



VMC - 50-Taper - Gearbox - Installation Aid

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Translation Available

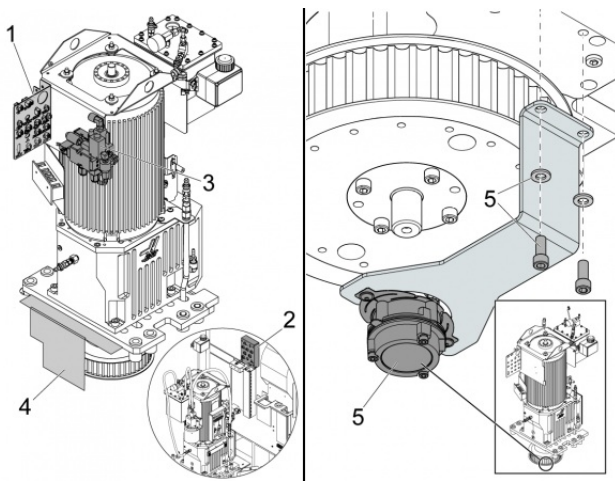


VMC - 50-Taper - Gearbox - Installation Aid



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.

STEP 1



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

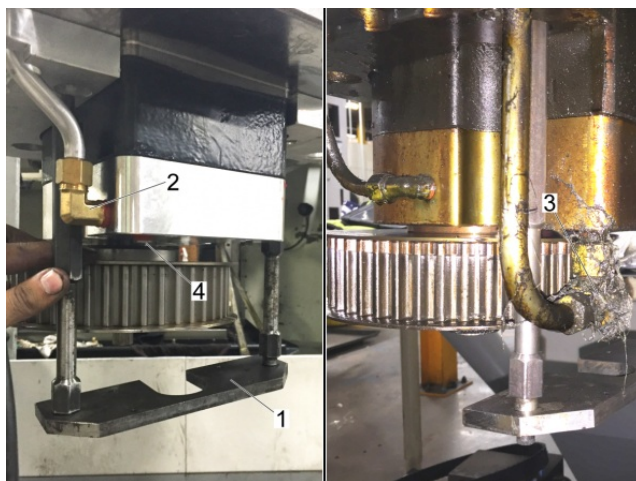
1. Connector bracket



Note: On CALM machines, the connector bracket [2] is installed behind the spindle. The solenoid pack [3] is in the CALM cabinet. Neither require removal.

3. Solenoid pack
4. Mid belt shield
5. Spindle encoder

STEP 2



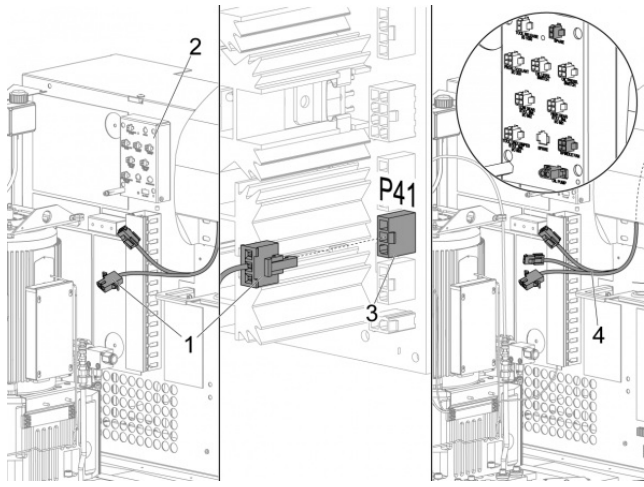
Optical and magnetic spindle encoders:

The encoder bracket [1] that holds an optical spindle encoder does not fit on a replacement gearbox. A fitting [2] is in the way. If the encoder bracket does not fit, use the aluminum pipe [3] from the used gearbox. Install the pipe [3] onto the port [4] on the bottom of the replacement gearbox.



Caution: Oil will drain from the ports [3 and 4] when the plug and fitting are removed. Make sure you drain the oil into a pan that is thoroughly cleaned. You must add the oil back into the gearbox oil reservoir when the pipe [3] is installed onto the port [4]. Any contamination in the oil will damage the replacement gearbox.

STEP 3



Remove the 300A cable [1] from the connector bracket [2] and the P41 connector [3] on the IO PCB. Discard this cable.

Install the new 300A cable [4] supplied with the kit to the back of the connector bracket.

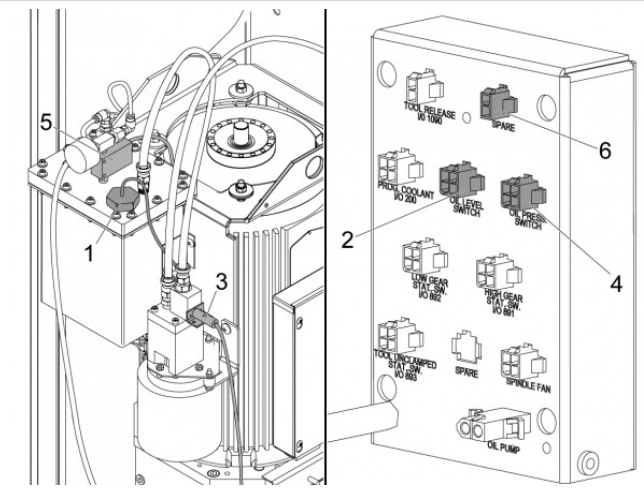
Install the small 2-pin connector to the location labeled SPARE.

Install the 4-pin connector to the location labeled SPINDLE FAN.

Install the large 2-pin connector to the location labeled OIL PUMP.

Install the other end of the new 300A cable to the P41 connector [3] on the IO PCB.

STEP 4



Install the cable labeled VMC GEARBOX 2 LEVEL [1] to the space on the connector bracket labeled OIL LEVEL SWITCH [2].

Install the cable labeled TRANS OIL FLOW [3] to the space on the connector bracket labeled OIL PRESS. SWITCH [4].

Install the cable on the tank-venting solenoid [5] to the space on the connector bracket labeled SPARE [6].

VMC - 50-Taper - Gearbox - Installation Aid - Parameter Setup

Use the tables that follow to enter the correct parameter values. Some parameters may not apply to the software version you have.

Parameter	Name	Value	Parameter	Name	Value
57:02	DISABLE GEAR BOX	0	1305	GEAR SHIFT RETRY TYPE	3
57:26	TRANS OIL LOW PRESS	1	1310	ENABLE GEAR BOX OIL LEVEL SENSOR	1
75	GEAR CHANGE SPEED	30	1311	GEAR BOX OIL FLOW SENSOR TYPE	Pressure Switch = 0
					Flow Sensor = 1
					Level Sensor = 2
129	GEAR CH SETTLE TIME	200	1312	GEAR BOX OIL LEVEL ALARM DELAY (DAYS)	10
130	GEAR STROKE DELAY	750	1316	SP MOTOR TEMP SENSOR TYPE	2

Parameter	Name	Value	Parameter	Name	Value
180	SP SLIP GAIN	240	1317	SP MOTOR SENSOR MAX TEMP (DEG F)	500000
181	SP MIN SLIP	40	1318	SP MOTOR SENSOR MIN TEMP (DEG F)	0
188	SP ORIENT GAIN	750	1319	SP MOTOR CAUTION TEMP (DEG F)	210
725	SP HIGH SPEED CURRENT PROFILING	1	1320	SP MOTOR ALARM TEMP (DEG F)	250
1304	GEAR SHIFT RETRY SPEED (RPM)	10	1274	GEAR STROKE TIMEOUT	3300

The parameters in the table that follows change with the encoder type and the maximum spindle RPM. Choose the value that matches the encoder type and the maximum spindle RPM.



Note: Use the same values for shafted and hubbed encoders except where noted.

Parameter	Name	7,500 RPM - Magnetic Encoder	7,500 RPM - Optical Encoder	10,000 RPM - Magnetic Encoder	10,000 RPM - Optical Encoder
79	SPINDLE STEPS/REV	4096	4000	2048	2000
131	MAX SPINDLE RPM	7500	7500	10000	10000
142	HIGH/LOW GEAR CHANGE	1965	1965	2950	2950
150	MAX SP RPM LOW GEAR	2325	2325	3100	3100
183	SP MAX FREQ	25000	25000	16667	16667
186	SP DECELERATION	81920	81920	76800	76800
187	SP MOT HI GEAR STPS/REV	4096	4000	4096 (Hubbed Encoder 5120)	4000
239	SPINDL ENC STEPS/REV	8192 (Hubbed Encoder 4096)	8000	4096	4000
1287	SPINDLE MAX BEARING RPM	7500	7500	10000	10000
1288	SPINDLE RPM MAX FREQUENCY	7500	7500	10000	10000

STEP 1