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Start-up
Start the truck, the SCT system will initialize. The Schwing logo will appear briefly on the SCT screen. When finished, the Machine Status screen will appear, with the Drive Mode icon displayed. Release the parking brake. The “Please confirm the remote is stowed properly” message will appear and an audible ‘beep’ will sound. Press the ok button to clear the message.

Please confirm the remote is properly stowed.

Pumping Mode
With the concrete pump in position, put the transmission into neutral and engage the parking brake. Press and hold the (F2) button PUMP until the PTO has shifted. (If you release the (F2) button PUMP, before the PTO has shifted, a warning message will appear on the SCT screen.) For automatic transmission, hold brake and select Drive gear. For manual transmissions, hold clutch and shift into displayed gear. With the PTO in Pump Mode, you can begin pumping concrete.

Driving Mode
When finished pumping concrete, place the truck into neutral and wait for the drive-shaft to stop spinning. For manual transmissions, hold clutch, then press and hold the (F1) button DRIVE until the PTO has shifted. For automatic transmissions, press the brake, then press and hold the (F1) button DRIVE until the PTO has shifted. When you release the parking brake, the “Please confirm the remote is stowed properly” message will appear and an audible ‘beep’ will sound. Press the ok button to clear the message.

If the boom is out of the cradle, the Boom Out of Cradle warning icon will appear on the SCT screen. When the parking brake is disengaged a continuous alarm will sound. Place the boom in the cradle to clear the fault icon and stop the alarm.

Outrigger Lights
Press the (F4) button to enable the outrigger work lights. Press again to disable the lights. Note: The outrigger lights will automatically shut-off when the truck reaches 10 mph.
**SCT In-Cab Controller**

The SCT (Schwing Control Technologies) In-Cab Controller allows the operator to electronically switch the PTO from Drive mode to Pump mode. The SCT displays PTO hours, PLC I/O Status and auxiliary fuel tank levels (if installed). The operator can also adjust PTO related settings along with raising/lowering pusher axles (if equipped).

**HMI (Human Machine Interface)**

The HMI is the interface between the operator and SCT In-Cab Controller. From the HMI, operators can view and set machine parameters.

The HMI contains the following:

A. LCD Screen  
B. (F1) Function Button  
C. (F2) Function Button  
D. (F3) Function Button  
E. (F4) Function Button  
F. OK Button  
G. Navigation Arrows Button

**Navigation Pane**

The Navigation Pane displays the available functions and menu actions for each screen. If a function symbol appears on the Navigation Pane, the operator can push the corresponding function button below that symbol to execute a menu action.

Example: The Worklight symbol appears above the (F4) Function Button. Pressing this button will enable the worklights. If no symbol appears above a function button, that button is inactive.

Arrows in the center of the Navigation Pane, represent which direction you can push the Function Arrows button. The Function Arrows button can be pushed in four directions. Not all directions are available on every screen. This button is used to navigate to other screens, scroll through menu items or adjust screen brightness.

To assist the reader, we will represent the symbols as follows:

- = OK  
- = Function Arrows Left/Right  
- = Function Arrows Up/Down
LCD Screens

Machine Status Screen
When the ignition switch is engaged, power will be supplied to the SCT In-Cab Controller. The Machine Status screen will appear on the HMI LCD display.

Displays:
A. Drive/Pump Mode Indicator
B. Status Message Display
C. PTO Hours
D. Auxiliary Fuel Tank Level (If equipped)
E. Drive Mode Function Symbol
F. Pump Mode Function Symbol
G. Work Light Function Symbol

Functions:
- Press \( \text{ok} \) to go to the Menu screen.
- Press the \( \text{ok} \) to go to the Axle Control Screen (if equipped)
- Use the \( \text{ok} \) to adjust screen brightness
- Press and Hold (F1) button \( \text{ok} \) to engage Drive mode
- Press and Hold (F2) button \( \text{ok} \) to engage PTO
- Press (F4) button \( \text{ok} \) to turn worklights On/Off

Menu Screen
The Menu Screen displays additional status, parameter settings screens and software version:

- PLC I/O Status
- Maintenance
- Configuration
- HMI Software Version
- PLC Software Version

A small Schwing logo indicates which menu item is currently selected. Use the \( \text{ok} \) to scroll up and down the menu items. When you have moved the \( \text{ok} \) to the screen you would like to access, press the \( \text{ok} \) button.

Software versions for the HMI and PLC are displayed in the lower corners of the screen. This information is useful for troubleshooting.
PLC I/O Screen
Displays the electronic input and output signals. Active input or output signals will be indicated with a red circle. Supply voltage indicators and PLC temperature are displayed below the input/outputs.

This screen can be used to assist in troubleshooting electrical issues.

Maintenance Screen - Password Prompt
When the Maintenance Screen is selected, the operator will be prompted to supply a password. Use the to navigate to the password input. A red arrow will appear under the number selected. Use the to scroll through a list of single digit numbers. When the number you want is displayed, use the to navigate to the next value. When all values are filled in, press the button.
If the password is correct, the Maintenance Menu screen will be displayed. If incorrect, the red arrow will disappear and you will not be taken to the Maintenance Screen. Press the to display the red arrow. Re-enter the password and press button.

Functions:
- Press (F4) button to return to Menu Screen.

Functions:
- Use the to select password value.
- Use the to change the selected values.
- Press to accept password.
- Press to exit the Maintenance screen.
Maintenance Screen
The Maintenance Screen displays the following parameters:

- Frost Law Axle Enable (Enable/Disable)
- Transmission Gear (auto)
- Drive Shaft Speed
- Parking Brake Indicator Icon
- Brake Indicator Icon
- Clutch Indicator Icon

The only parameter you can change on the Maintenance screen is “Frost Law Axle Enable”. Press \( \text{ok} \) to enable or disable the frost law axles. See “Axle Screen - Frost Law Enabled” on page 8 for more information.

Note: “Frost Law Axle Enable” will only appear if two or more pusher axles are installed.

Reset Password Screen
The password reset screen allows you to change your maintenance screen access password.

The red arrow indicates which value is selected. Use the \( \text{▲} \) to change the selected value. Use \( \text{▼} \) to select the next password value. If you make a mistake, you can press CLEAR to erase all the values and start over. When finished entering the new password, press \( \text{ok} \) button.

Pressing the (F4) button \( \text{Esc} \) will exit the password screen without excepting the new values. The password will not be changed.

Functions:

- Use the \( \text{▲} \) to select password value.
- Use the \( \text{▼} \) to change the selected values
- Press \( \text{ok} \) to accept new password.
- Press \( \text{Esc} \) to return to the Maintenance screen, without changing the password.
Axle Screen

If your truck is equipped with optional pusher axles, they can be raised and lowered via the Axle Screen. From the Machine Status screen, press the \[\text{Axle} \] icon to go to the Axle Control Screen.

Each axle will be represented with \[\text{Axle} \] icon. Press the function button below the \[\text{Axle} \] icon to raise or lower the axle. An indicator arrow will be displayed showing the direction of the pusher axle. The green arrow indicates the axle is moving up, the red arrow indicates the axle is moving down. The pressure rating for each axle is also displayed.

**Functions:**
- Press the \[\text{Axle} \] icon to go to the Machine Status screen
- Press \[\text{Axle} \] to raise or lower pusher axle.

Axle Screen - Frost Law Enabled

If the “Frost Law Axle Enable” is activated in the Maintenance screen, the first and last pusher axle will be paired together. Pressing (F1) button will lower or raise booster axle 1 and 4.
Engine RPM Control Screen

The Engine RPM Control screen allows you to set the truck engine throttle from inside the cab. From this screen you adjust the truck RPM without having to access the rear operator control panel.

You can only access the Engine RPM Control screen in PUMP Mode, not DRIVE Mode. When in PUMP mode, press the left arrow key.

The following parameters are displayed:

- RPM Requested
- RPM Actual

Pressing the function buttons below the “-” and “+” symbols will increase or decrease engine RPM. If you adjust the RPM from the rear control panel, that value will be displayed next to the RPM Requested row.

The Engine RPM Control screen can also be used for troubleshooting. If the requested and actual RPM’s do not match - but the actual RPM matches the tachometer, the truck is not allowing TSC1 to control the RPM. Contact your truck OEM service center.

Functions:

- Press function button below the “-” symbol to decrease engine RPM.
- Press function button below the “+” symbol to increase engine RPM.
- Use the button to exit the Engine RPM Control screen.
Status Messages

Status messages will appear on top of the Machine Status screen. A status message will display for 5 seconds or will go away when the fault is corrected.

<table>
<thead>
<tr>
<th>Message</th>
<th>Status</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hold until shift is complete</td>
<td>Drive/Pump Mode button released too early</td>
<td>Hold Drive/Pump button until gearbox has shifted</td>
</tr>
<tr>
<td>In Pump Mode use “x” gear</td>
<td>Displays proper gear for manual transmission</td>
<td>Place manual transmission in proper gear</td>
</tr>
<tr>
<td>RPM Slow-Verify selected gear</td>
<td>Transfer case RPM is slower than engine RPM</td>
<td>Place manual transmission in proper gear</td>
</tr>
<tr>
<td>RPM Fast-Verify selected gear</td>
<td>Transfer case RPM is faster than engine RPM</td>
<td>Place manual transmission in proper gear</td>
</tr>
<tr>
<td>Shift to Neutral</td>
<td>Truck is in Drive gear</td>
<td>Shift gear to neutral</td>
</tr>
<tr>
<td>Set Park Brake</td>
<td>Parking Brake is not set</td>
<td>Engage the parking brake</td>
</tr>
<tr>
<td>Wait for drive-shaft to stop</td>
<td>Drive shaft is still spinning</td>
<td>Wait until drive shaft stops spinning</td>
</tr>
<tr>
<td>Depress Clutch Pedal</td>
<td>Clutch pedal not engaged</td>
<td>Depress clutch pedal to engage</td>
</tr>
<tr>
<td>Check Air Pressure</td>
<td>Truck air pressure is low</td>
<td>Check truck air pressure - correct if necessary</td>
</tr>
<tr>
<td>Pusher Axle1-Low Pressure</td>
<td>Axle pressure below 15 psi for 30 seconds</td>
<td>Adjust axle pressure</td>
</tr>
<tr>
<td>Pusher Axle2-Low Pressure</td>
<td>Axle pressure below 15 psi for 30 seconds</td>
<td>Adjust axle pressure</td>
</tr>
<tr>
<td>Pusher Axle3-Low Pressure</td>
<td>Axle pressure below 15 psi for 30 seconds</td>
<td>Adjust axle pressure</td>
</tr>
<tr>
<td>Pusher Axle4-Low Pressure</td>
<td>Axle pressure below 15 psi for 30 seconds</td>
<td>Adjust axle pressure</td>
</tr>
</tbody>
</table>
Troubleshooting

Pump / Drive Mode

When you press either the Pump or Drive mode button, the corresponding solenoid on the 2-way air valve is activated, placing the gearbox in either pump (PTO) or drive (DRIVE) mode. If the gearbox fails to shift between Pump / Drive mode and no warning messages are displayed, the corresponding solenoid can be bypassed at the air valve.

The solenoids are labeled “PTO” and “DRIVE”. Below the solenoid is a yellow bypass switch. Turn the corresponding bypass switch to the “1” position. With proper air pressure applied, the air valve will switch to the bypassed function.

Using a multimeter, determine if the solenoid is bad or if there is a short in the harness. On units with solenoid plugs with built-in LED's, have someone activate either the Pump/Drive function on the SCT panel, while watching the corresponding solenoid plug. If the solenoid plug LED illuminates when the function is active, the solenoid coil may be bad and should be replaced. If the solenoid plug LED does not illuminate, there may be a short in the harness, or the fuse needs to be replaced.

When the problem is corrected, turn the solenoid bypass switch back to the “0” position.