

MP-Series (Series A and B) and TL-Series Electric Cylinders Replacement Parts

Catalog Numbers MPAR-NA3210C, MPAR-NA323C, MPAR-NA4012C, MPAR-NA405C, MPAR-NA6310C, MPAR-NA6320C, MPAR-NP3210B, MPAR-NP323B, MPAR-NP4012B, MPAR-NP405B, MPAR-NP6310B, MPAR-NP6320B,

TLY-A1xxx-B-X19x, TLY-A2xxx-B-X19x, TLY-A3xxx-B-Xxxx

MPL-x1520F-V-X20x, MPL-x1530F-V-X20x, MPL-x220F-V-X2xx, MPL-x330F-M-X21x, MPL-x420F-M-X21x, MPAR-X1xxxB, MPAR-X1xxxE, MPAR-X2xxxC, MPAR-X2xxxF, MPAR-X3xxxE, MPAR-X3xxxHC

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About the MP-Series (Series A and B) and TL-Series Electric Cylinder Replacement Parts

Electric cylinders have three replaceable parts; the motor, actuator cylinder, and the transmission component. For inline-mount electric cylinders, the transmission component is the coupler and for parallel-mount electric cylinder, it is a belt. Instructions in this manual cover the replacement of these components.

Catalog Number Explanation

Replacement Couplings

Replacement Coupling Cat. No.	Electric Cylinder with Inline Motor Attributes		Use with Electric Cylinder Cat. No.
	Frame Size	Ball Screw Pitch mm/rev (in./rev)	
MPAR-NA3210C	32	10.0 (0.394)	MPAR-x1xxxE-xxA
MPAR-NA323C		3.0 (0.118)	MPAR-x1xxxB-xxA
MPAR-NA4012C	40	12.7 (0.500)	MPAR-x2xxxF-xxA
MPAR-NA405C		5.0 (0.197)	MPAR-x2xxxC-xxA
MPAR-NA6310C	63	10.0 (0.394)	MPAR-x3xxxE-xxA
MPAR-NA6320C		20.0 (0.787)	MPAR-x3xxxH-xxA

Replacement Belts

Replacement Belt Cat. No.	Electric Cylinder with Motor Mounted in Parallel Attributes		Use with Electric Cylinder Cat. No.
	Frame Size	Ball Screw Pitch mm/rev (in./rev)	
MPAR-NP3210B	32	10.0 (0.394)	MPAR-x1xxxE-xxB/D/E
MPAR-NP323B		3.0 (0.118)	MPAR-x1xxxB-xxB/D/E
MPAR-NP4012B	40	12.7 (0.500)	MPAR-x2xxxF-xxB/D/E
MPAR-NP405B		5.0 (0.197)	MPAR-x2xxxC-xxB/D/E
MPAR-NP6310B	63	10.0 (0.394)	MPAR-x3xxxE-xxB/D/E
MPAR-NP6320B		20.0 (0.787)	MPAR-x3xxxH-xxB/D/E

Replacement Motors for TLAR-Series Electric Cylinders

Replacement Motor Cat. No.	Electric Cylinder Attributes			Use with Electric Cylinder Cat. No.
	Frame Size	Ball Screw Pitch mm/rev (in./rev)	Brake	
TLY-A130F-B-X191	32	3.0 (0.118)	None	TLAR-A1xxxB-x2x
TLY-A130F-B-X192			24V Brake	TLAR-A1xxxB-x4x
TLY-A220F-B-X193		10.0 (0.394)	None	TLAR-A1xxxE-x2x
TLY-A220F-B-X194			24V Brake	TLAR-A1xxxE-x4x
TLY-A220F-B-X195	40	5.0 (0.197)	None	TLAR-A2xxxC-x2x
TLY-A220F-B-X196			24V Brake	TLAR-A2xxxC-x4x
TLY-A230F-B-X197		12.7 (0.5)	None	TLAR-A2xxxF-x2x
TLY-A230F-B-X198			24V Brake	TLAR-A2xxxF-x4x
TLY-A310F-B-X199	63	10.0 (0.394)	None	TLAR-A3xxxE-x2x
TLY-A310F-B-X200			24V Brake	TLAR-A3xxxE-x4x
TLY-A310F-B-X201		20.0 (0.787)	None	TLAR-A3xxxH-x2x
TLY-A310F-B-X202			24V Brake	TLAR-A3xxxH-x4x

Replacement Motor for MPAR-Series Electric Cylinders

Replacement Motor Cat. No.	Electric Cylinder Attributes				Use with Electric Cylinder Cat. No.			
	Voltage Class	Frame Size	Pitch mm/rev (in./rev)	Brake				
MPL-A1520F-V-X203	200	32	3.0 (0.118)	None	MPAR-A1xxxB-x2x			
MPL-A1520F-V-X204				24V Brake	MPAR-A1xxxB-x4x			
MPL-A1530F-V-X205			10.0 (0.394)	None	MPAR-A1xxxE-x2x			
MPL-A1530F-V-X206				24V Brake	MPAR-A1xxxE-x4x			
MPL-A1530F-V-X207		40	5.0 (0.197)	None	MPAR-A2xxxC-x2x			
MPL-A1530F-V-X208				24V Brake	MPAR-A2xxxC-x4x			
MPL-A220F-V-X209			12.7 (0.50)	None	MPAR-A2xxxF-x2x			
MPL-A220F-V-X210				24V Brake	MPAR-A2xxxF-x4x			
MPL-A330F-M-X211		63	10.0 (0.394)	None	MPAR-A3xxxE-x2x			
MPL-A330F-M-X212				24V Brake	MPAR-A3xxxE-x4x			
MPL-A420F-M-X213			20 (0.787)	None	MPAR-A3xxxH-x2x			
MPL-A420F-M-X214				24V Brake	MPAR-A3xxxH-x4x			
MPL-B1520F-V-X215				400	32	3.0 (0.118)	None	MPAR-B1xxxB-x2x
MPL-B1520F-V-X216							24V Brake	MPAR-B1xxxB-x4x
MPL-B1530F-V-X217	10.0 (0.394)	None	MPARBA1xxxE-x2x					
MPL-B1530F-V-X218		24V Brake	MPAR-B1xxxE-x4x					
MPL-B1530F-V-X219	40	5.0 (0.197)	None		MPAR-B2xxxC-x2x			
MPL-B1530F-V-X220			24V Brake		MPAR-B2xxxC-x4x			
MPL-B220F-V-X221		12.7 (0.50)	None		MPAR-B2xxxF-x2x			
MPL-B220F-V-X222			24V Brake		MPAR-B2xxxF-x4x			
MPL-B330F-M-X223	63	10.0 (0.394)	None		MPAR-B3xxxE-x2x			
MPL-B330F-M-X224			24V Brake		MPAR-B3xxxE-x4x			
MPL-B420F-M-X225		20.0 (0.787)	None		MPAR-B3xxxH-x2x			
MPL-B420F-M-X226			24V Brake		MPAR-B3xxxH-x4x			

Replacement Actuator

Replacement Actuator Cat. No.	Electric Cylinder Attributes			Use with Electric Cylinder Cat. No.
	Frame Size	Pitch mm/rev (in./rev)	Stroke Length mm (in.)	
MPAR-X1100B	32	3.0 (0.118)	100	TLAR/MPAR-x1xxxB-xxx
MPAR-X1200B			200	TLAR/MPAR-x1xxxB-xxx
MPAR-X1300B			300	TLAR/MPAR-x1xxxB-xxx
MPAR-X1400B			400	TLAR/MPAR-x1xxxB-xxx
MPAR-X1100E		10.0 (0.394)	100	TLAR/MPAR-x1xxxE-xxx
MPAR-X1200E			200	TLAR/MPAR-x1xxxE-xxx
MPAR-X1300E			300	TLAR/MPAR-x1xxxE-xxx
MPAR-X1400E			400	TLAR/MPAR-x1xxxE-xxx

Replacement Actuator

Replacement Actuator Cat. No.	Electric Cylinder Attributes			Use with Electric Cylinder Cat. No.
	Frame Size	Pitch mm/rev (in./rev)	Stroke Length mm (in.)	
MPAR-X2100C	40	5.0 (0.197)	100	TLAR/MPAR-x2xxxC-xxx
MPAR-X2200C			200	TLAR/MPAR-x2xxxC-xxx
MPAR-X2300C			300	TLAR/MPAR-x2xxxC-xxx
MPAR-X2400C			400	TLAR/MPAR-x2xxxC-xxx
MPAR-X2600C			600	TLAR/MPAR-x2xxxC-xxx
MPAR-X2100F		12.7 (0.50)	100	TLAR/MPAR-x2xxxF-xxx
MPAR-X2200F			200	TLAR/MPAR-x2xxxF-xxx
MPAR-X2300F			300	TLAR/MPAR-x2xxxF-xxx
MPAR-X2400F			400	TLAR/MPAR-x2xxxF-xxx
MPAR-X2600F			600	TLAR/MPAR-x2xxxF-xxx
MPAR-X3100E	63	10.0 (0.344)	100	TLAR/MPAR-x3xxxE-xxx
MPAR-X3200E			200	TLAR/MPAR-x3xxxE-xxx
MPAR-X3300E			300	TLAR/MPAR-x3xxxE-xxx
MPAR-X3400E			400	TLAR/MPAR-x3xxxE-xxx
MPAR-X3600E			600	TLAR/MPAR-x3xxxE-xxx
MPAR-X3800E		800	TLAR/MPAR-x3xxxE-xxx	
MPAR-X3100H		20.0 (0.787)	100	TLAR/MPAR-x3xxxH-xxx
MPAR-X3200H			200	TLAR/MPAR-x3xxxH-xxx
MPAR-X3300H			300	TLAR/MPAR-x3xxxH-xxx
MPAR-X3400H			400	TLAR/MPAR-x3xxxH-xxx
MPAR-X3600H	600		TLAR/MPAR-x3xxxH-xxx	
MPAR-X3800H	800	TLAR/MPAR-x3xxxH-xxx		

Before You Begin

Before you begin, use the [Catalog Number Explanation](#) to verify that the replacement parts match the electric cylinder that you are attempting to repair. Read through the procedure before you start a repair or replacement.

Replace Inline-mount Electric Cylinder Motor

This procedure applies to Bulletin MPAR-xxxxxx-xxA and TLAR-xxxxxx-xxA electric cylinders.

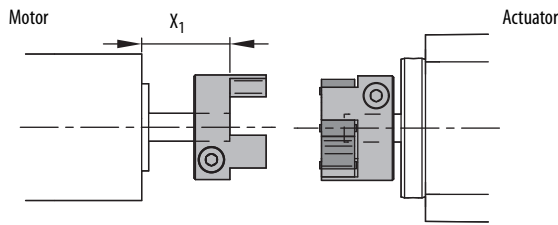
IMPORTANT Apply Loctite 222 to bolts ≤ M4 and Loctite 242 for bolts ≥ M5 during assembly steps.

To replace the motor, do the following.

1. Disconnect motor and feedback cables.
2. Remove the four bolts that secure the motor to the motor flange.
3. Remove the bolt from the coupling hub on the motor shaft.
4. Remove the coupling hub from the motor shaft.
5. Clean the replacement motor shaft with a soft cloth that is damped with isopropyl alcohol.
6. Position the coupling hub on the replacement motor shaft.

Use the dimension from the table on page 5.

7. Torque the coupling bolt to the value as shown in the following table.



Cat. No.	X ₁ ⁽¹⁾ mm (in.)	Torque N·m (lb·in)
MPAR-x1xxxB-xxA	18.5 (0.73)	4.0 (35.4)
MPAR-x1xxxE-xxA		
MPAR-x2xxxC-xxA	19.5 (0.77)	
MPAR-x2xxxF-xxA	22.3 (0.88)	
MPAR-x3xxxE-xxA	35.5 (1.40)	8.0 (70.8)
MPAR-x3xxxH-xxA	35.2 (1.38)	

Cat. No.	X ₁ ⁽¹⁾ mm (in.)	Torque N·m (lb·in)
TLAR-A1xxxB-BxA	25.0 (0.98)	0.6 (5.31)
TLAR-A1xxxE-BxA	28.8 (1.13)	4.0 (35.4)
TLAR-A2xxxC-BxA	29.8 (1.17)	
TLAR-A2xxxF-BxA		
TLAR-A3xxxE-BxA	30.5 (1.20)	8.0 (70.8)
TLAR-A3xxxH-BxA		

(1) Tolerance is ± 0.25 mm (0.010 in.).

8. Align the coupling, the motor, and the actuator cylinder, then push them together.
9. Attach the motor to the motor mount flange by using all four bolts.
10. Torque the bolts as shown in the following table.

Cat. No.	Bolt Size	Torque N·m (lb·in)
MPAR-x1xxx-xxA	M5 x 20	5.9 (52.2)
MPAR-x2xxxC-xxA		
MPAR-x2xxxF-xxA		
MPAR-x3xxxE-xxA	M6 x 25	9.9 (87.6)
MPAR-x3xxxH-xxA	M8 x 25	24.0 (212.4)

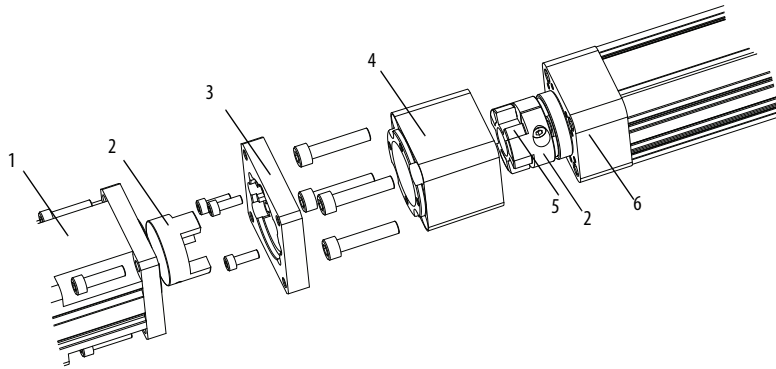
Cat. No.	Bolt Size	Torque N·m (lb·in)
TLAR-A1xxxB-BxA	M4 x 16	2.9 (25.6)
TLAR-A1xxxE-BxA	M5 x 16	5.9 (52.2)
TLAR-A2xxxC-BxA		
TLAR-A2xxxF-BxA	M6 x 20	9.9 (87.6)
TLAR-A3xxxE-BxA		
TLAR-A3xxxH-BxA		

Replace Inline-mount Electric Cylinder Coupling or Actuator Cylinder

This procedure applies to Bulletin MPAR-xxxxxx-xxA and TLAR-xxxxxx-xxA electric cylinders. To replace the coupling or an actuator cylinder, do the following.

IMPORTANT Apply Loctite 222 to bolts \leq M4 and Loctite 242 for bolts \geq M5 during assembly steps.

1. Disconnect the motor and feedback cables.
2. Disassemble the motor, motor flange, and coupling housing, using the following diagram.



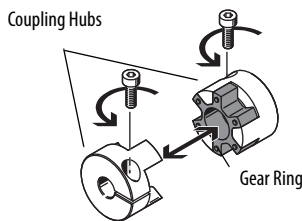
Item	Description
1	Motor
2	Coupling hub
3	Motor flange

Item	Description
4	Coupling housing
5	Gear ring
6	Actuator cylinder

Replace Only the Coupling

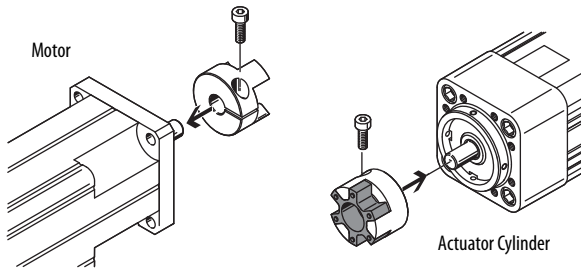
If you are replacing the coupling only, do following. If replacing the actuator cylinder, go to [Replace Only the Actuator Cylinder](#) on [page 7](#).

1. Remove the coupling hubs from the motor and actuator.



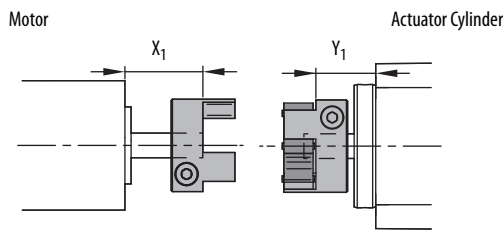
2. Pull apart the new coupling.
3. Insert the new gear ring in one of the coupling hubs.
4. Position the coupling hub with diameter that matches the diameter of the motor shaft on the shaft.

- Position the coupling hub with diameter that matches actuator cylinder shaft on the shaft.



- Tighten the clamping bolts on both the coupling hubs to the specified torque.
Continue with [Assemble the Electric Cylinder](#) on [page 8](#).

Use the dimension from the table.



Cat. No.	X ₁ ⁽¹⁾ mm (in.)	Y ₁ ⁽¹⁾ mm (in.)	Torque N·m (lb·in)
MPAR-x1xxxB	18.5 (0.73)	19.3 (0.76)	4.0 (35.4)
MPAR-x1xxxE			
MPAR-x2xxxC	18.3 (0.72)	8.0 (70.8)	
MPAR-x2xxxF			
MPAR-x3xxxE	35.2 (1.38)	27.0 (1.06)	8.0 (70.8)
MPAR-x3xxxH			

Cat. No.	X ₁ ⁽¹⁾ mm (in.)	Y ₁ ⁽¹⁾ mm (in.)	Torque N·m (lb·in)	
TLAR-x1xxxB	25.0 (0.98)	16.8 (0.66)	0.6 (5.31)	
TLAR-x1xxxE	28.8 (1.13)	19.3 (0.76)		
TLAR-x2xxxC	29.8 (1.17)	18.3 (0.72)	4.0 (35.4)	
TLAR-x2xxxF				
TLAR-x3xxxE	30.5 (1.20)	27.0 (1.06)		8.0 (70.8)
TLAR-x3xxxH				

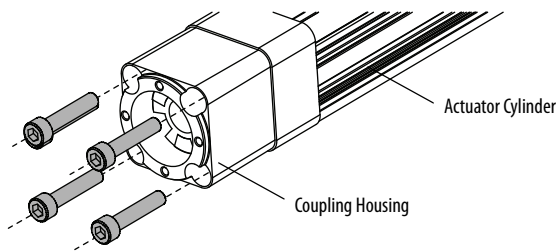
(1) Tolerance is ± 0.25 mm (0.010 in.).

Replace Only the Actuator Cylinder

- Remove the coupling hub from the actuator cylinder.
- Remove the bolt from the coupling hub.
- Position the coupling hub on the shaft of the actuator cylinder.
Use the dimension that is shown on the table in [step 6](#) on [page 7](#).
- Tighten the coupling hub bolt to the torque shown on the table in [step 6](#) on [page 7](#).
Continue with [Assemble the Electric Cylinder](#) on [page 8](#).

Assemble the Electric Cylinder

1. Attach the coupling housing by using four bolts.

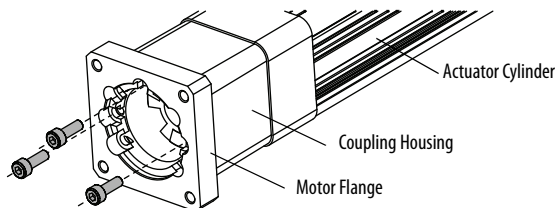


2. Torque the bolts as shown in the following table.

Cat. No.	Bolt Size	Torque N-m (lb-in)	Cat. No.	Bolt Size	Torque N-m (lb-in)
MPAR-x1xxxx-xxA	M6 x 30	4.2 (37.17)	TLAR-A1xxxB-BxA	M6 x 20	4.2 (37.17)
MPAR-x2xxxC-xxA			TLAR-A1xxxE-BxA		
MPAR-x2xxxF-xxA			TLAR-A2xxxC-BxA		
MPAR-x3xxxE-xxA	M8 x 40	7.8 (69)	TLAR-A2xxxF-BxA	M8 x 40	7.8 (69)
MPAR-x3xxxH-xxA			TLAR-A3xxxE-BxA		
			TLAR-A3xxxH-BxA		

3. Attach the motor flange by using the required number of bolts.

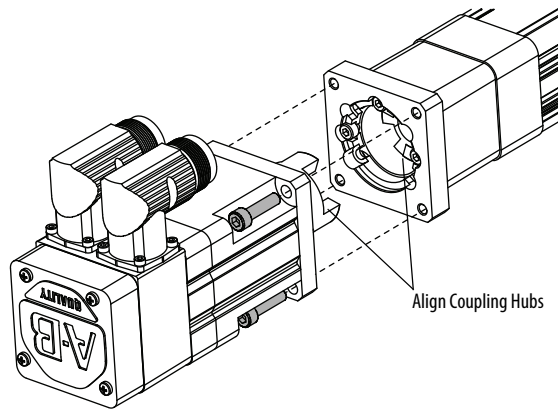
See table in following the step for the bolt quantity.



4. Torque the bolts as shown in the following table.

Cat. No.	Bolt Quantity	Bolt Size	Torque N-m (lb-in)	Cat. No.	Bolt Quantity	Bolt Size	Torque N-m (lb-in)
MPAR-x1xxxx-xxA	4	M4 x 12	2.9 (25.6)	TLAR-A1xxxB-BxA	4	M3 x 12	1.2 (10.6)
MPAR-x2xxxC-xxA				TLAR-A1xxxE-BxA		M4 x 16	2.9 (25.6)
MPAR-x2xxxF-xxA				TLAR-A2xxxC-BxA			
MPAR-x3xxxE-xxA	3	M6 x 20	9.9 (87.6)	TLAR-A2xxxF-BxA	3	M6 x 16	9.9 (87.6)
MPAR-x3xxxH-xxA				TLAR-A3xxxE-BxA			
				TLAR-A3xxxH-BxA			

- Align the coupling, the motor, and the actuator cylinder and push them together.



- Attach the motor to the motor mount flange by using all four bolts.
- Torque bolts as follows.

Cat. No.	Bolt Size	Torque N-m (lb-in)	Cat. No.	Bolt Size	Torque N-m (lb-in)
MPAR-x1xxx-xxA	M5 x 20	5.9 (52.2)	TLAR-A1xxxB-BxA	M4 x 16	2.9 (25.6)
MPAR-x2xxxC-xxA			M5 x 16	5.9 (52.2)	
MPAR-x2xxxF-xxA					
MPAR-x3xxxE-xxA	M6 x 25	9.9 (87.6)	TLAR-A2xxxC-BxA	M6 x 20	9.9 (87.6)
MPAR-x3xxxH-xxA	M8 x 25	24.0 (212.42)	TLAR-A2xxxF-BxA		
			TLAR-A3xxxE-BxA		
			TLAR-A3xxxH-BxA		

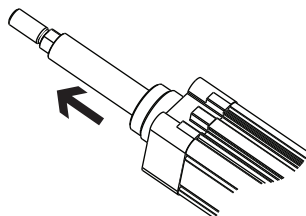
Replace a Parallel-mount Electric Cylinder Motor or Belt

This procedure is for Bulletin MPAR-xxxxxx-xxB/D/E and TLAR-xxxxxx-xxB/D/E electric cylinders. These steps can be used to change the motor or the actuator cylinder orientation.

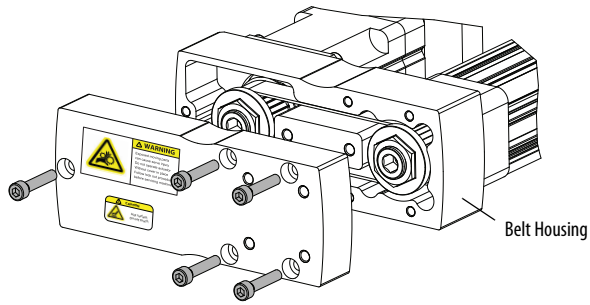
Follow these steps to replace the belt, motor, or actuator cylinder.

IMPORTANT Apply Loctite 222 to bolts \leq M4 and Loctite 242 for bolts \geq M5 during assembly steps.

- Disconnect the motor and feedback cables.
- If the motor has brake, release the brake on motor so that the rod moves freely.
- Position the rod to the center of travel.

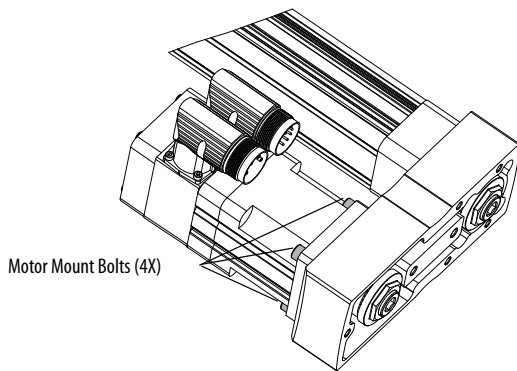


4. Remove the cover from belt housing.

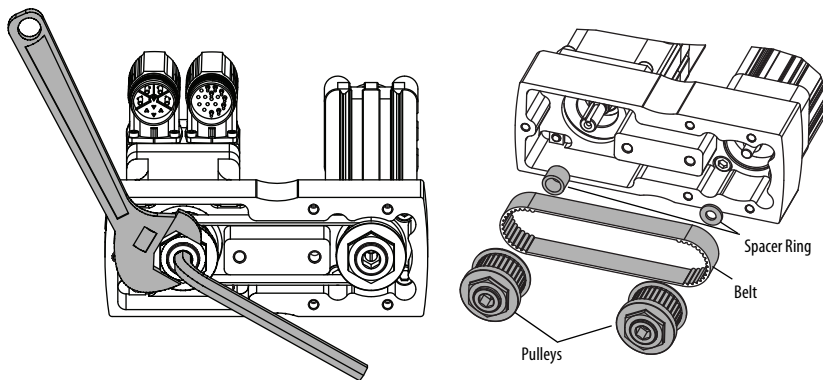


ATTENTION: Exposed parts that move can cause severe injury. Do not operate the electric cylinder without the cover in place. Follow the lock-out procedures before servicing the machine.

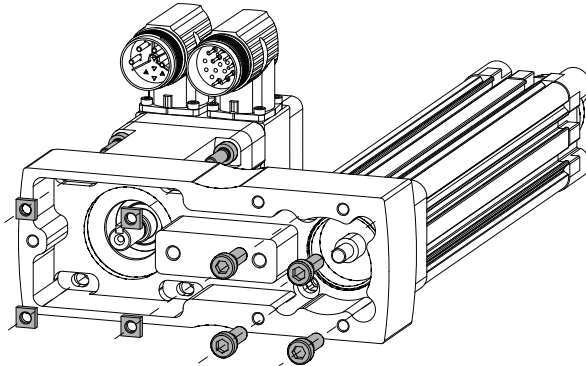
5. Loosen, but do not remove the four bolts that hold the motor to the belt housing.
The tension is relieved on the belt.



6. Remove the pulleys and the belt.
Use a wrench to hold the pulley in place while turning the collar clockwise with a hex driver.
The pulley has a left-hand thread.



7. If you are changing the motor or actuator cylinder orientation, follow steps 7a through 7e; if not, go to [step 8](#).
 - a. Remove the bolts from the motor or actuator cylinder.
Be sure to collect the square nuts if you are removing the motor.



- b. Reposition the motor and or actuator cylinder.

IMPORTANT If you are mounting the motor with the connectors between the actuator cylinder and the motor, rotate the motor connectors so they exit 180° away from the shaft.

- c. Attach the actuator cylinder with four bolts.
 - d. Torque the actuator cylinder bolts to values shown in the following table.

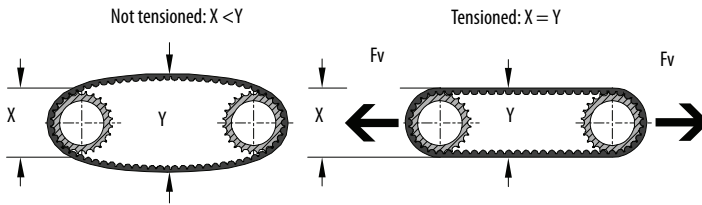
Cat. No.	Bolt Size	Torque N·m (lb·in)	Cat. No.	Bolt Size	Torque N·m (lb·in)
MPAR-x1xxxB-xxB/D/E	M6 x 18	4.2 (37.17)	TLAR-A1xxxB-BxB/D/E	M6 x 18	4.2 (37.17)
MPAR-x1xxxE-xxB/D/E			TLAR-A1xxxE-BxB/D/E		
MPAR-x2xxxC-xxB/D/E			TLAR-A2xxxC-BxB/D/E		
MPAR-x2xxxF-xxB/D/E			TLAR-A2xxxF-BxB/D/E		
MPAR-x3xxxE-xxB/D/E	M8 x 20	7.8 (69)	TLAR-A3xxxE-BxB/D/E	M8 x 20	7.8 (69)
MPAR-x3xxxH-xxB/D/E			TLAR-A3xxxH-BxB/D/E		

- e. Attach the motor by using four bolts and four square nuts.
Do not tighten bolts now.
8. Place the spacer rings, belt, and pulleys on the shafts.
Bottom out the pulleys to make them parallel.
9. Hold the pulleys with a wrench and tighten the collar by turning the hex key counter-clockwise to the torque shown in the following table.

Cat. No.	Torque N·m (lb·ft)	Cat. No.	Torque N·m (lb·ft)
MPAR-x1xxxB-xxB/D/E	16.95 (13)	TLAR-A1xxxB-BxB/D/E	13.56 (10)
MPAR-x1xxxE-xxB/D/E		TLAR-A1xxxE-BxB/D/E	16.95 (13)
MPAR-x2xxxC-xxB/D/E		TLAR-A2xxxC-BxB/D/E	
MPAR-x2xxxF-xxB/D/E		TLAR-A2xxxF-BxB/D/E	
MPAR-x3xxxE-xxB/D/E	67.79 (50)	TLAR-A3xxxE-BxB/D/E	67.79 (50)
MPAR-x3xxxH-xxB/D/E		TLAR-A3xxxH-BxB/D/E	

10. Apply pressure to the base of the motor to tension the belt.

Observe the distances of X and Y and determine this transition precisely.



The following table shows the recommend belt tension values.

Cat. No.	Tension N (lb)	Cat. No.	Tension N (lb)
MPAR-x1xxxB-xxB/D/E	30 (6.75)	TLAR-A1xxxB-BxB/D/E	35 (7.9)
MPAR-x1xxxE-xxB/D/E	61 (13.73)	TLAR-A1xxxE-BxB/D/E	61 (13.7)
MPAR-x2xxxC-xxB/D/E	67 (15.10)	TLAR-A2xxxC-BxB/D/E	67 (15.1)
MPAR-x2xxxF-xxB/D/E	90 (20.23)	TLAR-A2xxxF-BxB/D/E	149 (33.5)
MPAR-x3xxxE-xxB/D/E	162 (36.4)	TLAR-A3xxxE-BxB/D/E	162 (36.4)
MPAR-x3xxxH-xxB/D/E	224 (50.4)	TLAR-A3xxxH-BxB/D/E	216 (48.5)

IMPORTANT A low pretension force is better than a high pretension force.

Excessive pretension on the belt results in:

- impermissible radial loads causing shaft to break
- increased wear in the axis and motor gearings
- reduction of the service life of the belt

11. While a maintaining tension on the belt, torque the motor bolts to value specified in following table.

Cat. No.	Bolt Size	Torque N·m (lb·in)	Cat. No.	Bolt Size	Torque N·m (lb·in)
MPAR-x1xxxB-xxB/D/E	M5 x 16	5.9 (52.2)	TLAR-A1xxxB-BxB/D/E	M4 x 12	2.9 (25.6)
MPAR-x1xxxE-xxB/D/E			M5 x 35	5.9 (52.2)	
MPAR-x2xxxC-xxB/D/E					
MPAR-x2xxxF-xxB/D/E	M5 x 20	9.8 (87.6)	TLAR-A2xxxF-BxB/D/E	M6 x 18	9.9 (87.6)
MPAR-x3xxxE-xxB/D/E	M6 x 18				
MPAR-x3xxxH-xxB/D/E	M8 x 20		24.0 (212.0)		

12. Secure the cover to the belt housing with five bolts.

Additional Resources

These documents contain additional information concerning related products from Rockwell Automation.

Resource	Description
TL-Series™ Electric Cylinders Installation Instructions, publication TLAR-IN001	Information on how to install TL-Series electric cylinders and product and performance specifications.
MP-Series™ Brushless Servo Motor Installation Instructions, publication MP-IN001	Information on how to install, medium frame (100 . . . 165 mm) MP-Series low-inertia motors.
MP-Series Brushless Servo Motor Installation Instructions, publication MP-IN006	Information on how to install small frame (<75 mm) MP-Series low-inertia motors.
Product Certifications website, http://www.rockwellautomation.com/global/certification/overview.page	Provides declarations of conformity, certificates, and other certification details.

You can view or download publications at <http://www.rockwellautomation.com/literature>. To order paper copies of technical documentation, contact your local Allen-Bradley distributor or Rockwell Automation sales representative.

Rockwell Automation Support

Use the following resources to access support information.

Technical Support Center	Knowledgebase Articles, How-to Videos, FAQs, Chat, User Forums, and Product Notification Updates.	https://rockwellautomation.custhelp.com/
Local Technical Support Phone Numbers	Locate the phone number for your country.	http://www.rockwellautomation.com/global/support/get-support-now.page
Direct Dial Codes	Find the Direct Dial Code for your product. Use the code to route your call directly to a technical support engineer.	http://www.rockwellautomation.com/global/support/direct-dial.page
Literature Library	Installation Instructions, Manuals, Brochures, and Technical Data.	http://www.rockwellautomation.com/global/literature-library/overview.page
Product Compatibility and Download Center (PCDC)	Get help determining how products interact, check features and capabilities, and find associated firmware.	http://www.rockwellautomation.com/global/support/pcdc.page

Documentation Feedback

Your comments will help us serve your documentation needs better. If you have any suggestions on how to improve this document, complete the How Are We Doing? form at http://literature.rockwellautomation.com/idc/groups/literature/documents/du/ra-du002_-en-e.pdf.

Rockwell Automation maintains current product environmental information on its website at <http://www.rockwellautomation.com/rockwellautomation/about-us/sustainability-ethics/product-environmental-compliance.page>.

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