



GYSPOT 125L & DC / Procedure to replace the cooling pipes on the C-clamp cable

The following procedure explains how to update the C-clamp cable on the spot welding machines GYSPOT 125L (LC and INTEGRAL) and GYSPOT DC (DC-LC and DC-LCX).

This update is in order to improve the cooling system to avoid any leakage risk.

Spare parts list for the update :

- black pipe	ref.71438	Qty = 5m20 (2*2m60)	} Global reference : S81024
- right angle connector	ref.71463	Qty = 2	
- collar diam.12,8mm	ref.71218	Qty = 4	
- collar diam.9,5mm	ref.71224	Qty = 2	
- tubular bush	ref.71084	Qty = 4	
- sup. plastic support	ref.90129	Qty = 1	} Global reference : S81025
- inf. plastic support.	ref.90130	Qty = 1	
- support screws	ref.41067	Qty = 2	
- clamp cover	ref.98468BG	Qty = 1	
- clamp cover axis	ref.90128	Qty = 1	
- clamp cover axis screw	ref.41025	Qty = 2	
- clamp cover thread insert	ref.41148	Qty = 2	

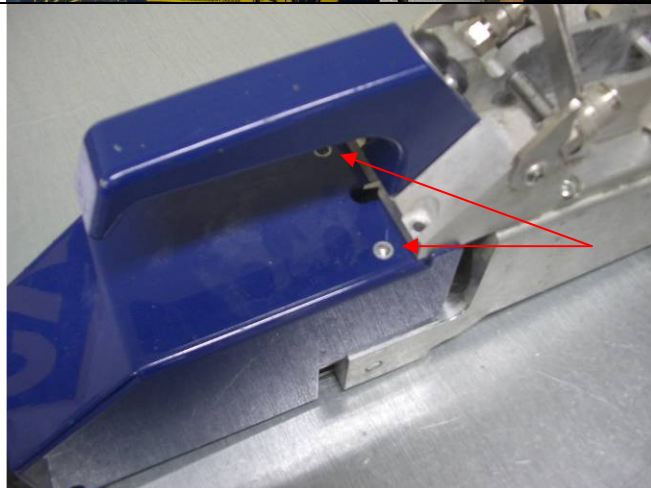
This modification will be operated in 5 steps.

STEP 1 : PREPARATION OF THE CLAMP

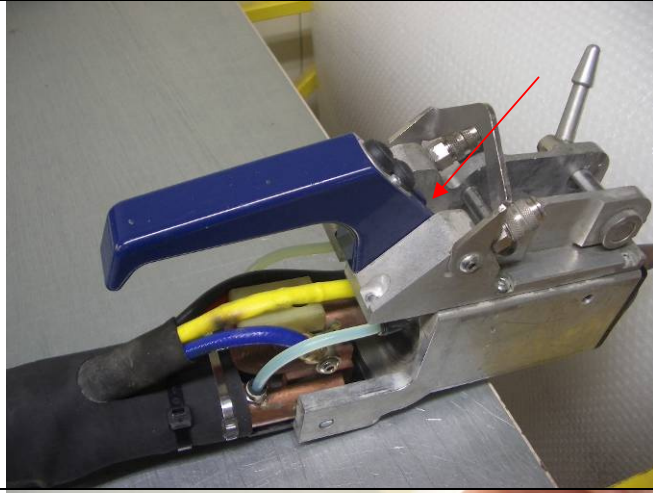


Take off the yellow metallic cover of the machine.

Be careful, the earth wire is fixed between the yellow metallic cover and the interior of the machine: slide the metallic cover to the rear.



Unscrew and take off the top cover of the clamp in order to access the pipes.

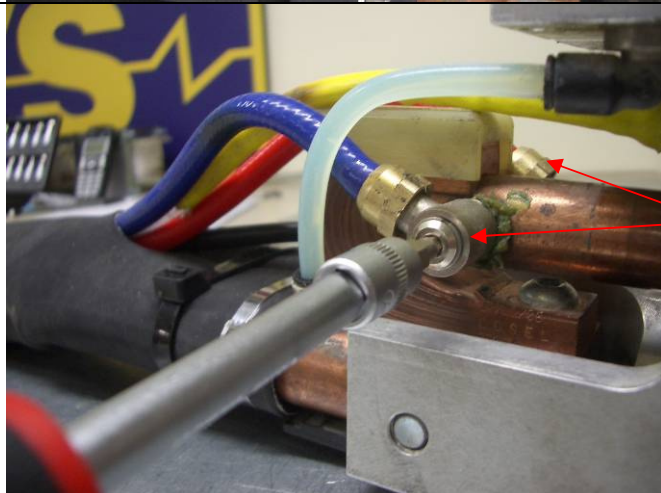


Take off the blue handle by unscrewing the screw shown by the red arrow on the photograph.

This step is to ease the access to the connectors and pipes inside the clamp.



Cut and remove the pipe protection sheath.

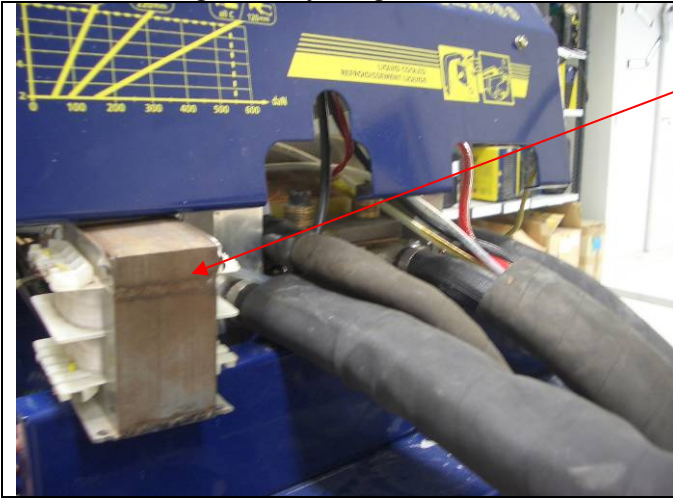


Unscrew the 2 connectors from the cylinder axle

BE CAREFUL: liquid cooling could leak from the pipe and from the axle when the connector will be removed.



MAKE SURE THAT NO TRACES OF GLUE REMAIN INSIDE THE THREAD.



Inside the machine : remove the screws used to assemble the 2 parts of the front covers, and use a wedge to keep them apart (in our case, we used a small transformer).

Be careful: there are different configurations of cables (125 / DC / INTEGRAL).

STEP 2 : REPLACEMENT OF THE PIPES



Spare parts required :

- black pipe	ref.71438	Qty 2*2m60
- right angle connector	ref.71463	Qty 2
- collar diam 12.8	ref.71218	Qty 4
- tubular bush	ref.71084	Qty 4
- sup. plastic support	ref.90129	Qty 1
- inf. plastic support	ref.90130	Qty 1
- support screws	ref.41067	Qty 2

Parts that don't appear on the photograph :

- collar diam 9.5	ref.71224	Qty 2
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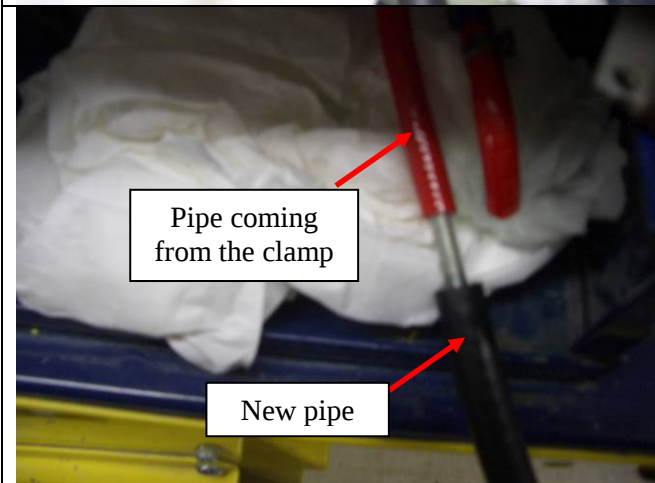


The photograph left is taken from the left hand side of the generator.

Cut the red and blue pipes, inside the machine, coming from the cable of the C-clamp.

Prepare some absorbing paper underneath to collect any cooling liquid that might leak.

Make sure you clearly identify each pipe, to remember how to connect them back between machine side and clamp side.



The idea is to connect the old red and blue pipes to the new black pipes inside the machine, and pull them through the sheath to the clamp.

TRICK : take a screw M6*50 ; cut the head of the screw; put some Super Glue at each extremity of the screw and insert it on one side in the old pipe, and on the other side in the new black pipe. Test the resistance of the assembly by pulling on the pipes. The assembly needs to resist to go through the whole cable sheath from the machine to the clamp. To ease the pulling of the pipes through the sheath, some vaseline can be used.

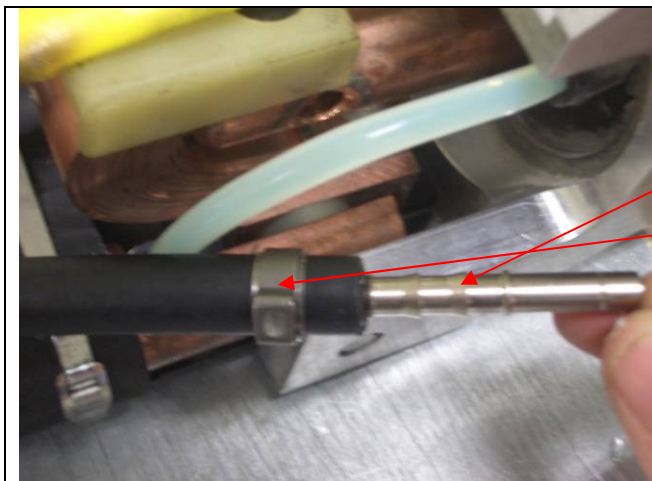


Pull on the old pipe on the clamp side to pull the black pipe through the sheath.

Proceed the exact same way for the other pipe.

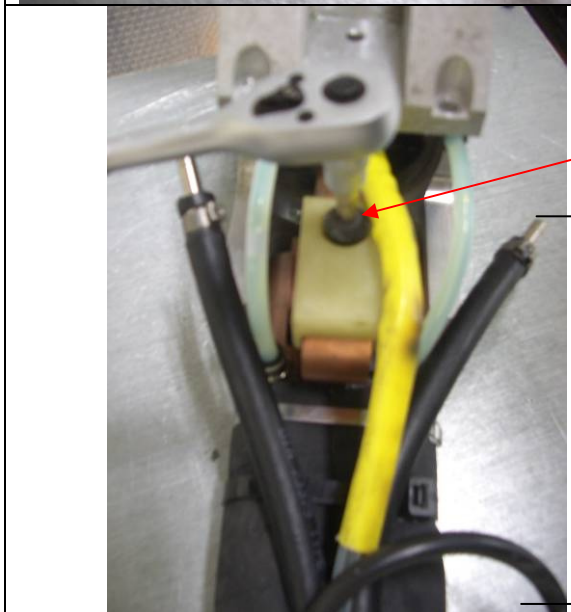
If the connection between new and old pipes breaks inside the sheath, it will be necessary to disassemble the whole cable connections from the machine, and take off the sheath to access the pipes.

STEP 3 : REASSEMBLY OF THE CLAMP ELEMENTS



At the extremity of the new pipes, on clamp side and on machine side :

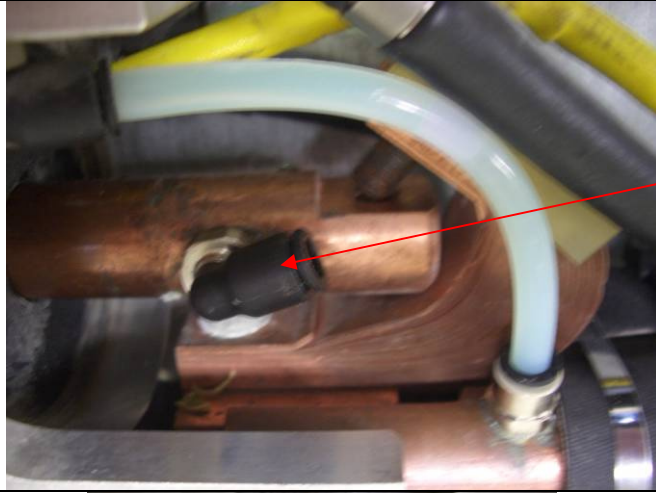
- Insert a bush ref.71084 with the rings inside the pipe.
- Crimp the collar diam 12.8 ref.71218 on the pipe.



To ease access, unscrew the screw of the shunt.

Leave about 15 cm of pipe the opening in sheath and the extremity of the pipe (for the 2 sides).

15 cm

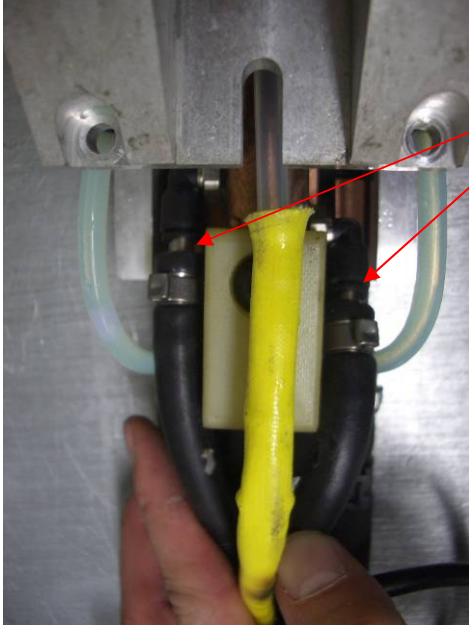


Make sure that no dirt remains inside the thread of the connector shown left.

Apply some watertightness paste on the thread of the right angle connector ref. 71463 and screw it on the axle of the cylinder.

Proceed the exact same way on the other side.

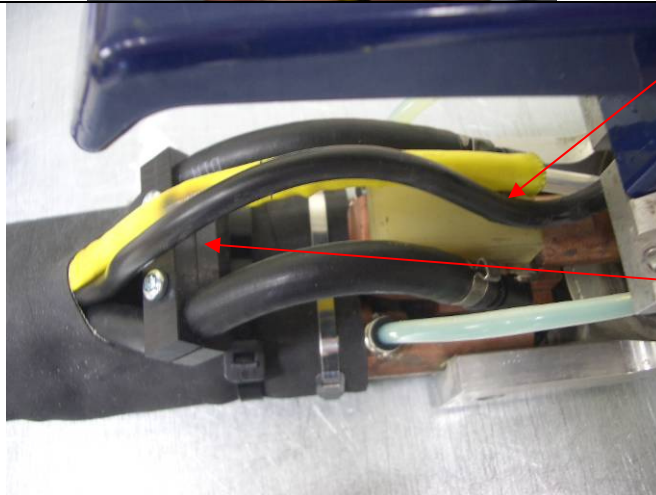
BEWARE : Pay particular attention to tighten the connector enough, but not too much as it could break the connector.



Connect the new black pipes to the right angle connectors.

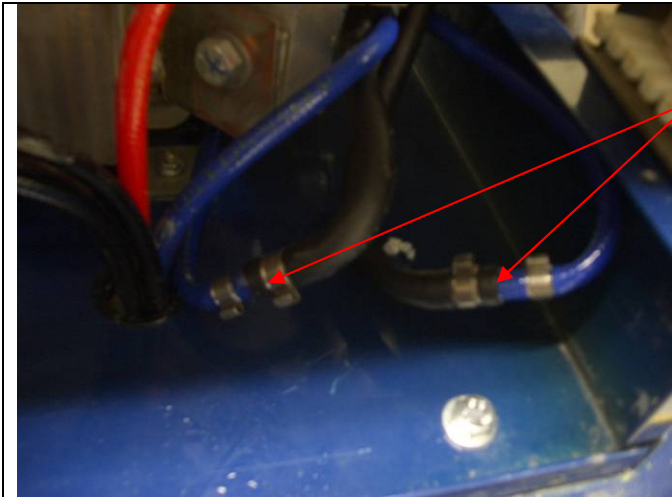
Make sure that they are correctly connected by pulling slightly on them.

BEWARE : make sure you connect the pipes back the right way, as they now have the same colour. Respect the right connection between the machine side and the clamp side.



Screw back the screw on the shunt.

Assemble the 2 black plastic parts ref.90129 and ref.90130 with the 2 screws ref. 41067. The air pipe and the command cable should pass above these plastic parts, as shown on the photograph left.

STEP 4 : REASSEMBLY ON MACHINE SIDE

Assemble the coupling connectors from the new pipes to the old pipes on the machine side.

BEWARE : make sure you connect the pipes back the right way, as they now have the same colour. Respect the right connection between the machine side and the clamp side.



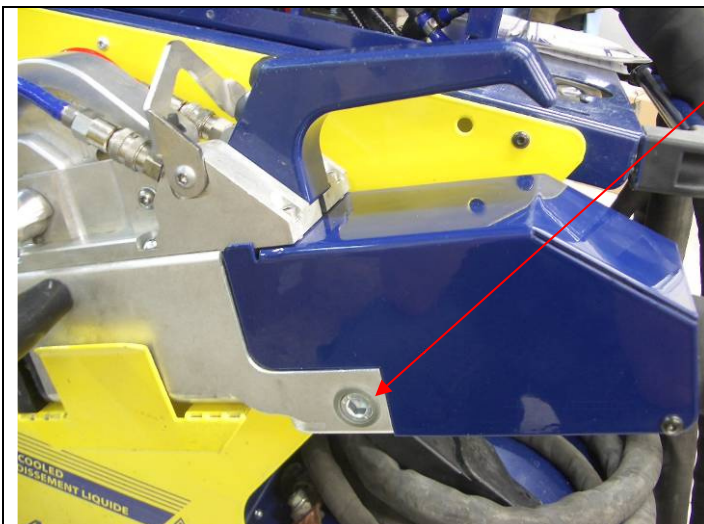
Reassemble the front panel of the machine.

STEP 5 : TEST AND REASSEMBLY OF TOP COVER

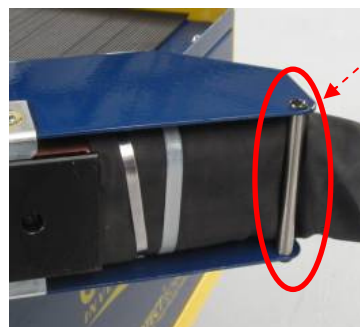
Once all these steps have been performed, switch ON the machine, and leave it operate for some time to make sure there is no leak on the new connections that have been done.

REMINDER : there should always be a C arm on the clamp, otherwise the cooling liquid circuit will not be closed anymore, and pressure will accumulate on one end, leading to failures.

If no leak is observed, the metallic cover of the clamp can be assembled back, as well as the top metallic cover of the machine.

**REASSEMBLY OF THE CLAMP COVER :**

A new, longer, clamp cover should be used, and an axis assembled to support the weight of the cables.



Reference of Kit for clamp cover : S81025