---	1122 664 1000	6
Chain sprocket cover	1119 648 0400	1125 648 0402	7
Guard	1121 656 1500	1125 656 1500	8
Self-tapping screw	9039 488 0340	9039 488 0340	9

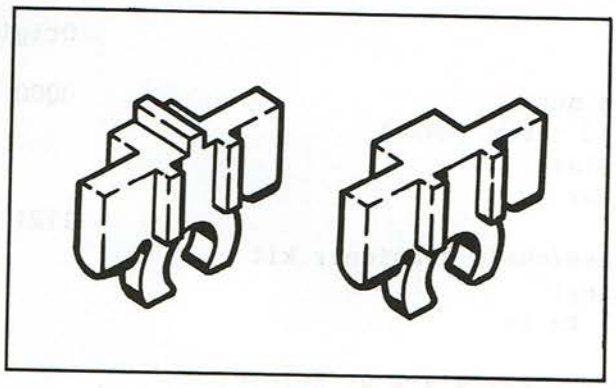
....

	Original version	New version	Key
Hexagon nut	0000 955 0801 (1x)	0000 955 0801 (2x)	10
Pan head screw (M4x8)	---	9041 216 0630 (3x)	11
Cover plate	---	1125 664 2200	12
Spur gear	---	1125 664 3200	13
Cover	1121 021 1100	1121 021 1101	14
Crankcase/chain tensioner kit	---	1121 007 1009	
including:			
Items 1 to 14			

*Component parts are as before.



Service note: In connection with the introduction of the side plate, the Thrust Pad, 1125 664 1400, adopted from model 034 now has no rib (see illustration). If a replacement thrust pad with rib is installed, it would prevent the side plate locating properly against the crankcase. Only thrust pads without ribs will be supplied as spare parts in the future. This also applies to model 034.



Thrust Pad, 1125 664 1400
Left: Original version
Right: New version

2. Shroud mounting:

The slotted nut and insulator have been modified to improve the shroud mounting. The new parts cannot be replaced individually. For this reason, they will not be supplied separately as spares, i.e. they are available only as a set in the slotted nut Kit, 1125 007 1007.

Summary:

	Original version	New version
Slotted nut kit including:	---	1125 007 1007
Slotted nut	1121 084 7000	*
Insulator	1121 084 6900	*

*Not available as separate items.

3. Brace on handlebar:

The handlebar material has been changed in order to increase its resistance to extreme loads. The introduction of the modified handlebar means that the sheet steel Brace, 1121 791 7601, between the handlebar and tank housing is no longer necessary. It has been deleted on new machines, but remains available for replacement purposes.

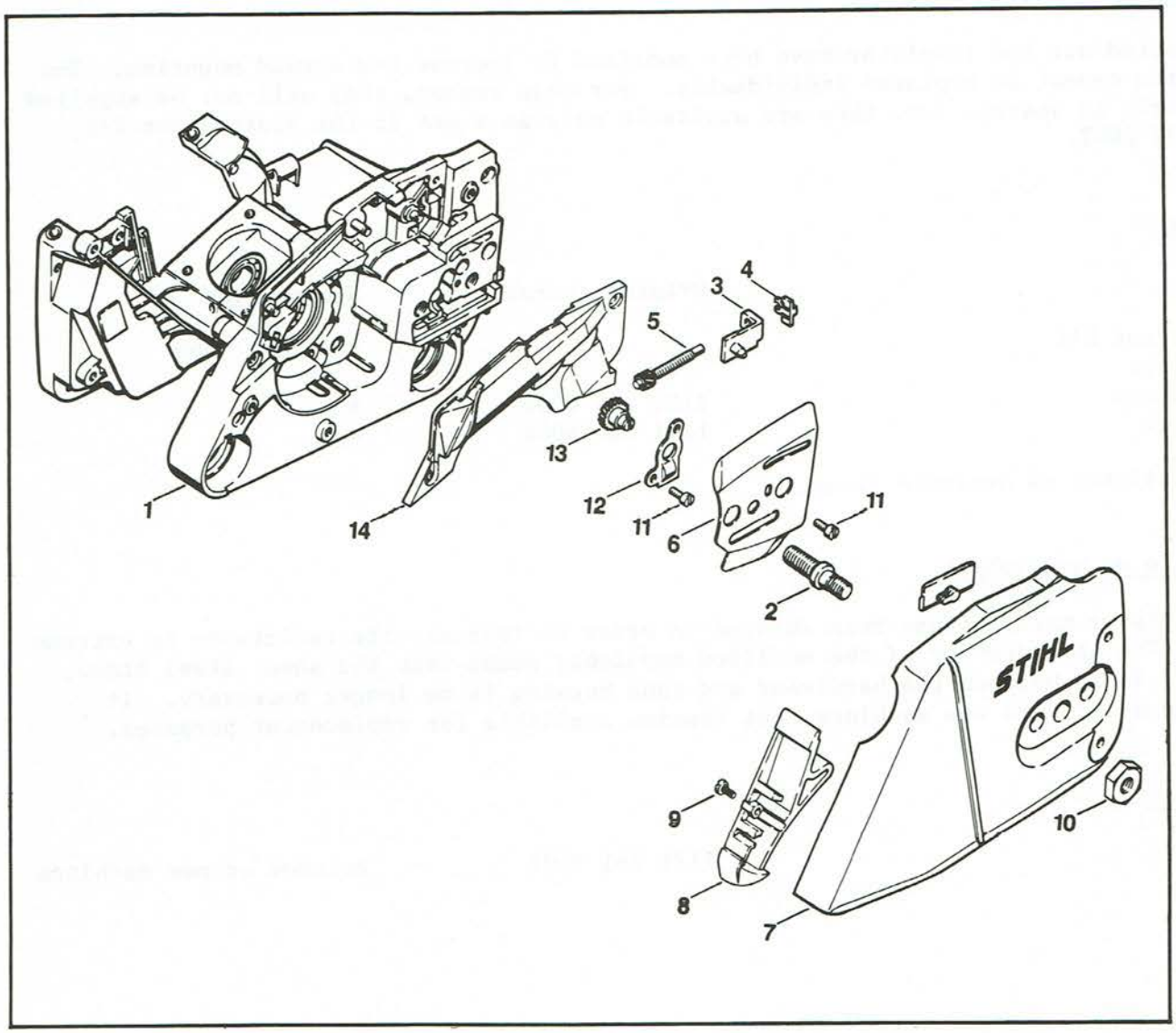
Summary:

Brace	1121 791 7601	deleted on new machines

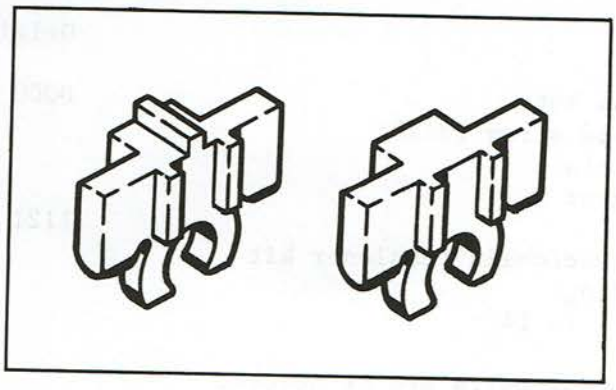
U/TSM: tc
(1306)

	Original version	New version	Key
Hexagon nut	0000 955 0801 (1x)	0000 955 0801 (2x)	10
Pan head screw (M4x8)	---	9041 216 0630 (3x)	11
Cover plate	---	1125 664 2200	12
Spur gear	---	1125 664 3200	13
Cover	1121 021 1100	1121 021 1101	14
Crankcase/chain tensioner kit including:	---	1121 007 1009	
Items 1 to 14			

*Component parts are as before.



Service note: In connection with the introduction of the side plate, the Thrust Pad, 1125 664 1400, adopted from model 034 now has no rib (see illustration). If a replacement thrust pad with rib is installed, it would prevent the side plate locating properly against the crankcase. Only thrust pads without ribs will be supplied as spare parts in the future. This also applies to model 034.



Thrust Pad, 1125 664 1400
Left: Original version
Right: New version

2. Shroud mounting:

The slotted nut and insulator have been modified to improve the shroud mounting. The new parts cannot be replaced individually. For this reason, they will not be supplied separately as spares, i.e. they are available only as a set in the slotted nut Kit, 1125 007 1007.

Summary:

	Original version	New version
Slotted nut kit including:	---	1125 007 1007
Slotted nut	1121 084 7000	*
Insulator	1121 084 6900	*

*Not available as separate items.

3. Brace on handlebar:

The handlebar material has been changed in order to increase its resistance to extreme loads. The introduction of the modified handlebar means that the sheet steel Brace, 1121 791 7601, between the handlebar and tank housing is no longer necessary. It has been deleted on new machines, but remains available for replacement purposes.

Summary:

Brace	1121 791 7601	deleted on new machines

U/TSM: tc
(1306)

Technical Information

STIHL®

T.12.85
(T.6.85)

Engineering Changes in Stihl's Model 024 Chain Saws (Series 1121):

1) Carburetor
2) Switch shaft, carburetor box cover
3) Piston
4) Fan housing
5) Intake air preheating kit
6) Air filter

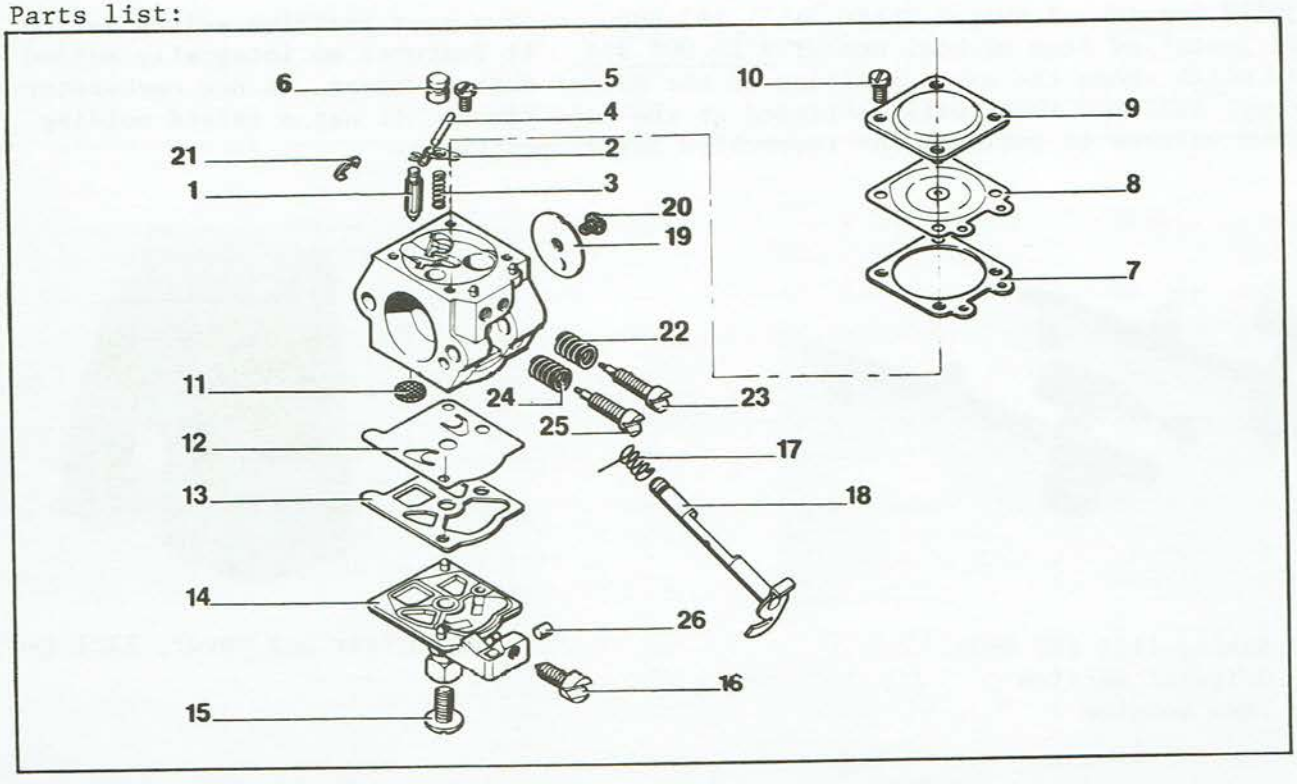
1. Carburetor:

The present Carburetor, 1121 120 0600 (Tillotson HU 54) will be deleted on the 024 AVEQZ (with fire-safe muffler) from machine number X 14000 464 and replaced by the new Carburetor, 1121 120 0601 (Walbro WT 22). The original and new carburetors are fully interchangeable as complete units.

Note:

This new carburetor has been installed on the 024 AVSEQZ (with fire-safe muffler) since production started.

Parts list:



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		Key
Carburetor WT 22:	1121 120 0601	
including:		
Inlet needle	1110 121 5100*	1
Inlet control lever	1113 121 5000*	2
Spring	1114 122 3005	3
Spindle	1113 121 9200*	4
Round head screw	1114 122 7400	5
Valve jet	1120 121 5405	6
Gasket	1120 129 0900	7
Metering diaphragm	1113 121 4705	8
Cover	1113 121 0800*	9
Round head screw	1106 122 7400*	10
Strainer	1114 121 7800	11
Pump diaphragm	1120 121 4805	12
Gasket	1120 129 0905	13
Cover	1121 121 0805	14
Oval head screw	1114 122 7100	15
Idle speed adjusting screw	1121 122 6205	16
Torsion spring	1118 122 3200	17
Throttle shaft with lever	1121 120 7105	18
Throttle shutter	1121 121 3300	19
Round head screw	1106 122 7400*	20
Circlip	1117 122 9000	21
Spring	1110 122 3030	22
Low speed adjusting screw	1120 122 6805	23
Spring	1106 122 3000*	24
High speed adjusting screw	1118 122 6700	25
Ball	1121 122 4200	26

*Part also used in Carburetor, 1121 120 0600.

2. Switch shaft, carburetor box cover:

A modified version of Switch Shaft, 1121 182 0900, with a more positive switch action, will be installed from machine number X 14 006 964. It features an integrally molded pointer which shows the exact position of the Master Control Lever. A new carburetor box Cover, 1121 140 1901, will be fitted at the same time. It has a raised molding with four notches to indicate the respective switch positions.

Switch Shaft, 1121 182 0900.
Left: Original version
Right: New version

Carburetor box Cover, 1121 140 1901

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Only the new versions of the switch shaft and carburetor box cover (once existing factory stocks are used up) will be supplied as spare parts in the future.

Note:

If you fit the new type switch on a machine with the original-type carburetor box cover, it is advisable to cut off the integrally molded pointer (e.g. with side cutters). If this is not done, the Master Control Lever might catch on brush, branches or clothing and be moved accidentally to another position. Smooth the cut with a flat file.

The new carburetor box Cover, 1121 140 1901, includes the complete twist lock with catch, as well as the prefilter, and can, therefore, be fitted without further preparation.

Summary:

	Original version	New version
Carburetor box cover including:	1121 140 1900	1121 140 1901
Prefilter	1121 124 0810	1121 124 0810
Self-tapping screw (2.2x6.5)	9099 021 0160	9099 021 0160
Twist lock	---	1121 141 2300
Helical spring	---	0000 997 1335
Catch	---	1121 141 2100
Self-tapping screw	---	9099 021 2770
Instruction plate	---	1118 967 3501

3. Piston:

The present Piston, 1121 030 2000, will be replaced in the near future by Piston, 1121 030 2005. This change is directly related to the introduction of the "Super" version (see T.1.85). Once existing factory stocks have been used up (on non-Super machines), the new piston will also be used in Cylinder/Piston Assy., 1121 020 1201 (for Super machines). Slight modifications have been made to enable this piston to be used as a universal replacement for all saw versions.

Left: Original piston
Right: New piston

...

Compared with the present piston, the following details are different on Piston, 1121 030 2005.

a) Recesses on webs below piston bosses.
b) Inside chamfer on bottom of piston skirt.
c) Assembly groove for snap rings on piston boss.

Summary:

	Original version	New version
Cylinder with piston[1] including:	1121 020 1200	1121 020 1200
Piston	1121 030 2000	1121 030 2005
Cylinder with piston[2] including:	1121 020 1201	1121 020 1201
Piston	1121 030 2000	1121 030 2005

All other parts are as before.

[1] For 024 AVEQ

[2] For 024 AVSEQ

4. Fan housing:

In the future, the Fan Housing, 1121 080 1800, will come with an integrally molded steel insert in the starter post. The higher strength of this insert increases the wear resistance of the groove for the spring clip and therefore increases the starter mechanism's reliability.

Only the new version of the fan housing will be supplied as a spare part when this change is introduced on the production line.

5. Intake air preheating kit:

The Air Deflector, 1121 084 1400, previously included in the kit, will be replaced by a new Air Control Cover, 1121 080 0900, in order to improve operating efficiency in extreme weather conditions.

The new air control cover and the original air deflector are fully interchangeable. The air control cover is pushed between the cylinder and carburetor box from above. It is important to ensure that the retaining pin (A) in the air control cover engages the hole to the right of the spark plug opening. The tab (B) on the air control cover must engage the underside of the third cylinder cooling fin at the fanwheel side. The lower edge (C) of the air control cover must be next to the base of the cylinder (see illustrations on following page).

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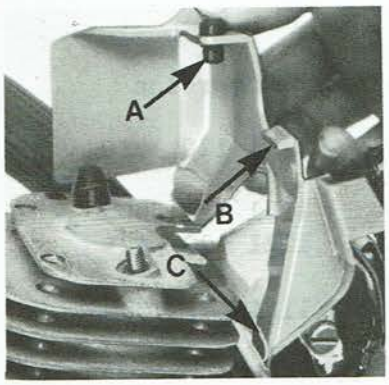
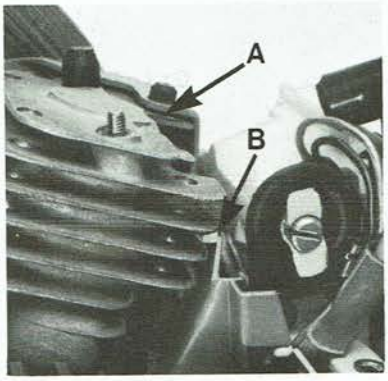
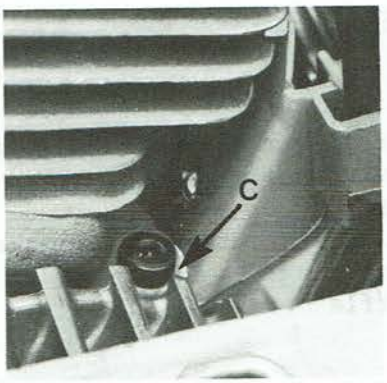






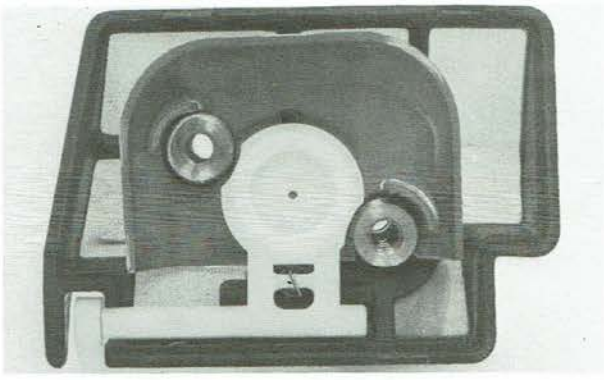
Summary:

	Original version	New version
Intake air preheating kit including:	1121 007 1000	1121 007 1000
Air deflector	1121 084 1400	---
Air control cover	---	1121 080 0900
including:		
Retaining pin	---	1121 084 7200

All other parts are as before.

6. Air filter:

A baffle will be fitted in the air filter on model 024 saws staring with machine number X 13 070 780. This Baffle, 1121 121 7000, is located in the area of the choke shutter, between the two halves of the air filter. It prevents the filter element from being "wetted" by fuel and thus extends filter life. Only air filter assemblies with this baffle will be supplied as spare parts in the future.



Baffle fitted in air filter

Service note:

The baffle can be retrofitted to all air filters.

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Summary:

	Original version	New version
Air filter assembly (wire mesh) including:	1121 120 1610	1121 120 1610
Baffle	---	1121 121 7000
Air filter assembly (flocked) including:	1121 120 1625	1121 120 1625
Baffle	---	1121 121 7000

All other parts are as before.

U/TSM:tc

(5105)

024

Technical Information

STIHL®

T.20.86

Engineering Changes on Model 024 Chain Saws (Series 1121)

1. Carburetor (HU 54, WT 22)
2. Carburetor preheating

1. Carburetor (HU 54, WT 22):

The low speed adjusting screw should be sealed with medium-strength threadlocking Fluid, 0786 111 1101 (LOCTITE 242), to improve engine idling behavior. This should be carried out on all carburetors (HU 54 and WT 22). The low speed adjusting screw is sealed in this way on all new model 024 saws and carburetors supplied from the factory.

Service note:

Procedure for sealing the low speed adjusting screw:

- Back off the low speed adjusting screw completely and then screw it in 2 to 3 full turns (caution: spring).
- Apply a drop of threadlocking fluid to the thread between the carburetor body and spring.
- Carefully turn low speed adjusting screw down onto its seat.
- Carry out basic carburetor setting.
- Fine-tune the carbutetor.

Caution: When blowing out the carburetor with compressed air, make sure that the threadlocking fluid in the screw threads is not blown toward the idle jet.

2. Carburetor preheating:

The benefits of carburetor preheating (see T.33.85) can be utilized on early machines without having to replace the tank housing. For this purpose, it is necessary to cut a hole in the tank housing at the point where the flap is fitted on the new tank housings.

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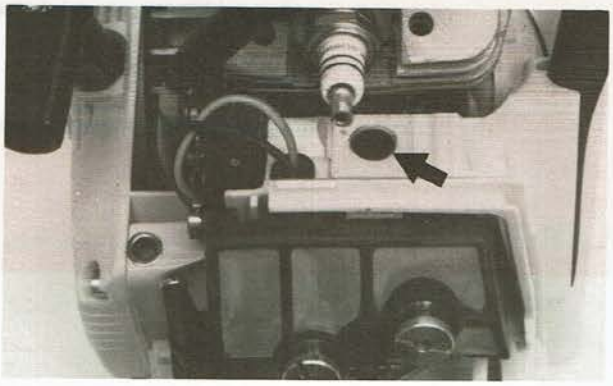
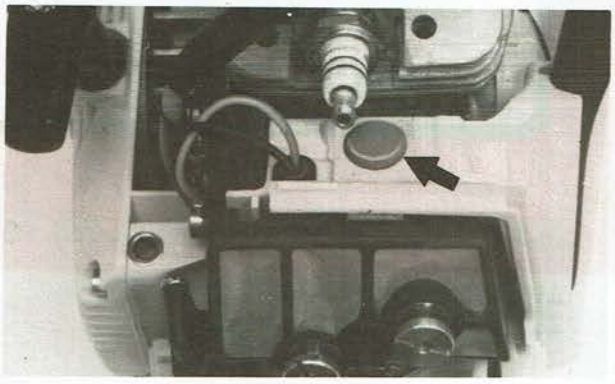
All previous tank housings (without built-in flap) can be modified in this way.

The hole must be sealed with Plug, 1110 145 9001, in warm weather conditions. It is best to take off the shroud to remove the plug with a screwdriver.



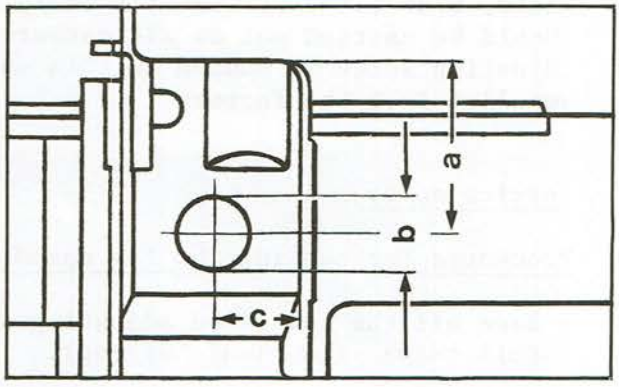
Reworked tank housing



Hole sealed with plug

Reworking tank housing:

- Remove the shroud and carburetor.
- Remove washer and take the sleeve out of the manifold.
- Seal the manifold (swarf, dirt).
- Modify the tank housing as shown.



a = 28 mm (1.10 in.)
b = 72 mm (0.47 in.)
c = 74 mm (0.55 in.)

U/TSM:tc

(7886)

024

Technical Information

STIHL®

T.53.86

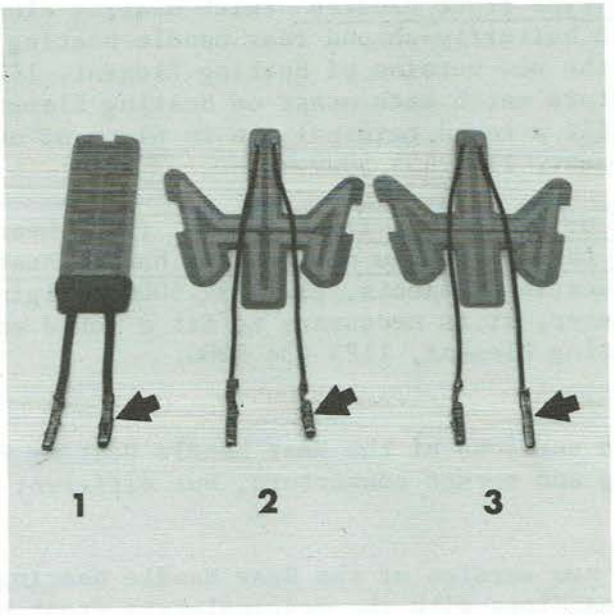
Engineering Changes on Model 024 Chain Saws (Series 1121)

Handle Heating System:

1. New heating element (front and rear handles):

The present heating elements, in the front and rear handles, will be replaced by new ones from machine nuber X 16 331 309. This change is designed to improve heating capacity and reliability. The two heating elements now have different resistances and connectors. The shape of the rear handle heating element has also been changed. This was necessary because the tank housing has been modified, in the area of the handle, to take account of a future engineering change.

The new front handle (with new heating element) can be identified by the fact that the insulating tube over the two connecting wires is now 130 mm (5 1/8 in.) long as opposed to the original 100 mm (4 in.).



1 = Hearing Element, 1121 434 5000 (original version)
2 = Heating Element, 1121 434 5000 (new version)
3 = New Heating Element, 1125 434 5000

1.1 Specifications of heating elements:

- Rear Handle Heating Element, 1121 434 5000 (original version): rectangular, resistance 0.3 Ohm, with 2 round sockets (item 1).

- Rear Handle Heating Element, 1121 434 5000 (new version): butterfly shape, resistance 0.25 Ohm, with 2 round sockets (item 2).

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- New Rear Handle Heating Element, 1125 434 5000: butterfly shape, resistance 0.25 Ohm, with 1 round socket and 1 round pin (item 3).

- Front handle with heating element (original version): resistance 2.2 Ohm, with 1 contact sleeve (for switch) and 1 round pin.

- Front handle with heating element (new version): resistance 1.6 Ohm, with 1 contact sleeve (for switch) and 1 round pin.

1.2 Wiring:

In the forseeable future, a hole will be provided in the front of the tank housing for the front handle connecting wires. This means it will be possible to fit the wires with the tank housing in position. On the new front handles (with 130 mm/ 5 1/8 in. insulating tube) the tube extends about 10 mm (3/8 in.) through the hole.

1.3 Service notes:

New-type front handles (with heating element R = 1.6 Ohm) may only be used together with butterfly-shaped rear handle heating elements (new Heating Element, 1125 434 5000 or the new version of Heating Element, 1121 434 5000). The two plug and socket connectors match each other on Heating Element, 1125 434 5000, whereas it is necessary to fit a round terminal pin in place of one round socket on the new version of Heating Element, 1121 434 5000.

The original-type front handle (with heating element R = 2.2 Ohm) may be combined with all three versions of the rear handle heating elememt. The plug and socket connectors on Heating Elements, 1121 434 5000 (original and new versions), fit this front handle; however, it is necessary to fit a round socket in place of the round terminal pin on Heating Element, 1125 434 5000.

Both versions of the Rear Handle Heating Element, 1121 434 5000, have exactly the same plug and socket connectors, but different resistances.

The new version of the Rear Handle Heating Element, 1121 434 5000, is intended for use on machines with the original-type front handle. This version of the heating element is not necessary for a repair if the round terminal pin of the new Heating Element, 1125 434 5000, if simply replaced by a round socket. The parts needed, i.e. round terminal sockets, are included in Electrician's Kit, 0000 007 1013. Crimping Tool, 5910 890 8210, is required to attach the terminals.

Important note: When bonding the rear handle heating element in position, make sure that the surface, in the tank housing, is completely free of grease. The whole area of the heating element must lie perfectly flat and crease-free.

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1.4 Parts availability:

Only the new version of the Rear Handle Heating Elements, 1121 434 5000 (butterfly shape, resistance 0.25 Ohm), will be supplied in the future.

Up to and including 1991, a Front Handle Kit, 1121 007 1015 (with new heating element R = 1.6 Ohm), will be supplied in place of the individual Front Handle, 1121 790 1711, with heating element. This kit includes a new Rear Handle Heating Element, 1125 434 5000.

1.5 Summary:

Part Name	Original version	New version	Key	Rem.	WG	MAM H	MAM V
Heating element -HG-	1121 434 5000	1125 434 5000	1	1)2)3)	5430	1	5
Front handle kit -W-	---	1121 007 1015		3)	5790	1	1
including:							
items 1 and 2: Front handle	1121 790 1711	1121 790 1712	2	2)3)	5790	1	1
including item 3:							
Insulating tube (100 mm long)	1118 442 0400	---					
Insulating tube (130 mm long)	---	1121 442 0403	3	2)	5440	1	10
Heating element -HG-	---	1125 434 5000	1	2)3)	5430	1	5

Modification to be introduced from machine No. X 16 331 309

Remarks:

1) Original part will continue to be supplied in modified form for older machines.

2) New part can also be used for older machines.

3) See "Service notes" and "Parts availability".

U/TSM:tc
(1147)