



# VMC - 40-Taper - Gearbox - Installation Aid

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Translation Available

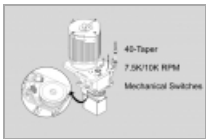


## VMC - 40-Taper - Gearbox - Installation Aid - Installation

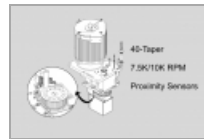
### Prerequisites

P/N 93-30-9997 has the mechanical switches. P/N 93-30-9994C has the proximity sensors.

### Parts Included

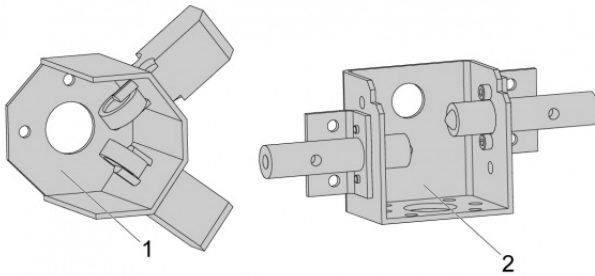


93-30-9997 QTY: 1  
GBOX ASSY 7.5/10K 16DP65T  
ROLLER SWITCH



93-30-9994C QTY: 1  
GEARBOX, 40T 7.5/10K -16DP65T -  
10HP (VMC)

### STEP 1



Push **[POWER OFF]**.

Set the main circuit breaker to the **OFF** position. Lock the main circuit breaker. Use an approved lock with an approved safety tag.

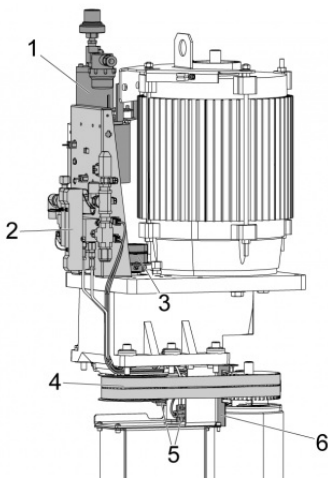
Before you install a replacement gearbox, you must find the type of sensors in the old gearbox.

The old gearbox has one of these types of sensors: mechanical switches [1] or proximity sensors [2].

Make sure the replacement gearbox has the same type of sensor as the old gearbox.

You can remove the mechanical switches from the old gearbox and install them on the replacement gearbox.

## STEP 2



Remove these parts from the old gearbox and put them on the replacement gearbox:

1. Transmission oil pump
2. Solenoid pack and connector bracket

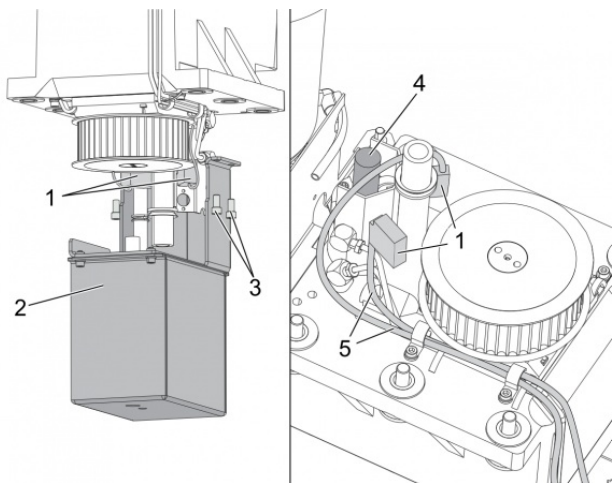


**Note:** On CALM machines, the connector bracket is installed behind the spindle. The solenoid pack is in the CALM cabinet. Neither require removal.

3. Spindle encoder
4. Spindle drive belt
5. High/low gear proximity sensors or mechanical switches
6. Mid belt shield

Remove the shot pin orientation assembly, if it is installed, and install it on the replacement gearbox.

## STEP 3



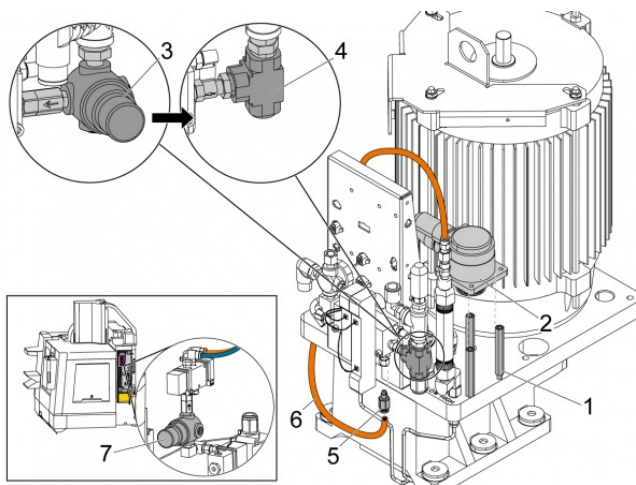
Do this step if the old gearbox has mechanical switches [1] and you install a replacement gearbox with proximity sensors.

1. Remove the (4) bolts [3] from the oil tank [2].
2. Remove the shift dampener [4].
3. Transfer the mechanical switches [1] to the replacement gearbox.

If the mechanical switches [5] from the old gearbox look damaged:

1. Disconnect the mechanical-switch cables [5] from the solenoid bracket.
2. Measure the resistance from the mechanical-switch cables. The open contact measurement should be 100 kOhms. The closed contact measurement should be between 0-3 Ohms.

## STEP 4



If the encoder from the old gearbox is a belted encoder [2]:

1. Remove the belted encoder [2] from the old gearbox.
2. Install the belted encoder assembly [2] onto the standoffs [1].

If the encoder from the old gearbox is not a belted encoder [2], remove the standoffs [1]. Move the encoder to the replacement gearbox.

If the air solenoid assembly has a 35-psi air regulator [3] on the input of the shift solenoid, remove it. Replace the 35-psi air regulator [3] with the tee fitting [4]. On CALM machines, the air regulator [7] is in the CALM cabinet.

If the air solenoid assembly has an adjustable air regulator, set the air regulator to 80 psi.

Install the fitting [5] on the high-gear side of the air solenoid assembly. Install the hose [6] from the air-over-oil shifting assembly to the fitting [5].

# VMC - 40-Taper - Gearbox - Installation Aid - Parameter Setup

## Software Upgrade Information:

Upgrade **M18.xx software** to the latest M18.xx main software and Mocon software. Upgrade **M17.xx software** to the latest Mocon software. Do not update the main software.

## Make sure these Parameters are correct:

- Change Parameter **1305** to **3**.
- Change Parameter **1304** to **10**.
- Change Parameter **130** from **1000** to **1300**.

**Do these steps for a 20DP Gearbox:** Part Numbers 93-30-9993, 93-30-9994

Find the RPM of your gearbox on the chart. Enter the value for Parameter 150 for your gearbox.

## 20DP Parameter 150 Chart

RPM	Parameter 131:	Parameter 150:
7500	7500	1829
8100	8100	1975
10000	10000	2439

**Do these steps for a 16DP Gearbox:** Part Numbers 93-30-9990A, 93-30-9991A, 93-30-9992, 93-30-9992A, 93-30-9993, 93-30-9993A, 93-30-9994, 93-30-9994A

Find the RPM of your gearbox on the chart. Enter the value for Parameter 150 for your gearbox.

## 16DP Parameter 150 Chart

RPM	Parameter 131:	Parameter 150:
5000	5000	1212
7500	7500	1875
8100	8100	2500
10000	10000	2500

**Do these steps for a 16DP-65T Gearbox:** Part Numbers 93-30-9990B, 93-30-9991B, 93-30-9992B, 93-30-9993B, 93-30-9993C, 93-30-9994B, 93-30-9994C, 93-30-11022A, 93-30-11022B

Enter the value for Parameter 150 for your gearbox based on the spindle RPM and the values of the parameters listed:

#### 16DP-65T Parameter 150 Chart

RPM	Parameter 131:	Parameter 183:	Parameter 1287:	Parameter 1288:	Parameter 150:
5000	5000	16667	N/A	N/A	1212
7500	7500	20000	N/A	N/A	1818
8100	8100	26667	10000	10000	2424
8100	8100	21600	N/A	N/A	1963
10000	10000	26667	10000	10000	2424
10000	10000	26667	N/A	N/A	2424