



Side Mount (SMTC) - Tool Changer Manual Recovery

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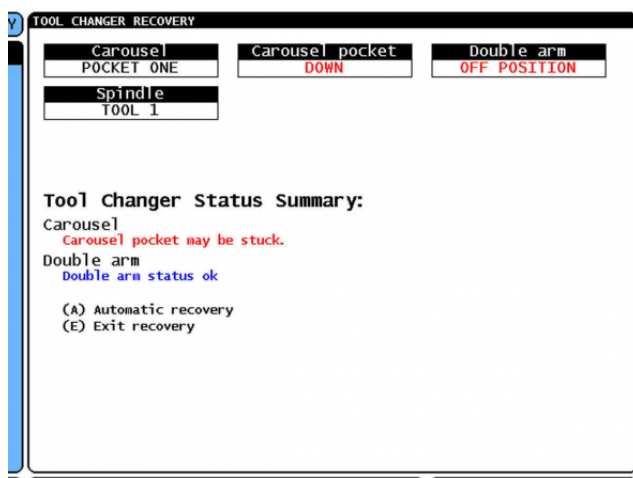
Translation
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VMC, HMC - Side-Mount Tool Changer - Manual Recovery

This procedure tells you how to do a manual recovery on the Side-Mount Tool Changer (SMTC) of a Haas mill. A recovery is required if the SMTC cannot complete a tool change.

STEP 1



Push [RESET] to clear any alarms.



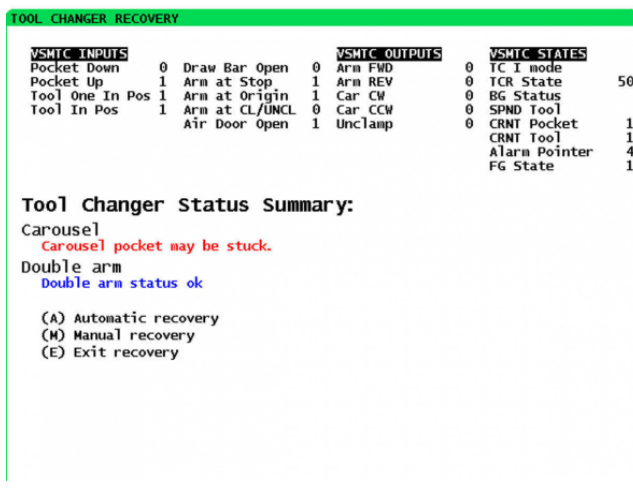
Push [RECOVER].

The control attempts an automatic recovery.



Push [A].

STEP 2



If the automatic recovery attempt is not successful, the control gives you the **(M) Manual recovery** option.



Push [M] for Manual.

STEP 3

```
TOOL CHANGER RECOVERY

VSMTC INPUTS      VSMTC OUTPUTS      VSMTC STATES
Pocket Down      1 Draw Bar Open    0 Arm FWD           0 TC I mode          0
Pocket Up        0 Arm at Stop      1 Arm REV           0 TCR State         53
Tool One In Pos  0 Arm at Origin    0 Car CW           0 BG Status         0
Tool In Pos      1 Arm at CL/UNCL  1 Car CCW          0 SPND Tool         1
Air Door Open    1 Unclamp          0 CRNT Pocket      15
                                           0 CRNT Tool        16
                                           1 Alarm Pointer    1
                                           0 FG State         20

Manual tool changer operation.

ATC FWD OR REV - Incrementally rotate arm FWD or REV
TOOL RELEASE - Toggle tool un/clamp
UP OR DWN ARROW - Moves pkt up or down
ORIENT SPINDLE - Spindle orientation
LF OR RT ARROW - Move carousel LF or RT
USE JOG KEYS TO JOG AXIS.
ORIGIN - To TC axes position

Remove all tools from the tool changer then rotate
arm in REV direction to origin position

Press 'C' to continue or 'E' to exit.
Arm at CLAMP/UNCLAMP
```

The display shows suggestions to correct the problem.

Follow the prompts as they are displayed.

Use these commands to move the tool changer components:

- Push **[ATC FWD]** or **[ATC REV]** to turn the double arm.
- Push the **[UP]** or **[DOWN]** cursor arrows to raise or lower the tool pocket.
- Push **[ORIENT SPINDLE]** to reset the spindle orientation and lock it.
- Push the **[LEFT]** or **[RIGHT]** cursor arrows to turn the carousel left or right.
- Push the **[TOOL RELEASE]** button to trigger the tool clamp/unclamp.

STEP 4

```
TOOL CHANGER RECOVERY

VSMTC INPUTS      VSMTC OUTPUTS      VSMTC STATES
Pocket Down      0 Draw Bar Open    0 Arm FWD           0 TC I mode          0
Pocket Up        1 Arm at Stop      1 Arm REV           0 TCR State         92
Tool One In Pos  1 Arm at Origin    1 Car CW           0 BG Status         0
Tool In Pos      1 Arm at CL/UNCL  0 Car CCW          0 SPND Tool         1
Air Door Open    1 Unclamp          1 CRNT Pocket      13
                                           1 CRNT Tool        14
                                           41 Alarm Pointer   41
                                           0 FG State         10

Manual tool changer operation.
*** About to orient the spindle ***
CAUTION! This may damage the tool arm
if spindle interferes with its motion
Press 'O' to orient, 'N' to cancel
```

If you press **[ORIENT SPINDLE]**, the display shows a warning dialog box.

Push **[N]** to cancel the spindle orientation if the tool changer double arm will interfere with the spindle when the spindle orients.

If the spindle can safely be rotated and locked, press **[O]**.

STEP 5

```
TOOL CHANGER RECOVERY

VSMTC INPUTS      VSMTC OUTPUTS      VSMTC STATES
Pocket Down      0 Draw Bar Open    0 Arm FWD           0 TC I mode          0
Pocket Up        1 Arm at Stop      1 Arm REV           0 TCR State         53
Tool One In Pos  1 Arm at Origin    1 Car CW           0 BG Status         0
Tool In Pos      1 Arm at CL/UNCL  0 Car CCW          0 SPND Tool         1
Air Door Open    1 Unclamp          0 CRNT Pocket      13
                                           0 CRNT Tool        14
                                           41 Alarm Pointer   41
                                           0 FG State         10

Manual tool changer operation.

ATC FWD OR REV - Incrementally rotate arm FWD or REV
TOOL RELEASE - Toggle tool un/clamp
UP OR DWN ARROW - Moves pkt up or down
ORIENT SPINDLE - Spindle orientation
LF OR RT ARROW - Move carousel LF or RT
USE JOG KEYS TO JOG AXIS.
ORIGIN - To TC axes position

No manual recovery action is required

Press 'C' to continue or 'E' to exit.
Arm at ORIGIN
```

After the problem has been corrected, the display shows that no further actions are required.



Push **[C]** to continue.

STEP 6

POCKET TOOL TABLE		
POCKET	CATEGORY	TOOL
ACTIVE TOOL: 1		NEXT POCKET:
SPINDLE		1
1		2
2		3
3		4
4		5
5		6
6		7
7		8
8		9
9		10
10		11
11 *		12
12		13
13		14
14		15
15		16
16		17
17		18
18		19
19		20
20		21

AVAILABLE OPTIONS
ORIGIN

Press WRITE to view category options

* INDICATES CURRENT TOOL CHANGER POCKET

The **Pocket Tool Table** on the control displays the pocket that is currently in front of the spindle and the tool that is in the spindle.

Make sure that the tool in the spindle and the current pocket match the control's display.

Conclusion



Push **[MDI]**.



Push **[ATC/FWD]** to test the recovery.

If the tool change recovery is not successful, it is most likely that the machine is mechanically jammed. Contact your Haas Factory Outlet for assistance.