Remove the Capto spindle.

- 1. Ensure that the tool conventional clamp is active.
 - a) Machine.
 - b) Menu Select.
 - c) T.B.T.
 - d) Auto.
 - e) Semi-functions.
 - f) OK.
 - g) Jog.
 - h) Unlock safety doors. (P.B.)
 - i) Open doors.

2. Unscrew 14-off cap screws stamped 12.9. and remove.



- 1. Close doors.
- 2. Machine.
- 3. Menu Select.
- 4. T.B.T.
- 5. Auto.
- 6. Semi-functions.
- 7. Release.
- 8. Action. (Unlocks tool).
- 9. Leave the control on this screen.
- 10. Jog.
- 11. Unlock safety doors. (P.B.)
- 12. Open doors.



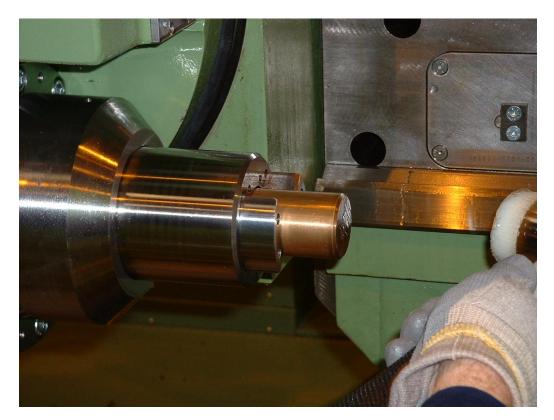
Remove Capto end.



- 1. Close doors.
- 2. Auto.
- 3. Tool conventional clamp.
- 4. + Action
- 'W' axis docking position.
 Action
- 7. W' axis re-tooling position.
- 8. + Auto action.
- 9. Jog.
- 10. Unlock safety doors. (P.B.)
- 11. Open doors.



> Use the brass tool to knock out the Capto spindle.







T.B.T. Operator Instructions

> Remove the Capto drive shaft from the driver.

1. Take both grub screws fully out and remove.





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T.B.T. Operator Instructions

> Clean the spindle and the I.T.S. shaft.

1. Load the I.T.S. bar to the spindle.

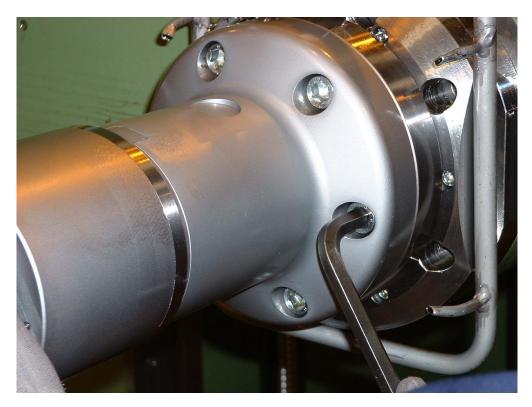




> Orientate using the dowel hole and pin.



> Tighten the 6-off cap screws.



- 1. Close doors.
- 2. Machine.
- 3. Menu Select.
- 4. T.B.T.
- 5. Machine Setup.
- 6. Auto.
- 7. 'W' axis docking position.
- 8. Action.
- 9. I.T.S. base position.
- 10. Start.
- 11. +Action.
- 12. Jog.
- 13. Select 'U' axis.
- 14. Manually jog until 'U' axis at the tool holder begins to move.
- 15. Jog 'U' in a direction.
- 16. Unlock safety doors. (P.B.)
- 17. Open doors.

> Lock in place the 2-off grub screws affixing the driver to the I.T.S. bar.

1. Fully tighten the right hand grub screw, then the left hand one.



- 2. Close doors.
- 3. Manually jog the 'U' axis +, until the 'W' soft limit appears.
- 4. Press reset (P.B.) to clear fault.



> The I.T.S. bar is now in the starting position.

> Activating the I.T.S. bar as the spindle tool.

- 1. Machine.
- 2. Menu Select.
- 3. Parameter.
- 4. Tool Management.
- 5. Tool list.
- 6. Cursor to I.T.S. tool required.
 - a) The following letter suffixed instructions are only necessary if the required tool is not loaded to the magazine.
 - b) Load.
 - c) Find empty location.
 - d) Start.
- 7. Relocate.
- 8. Magazine number 9998.
- 9. Input location 1.
- 10. Start.

> Input tool information when using the I.T.S. bar.

- 1. Machine.
- 2. Menu Select.
- 3. Parameter.
- 4. Tool management.
- 5. Tool List.
- 6. New tool.
- 7. Name the tool.
- 8. Duplo 1.
- 9. End mill.
- 10. Cursor through to enable.
- 11. Input to enable.
- 12. Select. (Blue button).
- 13. Cutting edge data.
- 14. Enter tool offset data. (estimate if required)

> De-activating the I.T.S. bar as the spindle tool.

- 1. Machine.
- 2. Menu Select.
- 3. Parameter.
- 4. Magazine list.
- 5. Tab button.
- 6. Relocate to empty location.
- 7. Tool now unloaded.
- 8. Tool list.
- 9. Cursor to next tool.
- 10. Load.
- 11. Find empty location.
- 12. Start.
- 13. Tool now loaded to magazine.
- 14. Relocate.
- 15. Magazine number 9998.
- 16. Input location number 1.
- 17. Start.
- 18. Tool is now active in the spindle.

➢ I.T.S. zero position (docking position):- W1 = -88.868.