Always refer to the Operators and Maintenance Manual
D23x30DR

DIRT MODE DRILL PREPARATION

WARNING: Eye protection must be worn when removing and installing roll pins. Serious eye injury can occur if struck by steel chips from the hammer, punch, or roll pin.

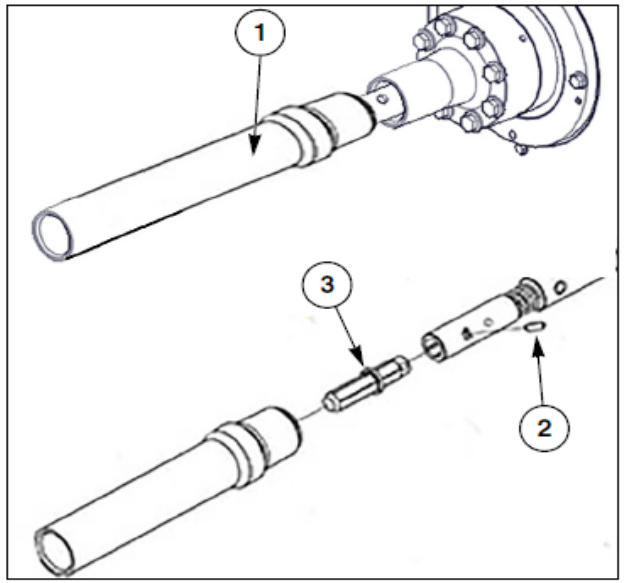
This machine can be equipped with an optional subsaver that allows the use of single rod drilling for dirt applications. Using dirt rod requires removal of the inner rod subsaver hex connector, and replacing the dual rod subsaver with a single rod subsaver. Enabling Dirt Mode requires selecting it in the Drill Setup screen. Refer to "Dirt Mode," *page 21-25.*

- *To remove the inner rod hex connector:*

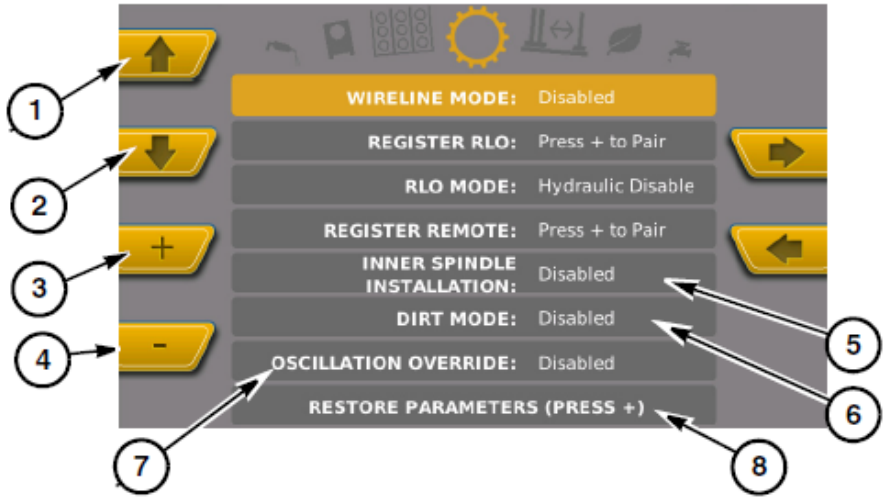
Remove the outer rod subsaver (1). Refer to the Maintenance Manual for removal instructions. Drive out and discard retaining pin (2). When converting machine back to dual rod service, always install new retaining pins acquired from a local Vermeer dealer.

- Remove inner rod hex connector (3).
- Install dirt rod subsaver. Refer to the *Maintenance Manual* for subsaver installation instructions.

Dirt mode drill operation requires the use of 10 ft single drill rod which can be purchased at a local Vermeer dealer.



Inner Spindle Installation



Use *Up / Down Keys* (**1**) and (**2**) to select option. Use *Plus / Minus Keys* (**3**) and (**4**) to enable or disable.

When enabled, inner spindle installation (**5**) allows inner spindle torque up when installing inner spindle subsaver.

Refer to *Maintenance Manual* for inner rod subsaver removal and installation instructions.

Dirt Mode

Use *Up / Down Keys* (**1**) and (**2**) to select option. Use *Plus / Minus Keys* (**3**) and (**4**) to enable or disable.

Enabling Dirt Mode (**6**) will automatically match outer rod rotation speed with inner rod rotation speed in both Drill Out and Pull Back modes.

Oscillation Override

Use *Up / Down Keys* (**1**) and (**2**) to select option. Use *Plus / Minus Keys* (**3**) and (**4**) to enable or disable.

When the front vise is clamped, the inner rod oscillates back and forth to help line up the hex connection with the socket in the drill rod. When oscillation override (**7**) is enabled, the inner rod will oscillate even when the front vise is not clamped. This aids in making up a drill rod connection out in front of the drill, such as when connecting to a drill rod already in the ground.

Restore parameters

Use *Up / Down Keys* (**1**) and (**2**) to select option. Use *Plus / Minus Keys* (**3**) and (**4**) to enable or disable.

Restore Parameters (**8**) will restore Drill Setup parameters to default settings. Must cycle *Ignition Switch* after pressing +.

Recommend to have a Second Drive Chuck also to install the single rod Sub Saver too. This will make changing from Dirt mode back to Rock mode rod quicker. Won`t have to mess with the thread locking compound.

OUTER ROD SUBSAVER - REMOVE/INSTALL

Special Tools and Materials

- heating torch
- wire brush
- Thread Locking Compound, refer to the D23x30DR S3 *Parts Manual* for ordering compound.

Thread Locking Compound Considerations

Thread locking compound has a shelf life of 3 years as long as the containers are not opened. Prolonged storage at temperatures above 100°F (38°C) may cause some settling of fillers and require thorough mixing for best results. Freezing has no detrimental effects on the components.

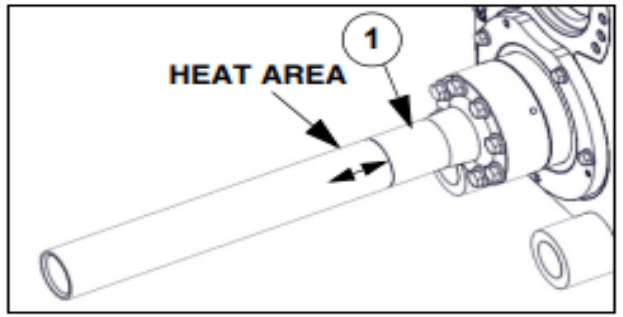
Remove

To prevent damage to the rotation shaft **(1)**, do not apply heat directly to its surface.

Step 1: Clamp subsaver in rear vise.

Step 2: Wax temperature sticks can be used to determine component temperature when preheating before disassembly. Using an acetylene torch, evenly and quickly apply heat to threaded joint to loosen threads. Apply heat only to box end of subsaver. Thread locking compound will release at 500°–600°F (260°–315°C).

Step 3: Back rotation shaft out of subsaver before heat transfers to rotation shaft.



Install

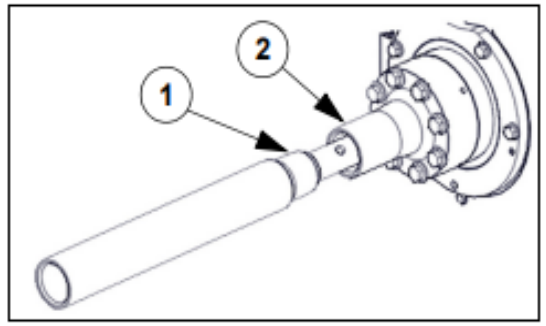
The optimum drive chuck casing temperature for applying mixed compound to threads is 70°–150°F (21°–66°C). The compound will not cure at temperatures below 40°F (4°C). Refer to compound instructions for cure times.

Step 4: Clean all threads on subsaver **(1)** and rotation shaft **(2)** with solvent. Rinse with water. Remove all grease, moisture, and foreign material. Remove any rust with a wire brush.

Step 5: Thoroughly mix packet of thread locking compound with applicator. Add hardener to compound. Mix until completely blended and no streaks are visible in mixture.

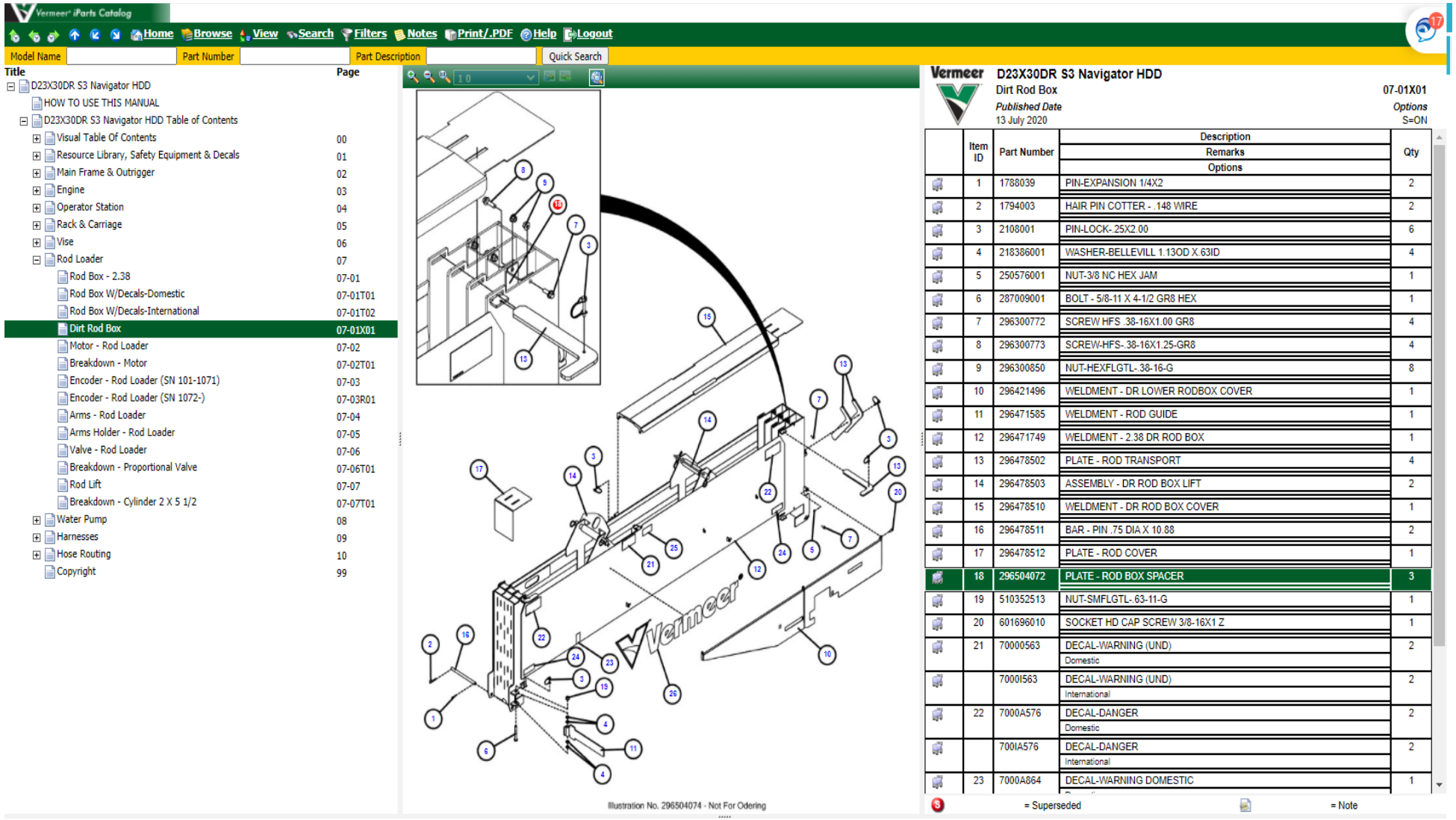
Step 6: Apply compound to entire circumference of first 2/3 of rotation shaft threads.

Step 7: Clamp subsaver in rear vise and make up joint with maximum torque (gearbox set to LOW).

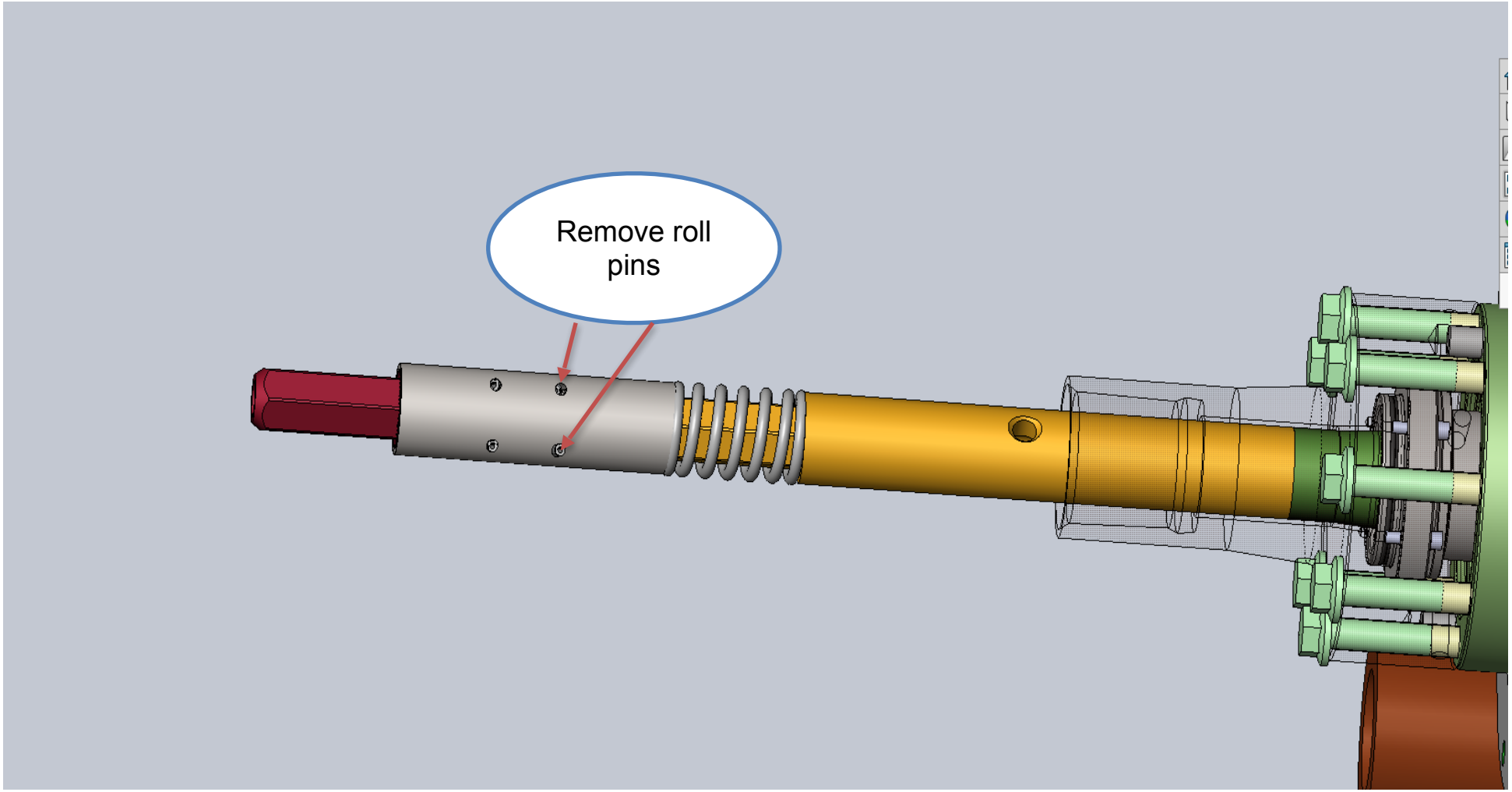


Do not put subsaver into use until thread locking compound has cured to full strength. Refer to manufacturer's instructions for cure time.

D23x30III Rod box can be changed to a dirt box by adding the spacers. Or having a second rod box set up for dirt rods.



When changing to single rod dirt mode. When the outer sub saver is removed. Remove inner rod hex connector. Do this by removing two roll pins for the D40x55DR or one roll pin for the D23x30DR. Remove the spring and hex from inner sub saver.
D23x30DR & D40x55DR



Always refer to the Operators and Maintenance Manual
D40x55DR

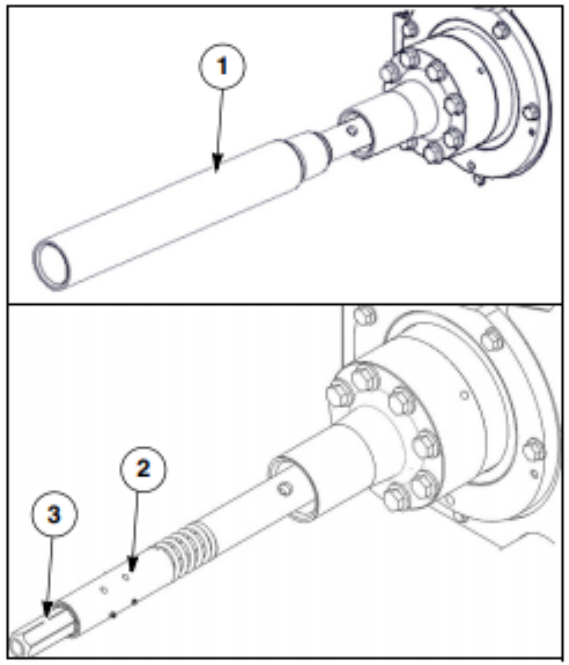
Dirt Mode Drill Preparation

This machine can be equipped with an optional subsaver that allows the use of single rod drilling for dirt applications. Using dirt rod requires removal of the inner rod subsaver hex connector, and replacing the dual rod subsaver with a single rod subsaver. Enabling Dirt Mode requires selecting it in the Drill Setup screen. Refer to "Dirt Mode," *page 21-29*.

To remove the inner rod hex connector

- Remove the outer rod subsaver **(1)**. Refer to the *Maintenance Manual* for removal instructions.
- Drive out and discard retaining pins **(2)**. When converting machine back to dual rod service, always install new retaining pins acquired from a local Vermeer dealer.
- Remove inner rod hex connector **(3)**.
- Install dirt rod subsaver. Refer to the *Maintenance Manual* for subsaver installation instructions.

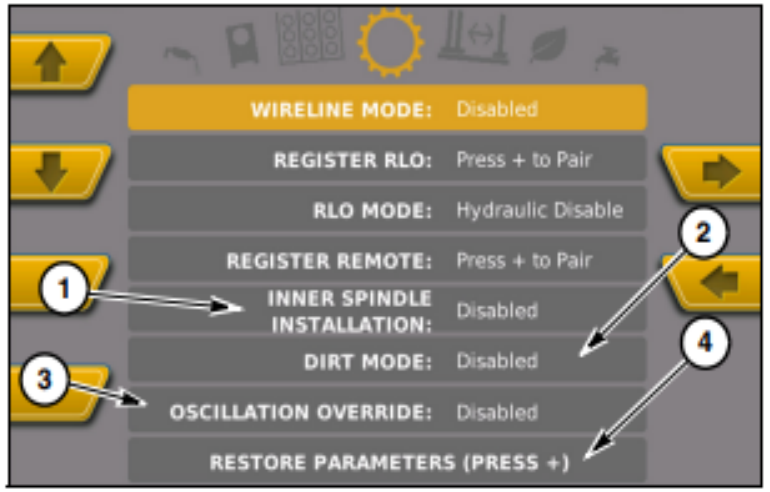
Dirt mode drill operation requires the use of 10 ft single drill rod which can be purchased at a local Vermeer dealer.



Inner Spindle Installation

When enabled, inner spindle installation **(1)** allows inner spindle torque up when installing inner spindle subsaver.

Refer to *Maintenance Manual* for inner rod subsaver removal and installation instructions.



Dirt Mode

Enabling Dirt Mode **(2)** will automatically match outer rod rotation speed with inner rod rotation speed in both Drill Out and Pull Back modes.

Dirt mode drill operation requires the use of 10 ft (305 cm) single drill rod and replacing the rotation subsaver. Refer to "Dirt Mode Drill Preparation," *page 50-33*.

Oscillation Override

During normal drilling, when the lower vise is clamped, the inner rod oscillates back and forth to help line up the hex with the socket in the drill rod. When oscillation override **(3)** is enabled, the inner rod will oscillate even when the lower vise is not clamped. This aids in making up a drill rod connection out in front of the drill, such as when connecting to a drill rod already in the ground.

Restore parameters

Restore parameters **(4)** will restore Drill Setup parameters to default settings. Must cycle ignition key after pressing +.

Recommend to have a Second Drive Chuck also to install the single rod Sub Saver too.
This will make changing from Dirt mode back to Rock mode rod quicker.
Won`t have to mess with thread locking compound.

OUTER ROD SUBSAVER REMOVE/INSTALL

Special Tools and Materials

- heating torch
- wire brush
- Thread Locking Compound, refer to the D40x55DR S3 *Parts Manual* for ordering compound.

Thread Locking Compound Considerations

Thread locking compound has a shelf life of three years as long as the containers are not opened. Prolonged storage at temperatures above 100°F (38°C) may cause some settling of fillers and require thorough mixing for best results. Freezing has no detrimental effects on the components.

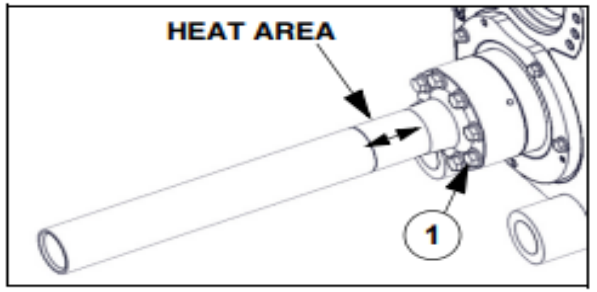
Remove

To prevent damage to the rotation shaft **(1)**, do not apply heat directly to its surface.

Step 1: Clamp subsaver in rear vise.

Step 2: Wax temperature sticks can be used to determine component temperature when preheating before disassembly. Using an acetylene torch, evenly and quickly apply heat to threaded joint to loosen threads. Apply heat only to box end of subsaver. Thread locking compound will release at 500°–600°F (260°–315°C).

Step 3: Back rotation shaft out of subsaver before heat transfers to rotation shaft.



Install

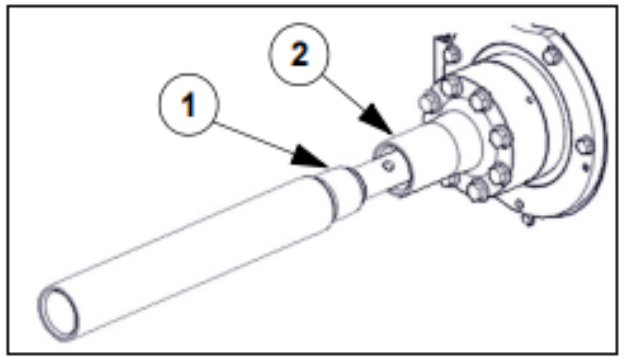
The optimum drive chuck casing temperature for applying mixed compound to threads is 70°–150°F (21°–66°C). The compound will not cure at temperatures below 40°F (4°C). Refer to compound instructions for cure times.

Step 1: Clean all threads on subsaver **(1)** and rotation shaft **(2)** with solvent. Rinse with water. Remove all grease, moisture, and foreign material. Remove any rust with a wire brush.

Step 2: Thoroughly mix packet of thread locking compound with applicator. Add hardener to compound. Mix until completely blended and no streaks are visible in mixture.

Step 3: Apply compound to entire circumference of first 2/3 of rotation shaft threads.

Step 4: Clamp subsaver in rear vise and make up joint with maximum torque (gearbox set to LOW).



Do not put subsaver into use until thread locking compound has cured to full strength.

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