056

# Technical Information

STIHL®

T.1.81

ENGINEERING CHANGES ON THE STIHL 056 CHAIN SAW (SERIES 1115):

1) New wrap-around handle:
2) New hand guards:
3) New fire-safe muffler:

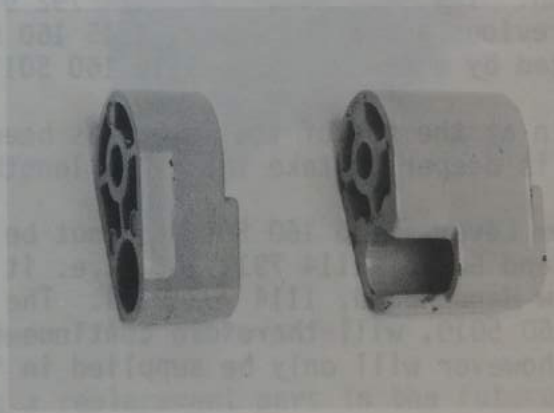
1. New wrap-around handle:

Starting with serial number 6 902 391, the Wrap-around Handle, 1115 790 3605, will be replaced by a new execution version, 1115 790 3606, on all model 056 chain saws equipped with wrap-around handles. A heavier gauge tubing is used and it increases the outer diameter of the new handle by 1 mm.

This new wrap-around handle is 12 mm (0.47 in) shorter on the sprocket side. This means that the rubber Buffer, 1110 790 9600, has been moved further away from the chain.

The original Handle Bracket, 1115 791 1900, had to be replaced by a new longer version, 1115 791 1901. Only the new wrap-around handle, 1115 790-3606, will be supplied as a replacement in the future. It can only be mounted with the new Handle Bracket, 1115 791 1901.

The original Handle Bracket, 1115-791 1900, will still continue to be available as a spare part.



Left: Original handle bracket
Right: New handle bracket

The rubber grips, fitted on the wrap-around handles on the production line, will be replaced by a new PVC material. However, the new grip material can only be fitted on the new handle by mechanical means. The original grip material will therefore continue to be available for replacement purposes, but only in 1 meter (3.28 ft) lengths. The required length can be cut to match the machine or any other saw model with the same handle diameter.

Summary:

| | Original version | New version |
|---|---|---|
| Wrap-around handle including: | 1115 790 3605 | 1115 790 3606 |
| Grip, 220 mm (8.66 in) long | 1115 791 2002 | --- |
| Grip, 365 mm (14.37 in) long | 1113 791 2000 | --- |
| Replacement grip material 21 X 1000 mm (0.83 X 39.4 in) | --- | 0000 791 2002 |
| Handle Bracket | 1115 791 1900 | 1115 791 1901 |

2. New hand guards:

2.1 Units with chain brake:

The 1114 792 9101, Hand Guard, used until now, will be replaced by a new higher version. Its part number is 1114 792 9104. In connection with this change, the previous actuating lever, 1115 160 5010, in the sprocket cover, will be replaced by a new version, 1115 160 5011.

The pin at the top of the lever has been lengthened. The slot in the hand guard is deeper to take the extra length.

The new Lever, 1115 160 5011, cannot be installed in machines with an original type Hand Guard, 1114 791 9101, i.e. it can be fitted only in conjunction with the new Hand Guard, 1114 792 9104. The original version of the actuating Lever, 1115 160 5010, will therefore continue to be available as a spare. The hand guard however will only be supplied in its new version, 1114 792 9104.

Summary:

| | Original version | New version |
|---|---|---|
| Hand Guard | 1114 792 9101 | 1114 792 9104 |
| Lever | 1115 160 5010 | 1115 160 5011 |

2.2 Units without chain brake:

The present Hand Guard, 1113 792 9103, will be replaced by the new higher version, 1113 792 9104. The new hand guard can be installed on all model 056 chain saws without a chain brake. For this reason only the new version, 1113 792 9104, will be supplied in the future.

Summary:

| | Original version | New version |
|---|---|---|
| Hand Guard | 1113 792 9103 | 1113 792 9104 |

3. New fire-safe muffler:

Starting at serial number 6 902 391, the original Muffler, 1115 140 0605, will be replaced by a new one. On all 056 machines, normally equipped with a fire-safe muffler, the new muffler will be part number 1115 140 0606.

On the new Muffler, 1115 140 0606, the exhaust gases exit to the side (in the direction of the bar) via a pipe which is welded to the inlet casing. To avoid the pipe butting against the cylinder, 1115 020 1214, at this point, one cylinder fin has been removed and one fin cut at right angles.

New muffler (fire-safe)

Only this new muffler sill be supplied as a replacement part in the future.

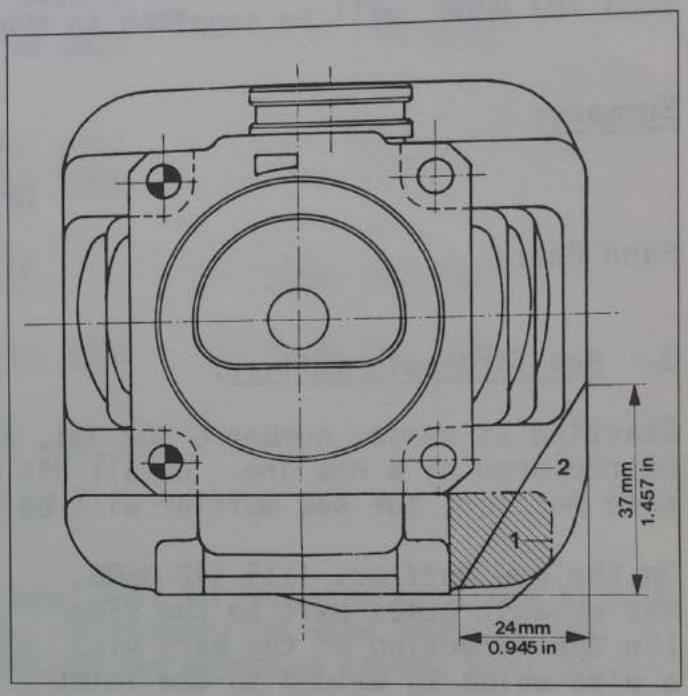
Summary:

| | Original version | New version |
|---|---|---|
| Muffler (fire-safe) | 1115 140 0605 | 1115 140 0606 |

Note on model 045: Only this new version of the 056 fire-safe muffler will be supplied as a replacement for model 045 saws.

Instructions for installation of replacement Muffler, 1115 140 0606:

When these new mufflers are installed in machines before number 6 902 391, or cylinders are replaced on machines from number 6 902 391 onward, the outlet pipe will butt against the cylinder. It is therefore necessary to rework two fins on the cylinder before installation. The short fin (1) can be broken off with a pair of pliers. The one underneath/ on top of (2), should be cut off at the corner of the cylinder (see drawing) with a hack saw. Die changes are in progress at this writing.




Reworked cylinder

U/TSM:fo

1311/420

# Technical Information

STIHL®

T.4.81

ENGINEERING CHANGES ON STIHL 056 CHAIN SAWS (Series 1115):

CONTENTS:



## 1. New "Super" Version:

Like the 045, model 056 chain saws will also be manufactured in a "Super" version. The main difference, compared with the standard versions, is the increase in displacement from 81 $cm^3$ to 87 $cm^3$ (4.94 to 5.3 cu. in.). Power is also increased due to port timing and configuration modifications. The "Super" versions and standard versions are otherwise identical.

### 1.1. Versions Available:

056 AVSE: With electronic (breakerless) ignition.

056 AVSEQ: With electronic (breakerless) ignition and "Quickstop" safety chain brake.

Both versions are also available with a fire-safe muffler.

### 1.2. Spare Parts for "Super" Version:

| | |
|---|---|
| Cylinder with the 54 mm (2.13 in.) dia. piston including: | 1115 020 1205 |
| Piston, 54 mm (2.13 in.) dia. including: | 1115 030 2002 |
| Piston Ring | 1115 034 3012 |
| Piston Ring | 1115 034 1500 |
| Wire Piston Pin Retaining Ring | 9462 650 1300 |

2. Connecting Rod (big end bearing):

Extreme loads on the Rod's big end bearing, brought about by very high engine speeds, resulted in isolated cases of some needle cage breaking. To combat this situation, the present needle cage will be replaced by one with a silver plated cage starting with machine serial number 7 557 340.

Only Crankshafts, 1115 030 0400, with a silver plated needle cage, will be supplied as spare parts in the future.

3. New Centrifugal Clutch without Shoe Linings:

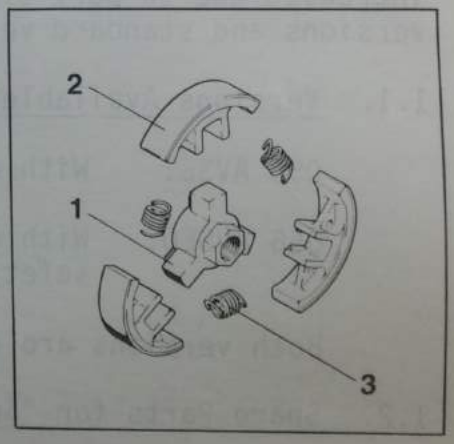
Starting at Machine No. 7 618 601, the Clutch, 1115 160 2000, will be equipped with clutch shoes that have no linings, instead of the present ones with linings. In connection with this change, the previous clutch carrier will be replaced by a new one with an integrally molded 19 mm (0.75 in.) hexagon nut for a wrench. The new carrier does not require a lock nut (i.e. the M 12 x 1.5 nut).

Original and new versions of the clutch shoes, carrier and clutch springs are not interchangeable.

Replacement clutch assemblies will be supplied only in the execution without linings. The individual parts of the previous version will continue to be available as spare parts.

SUMMARY:

| | Original Version | New Version | Ind.-No. |
|---|---|---|---|
| Clutch Assembly, consisting of: | 1115 160 2000 | 1115 160 2000 | |
| Carrier | 1115 162 3200 | 1115 162 3202 | (1) |
| Clutch Shoe (with lining) | 1115 160 1500 | --- | |
| Clutch Shoe (without lining) | --- | 1115 162 0803 | (2) |
| Clutch Spring | 0000 997 5922 | 0000 997 6202 | (3) |
| Washer | 1115 162 8900 | --- | |
| Hex. Nut (M 12 x 1.5) | 9211 260 1470 | --- | |




4. Tool Kits:

The Clutch Wrench, 1115 893 1300, and Tube, 1115 893 4200, will be deleted from the tool kit when the new Clutch Carrier, 1115 162 3202, is introduced, i.e. the new carrier can be tightened down with the supplied combination wrench.

The deleted parts will continue to be available as spare parts.

4. Tool Kits: (Continued)

SUMMARY:

| | Original Version | New Version |
|---|---|---|
| Tool Kit including: | 1115 890 1400 | 1115 890 1400 |
| Wrench | 1115 893 1300 | --- |
| Tube | 1115 893 4200 | --- |
| other parts as before | | |

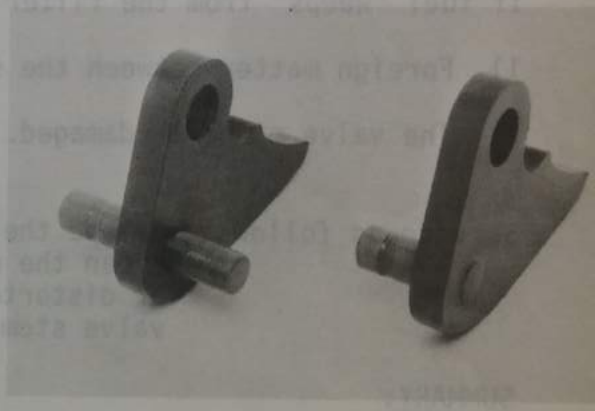
5. Chain Brake:

Following deletion of the isolating clutch, the Cam, 1115 160 5100 (with long pin), is no longer necessary and will be replaced by Cam, 1113 160 5100 (with short pin).

Only Cam, 1113 160 5100, will be available as a replacement in the future.

SUMMARY:

| | Original Version | New Version |
|---|---|---|
| Sprocket Cover (Quickstop) including: | 1115 640 1708 | 1115 640 1708 |
| Cam (all other parts as before). | 1115 160 5100 | 1113 160 5100 |



Left: Cam 1115 160 5100
Right: Cam 1113 160 5100

6: Fuel Pickup Body:

When exposed to the effects of certain fuel additives or certain fuels, the foam material of Filter, 1110 358 1800, showed signs of decomposition. In areas where this is found to be the case, the new Pickup Body, 1115 350 3505 (available as special accessory), can be installed in place of the Pickup Body, 1115 350 3501 (with foam rubber filter). The new pickup body is equipped with a sintered metal filter.

The new sintered metal filter can normally be cleaned with a compressed air line applied to the hose connector, i.e. blow out in direction opposite to normal fuel flow. However, if the filter pores are badly clogged with solid matter, cleaning is not suggested. As the sintered metal filter is press-fit in the new pickup body, it cannot be replaced, i.e. a new pickup body must be installed.

6. Fuel Pickup Body: (Continued)

SUMMARY:

| | | |
|---|---|---|
| Pickup Body with sintered metal filter including: | 1115 350 3505 | (new special accessory) |
| Cap | 1111 358 2500 | |

7. Fuel Filler Cap:

Starting with serial number 7 552 701, the Fuel Filler Cap, 1110 350 0500, will be equipped with a new vent valve. This mushroom-shaped valve vents the tank inward as the fuel level drops, but seals it off from the outside atmosphere in the outward direction. This new valve is designed to prevent fuel leaking when the saw is turned on its side.

NOTES ON SERVICING:

If fuel "weeps" from the filler cap, there are basically two possible causes:

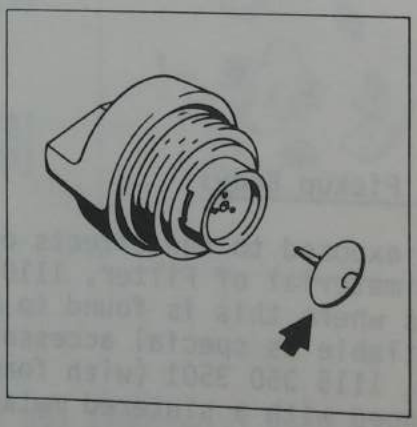
1) Foreign matter between the small valve plate and the valve body.

2) The valve plate is damaged.

Service as follows: Remove the valve plate from the valve body and thoroughly clean the whole filler cap. If the valve plate is damaged or distorted, fit a new one. Make sure the bead on the valve stem engages in the valve body bore.

SUMMARY:

| | Original Version | New Version |
|---|---|---|
| Fuel filler cap including: | 1110 350 0500 | 1110 350 0500 |
| O Ring | 9645 945 2820 | 9645 945 2820 |
| Grub screw | 0000 951 5815 | --- |
| Valve | --- | 1110 353 1600 |



8. Air Filter:

Starting at serial number 7 620 701, all 1115 series saws, with a fire-safe muffler, will come standard with the flocked Air Filter, 1115 120 1615 (previously optional), instead of the wire mesh Air Filter, 1115 120 1600.

8. Air Filter: (Continued)

SUMMARY:

| | Original Version | New Version |
|---|---|---|
| Air Filter (wire mesh) | 1115 120 1600 | --- |
| Air Filter (flocked) each consisting of: | --- | 1115 120 1615 |
| Air Filter | 1115 120 1605 | 1115 120 1620 |
| Air Filter | 1115 120 1610 | 1115 120 1625 |
| Slotted Nut | 1113 140 9510 | 1113 140 9510 |
| Slotted Nut | 1113 141 8305 | 1113 141 8305 |

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# Technical Information

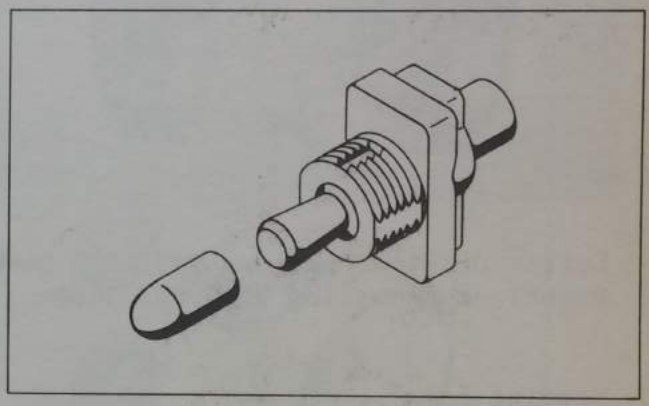
STIHL®

T.2.83

Engineering Changes on Stihl's Model 056 Model Chain Saws (Series 1115):

1) Stop Switch
2) Crankcase
3) Rim Sprocket
4) Fuel Filler Cap
5) Ignition System

## 1. Stop switch:



Starting with machine number X 10 056 301 the stop switch lever will be equipped with a protective cap. This protective cap can be retrofitted to all stop switches and should be secured to the switch lever by means of some LOCTITE 270 or 73 so that it won't slip off.

Only the (1110 430 0202) stop switches with this new protective cap will be supplied as spare parts in the future.

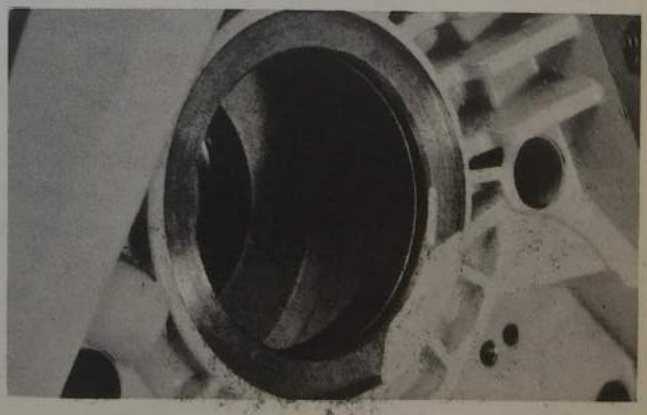
Summary:

| | Original version | New version |
|---|---|---|
| Stop switch, including: | 1110 430 0202 | 1110 430 0202 |
| Protective cap | --- | 1110 432 9002 |

## 2. Crankcase:

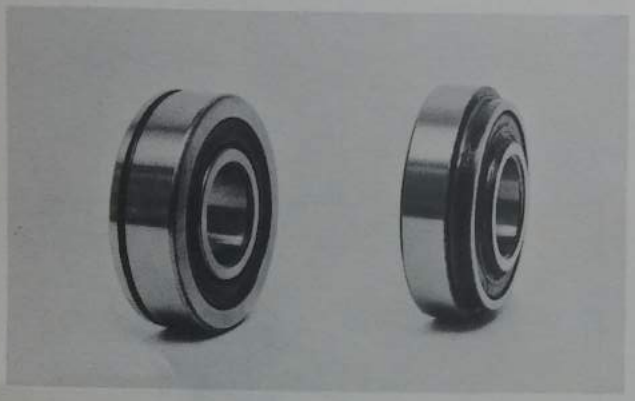
In the future the crankshaft bearing, clutch side, will be located by a snap ring in the crankcase. This instead of the ring being on the ball bearing itself. A new crankcase, with a groove for the new snap ring will, therefore, be used starting with machine number X 10 963 561.

Both the original-type and new-type crankcases will be supplied in the future with an integrally cast steel insert as the bearing seat at the clutch side. This steel insert addition is intended to prevent the crankshaft bearing from possibly working loose.



Crankcase 1115 020 2112 (insert showing as the unpainted area).

In connection with the crankcase modification, a new ball bearing, without a groove and with a wider inner race, will be introducted. It is equipped with an oil seal with an outer lip. A new snap ring locates this bearing axially in the crankcase. The wider inner race of the new bearing has necessitated the use of a modified spur gear, with recess in hub. This means that only the washer from the original spur gear set will be installed in the future. Different spur gears will be used for rim sprockets and standard sprockets and will be available as separate items for replacement purposes.



Left: Original bearing 9523 003 0440
Right: New bearing 9523 003 4460

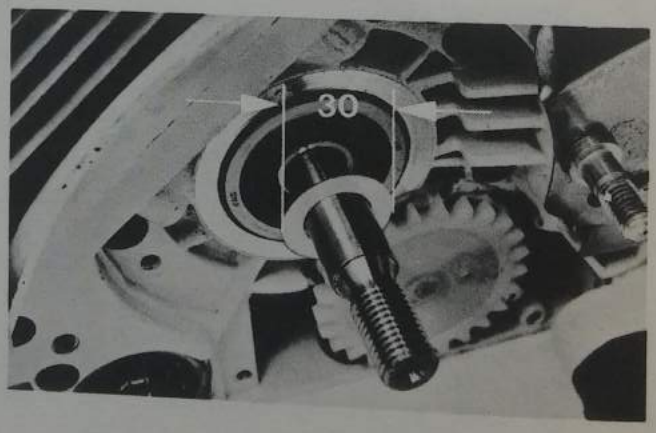
New spur gear 1115 647 1802

Service note:

The new parts are only interchangeable with the original parts as complete assemblies. For this reason all the original parts, except crankcase 1115 020 2102, will continue to be supplied as spare parts. Crankcases with a steel insert in the bearing seat must be heated to approx. 120° C for installation of the bearing.

Starting at machine number X 8 837 851, the outside diameter of Washer 0000 958 1404, located between the oil pump spur gear and the oil seal, will be increased from 24 mm (0.94 in.) to 30 mm (1.18 in.) This change has been made to ensure that the oil seal cannot be damaged by a loose oil pump drive pin in the cover plate.

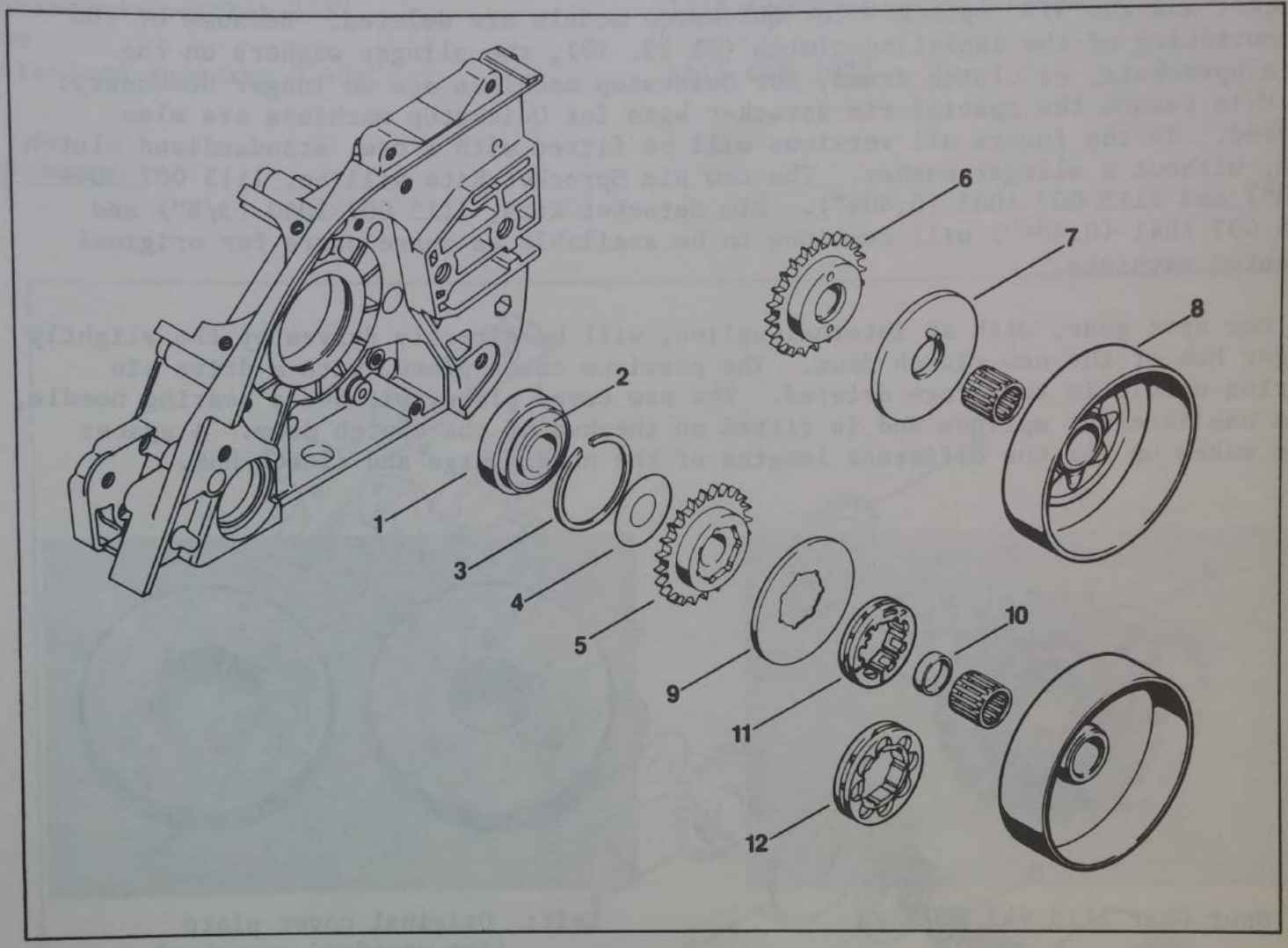
Only the larger diameter washers will be supplied as spare parts. The large washer is also included with the Spur Gear Set, 1115 007 1006.




Washer 0000 958 1404 (30 mm - 1.18 in. dia.).

We recommend that this new, larger washer be installed during any repair work.

Summary:



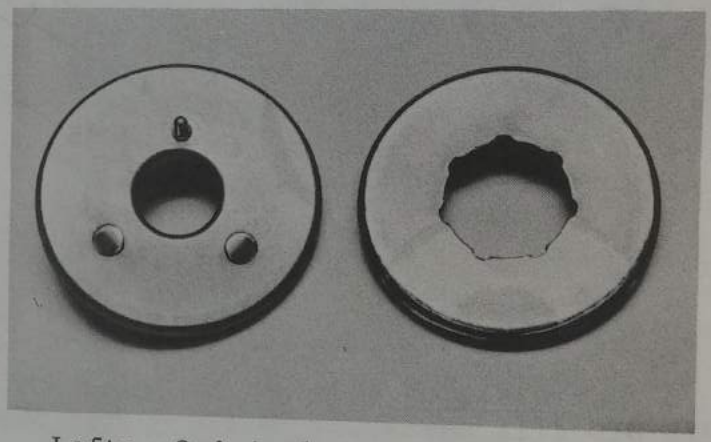

| | Original version | New version | Index |
|---|---|---|---|
| Crankcase, complete (with preassembled bearings including Index No. 1 - 3) | 1115 020 2103 | 1115 020 2113 | |
| Crankcase | 1115 020 2102 | 1115 020 2112 | |
| Ball bearing | 9523 003 0440 | 9523 003 4460 | 1 |
| including: | | | |
| Oil seal | 9639 003 2690 | 9640 003 2690 | 2 |
| Snap ring | 9459 620 2670 | 9465 620 2690 | 3 |
| all other parts unchanged | | | |
| Spur gear (set) | 1115 007 1006 | --- | |
| including : | | | |
| Washer | 0000 958 1404 | 0000 958 1404 | 4 |
| Spur gear (for rim sprocket) | --- | 1115 647 1803 | 5 |
| Spur gear (for standard sprocket) | --- | 1115 647 1802 | 6 |

3. Rim sprocket:

With the introduction of the modified crankcase, all 056 machines will come standard with Rim Sprocket, 0000 642 1220 (3/8", 7 teeth). This means that the 3/8" standard sprocket and the 3/8" sprocket for Quickstop models are deleted. Because of the discontinuing of the isolating clutch (T1 23. 79), the slinger washers on the chain sprockets, or clutch drums, for Quickstop machines are no longer necessary. For this reason the special rim sprocket kits for Quickstop machines are also deleted. In the future all versions will be fitted with a new, standardized clutch drum, without a slinger washer. The new Rim Sprocket Kits will be, 1115 007 1044 (3/8") and 1115 007 1045 (0.404"). Rim Sprocket Kits, 1115 007 1040 (3/8") and 1115 007 1041 (0.404") will continue to be available as spare parts for original executed machines.

The new spur gear, with an internal spline, will be directly driven by the slightly longer hub of the new clutch drum. The previous cover plate, with a drive pin bearing needle is therefore deleted. The new cover plate, without a bearing needle, also has internal splines and is fitted on the hub of the clutch drum. A spacer ring makes up for the different lengths of the needle cage and clutch hub.

New Spur Gear 1115 647 1803



Left: Original cover plate
(for standard sprocket)
Right: New cover plate
(for rim sprocket)

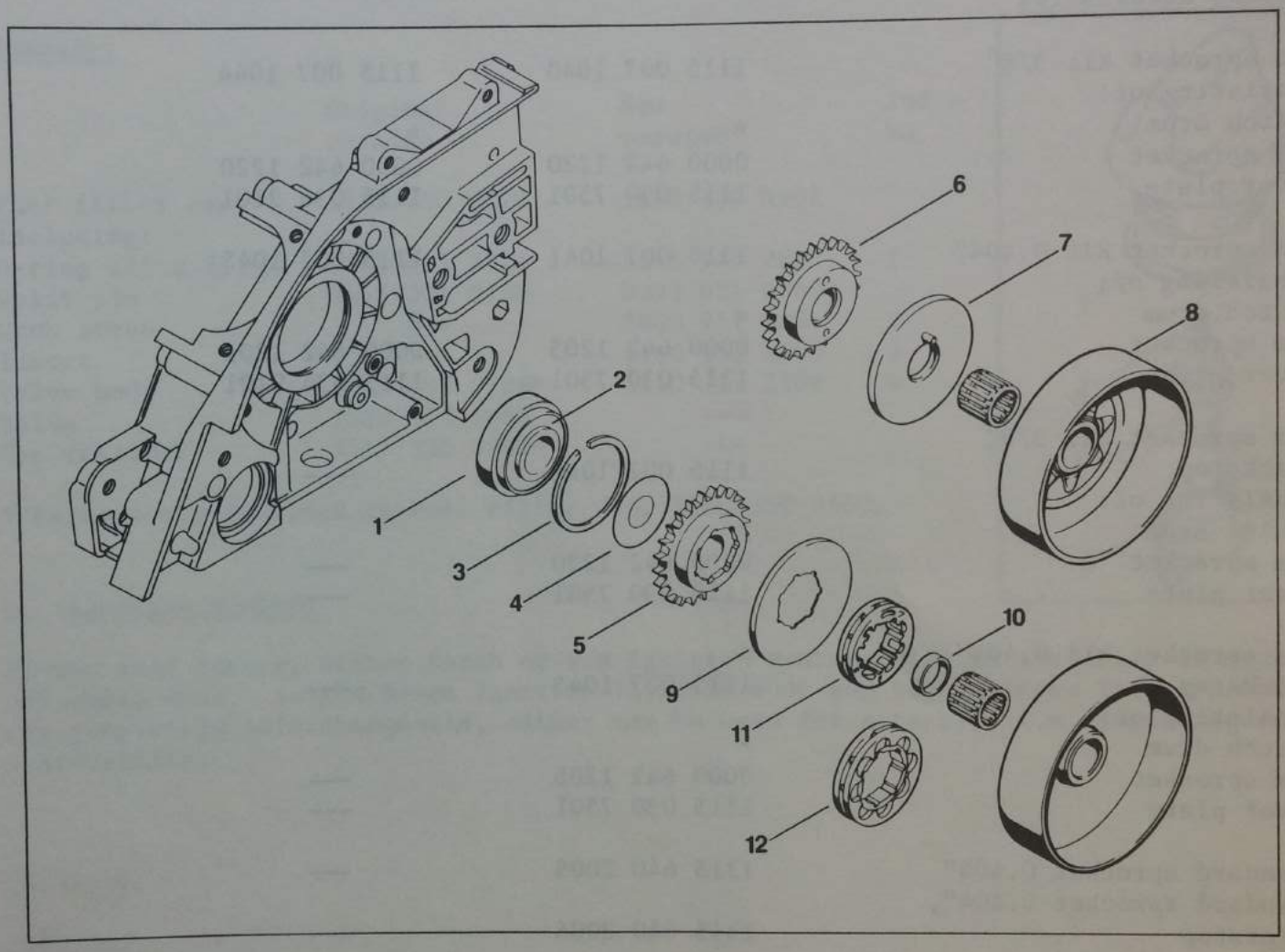
The new parts and original parts are only interchangeable as complete assemblies. Therefore, with the exception of the two Quickstop rim sprocket sets, all parts will continue to be available for replacement parts purposes. Quickstop sprockets 1115 640 2003 (3/8") and 1115 640 2006 (0.404") will only be supplied until factory stocks are exhausted.

Service note:

If a new type machine, new crankcase and rim sprocket, is to be equipped with a standard sprocket, the clutch drum, rim sprocket, spacer ring, cover plate and spur gear must be replaced by the following parts:

| | Part No. | Index No. |
|---|---|---|
| Spur gear | 1115 647 1802 | 6 |
| Cover plate | 1115 030 7500 | 7 |
| Standard sprocket 3/8" | 1115 640 2001 | 8 |
| or | | |
| Standard sprocket 0.404" | 1115 640 2005 | |

Summary:




| | Original version | New version | Index-No. |
|---|---|---|---|
| Cover plate (for standard sprocket) | 1115 030 7500 | --- | |
| including: | | | |
| Bearing needle | 9517 003 0490 | --- | |
| Cover plate (for rim sprocket) | 1115 030 7501 | 1115 036 9101 | 9 |
| including: | | | |
| Bearing needle | 9517 003 0480 | --- | |

| | Original version | New version | Index-No. |
|---|---|---|---|
| Spacer ring | --- | 1115 642 8000 | 10 |
| Rim sprocket 3/8", 7 teeth (on all machines except wrap-around handle) | --- | 0000 642 1220 | 11 |
| Rim sprocket 3/8", 8 teeth (for machines with wrap-around handle) | 0000 642 1215 | 0000 642 1215 | 12 |
| Standard sprocket 3/8" | 1115 640 2001 | --- | |
| Std. Spkt. 3/8" Quickstop | 1115 640 2003 | --- | |
| **Special accessories** | | | |
| Rim sprocket kit 3/8" consisting of: | 1115 007 1040 | 1115 007 1044 | |
| Clutch drum | * | * | |
| Rim sprocket | 0000 642 1220 | 0000 642 1220 | |
| Cover plate | 1115 030 7501 | 1115 036 9101 | |
| Rim sprocket kit 0.404" consisting of: | 1115 007 1041 | 1115 007 1045 | |
| Clutch drum | * | * | |
| Rim sprocket | 0000 642 1205 | 0000 642 1205 | |
| Cover plate | 1115 030 7501 | 1115 036 9101 | |
| Rim sprocket kit 3/8", Quickstop consisting of: | 1115 007 1042 | --- | |
| Clutch drum | * | | |
| Rim sprocket | 0000 642 1220 | --- | |
| Cover plate | 1115 030 7501 | --- | |
| Rim sprocket kit 0.404", Quickstop consisting of: | 1115 007 1043 | --- | |
| Clutch drum | * | | |
| Rim sprocket | 0000 642 1205 | --- | |
| Cover plate | 1115 030 7501 | --- | |
| Standard sprocket 0.404" | 1115 640 2005 | --- | |
| Standard sprocket 0.404", Quickstop | 1115 640 2006 | --- | |

* Not available as a separate item.

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## 4. Fuel filler cap:

The present Fuel Filler Cap 1110 350 0500, with the mushroom valve, will be replaced in the future by a new version 1110 350 0502, with grub screw.

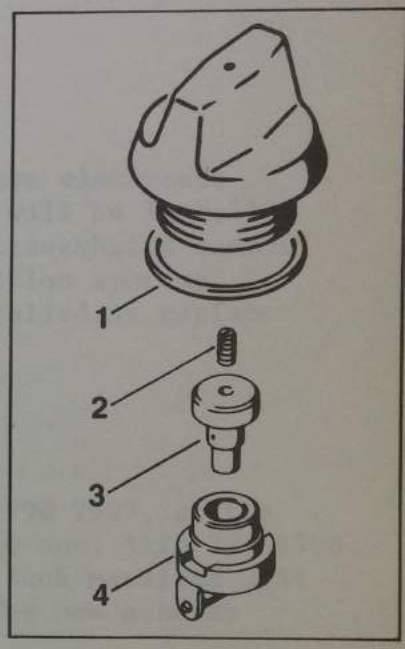
The vent Valve, 1110 353 1600, did not always allow air to leave the fuel tank via the filler cap and occasionally effects the carburetor idling. For this reason the Valve, 1110 353 1600, will be replaced in production by Grub Screw, 0000 951 5800, which allows air to enter and leave the tank via the filler cap.

Fuel Filler Cap, 1110 350 0500, with mushroom valve, may still be used as a special accessory and will be equipped with a retainer in the future.

Summary:

| | Original version | New version | Ind.-No. |
|---|---|---|---|
| Fuel filler cap; including: | 1110 350 0500 | 1110 350 0502 | |
| O-ring (25 x 2.5) | 9645 945 2820 | 9645 945 2820 | 1 |
| Split pin | 9395 021 0760 | 9395 021 0760 | |
| Grub screw | --- | 0000 951 5800 | 2 |
| Insert | --- | 1110 353 8100 | 3 |
| Valve body | 1110 353 2108* | 1110 353 2108 | 4 |
| Valve | 1110 353 1600 | --- | |
| Cap retainer | 1117 350 0900* | --- | |

* Parts newly included in Fuel Filler Cap, 1110 350 0500.




## 5. Ignition system:

In the near future, either Bosch or SEM ignition systems will be installed in model 056 chain saws. As the Bosch ignition 1115 400 0506 and SEM ignition 1115 400 0507 are completely interchangeable, either may be used for a repair, i.e. depending on availability.

U/TSM:tc

1283/262

# Technical Information

STIHL®

T.19.83

Engineering Changes on Stihl's Model 056 Chain Saws (Series 1115):

1) Contact breaker cam on crankshaft
2) Annular buffer
3) New locking device for idle speed adjusting screw

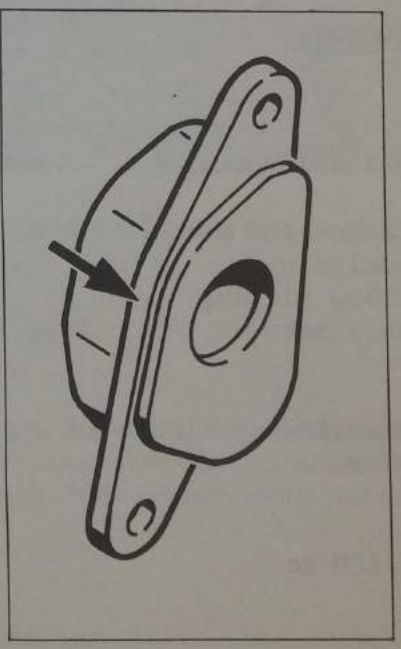
## 1. Contact breaker cam on crankshaft:

The crankshaft's breaker cam is not required on machines which have electronic ignition systems. For this reason crankshafts without cam lobes will be installed in these machines starting from serial No. X 10 963 561. These crankshafts cannot be used as replacements for machines with breaker-controlled ignition systems. Therefore, only crankshafts with contact breaker cams will be supplied as replacements under the existing part number 1115 030 0400.

## 2. Annular buffer:

Starting at serial number X 11 026 121, the Annular Buffer, 1115 790 9905, at the underside of the handle frame, will be replaced by a more flexable one, 1115 790 9906. This change does not apply to machines with fire-safe mufflers. Such machines will continue to be equipped with the original-type annular buffer. The new annular buffers are marked with red to avoid any confusion.

It is essential to ensure that the annular buffer is installed in the correct position. If it is turned 180°, or fitted back to front, it will knock against the carburetor box and thus interfere with the operation of the anti-vibration system.



When correctly fitted, the plate with the two mounting holes is on the clutch side of the housing. The edge of this plate, marked with an arrow in the illustration, must point toward the carburetor box.

The shape of the annular buffers will be modified in the near future in order to reduce the risk of incorrect installation.

Summary:

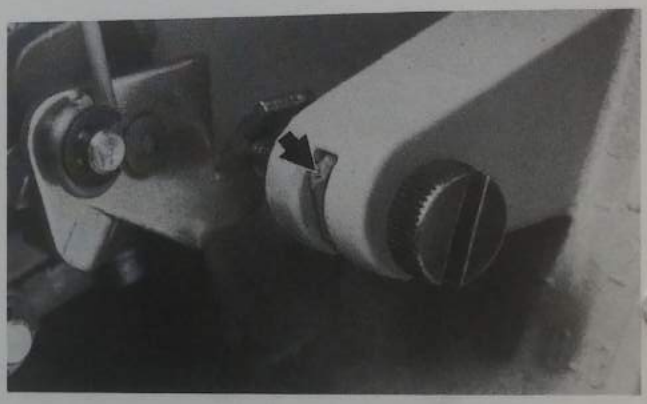
| | Original version | New version |
|---|---|---|
| Annular buffer | 1115 790 9905* | --- |
| Annular buffer (marked red) | --- | 1115 790 9906 |

*Part must be used as a replacement for all machines with fire-safe mufflers.

3. New locking device for idle speed adjusting screw:

A new plastic retainer will be introduced in place of the original helical spring starting with machine No. X 10 963 561, in order to prevent the idle speed adjusting screw moving out of position and allow more accurate adjustment of the engine idling speed.

A rectangular recess is provided in the carburetor box to take the retainer. The previous cylindrical recess for the helical spring will be discontinued.



The helical spring will remain available as a spare part for installation in original-type carburetor boxes. Only the new version of the carburetor box will be supplied as a replacement part when factory stocks of the original carburetor boxes have been exhausted. The retainer is included in the latest Carburetor Box, 1115 140 1700.

Summary:

| | Original version | New version |
|---|---|---|
| Helical spring | 0000 997 0626* | --- |
| Carburetor box, including: | 1115 140 1700 | 1115 140 1700 |
| Elbow fitting | 1112 122 3900 | 1112 122 3900 |
| Retainer | --- | 1115 121 7700 |

*Remains available as a spare part.

U/TSM:tc

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# Technical Information

STIHL®

T.44.83

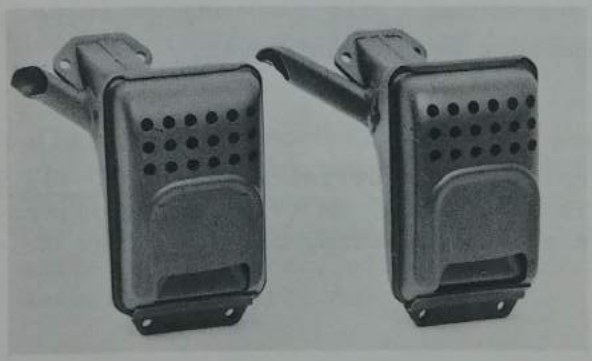
Engineering Changes on Model 056 Chain Saws (Series 1115):

Contents:

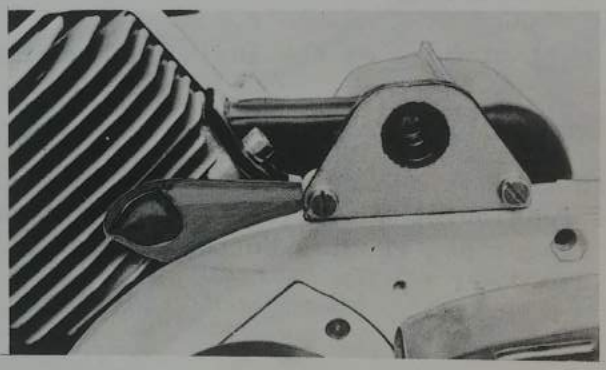


## 1. Muffler (fire-safe):

The present fire-safe Muffler, 1115 140 0606, will be replaced starting from serial number X 11 167 421 by a new version with part number, 1115 140 0607. On the new muffler, the exhaust outlet has been lenghthened and reshaped so that the exhaust gases are directed over the chain sprocket cover and past the front handle.



Left: Muffler, 1115 140 0606 (original)
Right: Muffler, 1115 140 0607 (new)



New fire-safe muffler fitted in position.

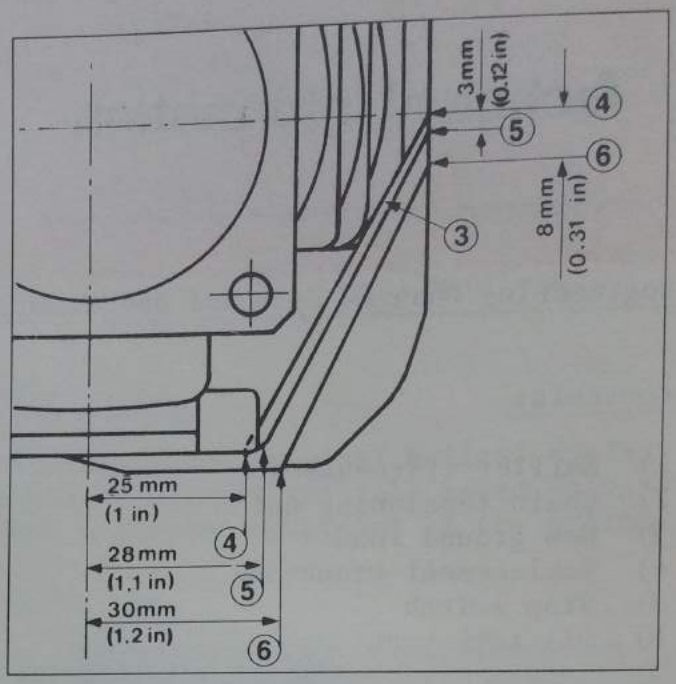
Shortly, only the new muffler will be supplied as a spare part. The part numbers of the individual muffler components remain the same.

It was necessary to modify the contour of the cylinder fins in order to accommodate the new fire-safe muffler. The 54 mm (2.13 in.) dia. Cylinder and Piston Assembly, 1115 020 1205, will only be available in this modified form for replacement parts purposes.

....

Service note:

The contour of the cylinder fins must be reworked (see drawing) if a new-type, fire-safe muffler is fitted on an original-type cylinder. The 3rd., 4th, 5th and 6th fins of the cylinder should be shortened (e.g. with a file or hack saw) to obtain a clearance of at least 1 mm (0.04 in.) between the exhaust outlet and the cylinder.




Modifications to original-type cylinder (view from below).

Summary:

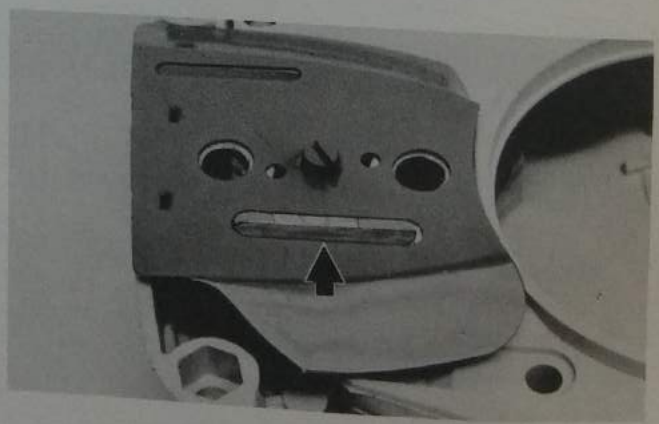
| | Original version | New version |
|---|---|---|
| Muffler (fire-safe) | 1115 140 0606 | 1115 140 0607 |

The part numbers of the individual muffler components remain unchanged.

2. Chain tensioning nut:

Chain Tensioning Nut, 1110 664 1500, will be replaced from serial number X 11 403 921, by a Tensioning Nut, 1120 664 1500, whose peg is approx. 2.7 mm (7/64 in.) longer. The longer peg ensures better engagement in the guide bar during bar mounting.

Left: Tensioning Nut, 1110 664 1500 (orig.)
Right: Tensioning Nut, 1120 664 1500 (new)



Recess in new-type chain sprocket cover.

Since the original-type chain sprocket cover would have butted against the longer peg of the new tensioning nut, the sprocket cover now has a recess in order to allow clearance for the longer peg.

In the future, only the new version of the chain sprocket cover will be supplied as a spare part.

Note:

The new version of the chain sprocket cover may be installed together with the original or new type tensioning nuts. However, a chain sprocket cover without a recess may only be used with the original-type tensioning nut.

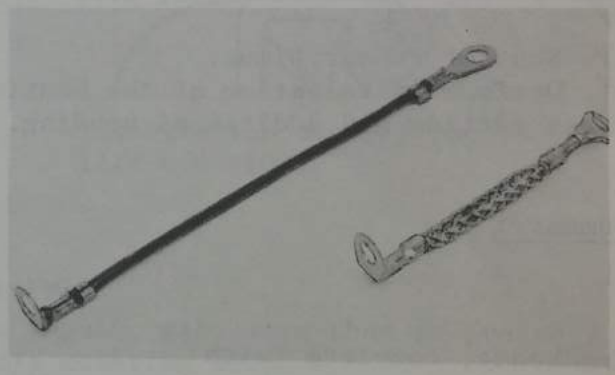
Summary:

| | Original version | New version |
|---|---|---|
| Tensioning nut | 1110 664 1500* | 1120 664 1500 |

*remains available as a spare part.

3. New ground lead:

A new Ground Lead, 1115 440 2202, made of stranded copper wire, will be installed in place of the previous Ground Lead, 1115 440 2201, from serial number X 11 167 421 . The ground lead is no longer secured together with the annular buffer at the tank side, but is fitted directly to the tank housing by means of self-tapping Screw, 9039 488 0630. For this reason, a modified tank housing will also be used from the above serial number. The changeover to stranded copper wire improves durability and the new method of attachment, with a self-tapping screw, offers greater security against loosening.



Left: Original ground lead.
Right: New ground lead.

New attachment point on tank housing (with self-tapping screw).

Attachment point on original tank housing.

In the future, two different lengths of the new ground lead (stranded copper wire) will be available as spare parts. Ground Lead, 1115 440 2202 (70 mm / 2.75 in. long) must be used on machines with the new tank housing. The 120 mm /4.72 in. long Ground Lead, 1115 440 2200, is for machines with the original-type tank housing and is no longer secured with the annular buffer, but by meams of the M 4 x 16 screw used to mount the tank housing to the carburetor box cover (below stop switch). See illustration, previous page, lower right.

Summary:

| | Original version | New version |
|---|---|---|
| Ground lead (70 mm, 2.75 in.) | 1115 440 2201 | 1115 440 2202 |
| Self-tapping screw (4x8) | --- | 9039 488 0630 |
| Ground lead (120 mm, 4.72 in.) | --- | 1115 440 2200* |

*only for machines with original-type tank housing.

4. Replacement crankcase:

Only crankcases with preassembled bearings will be supplied as replacement cases in the future. Crankcases without bearings will be discontinued as soon as factory stocks are exhausted.

It has been found in practice that the use of crankcases with preassembled bearings offers two major advantages, i.e.

a) Shorter repair times.
b) Optimum installation of the bearings is assured by the factory's automatic degreasing press fitting and additional bonding. This has a favorable effect on bearing life.

Summary:

| | Original version | New version |
|---|---|---|
| Crankcase, complete (with preassembled bearings) | 1115 020 2113 | 1115 020 2113 |
| including: | | |
| Crankcase | 1115 020 2112 | --- |

(all other parts as before).

5. Stop switch:

A modified Stop Switch, 1110 430 0202, will be installed in the future. The previous, bonded Protective Cap, 1110 432 9002, has been deleted and will be replaced by a press-fitted Protective Cap, 1110 432 9003, (made of harder material). Since the original and new type protective caps are not interchangeable, both will be available as spare parts. Only the new version of the stop switch will be supplied as a replacement part in the future. The part number remains as before.

....

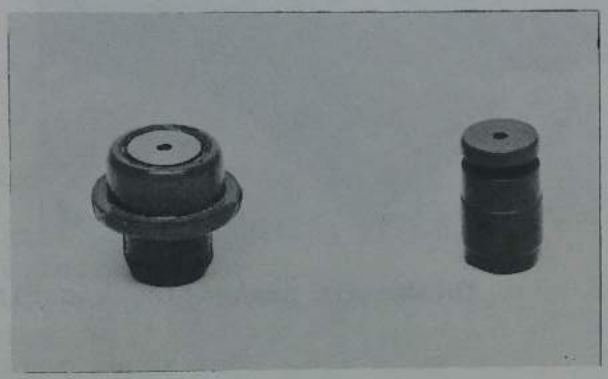
Summary:

| | Original version | New version |
|---|---|---|
| Stop switch | 1110 430 0202 | 1110 430 0202 |
| including: | | |
| Protective cap | 1110 432 9002* | 1110 432 9003 |

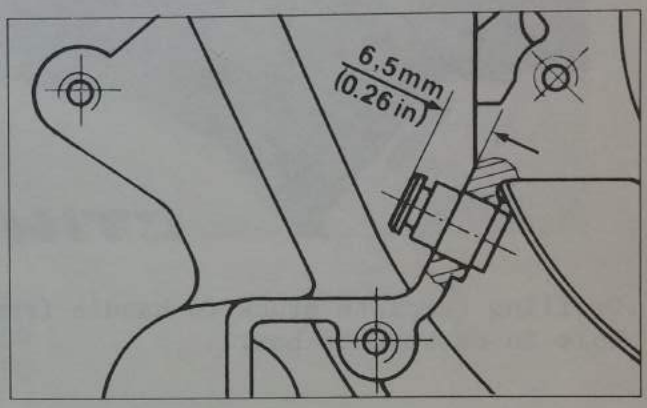
*remains available as a spare part.

6. Oil tank vent:

In the future, Valve, 1118 640 9100, will be installed instead of Valve, 1113 640 9100. This change is intended to simplify stockkeeping. The original and new type valves are fully interchangeable.



Left: Valve, 1113 640 9100 (original)
Right: Valve, 1118 640 9100 (new)




Installation drawing for Valve, 1118 640 9100.

Note:

When installing Valve, 1118 640 9100, during a repair, make sure that it projects exactly 6.5 mm (0.26 in.) (see drawing) from its mounting surface.

Summary:

| | Original version | New version |
|---|---|---|
| Crankcase, complete | 1115 020 2113 | 1115 020 2113 |
| including: | | |
| Valve | 1113 640 9100* | 1118 640 9100 |

*remains available as a spare part for use on models 031 and 032.

The other parts of the crankcase remain unchanged.

....

## 7. Intake air preheating kit (special accessory):

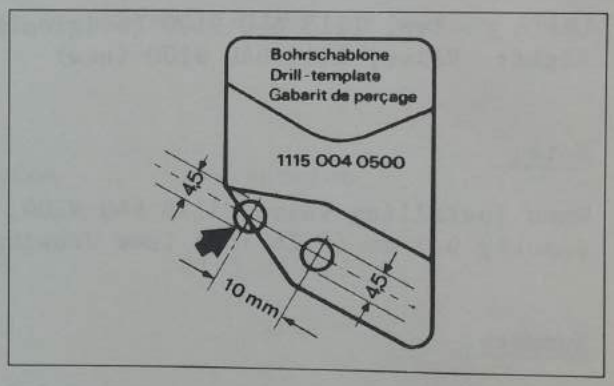
The intake air Preheating Kit, 1115 007 1007, is available as a special accessory for cold climate operation. When fitted, the kit causes heated air from around the cylinder to be drawn in to the carburetor box instead of cold outside air. This prevents air filter and carburetor icing.

Caution: The kit may only be fitted for use at temperatures belor $+10^{o}$ C ($50^{o}$F). The engine could otherwise be damaged as a result of overheating if the preheating kit is kept in operation above $50^{0}$ F.

Drilling template stuck to handle frame
Hole in carburetor box.

Intake air preheating kit fitted.

When fitting the kit for the first time it is necessary to drill a 4.5 mm (0.04 in.) dia. mounting hole in the handle frame. A drilling template is supplied with the kit for this purpose. On machines with a fire-safe Muffler, 1115 140 0607, (with long exhaust outles pipe), the hole must be drilled some 10 mm (0.39 in.) offset (see drawing). An opening must be made in the barburetor box to accommodate the air deflector plate. To do this, drill an approx. 10 mm (0.39 in.) hole in the center of the contour which can be seen on the inside of the carburetor box. Starting from this hole, the opening can be finished off by running a file along the contour. Then fit the sheet metal nut on the air deflector plate. Use the 3.9 x 16 self-tapping screw to secure the air deflector plate to the handle frame so that it projects into the opening in the carburetor box.

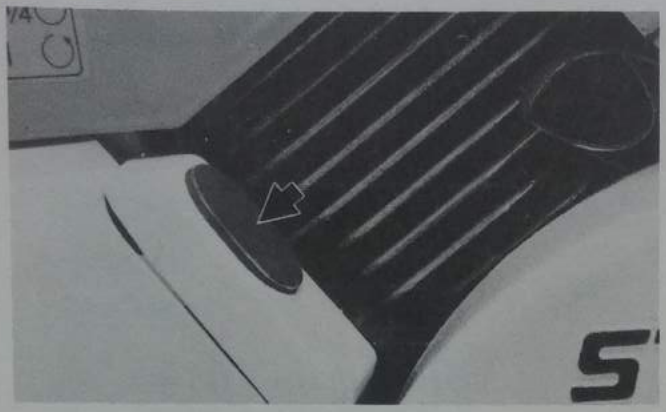


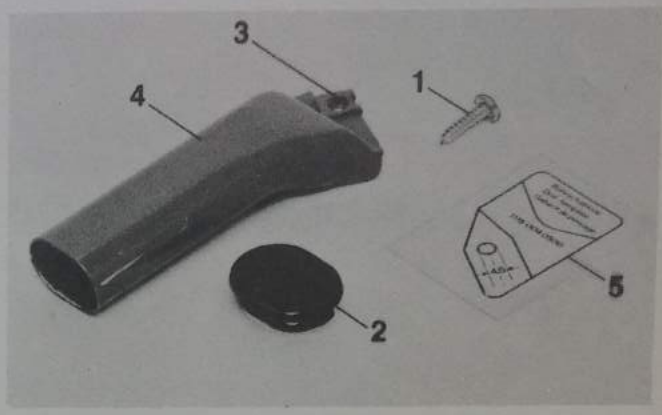

Position of mounting hole on machines with fire-safe Muffler, 1115 140 0607

Note: If the air deflector plate does not fit the contour of the handle frame, on machines with fire-safe Muffler, 1115 140 0607, the inner edge of the handle frame should be filed away slightly in order to accomplish a fit.

....

The opening in the carburetor box should be sealed with Plug, 1115 145 9000, provided with the kit, when the chain saw is operated without intake air preheating.






Plug fitted in position.

Spare parts list:

| | | Ind. No. |
|---|---|---|
| Intake air preheating kit including: | 1115 007 1007 | |
| Self-tapping screw (3.9x16) | 9099 021 2790 | 1 |
| Plug | 1115 145 9000 | 2 |
| Sheet metal nut | 9251 003 0400 | 3 |
| Air deflector plate | * | 4 |
| Drilling template | * | 5 |

*Not available as separate item.

With the exception of #4, all the above-mentioned changes also apply to model 045 chain saws.

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12163/323

# Technical Information

STIHL®

T.3.85
(T.36.84)

## Engineering Changes on Stihl's Model 056 Chain Saws (Series 1115)

Contents:



### 1. Inertia chain brake:

Model 056 chain saws will be equipped with an inertia chain brake from machine No. X 13 422 814. As on models 024, 028, 034 and 038, the chain brake can be activated in two ways:

a) Manually , by operating the front hand guard with the left hand.
b) By the inertia of the front hand guard when the saw suddenly kicks back.

This change necessitated modification of all the component parts of the chain brake. They have, therefore, been given new part numbers (see "Summary").

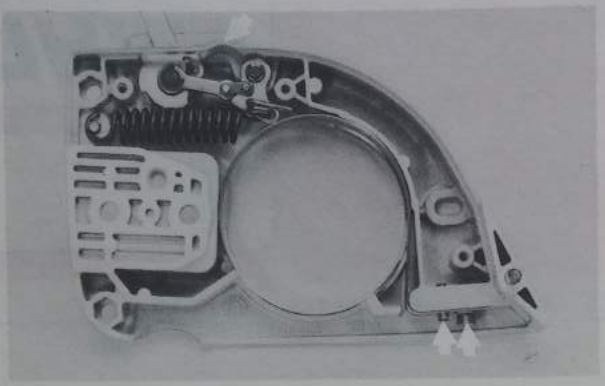
The new Hand Guard, 1114 792 9106, is somewhat higher and wider than the previous version.

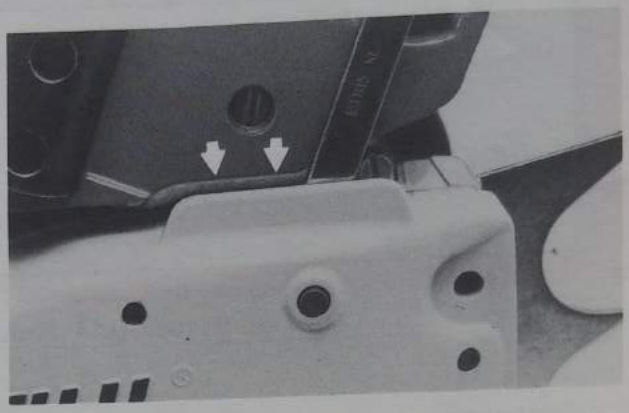
The new and wider brake band completely encircles the clutch drum (360°) and is secured in the new chain sprocket cover by means of an M 5 socket head screw and a cylindrical pin.

The top of the new Chain Sprocket Cover, 1115 640 1712, has a hump to take the toggle lever. Moreover, the step in the mounting flange has been deleted and enables two collar studs of the same length to be used (see also paragraph #4).

The new Handle Frame, 1115 791 4901, has a modified contour, in the area of the upper annular buffer mounting, i.e. the edge has been set back to prevent contact between it and the new chain sprocket cover when the machine is subjected to extreme torsional loads (see also "Service Note").

...

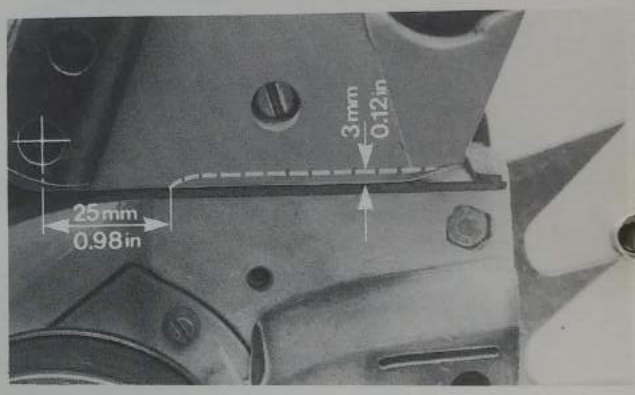




Inertia chain brake

Service note:

If it is necessary to fit a new Chain Sprocket Cover, 1115 640 1712 (inertia chain brake), on a machine with the original-type handle frame (up to machine number X 13 422 813), the handle frame must be reshaped slightly. This work can be performed with a half round file after removing the handle frame (see illus.).




Contour which has to be reworked

Important!

Only Hand Guard, 1114 792 9106, may be fitted in conjunction with the inertia chain brake.

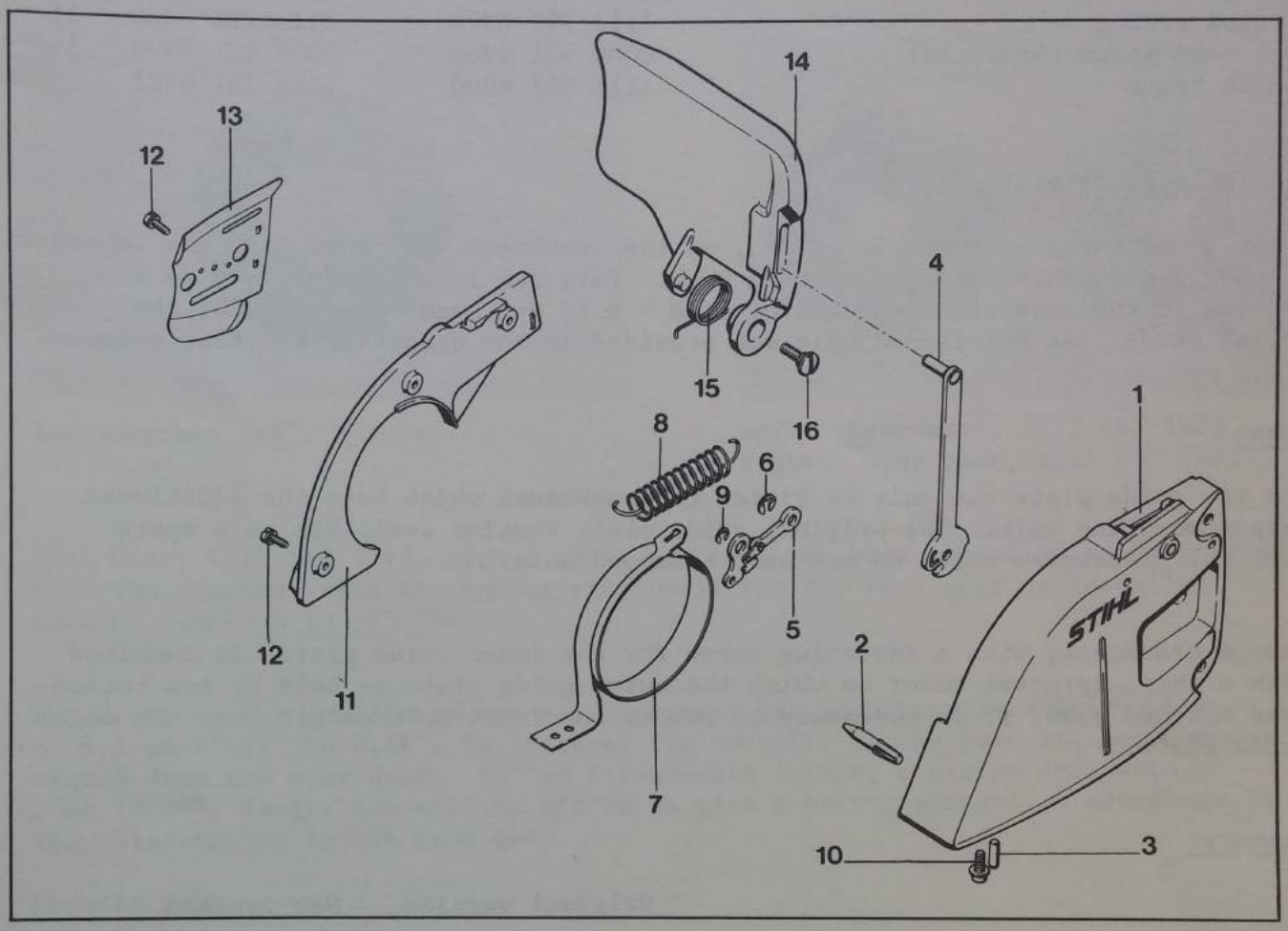
Two collar studs of the same length (shank length 19.5 mm/approx. 3/4") are required to mount the bar.

Spare parts availability:

The hand guard, chain sprocket cover assembly and the component parts of the chain brake remain available as spares for machines up to No. X 13 422 813. Only the new version of the handle frame will be supplied as a replacement in the future.

...

Summary:




| | Original version | New version | Key |
|---|---|---|---|
| Chain sprocket cover assy., (including items 1 to 13) | 1115 640 1708 | 1115 640 1712 | |
| Chain sprocket cover (including items 2 and 3) | 1115 640 1705 | 1115 640 1711 | 1 |
| Pin | 0000 971 0612 | 0000 971 0612 | 2 |
| Cylindrical pin (6x16) | --- | 9381 651 2600 | 3 |
| Lever | 1115 160 5011 | 1115 160 5016 | 4 |
| Washer | 0000 958 0702 | --- | |
| Cam | 1113 160 5100 | --- | |
| Lever | 1115 162 5005 | 1115 160 5015 | 5 |
| E-clip (5) | 9460 624 0500 (2x) | 9460 624 0500(1x) | 6 |
| Brake band | 1115 160 5400 | 1115 162 5401 | 7 |
| Tension spring | 1115 162 7900 | 1115 162 7905 | 8 |
| Pin | 1115 162 5220 | --- | |
| E-clip (4) | --- | 9460 624 0400 | 9 |
| Socket head screw (5x12) | --- | 9036 313 8030(1x) | 10 |
| Cover | 1115 648 7701 | 1115 648 7702 | 11 |
| Pan head screw (4x12) | 9048 319 0660(5x) | 9048 319 0660(4x) | 12 |
| Outer guide plate | 1113 664 1100 | 1113 664 1100 | 13 |

| | Original version | New version | Key |
|---|---|---|---|
| Hand guard | 1114 792 9104 | 1114 792 9106 | 14 |
| Torsion spring | 1113 791 8200 | 1113 791 8200 | 15 |
| Oval head screw (6x3.2x12) | 0000 951 2904 | 0000 951 2904 | 16 |
| Handle frame | 1115 791 4900 | 1115 791 4901 | |

2. Inner guide plate:

A new guide plate has been installed, on the crankcase, for some time now in order to ease disassembly during servicing work. This new inner guide plate is now secured to the crankcase by means of an M 4 x 12 pan head screw and not the collar studs. An M 4 tapped hole was provided in the crankcase for this purpose.

Note:

The new guide plate can only be fitted to crankcases which have the additional tapped mounting hole. The original guide plate remains available as a spare part for crankcases which do not have a tapped hole.

When a crankcase, with a fastening screw for the inner guide plate, is combined with a chain sprocket cover on which the outer guide plate is held by two button-head notched pins, it is necessary to remove the front notched pin from the outer guide plate.

Summary:

| | Original version | New version |
|---|---|---|
| Inner guide plate | 1113 664 1001* | 1113 664 1002 |
| Pan head screw (4 x 12) | --- | 9048 319 0660 |

*remains available for crankcases without the M4 tapped hole.

3. Rim sprocket (8-tooth), spur gear:

In the future the 8-tooth, 3/8" Rim Sprocket, 0000 642 1215, already introduced on machines with a wrap-around handle, will be installed as standard equipment on all versions of the 056.

The Spur Gear, 1115 647 1803, introduced in 1982, will be replaced by Spur Gear, 1115 640 7501, with an integrally molded bearing bushing in order to further reduce friction on the crankshaft. The length of the bushing in Spur Gear, 1115 640 7501, is such that the Spacer Ring, 1115 642 8000, is no longer necessary.

...


Rim sprocket 3/8", 8-tooth

Left: Spur gear, 1115 647 1803
Right: Spur gear, 1115 640 7501

Spur Gear, 1115 640 7595, with a short bushing, has been installed as an interim solution, together with the spacer ring, until the new spur gear is installed from machine number X 13 425 350.

The depth of the profile on the new spur gear has been increased from 3.1 mm to 4.1 mm (0.12" to 0.16") to increase the security of the push fit between the clutch drum and spur gear. In the foreseeable future, a clutch drum with a 1 mm (0.04") longer hub will be fitted to give a better mechanical advantage in its relationship to the spur gear.

Service note:

The clutch drum, with the modified hub, may only be installed with the matching Spur Gear, 1115 640 7501. For this reason, the Spur Gear, 1115 640 7501, will be included in the Rim Sprocket Kits, 1115 007 1045 (0.404", 7-tooth) and 1115 007 1048 (3/8", 8-tooth) for about a year from the date of introduction of the new clutch drum.

A Rim Sprocket Conversion Kit, 1115 007 1014, is available for machines up to No. X 10 963 560 (with Crankshaft Bearing, 9523 003 0440 and Oil Seal, 9639 003 2690) on which the oil pump is driven by the bearing needle in the cover plate. This kit upgrades the machines to the latest production level (see also T.2.83).

The inside diameter of the Spur Gear, 1115 640 7502, with bushing, contained in the kit, is not turned in the hub area at the side next to the engine. This means that the spur gear assumes the correct installed position in spite of the shorter bearing inner race on these machines.

Note:

As a result of the changeover from a 7-tooth to an 8-tooth rim sprocket, the saw chains for bar lengths of 37 cm (15 in.) and 63 cm (25 in.) must be extended by one drive link to 57 and 85 drive links respectively.

Summary:

| | Original version | New version |
|---|---|---|
| Spur gear | 1115 647 1803 | 1115 640 7501 |
| Spacer ring | 1115 642 8000 | --- |
| Rim sprocket kit 3/8", 7-tooth | 1115 007 1044 | --- |
| including: | | |
| Rim sprocket 3/8", 7-tooth | 0000 642 1221 | --- |
| Cover plate | 1115 036 9101 | --- |
| Clutch drum | ** | --- |
| Rim sprocket kit 3/8", 8-tooth | 1115 007 1048* | 1115 007 1048 |
| including: | | |
| Rim sprocket 3/8", 8-tooth | 0000 642 1215* | 0000 642 1215 |
| Cover plate | 1115 036 9101 | 1115 036 9101 |
| Clutch drum | ** | ** |
| Rim sprocket conversion kit | --- | 1115 007 1014 |
| including: | | |
| Rim sprocket 3/8", 7-tooth | --- | 0000 642 1215 |
| Cover plate | --- | 1115 036 9101 |
| Clutch drum | --- | ** |
| Spur gear | --- | 1115 640 7502 |

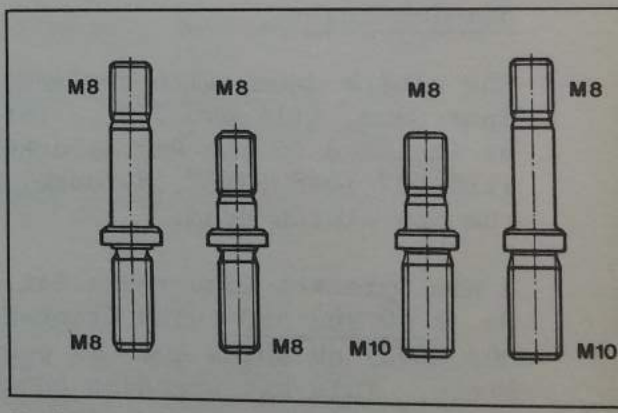
* Already standard on machines with wrap-around handles.

** Not available as separate item.

4. Collar studs (bar mounting):

All versions of the 056, with and without chain brake, from machine number X 13 809 814 , will come standard with Collar Studs, 1115 664 2405, which have an M 10 screw-in thread. The previous Collar Studs, 1110 664 2400, have been deleted.

Replacement crankcases will only be supplied with M 10 tapped holes in the future.




Left: Original collar studs
Right: New collar studs

Service note:

Stripped or damaged M 8 mounting threads in original-type crankcases can be drilled out to 8.5 mm (0.33 in.) dia. and recut with an M 10 tap. One long and one short collar stud or two short collar studs, with an M 10 screw-in thread, must then be fitted to suit the chain sprocket cover concerned (stepped or flat mounting flange).

...

Summary:

| | Original version | New version |
|---|---|---|
| Collar stud (M8/M8) shank length 19.5 mm (0.77 in.) | 1110 664 2400* | --- |
| Collar stud (M8/M8) shank length 34.5mm (1.36 in.) | 1115 664 2400* | --- |
| Collar stud (M10/M8) shank length 19.5mm (0.77 in.) | --- | 1115 664 2405 (2x) |
| Collar stud (M10/M8) shank length 34.5mm (1.36 in.) | --- | 1115 664 2410** |

*Item remains available as a service part

** For chain sprocket cover with step only.

5. Oil and fuel filler caps:

Occasional difficulties have been experienced with the valve introduced to insure proper ventilation, i.e. the Hose, 1110 358 7700, has tended to turn along with the Vent Insert, 1120 358 8105, when it is unscrewed for cleaning. These parts will be deleted on Fuel Filler Caps, 1110 350 0500 and 1110 350 0501, for this reason and replaced by Insert, 1110 353 8102 and Grub Screw, 0000 951 5800.

Left: Fuel Filler Cap, 1110 350 0501.
Right: Oil Filler Cap, 1115 640 3600.

For reasons of standardization, the Cap Retainer, 1117 350 0900 (ball-link chain) will be deleted on Fuel Filler Cap, 1110 350 0501 and replaced by Cap Retainer, 1117 350 0905 (open-link chain). This cap retainer will be secured by a grooved stud on the production line. However, it could be attached by means of self-tapping Screw, 9099 021 2360, in the event of a repair.

Starting with this notice, Oil Filler Cap, 1115 640 3600, will be equipped with a Cap Retainer, 1117 350 0901. This cap retainer could also be attached by means of a self-tapping screw in the event of a repair.

| Summary: | Original version | New version |
|---|---|---|
| Oil filler cap, complete including: | 1115 640 3600 | 1115 640 3600 |
| Cap retainer | --- | 1117 350 0901 |
| Self-tapping screw (3.5x2.5) | --- | 9099 021 2360 |

...

| | Original version | New version |
|---|---|---|
| Fuel filler cap, complete | 1110 350 0500 | 1110 350 0500 |
| including: | | |
| Hose | 1110 358 7700 | --- |
| Insert | --- | 1110 358 8102* |
| Vent insert | 1120 358 8105 | --- |
| Grub screw | --- | 0000 951 5800* |
| Fuel filler cap, complete | 1110 350 0501 | 1110 350 0501 |
| including: | | |
| Hose | 1110 358 7700 | --- |
| Insert | --- | 1110 358 8102* |
| Vent insert | 1120 358 8105 | --- |
| Grub screw | --- | 0000 951 5800* |
| Cap retainer (ball-link chain) | 1117 350 0900 | --- |
| Cap retainer (open-link chain) | --- | 1117 350 0905 |

All other parts are as before.

*Only new-type parts should be used for repairs.

6. Chain sprocket bearing:

The present needle bearing, with a steel cage, will be replaced from machine number X 13 809 814 by a new version with a polymer cage.

Only the new version will be supplied as a spare part after factory stocks of the original part have been exhausted.

Summary:

| | Original version | New version |
|---|---|---|
| Needle bearing (14x17x17) with steel cage | 9512 003 3760 | --- |
| Needle bearing (14x17x17) with polymer cage | --- | 9512 933 3760 |

U/TSM:tc

(385)

# Technical Information

STIHL®

T.9.85
(T.40.84)

New Version, Stihl's 056 AV Magnum II (Series 1115)

## 1. Description:

The new 056 AV Magnum II chain saw is a continued development and uprated version of the time-proven 056 saws. The increase in power has been achieved by installing a new cylinder with an enlarged "swept volume".

With a power output of 5.0 kW, the new 056 AV Magnum II is an exceptionally powerful logging saw and its low weight also makes it suitable for big timber.

This new version, the 056 AV Magnum II, will be supplied with a wrap-around handle and fire-safe muffler under the sales designation.

STIHL 056 AV Magnum II electronic quickstop (056 AVMREQZ II)

## 2. Specifications:

| | |
|---|---|
| Displacement: | 5.73 cu. in. (94 $cm^3$) |
| Bore: | 2.2 in. (56 mm) |
| Stroke: | 1.5 in. (38 mm) |
| Power output: | 5.0 kW at 9,000 R.P.M. |
| Max. allowable engine speed, with bar & chain | 12,000 R.P.M. |

New parts:

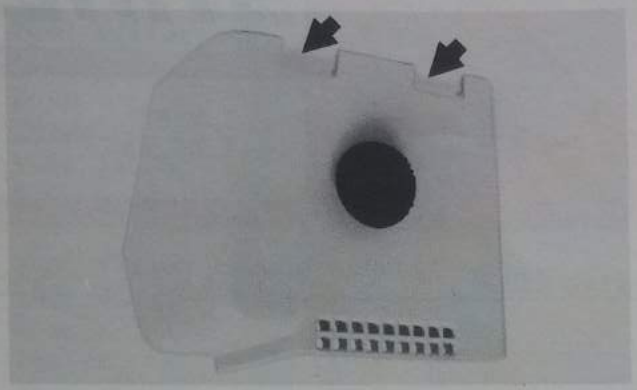
Compared with the 056 and 056 S, the following assemblies have been changed on the 056 AV Magnum II. These parts have been allocated new part numbers and must not be used for other 056 chain saws.

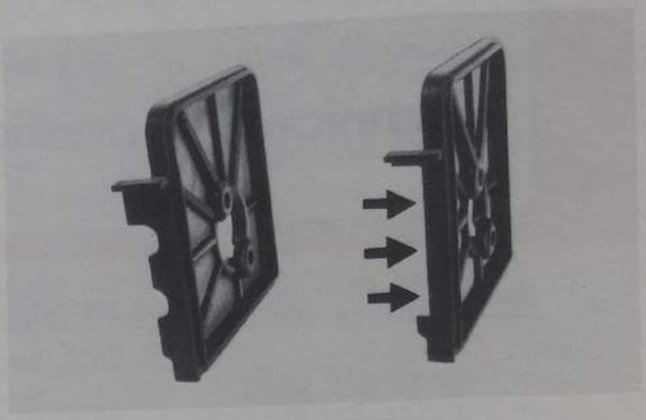
a) The crankcase assembly, with bearings, has been modified to suit the larger cylinder.

b) The new cylinder and 2.2 in. (56 mm) piston are installed with a new cylinder gasket.

c) The carburetor (WJ 4) has been adapted to suit the extra power of the new 056 AV Magnum II.

d) The Air Filter Assembly, 1115 120 1630, consists of two air filter elements, 1115 120 1629, new, with enlarged cut-out and 1115 120 1605, as on 056, 056 S.





e) The new Carburetor Box Cover, 1115 141 1020, differs from the one on the other versions of 056, in that it has two cutouts on its lower edge.

The new muffler, fire-safe, consists of the Inlet Casing, 1115 140 0901 (with screen). Exhaust Casing, 1115 140 0800 (with screen) and Shield, 1115 145 0900, and has two exhuast outlets.

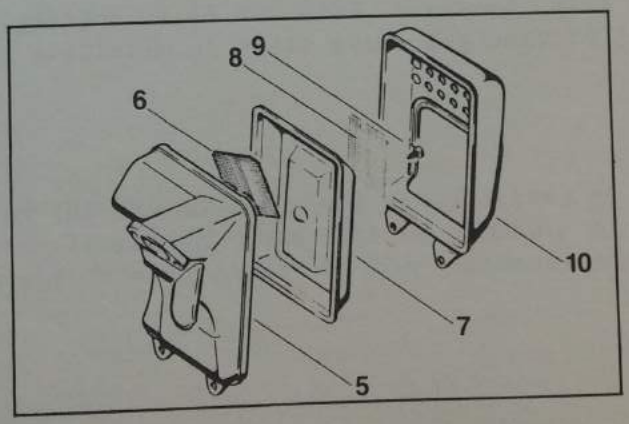
Summary of new parts:

| | | Key |
|---|---|---|
| Crankcase, complete (with bearings) | 1115 020 2114 | |
| Cylinder gasket | 1115 029 2301 | |
| Cylinder with piston, 56 mm (2.2 in.) (including items 1 and 2) | 1115 020 1202 | |
| Piston, 56 mm (including item 2) | 1115 030 2003 | 1 |
| Piston ring | 1115 034 3013 | 2 |
| Cover | 1115 021 1101 | |
| Carburetor WJ 4 including: | 1115 120 0602 | |
| Inlet needle | 1110 121 5100* | |
| Screen | 1114 121 7800* | |
| Button-headed screw | 1114 122 7400* | |
| Cover plate | 1115 120 0800 | |
| Throttle shaft with lever | 1115 120 7101 | |
| Choke shaft with lever | 1115 120 7201 | |
| Sealing plate | 1115 121 0700 | |
| Throttle shutter | 1115 121 3301 | |
| Fuel pump diaphragm | 1115 121 4800 | |
| Valve nozzle | 1115 121 5401 | |
| Washer | 1115 121 8600 | |
| Spring | 1115 122 3000 | |
| Spring | 1115 122 3001 | |
| Spring | 1115 122 3002 | |
| Hook on spring | 1115 122 3200 | |
| Ball | 1115 122 4200 | |
| High speed adjustment screw | 1115 122 6700 | |
| Low speed adjustment screw | 1115 122 6800 | |
| Screw | 1115 122 7100 | |

| | | Key |
|---|---|---|
| Screw | 1115 122 7101 | |
| Button-headed screw | 1115 122 7400 | |
| Gasket | 1115 129 1100 | |
| Gasket | 1116 129 0900* | |
| Cover plate | 1117 121 0800* | |
| Choke shutter | 1117 121 2900* | |
| Metering diaphragm | 1117 121 4700* | |
| Inlet control lever | 1117 121 5000* | |
| Shaft | 1117 121 9200* | |
| Retaining ring | 1117 122 9000* | |
| Air filter assembly, (including items 3 & 4) | 1115 120 1630 | |
| Air filter element | 1115 120 1605 | 3 |
| Air filter element | 1115 120 1629 | 4 |
| Muffler (fire-safe), (consisting of items 5 to 10) | 1115 140 0608 | |
| Inlet casing, complete, (including item 6) | 1115 140 0901 | 5 |
| Screen | 1115 141 9001 | 6 |
| Exhaust casing, complete (including items 8 and 9) | 1115 140 0800 | 7 |
| Screen | 1111 141 9000 | 8 |
| Self-tapping screw (4.2x9.5) | 9099 021 0810 | 9 |
| Shield | 1115 145 0900 | 10 |
| Nameplate 056 AVMREQZ II | | |
| Carburetor box cover | 1115 141 1020 | |

*Part also fitted in other carburetors.

All other parts conform to latest production modifications on model 056 chain saws (see T.3.85).




U/TSM:tc
(3295)

056

# Technical Information

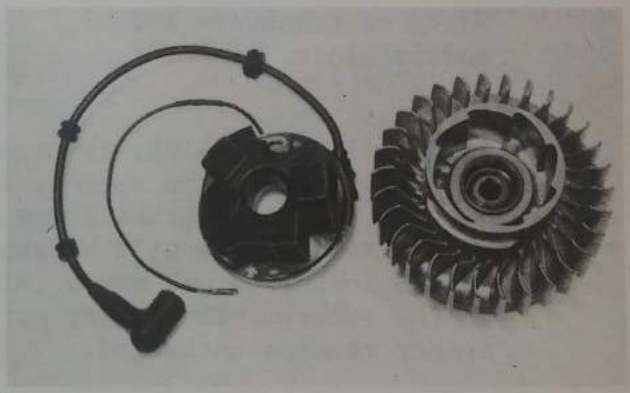
T.13.85
(T.10.85)

## Engineering Changes on Stihl's Model 056 Chain Saws (Series 1115)

1) Ignition system
2) Starter grip
3) Piston pin (056 Magnum)

### 1. Ignition system:

A new electronic ignition system will be introduced on model 056 chain saws starting with serial number X 14 038 764. The previous Bosch Electronic Ignition System, 1115 400 0506, with Flywheel, 1115 400 1206 and Armature Plate, 1115 400 0806, has been deleted and will be replaced by the SEM Module Plate, 1108 400 1208. The new flywheel has fan blades and therefore also replaces the previous fanwheel. Like the original armature plate, the module plate is located behind the flywheel and secured by two screws.



Module plate and flywheel (new).

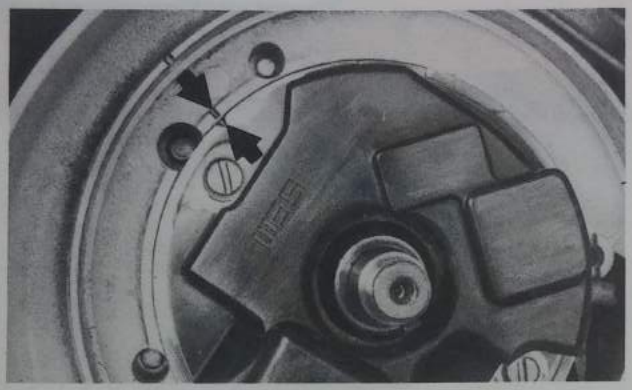
The SEM module plate and flywheel have to be used an an assembly and are then interchangeable with the previous Bosch Ignition, 1115 400 0506 or SEM Ignition, 1115 400 0507.

The previous Bosch Ignition, 1115 400 0506, Flywheel, 1115 400 1206 and Fanwheel, 1115 086 0501 remain available as spare parts for service purposes.

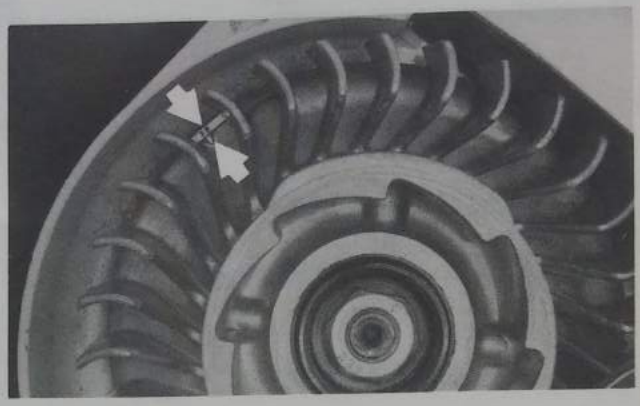
### Service note:

The mounting holes of the SEM module plate are slotted, as on the previous Bosch armature plate. Therefore, when fitting a module plate, it is necessary to pay attention to the "timing marks" on the crankcase and module plate.

When a replacement crankcase is installed, the crankcase "timing marks" must be determined as before, with the flywheel in the firing position (2.8 mm/0.11 in. B.T.D.C.). The mark on the outer edge of the flywheel is then used to apply the timing mark to the new crankcase (illus. right, below).

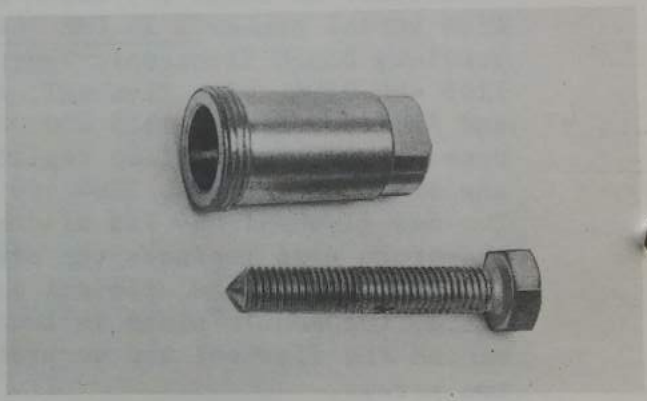


Marks on crankcase and module plate.



Marks on crankcase and flywheel.

Puller, 1106 890 4501, is required for the flywheel, but an approx. 15 mm (0.6 in.) longer thrust screw must be used. New pullers will be supplied with a longer thrust screw (M10x55), in the future. The puller part number remains unchanged.

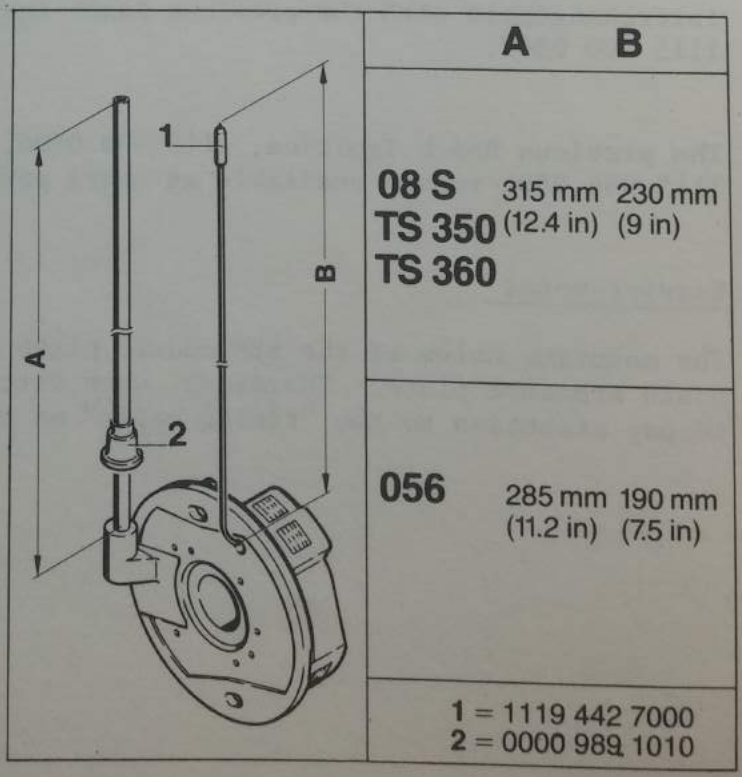


Puller, 1106 890 4501, with M 10 x 55 thrust screw.

In order to simplify stockkeeping, the Module Plate, 1108 400 0800, should be used as a replacement on chain saw models 056 and 08 S, as well as the TS 360 AVE Cutquik (formerly TS 350 AVE).

Note:

The lengths of the ignition and ground leads must be shortened on a replacement module plate before it is installed in model 056 chain saws (see drawing).




| | A | B |
|---|---|---|
| **08 S**<br>**TS 350**<br>**TS 360** | 315 mm (12.4 in) | 230 mm (9 in) |
| **056** | 285 mm (11.2 in) | 190 mm (7.5 in) |

**1** = 1119 442 7000
**2** = 0000 989 1010

Note:

Some 1115 flywheels have been mistakenly marked with the part number of the 1108 flywheel and vice versa. To eliminate the risk of any confusion, please check the bore diameters of the flywheels, i.e.:

Flywheel, 1108 400 1205 = large taper diameter 12.1 mm (0.48 in.)
Flywheel, 1115 400 1208 = large taper diameter 14.1 mm (0.55 in.)

Summary:

| | Original version | New version |
|---|---|---|
| Bosch electronic ignition, consisting of: | 1115 400 0506 | --- |
| Flywheel (Bosch) | 1115 400 1206 | --- |
| Armature plate (Bosch) including: | 1115 400 0806 | --- |
| Rubber boot | 0000 989 1010 | --- |
| Ignition lead (270mm/10.6 in.) | * | --- |
| Fanwheel | 1115 086 0501 | --- |
| Pan head screw (5x12) | 9048 216 0960 | --- |
| Module plate, SEM including: | --- | 1108 400 0800 |
| Rubber grommet | --- | 0000 989 1010 |
| Contact sleeve | --- | 1110 442 7000 |
| Ignition lead (295mm/11.6 in.) | --- | * |
| Flywheel | --- | 1115 400 1208 |

* Not available in pre-cut length.

2. Starter grip:

The present Grip, 1110 195 3400, will be replaced in the near future by a new Grip, 1121 195 3400. This new, more comfortable grip will be gradually introduced on all Stihl chain saws and power tools.

Summary:

| | Original version | New version |
|---|---|---|
| Starter grip | 1110 195 3400 | 1121 195 3400 |

3. Piston pin (056 Magnum):

A 2 mm (0.08 in.) longer piston pin is used in the Piston, 1115 030 2003 (56 mm/ 2.2 in. dia.) recently installed in the newly introduced "Magnum" versions. Please ensure that only the new Piston Pin, 1115 034 1501 (length: 36 mm/1.4 in.) is used in servicing work on Piston, 1115 030 2003.

Summary:

| | |
|---|---|
| Piston pin (13x8x36) | 1115 034 1501 (new) |

U/TSM:tc
(5175)

056

# Technical Information

STIHL®

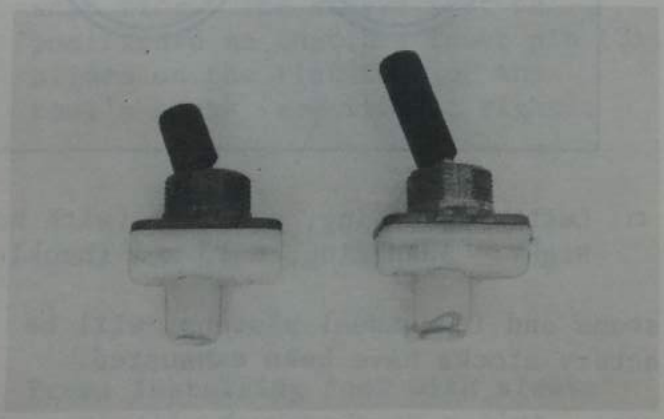
T.25.85
(T.21.85)

Engineering Changes on Stihl's Model 056 Chain Saws (Series 1115)

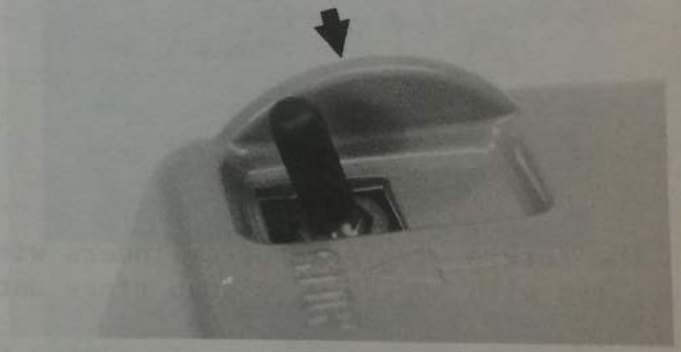
1) Stop switch, handle frame
2) Wire snap ring (piston pin retainer), new installing tool
3) Muffler mounting
4) Cover (oil pump)

## 1. Stop switch, handle frame:

The present Stop Switch, 1110 430 0202, will be replaced by Stop Switch, 1111 430 0210, on all 056 saws starting at serial number X 14 365 164 . The longer lever on the new switch makes it easier to operate, even with a gloved hand. However, a raised "molding" has been provided on the outer edge of the Handle Frame, 1115 791 4901, in order to help avoid the unintentional operation of the switch.



Left: Stop Switch, 1110 430 0202
Right: Stop Switch, 1111 430 0210



Raised molding on handle frame

Also, as the handlebar will be secured by 5 x 25 pan head screws in the future, instead of the 5 x 20 execution, the two mounting threads in the handle frame have been deepened accordingly.

Only the new version of the handle frame will be supplied as a spare part in the future. The original Stop Switch, 1110 430 0202, and the shorter pan head screws should be used on machines with the original-type handle frame, without raised "molding" next to the switch.

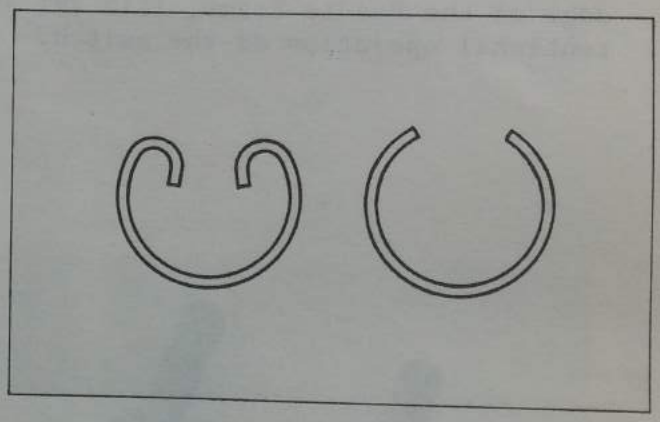
Summary:

| | Original version | New version |
|---|---|---|
| Stop switch including: | 1110 430 0202 | 1111 430 0210 |
| Protective cap | 1110 432 9003 | --- |
| Handle frame | 1115 791 4901 | 1115 791 4901 |
| Pan head screw (5x20) | 9036 341 1020 (2x) | --- |
| Pan head screw (5x25) | --- | 9036 341 1050 (2x) |

2. Wire snap ring (piston pin retainer), new installing tool:

An installing recess, or groove, will be provided in the boss of the 056 piston (54 mm and 56 mm dia. / 2.12 and 2.2 in. dia.) starting at machine number X 14 261 464. This will enable the 13 x 1 hookless snap rings to be used to secure the piston pin instead of the previous 13 x 1 hooked snap rings. Although it is slightly more difficult to remove and install these snap rings, they are more dependable than hooked snap rings, especially at high R.P.M.

Piston boss with installing recess



Left: Snap Ring, A 13 x 1 (with hook)
Right: Snap Ring, C 13 x 1 (hookless)

In the future, replacement cylinders with pistons and individual pistons, will be supplied with hooked wire snap rings until factory stocks have been exhausted.

The 13 x 1 hooked wire Snap Ring, 9462 650 1300, remains available as a spare part for pistons without an installing recess.

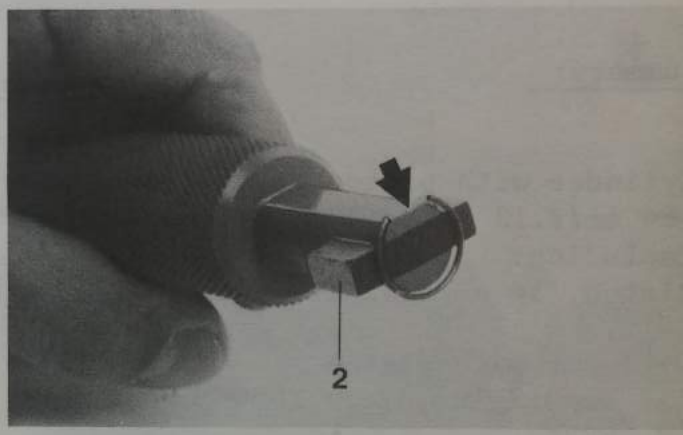
Service note:

Only 13 x 1 wire snap rings with hooks may be used for pistons which have no installing recess since it is extremely difficult to remove hookless snap rings from such pistons.

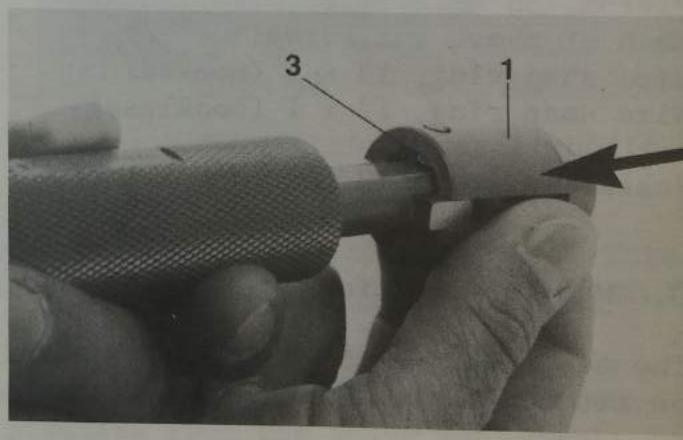
Use a "scriber" or a similar tool to remove hookless snap rings from pistons which have an installing recess. It is only necessary to remove one snap ring to drive out the piston pin with Drift, 1111 893 4700. Hookless snap rings are fitted with the new Installing Tool, 5910 890 2213. The tool is used as follows (A, B, C, D):


Installing Tool, 5910 890 2213

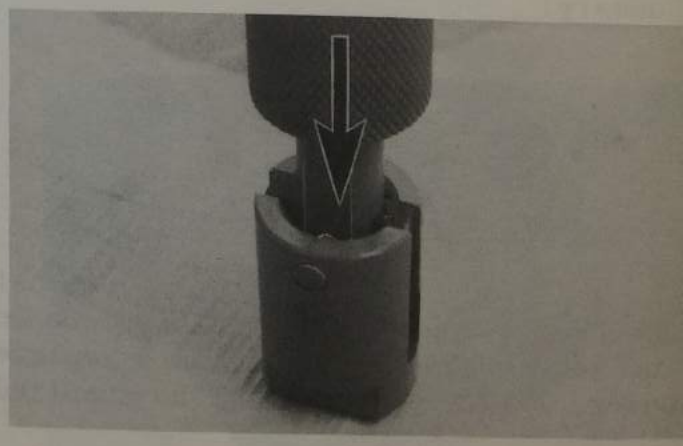
A) Take off the sleeve (1); attach the 13 x 1 hookless snap ring to the magnet (2) so that the ring gap is on the flat side of the tool's shank (see illus., right).



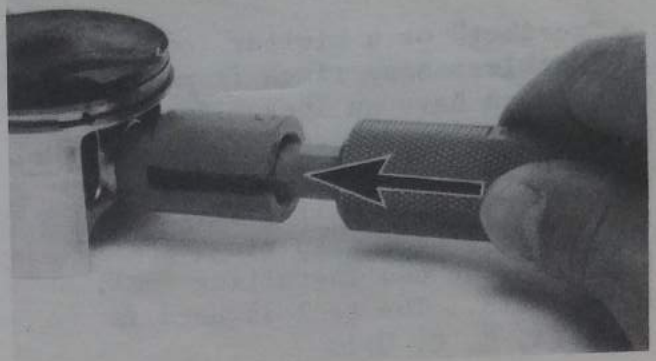

B) Push large, slotted diameter of sleeve over the magnet and the snap ring. The sleeve must be positioned so that the inner pin (3) slides on the flat face of the tool's shank (see illus., right).




C) Press installing tool with sleeve vertically downwards on a flat surface (bar) until the sleeve butts against the tool's shoulder.



D) Remove the sleeve and slip it onto the other end of the shank - pin must slide on flat face of the tool's shank. Apply installing tool to piston pin boss (flat on sleeve must point upwards), hold piston steady, center the tool shank exactly and press firmly until the snap ring slips into the piston boss groove.



Important Service Note:

Replacement pistons are supplied with one snap ring already fitted in the boss. The piston pin must always be fitted from the ignition side.

Summary:

| | Original version | New version |
|---|---|---|
| Cylinder with piston (54 mm/2.12 in. dia.) (056 Super) | 1115 020 1205 | 1115 020 1205 |
| including: Piston, 54 mm/2.12 in. dia. | 1115 030 2002 | 1115 030 2002 |
| Cylinder with piston (56 mm/3.2 in. dia.) (056 Magnum) | 1115 020 1202 | 1115 020 1202 |
| including: Piston, 56 mm/2.2 in. dia. | 1115 030 2003 | 1115 030 2003 |
| each of above including: Wire snap ring, 13 x 1 (hooked) | 9462 650 1300 | --- |
| Wire snap ring, 13 x 1 (hookless) | --- | 9463 650 1300 |
| Installing tool 13 (new special tool) | --- | 5910 890 2213 |

3. Muffler mounting:

The two lower muffler mounting screws ( 5 x 18), with captive spring washers, will be fitted with plain (5.3) washers in the future.

Summary:

| | Original version | New version |
|---|---|---|
| Washer (5.3) | --- | 9291 021 0120 (2x) |

4. Cover (oil pump):

The modified cylinder mounting dimensions, for a special (056 Magnum) saw version, required the replacement of the present Cover, 1115 021 1100, by Cover, 1115 021 1101. The new cover can be used as a replacement on all versions of the 056. The original Cover, 1115 021 1100, will be supplied only as long as factory stocks last.

Summary:

| | Original version | New version |
|---|---|---|
| Cover | 1115 021 1100 | 1115 021 1101 |

U/TSM:tc
(8165)

056

# Technical Information

STIHL®

T.1.86

Engineering Changes on Model 056 Chain Saws (Series 1115)

1. New intake air preheating kit (special accessory)
2. Hand guard
3. Side plate
4. New "Power Control Valve) carburetor (Walbro WJ4)

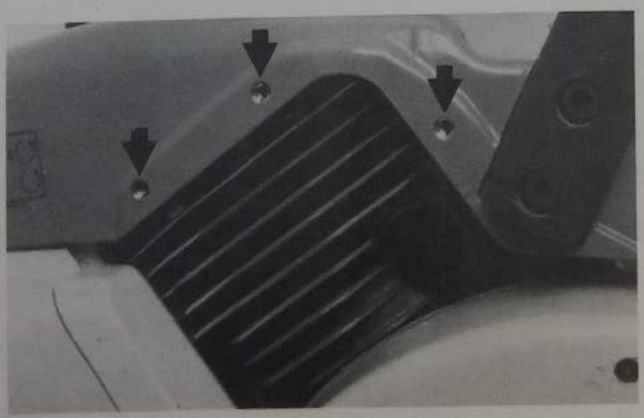
## 1. New intake air preheating kit (special accessory):

The new Intake Air Preheating Kit, 1115 007 1015, is available for cold weather operation. This new kit can be fitted on all machines from No. X 15 215 414 and replaces the previous version, 1115 007 1007, which is no longer available. When the kit is fitted, heated air is drawn in from around the cylinder instead of the cold outside air. This helps prevent air filter and carburetor icing.

Intake Air Preheating Kit, 1115 007 1015

Caution: The new kit may only be used at temperatures below +10°C (50°F). This is necessary in order to avoid damage to the engine caused by thermal overload.

Three M 4 tapped holes are provided in the handle frame for attachment of the air deflector supplied with the kit. The modified handle frame has been given a new part number and will be installed as standard from the above mentioned machine number.



Handle frame (new) with tapped holes

Air deflector fitted

Before the kit is fitted for the first time, it is necessary to make an opening in the carburetor box. To do this, drill a hole of about 10mm (3/8") diameter roughly in the center of the contour on the inside of the carburetor box. Starting from the hole, use a round file to make the opening along the contour.

Plug, 1115 145 9000

The opening in the carburetor box must be sealed with the Plug, 1115 145 9000, when intake air preheating is not required.

Summary :

| Part name | Original version | New version | Key | Rem. | WG | MAM H | MAM V |
|---|---|---|---|---|---|---|---|
| Intake air preheating kit including: | 1115 007 1007 | 1115 007 1015 | | | 04 | 1 | 1 |
| Air deflector | -*- | -*- | | 1) | | | |
| Self-tapping screw B 3.9 x 16 | 9099 021 2790 | --- | | | 01 | 10 | 100 |
| Pan head screw M 4 x 10 | --- | 9047 319 0650 | | | 01 | 10 | 100 |
| Sheetmetal nut | 9251 003 0400 | --- | | | 01 | 10 | 10 |
| Plug | 1115 145 9000 | 1115 145 9000 | | | 01 | 1 | 50 |
| Handle frame | 1115 791 4901 | 1115 791 4902 | | | 04 | 1 | 5 |
| Air deflector (only 056 Magnum with wrap-around handle) | --- | 1115 141 5601 | | 2) | 01 | 1 | 5 |

Remarks:

1) Not available as a separate item.

2) The new air deflector in the kit is exactly the same as Air Deflector, 1115 141 5601, but it has a wire mesh filter riveted to it. The air deflector in the 056 Magnum, with wrap-around handle, diverts the flow of cooling air away from the operator during the felling cut, i.e. with the sprocket cover pointing up.

...

2. Hand guard:

The Hand Guard, 1114 792 9106, installed up to now on model 056 saws, with manual and inertia chain brake, has been deleted and will be replaced from machine No. X 15 216 514 by Hand Guard, 1115 792 9105. Two windows in the new hand guard improve the operator's view on the bar nose.

Hand Guard, 1115 792 9105

Only the new, fully interchangeable version will be supplied as a replacement in the future. The original Hand Guard, 1114 792 9106, can be used as a replacement for models 015, 020, 031 and 032.

Service note:

Some hand guards have two holes in the right-hand pivot. The smaller hole (front side of hand guard) must be used to anchor the torsion spring.

Summary:

| Part name | Original version | New version | Key. Rem. | WG | Mam H | Mam V |
|---|---|---|---|---|---|---|
| Hand guard | 1114 792 9106 | 1115 792 9105 | | 04 | 1 | 5 |

3. Side plate:

In the interests of standardization, the present Inner Side Plate, 1113 664 1002, will be deleted in the near future and replaced by Side Plate, 1122 664 1000.

Only the new version will be supplied as a spare part once factory stocks of the original part are exhausted.

Summary:

| Part name | Original version | New version | Key Rem. | WG | MAM H | MAM V |
|---|---|---|---|---|---|---|
| Inner side plate | 1113 664 1002 | 1122 664 1000 | | 04 | 1 | 50 |

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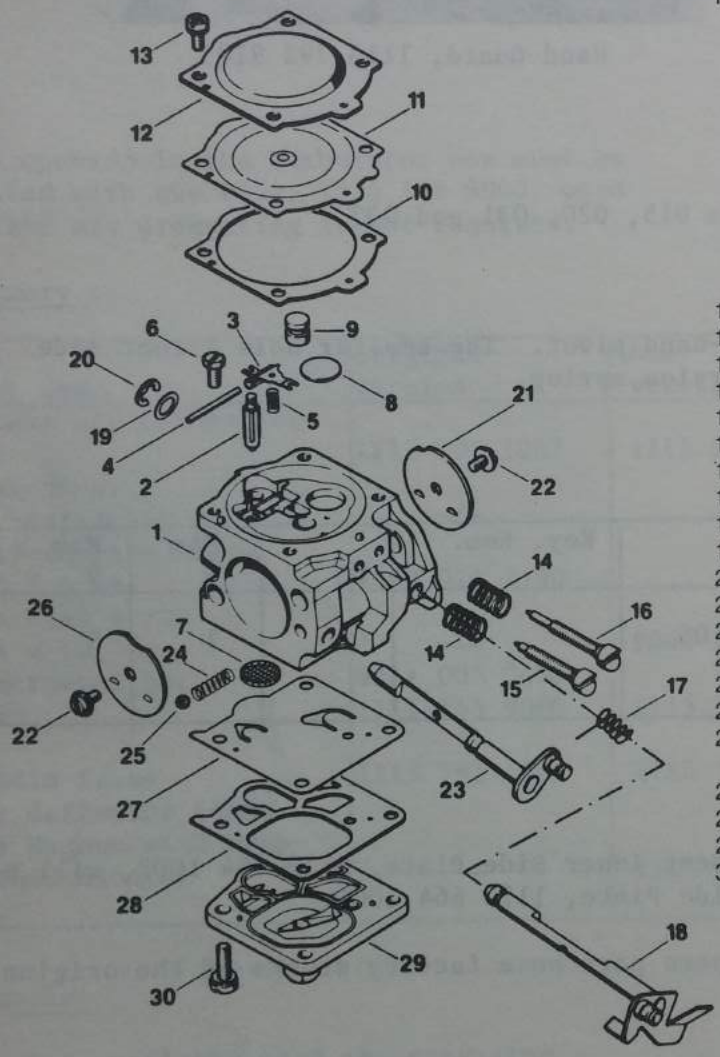
## 4. New "Power Control Valve" Carburetor (Walbro WJ4B):

The new "Power Control Valve" Carburetor, 1115 120 0602 (Walbro WJ4B) is now being installed on 056 Mag. II flush cut versions.

Spare parts of the WJ4B carburetor:




| Ind. No. | Part Number | Quantity | Part Name |
|---|---|---|---|
| 1 | 1115 120 0602 | 1 | Carburetor WJ-4 Δ 2-31 |
| 2 | 1110 121 5100 | 1 | Inlet needle |
| 3 | 1117 121 5000 | 1 | Inlet control lever |
| 4 | 1117 121 9200 | 1 | Lever pin |
| 5 | 1117 122 3005 | 1 | Spring |
| 6 | 1114 122 7400 | 1 | Retaining screw |
| 7 | 1114 121 7800 | 1 | Screen |
| 8 | 1115 121 0700 | 1 | Sealing plate |
| 9 | 1115 121 5401 | 1 | Valve nozzle |
| 10 | 1116 129 0900 | 1 | Gasket |
| 11 | 1117 121 4700 | 1 | Metering diaphragm |
| 12 | 1117 121 0800 | 1 | Cover |
| 13 | 1115 122 7101 | 4 | Screw |
| 14 | 1115 122 3002 | 2 | Spring |
| 15 | 1115 122 6700 | 1 | Main adjustment screw |
| 16 | 1115 122 6800 | 1 | Idle adjustment screw |
| 17 | 1115 122 3200 | 1 | Return spring |
| 18 | 1115 120 7101 | 1 | Throttle shaft with lever |
| 19 | 1115 121 8600 | 1 | Washer |
| 20 | 1117 122 9000 | 1 | Retaining washer |
| 21 | 1115 121 3301 | 1 | Throttle shutter |
| 22 | 1115 122 7400 | 2 | Retaining screw |
| 23 | 1115 120 7201 | 1 | Choke shaft with lever |
| 24 | 1115 122 3001 | 1 | Spring |
| 25 | 1115 122 4200 | 1 | Ball |
| 26 | 1117 121 2900 | 1 | Choke shutter |
| 27 | 1115 121 4800 | 1 | Pump diaphragm |
| 28 | 1115 129 1100 | 1 | Gasket |
| 29 | 1115 120 0800 | 1 | Cover |
| 30 | 1115 122 7100 | 4 | Screw |

U/TSM:tc
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# Technical Information

STIHL®

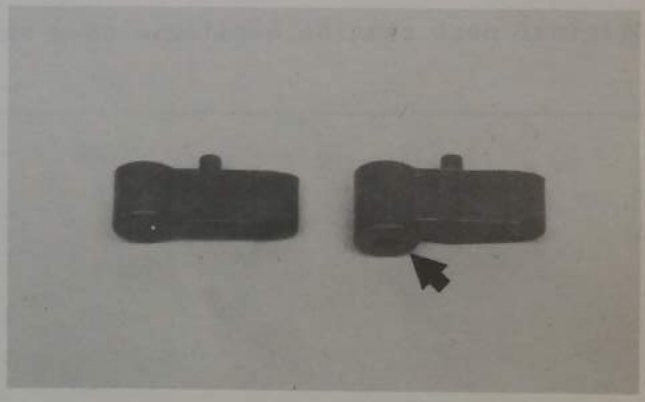
T.13.86

## Engineering Change on Model 056 Chain Saws (Series 1115)

### Rewind starter:

The present starter pawl will be replaced by a new Pawl, 1124 195 7200, from machine number X 15 373 614 . 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, 1117 190 1010, has been replaced by a new version 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, 1117 195 7200
Right: Pawl, 1124 195 7200

The shape of the spring was changed some time ago to achieve a further improvement in the starter's function. The spring now holds the pawl in the idle position. The part number remains unchanged.

A new Rope Rotor/Pawl Kit, 1117 007 1014, will be supplied as a replacement for the original rope rotor up to the end of 1987.

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Summary:

| Part Name | Original version | New version | Key | Rem. | WG | MAM H | MAM V |
|---|---|---|---|---|---|---|---|
| Rope rotor/pawl kit consisting of: | --- | 1117 007 1014 | | | 04 | 1 | 1 |
| Rope rotor | 1117 190 1010 | -*- | | 1)2) | 04 | 1 | 5 |
| Pawl | 1117 195 7200 | 1124 195 7200 | | 3) | 04 | 1 | 10 |

Modification to be introduced: from machine number X 15 373 614 .

Remarks:

1) Original part will be supplied only as long as factory stocks last.

2) New part is not available as a separate item.

3) Original part remains available as a spare part.

U/TSM:tc
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