



No. 243

Date: 13.03.2012



MT5 platform updates

Dear colleagues,

As part of our policy of continuous product improvement we have summarized below the main improvements made on the MT5 platform in order to enhance product performance and to ensure an even higher quality of quality product reaches the market.

The changes that were implemented are as a result of the feedback received from our business partners and end users worldwide, along with our ongoing monitoring and analysis of the manufacturing processes.

Since 01/11/2011 we have been using a new lubricant spray made by "Rivolta".

This lubricant has been used for some time for the lubrication of the CLIQ cylinders and is now the recommended lubricant for all MT5 cylinders.

This lubricant has enhanced penetration and lubrication capabilities and in the near future it will also replace the lubricant spray that we supply for all mechanical cylinders.

New lubrication instructions will be printed on new packages and duplication cards:

"Lubricate the cylinder every 6 months. In frequent use, or in harsh weather conditions, lubricate at least 4 times a year. Use Mul-T-Lock approved lubricant".

Driver pin (combined body pin): We realized that in some cases the internal body pin was jamming and the reason was the riveting force applied during the telescopic pin assembling. By reducing the wall thickness of the riveting area we reduced the force applied during riveting and by that preventing the pin to bend and jam.



MUL-T-LOCK®

ON LINE UPDATE

New Product

Changeable combination (2 & 3-in-1): Unwanted combination change was identified as occurring on the first design of cylinders.

Action: modified changeable pins and plugs (see enclosed online 240).

Online 240

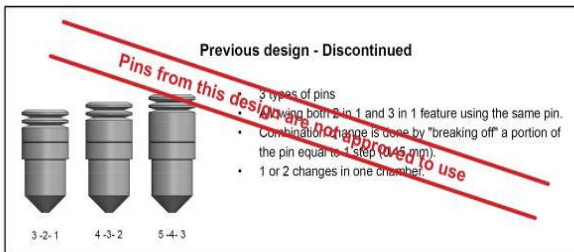


No. 240
Date: 14.12.2011

Improved changeable combination MT5/MT5+

General:

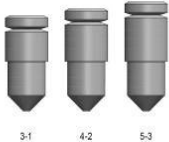
In the previous design of the variable pins, the combination change was done by "breaking off" a portion of the pin that is equal to 1 step (0.45 mm). In the improved design, we have modified the size of the "breakable" portion to 2 steps (0.90 mm). This modification improves the functionality and reliability of this feature.



Improved design

2-in-1 pins – Single Change

Pins catalog numbers
83301234 83301235 83301236

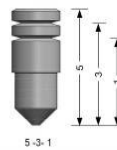


- 3 types of pins
- Allows 1 change using the same pin
- Combination change is done by "breaking off" a portion of the pin equal to 2 steps (0.90 mm)
- Change is done using 1 chamber



3-in-1 pin – Double Change

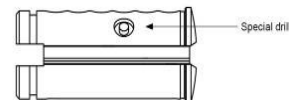
Pin catalog number
83301310



- 1 type of pin
- Allows up to 2 changes using the same pin
- Combination change is done by "breaking off" a portion of the pin equal to 2 steps (0.90 mm)
- Change is done using 1 chamber

Cylinder plug

- Drill depth dimension was modified in order to accommodate the improved pin design.
- New production plugs (effective December 2011) can be used for 2-in-1 and 3-in-1.
- Old stock of plugs can be used only for 2-in-1 feature.



Note: No change has been done to cylinder bodies.

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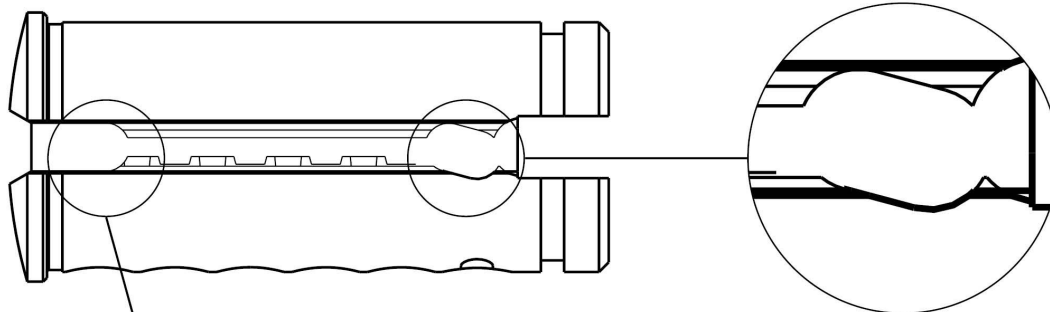
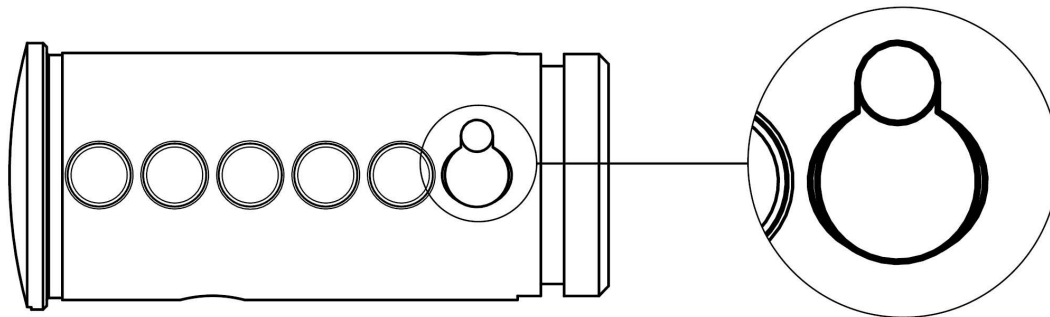
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Detailed description and illustrations

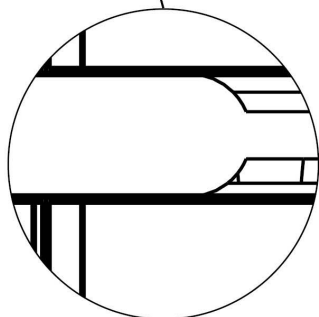
Eccentric pin not moving freely

Improved shape of the eccentric plug pin chamber in order to improve the guidance of the eccentric pin.



Difficult to take the key out

Alpha spring jammed in the intersection point of the drill and the keyway. Curved milling was added in the plug for free movement of the Alpha spring and removing the sharp edge between keyway and Alpha spring drill.



External plug pin jammed in the first chamber

Short keyway guidance was banded and stuck the first pin during key insertion. It happens in 31 mm plugs (first pin is more close to the plug front). a keyway milling was added to remove the front keyway material.



In some cases we have noticed that the Alpha spring has been damaged as a result of getting caught on the sharp edges of the key opening in the protecting/rotating disk which can be found in some security hardware. Attention is required in those installations specially the intersection between the key and the slot when taking out the key.

"Elongating the skirt" of the finger pin to minimize the gap for the Alpha spring during key insertion and extraction is also something in process for improving the Alfa spring reliability.

We are also in process of reviewing the Alpha spring design in order to decrease failure possibilities.

All actions were taken to ensure that cylinders and parts supplied starting February 2012 onwards contain components according to the latest design improvements.

The changes are aimed at further enhancing product performance but unless otherwise stated, the inventory you have in your warehouse is for purpose and of suitable quality.

One major issue that can affect the well being of the cylinder is quality of the keys used, therefore it is highly important to keep the KC5 well calibrated at all times!

Any time you suspect machine is out of alignment – give your service technician a call.



Follow up table

Updated to: 22.02.2012

Problem Type	QTY	%	Corrective action - done	Expected % Relevant for) production (from Jan 2012)
Alpha Spring design issues Alpha Spring malfunction due to interface with mechanical part in the cylinder	37	44%	Design change in the plug that includes: reduce obstacle from the Alpha spring route, enable production without burrs - Done Design change in the special pin - Done Design change of the Alpha spring - in process Finger pin redesign - in process (Mar 2012)	1%
Bodies production (side bar groove, general production..)	2	2%	New gauges in the production process + 100% inspection	0%
Plug production	8	10%	Design change in the hole for special Alpha pin - Done New inspection station in the production and the assembly - Done No old version plugs will be supplied from the factory - Done	0%
Telescopic pins production	3	4%	Design change that effect the riveting process - Done New inspection point for the assembled pins - Done	0%
Finger pins mechanism issue	1	1%	No Action needed	0%
Assembly issues	1	1%	New instruction for the assemblers "not to fix malfunctions in process" but to report - Done Change of the used lubricant to "Rivolta" for better cylinder performance - Done	0%
Keys production issues (profile, combination, Alpha spring assembly...)	11	13%	3 New inspection point (100% check) in the process - Done Improvement in the machines to prevent key damages in the manufacturing process - Done new gig for the assembly of the Alpha spring mechanism - Done	0%
Dirt in the cylinder	12	14%	New instructions to the field for lubrication and maintenance	?
Wrong use in the field (duplication by using the wrong card, wrong pinning...)	5	6%	Should be reduce in time with training and experience	?
Sensitivity of key tip	1	1%	Same like all platforms	
Wrong design of 3 in 1	1	1%	Design change and inventory fixed - Done	0%
Key cutting machines in the field issue (KC5)	2	2%	Inspection of KC5 machines in Israel - 50% Done (End of Feb) A decision was taken to send us one cut key from each machine for inspection and feedback - (End of Mar)	?
	84	100%		