



# Umbrella Tool Changer - Slip Clutch Arm and Shuttle Motor - Replacement

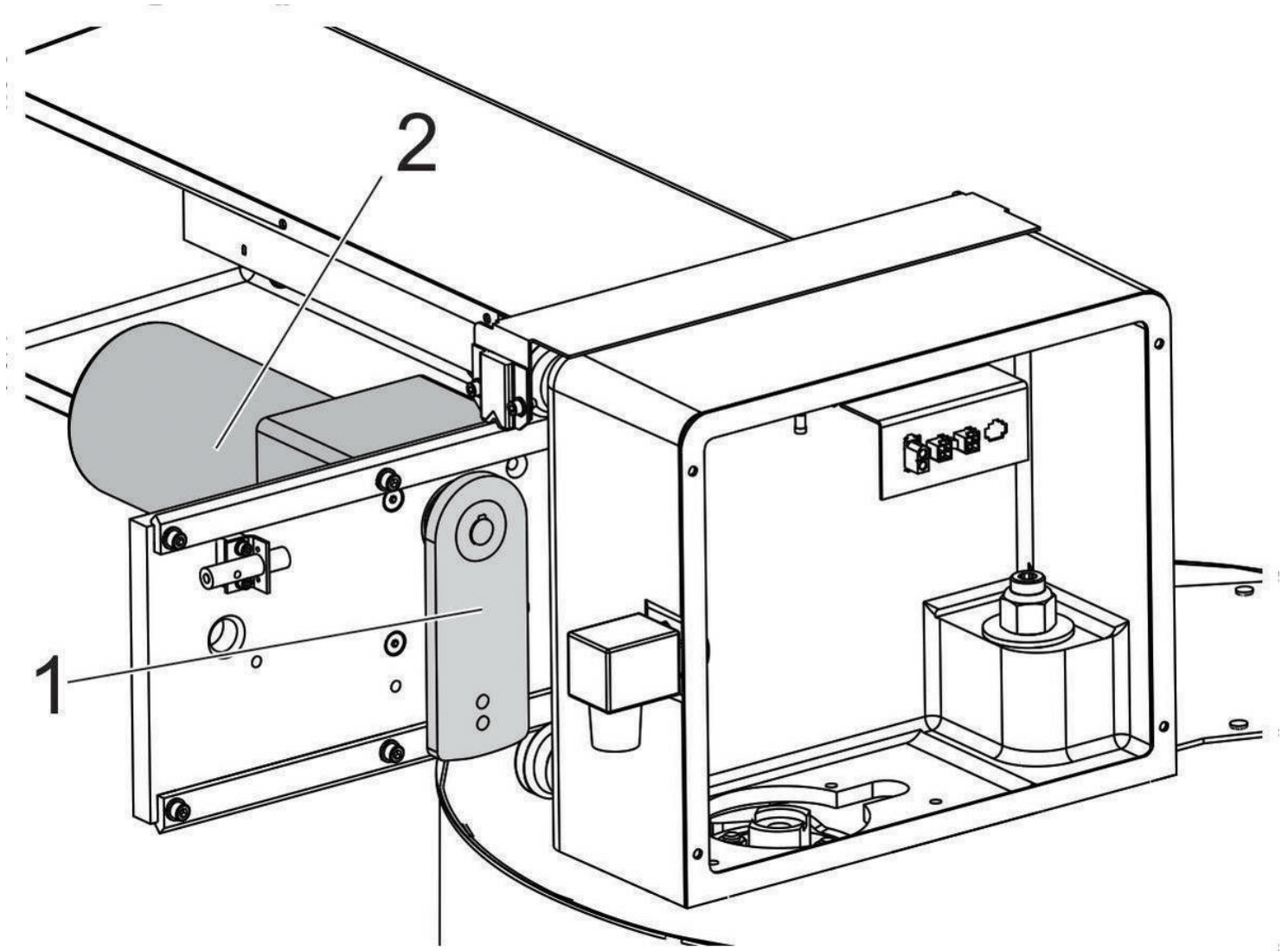
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## VMC - Umbrella Tool Changer - Slip Clutch Arm and Shuttle Motor - Replacement

This procedure is applicable to 10- and 20-pocket umbrella tool changers. This procedure tells you how to replace the slip clutch arm [1] and the shuttle motor [2]. The illustrations show a 20-pocket umbrella tool changer.



### Prerequisites

This procedure is applicable to more than one motor and clutch assembly. Only one motor and clutch in the "Parts Included" section is necessary.

## Parts Included



32-1876 QTY: 1  
MOTOR, UMBRELLA SHUTTLE 10  
POCKET (SR-100,GR-510,SMM)



32-1875 QTY: 1  
MOTOR, UMBRELLA SHUTTLE  
10/20/32 POCKET, APC CHAIN DRIVE



32-0011 QTY: 1  
MOTOR, 50T SHUTTLE 20 POCKET &  
BARFEEDER



93-30-30061 QTY: 1  
ARM, CLUTCH ASSEMBLY 10  
POCKET



93-1790 QTY: 1  
ARM, CLUTCH ASSEMBLY 20  
POCKET (VF-1-5)



93-30-1937 QTY: 1  
ARM, CLUTCH ASSEMBLY 20  
POCKET (VF-6-11)



30-0019B QTY: 1  
ARM, CLUTCH ASSEMBLY 20  
POCKET (50T)

## Tools Required



Two-Jaw Puller

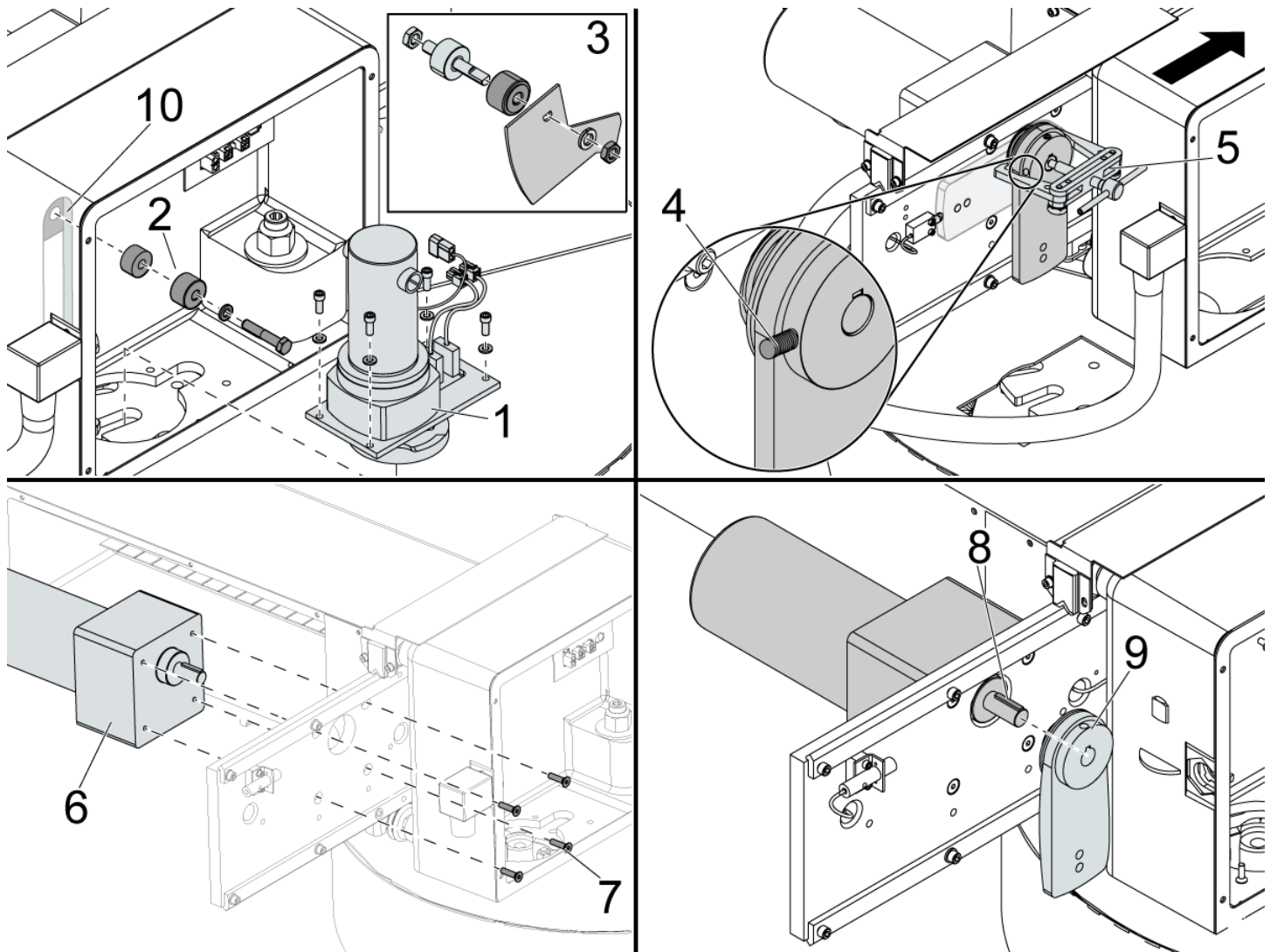


Mobil SHC 460 Grease



Medium-strength thread-lock compound

## 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.

Remove the cover for the carousel motor. Put labels on the cables for the carousel motor assembly. Remove the carousel motor assembly [1]. Remove the cam follower assembly [2]. On 10-pocket umbrella tool changers, the cam follower assembly also has a flag and a nut [3] behind the carriage.

Push the shuttle assembly in the direction of the spindle. Remove the set screw [4] from the slip clutch arm collar. Use a small two-jaw puller [5] to remove the slip clutch arm from the motor shaft.

Remove the shuttle motor assembly [6] and (4) screws [7] from the rail plate. Apply a thread-lock compound (for example: blue Loctite®) to the (4) screws [7]. Install the replacement motor [6] to the rail plate. Use the (4) screws [7].

Install the motor key [8] onto the motor shaft. Install the slip clutch arm [9] onto the motor shaft, over the key [8]. Adjust the position of the slip clutch arm on the motor shaft to make sure the adjacent screw heads have sufficient clearance. Apply a thread-lock compound (for example: blue Loctite®) to the set screw [4]. Install the set screw into the slip clutch arm [9].

Apply Mobil SHC 460 grease to the carriage slot [10] and cam follower [2 and 3]. Install the remaining parts in the opposite sequence that they were removed. Make sure the umbrella tool changer operates correctly. Install the carriage assembly cover.