

(UC4M shown)

**CAUTION:**

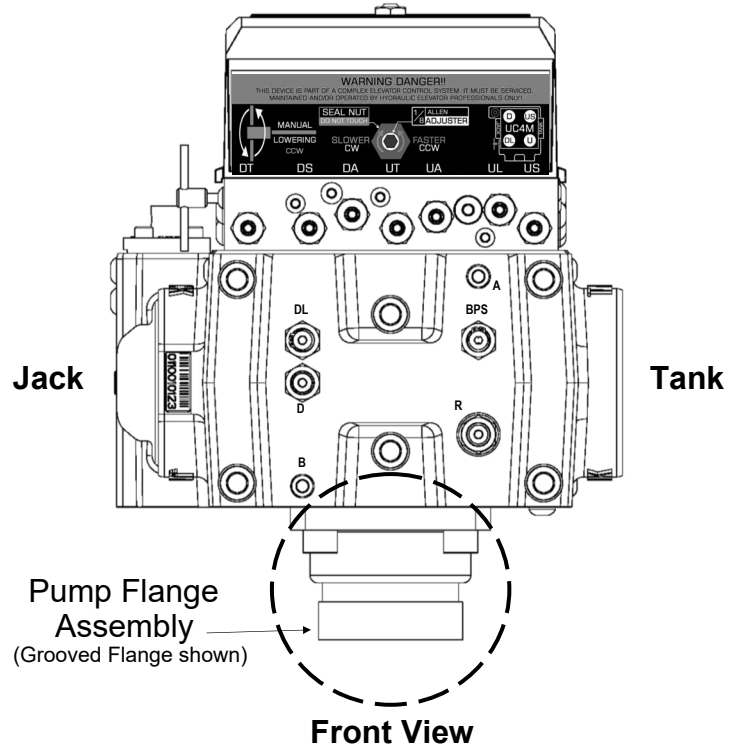
All Maxton valves **MUST** be installed with the solenoids in the upright (vertical) position.

**Pump Flange Replacement:**

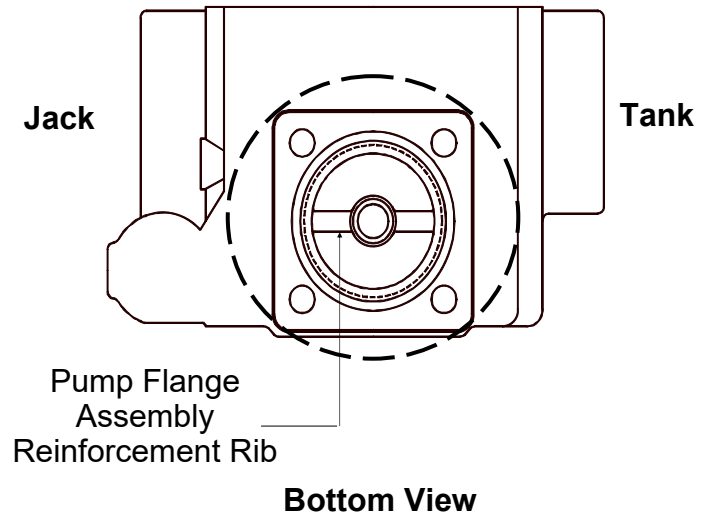
*When replacing a Maxton UC3A / UC3AM or UC4 / UC4M / UC4MR series valve, the Pump Flange Assembly must also be replaced.*

It is subject to the same wear and tear as the valve. It is important that when installing the flange, the Reinforcement Rib inside the flange be installed in line with the Jack and Tank ports on the valve body.

Maxton has not manufactured the UC3 since 1977 and the UC3A/UC3AM since 1983. We no longer support the UC3/3A/3AM in the form of parts, kits or repairs. The UC4 series valve is the direct piping replacement for the UC3/3A/3AM. To determine which of the UC4 valves is best suited for your job, please contact our sales department with your job specs (piston diameter, car speed, capacity, no-load PSI or empty car weight).



**Front View**



**Bottom View**

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Part No.	Coil Color / Label Color	Lead Wires	Coil Wire Size (AWG)	Voltage	OHMS ± 10%	Current (AMPS) ± 10%	
		Length (inches) +2", -0"			DC Resistance At 25° C With Leads	DC	AC
208200	Black / Red	36	26	120 VAC	28.6		.55
2082C0	Black / White	5	26	24 VDC	24.5	.9	-
208000	Black / Green	36	29	240 VAC	116	--	.230
208100	Black / White	36	32	115 VDC	522	.22	--
208300	Black / White	36	22	12 VDC	5.30	2.19	--
2080A0	Blue / White	36	28	185 VAC	78.2	--	.220

Current (AMPS) measured when coil is tested on a fully assembled control plate with C-Frame installed.

**Set of 4 # 290820\***  
120 VAC  
Ea. # 280820

**Set of 4 # 290800\***  
240 VAC  
Ea. # 280800

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**318898**  
24 VDC  
Use with EMV10 Series Valves Only

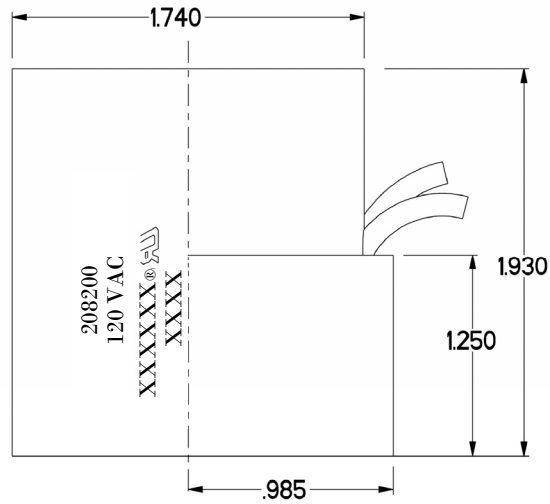
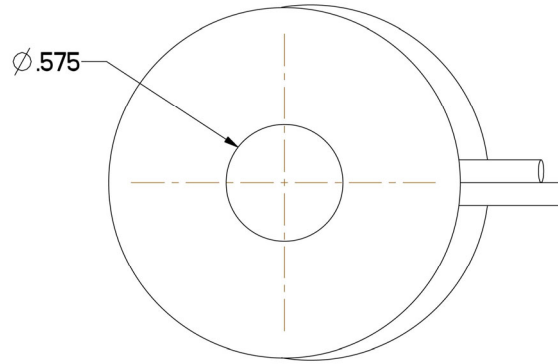
**280810**  
115 VDC

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**28080A**  
185 VAC

**280830**  
12 VDC

\* Part # 290820 AND # 290800 COME IN SETS OF 4 WITH MULTI-COLORED LEAD WIRES. COLORS ARE RED, YELLOW, ORANGE AND BLUE. ALL OTHERS ARE BLACK UNLESS OTHERWISE NOTED



The normal mechanical life of a Maxton valve is in excess of two million cycles. Valve operating life can be affected by many variables, i.e. the operating temperature, the usage frequency, the pressure ratio, and the presence of contaminants in the oil, their size, type and amount, etc. With the presence of at least some adverse conditions in most installations, serious consideration should be given to overhaul or replacement of a control valve on a five year cycle.

Rebuild of a control valve requires proper tools, detailed knowledge of critical areas in the valve, and full testing of the completed assembly. Machining and component replacement may be necessary to meet current design specifications. Few facilities have the knowledge and capability. For this reason, Maxton no longer offers a valve service kit. Valve seal kits, seat kits, and solenoid kits are available, but are neither designed nor intended for field rebuild of a valve unit.

Seat kits, seal kits, and solenoid kits are intended for use by professionals trained in the manufacture, installation and maintenance of hydraulic elevator systems. Before disassembly or replacement of a control valve, the main line power switch should be disconnected and locked out and the car landed on the buffers (zero system pressure).

Manual lowering is used to lower a car for service, and to depressurize the oil system. This control should be fully closed after use. If a car is stuck in the hoist way, manual lowering must be shut to ensure the car remains supported by a column of oil.

There are neither parts nor kits available for the UC3/3A/3AM or Minimax control valves. These valve models are no longer manufactured nor supported in the form of kits, parts, and repairs. For replacement of a UC3 or MiniMax valve, contact our sales department with the job specifications to determine the correct valve for replacement. Job specifications needed would include car speed, jack piston diameter, capacity, empty static pressure or empty car weight, the coil voltage and the pump flange type.

It is recommended that solenoid seats and ball cage assemblies be replaced every 2,000,000 cycles. For a valve that was manufactured or last repaired before May 1995, the solenoid seat and solenoid tube assembly must be changed together (use the appropriate solenoid kit).

Seal kit # 291510 (for UC1/1A/2/2A valves) contains field replaceable seals and piston rings for these model valves. The check piston, and the piston seat assemblies are not considered removable, and seal parts for these assemblies are not provided.

Seal kit # 291540 (for UC4/4M/4MR valves) contains field replaceable seals as well as a BPS adjuster (#283330). Seals for the piston seat assemblies in these valves are not provided as the seats vary between valve years, are not easily removed and can be improperly re-installed in the field.

Seal kit # 291500 is used to replace the seals in the OSV (seismic safety or pipe rupture) valve.

UC1/UC1A/UC2/UC2A valves manufactured prior to 1980 have solenoid stems that are held in place with a snap ring. There are no longer parts, seats or seals available for this style solenoid assembly. The valve may be replaced through the purchase of a new valve.

Solenoid kit # 29292A (UC1/1A/2/2A valves) Each kit contains matched solenoid seats, ball cages and solenoid tube assemblies sufficient for one valve.

Solenoid kit # 292920 (UC4/4M/4MR valves) Each kit contains matched solenoid seats, ball cages and solenoid tube assemblies sufficient for one valve.

For valves manufactured since May 1995, Seat kit # 29298A-2 (UC1/1A/2/2A/UC4/4M/4MR valves) is used to replace the solenoid seats only.

When replacing a UC3/3A/3AM or UC4 series valve, the pump flange assembly must also be replaced. This pump flange assembly has moving parts with a service life.

To provide trouble free startup and operation, the oil system should be purged and the oil filtered or replaced when a valve replacement takes place.

Disconnect power and land car on the buffers (zero system pressure) before installation. Do not save and reuse parts.

291510 KIT FOR UC1 / UC1A / UC2 / UC2A VALVES					
Quantity	Part No.	Description	Quantity	Part No.	Description
2	210000	Seal Ring (BPS / Down closure sleeve)	3	210600	Seal Ring (Adjuster; down leveling, BPS)
1	2372LC	Square C.S. Seal Ring (Face Seal)	19	210800	Seal Ring (1/4-28 Button head screw)
5	210200	Seal Ring (BPS / Down / Check piston rod)	1	2110LC	Square C.S. Seal Ring (Relief block bore)
1	210300	Seal Ring (Restrictor closure)	9	227000	Adjuster Seal (Teflon ring)
1	210370	Seal Ring (Check Closure with groove)	2	28098A	Piston Ring & Expander (BPS / Down)
3	210400	Seal Ring (Flanges, Pump, Tank & Jack)	2	2107LC	Square C.S. Seal Ring (Face Seal)
17	2105LC	Square C.S. Seal Ring (Face Seal)	4	210700	Seal Ring (LS adjuster)
7	210500	Seal Ring (Seal plug, Relief push rod)	7	263900	Seal Ring (10-32 button head screw)
1	2385LC	Square C.S. Seal Ring (Face Seal)			

Disconnect power and land car on the buffers (zero system pressure) before installation. Do not save and reuse parts.

291500 KIT FOR OSV VALVE					
Quantity	Part No.	Description	Quantity	Part No.	Description
1	210000	Seal Ring (Closure sleeve)	1	2107LC	Square C.S. Seal Ring (Face Seal)
2	210400	Seal Ring (Flanges, Pump & Jack)	1	227000	Adjuster Seal (Teflon ring)
3	210500	Seal Ring (Seal plug)	1	28098A	Piston Ring & Expander (Down piston)
7	2105LC	Square C.S. Seal Ring (Face Seal)	1	2385LC	Square C.S. Seal Ring (Spring Guide)
1	210600	Seal Ring (Tripping speed adjuster)	1	210190	Seal Ring (Spring guide, new style)
1	210700	Seal Ring (Control block, Valve Body)	3	210800	Seal Ring (1/4-28 Button head screw)

Disconnect power and land car on the buffers (zero system pressure) before installation. Do not save and reuse parts.

291540 KIT FOR UC4/4M/4MR VALVES					
Quantity	Part No.	Description	Quantity	Part No.	Description
1	204500	Seal Ring (Down guide retainer)	8	227000	Adjuster Seal (Teflon ring)
9	2372LC	Square C.S. Seal Ring (Face Seal)	3	232100	Seal Ring (Flange, piston sleeves)
4	237200	Seal Ring (Relief cart. up/down strainer, DSR)	2	233600	Seal Ring (Manual Lowering / DSR)
1	21019LC	Seal Ring (Face seal, B44)	1	2107LC	Square C.S. Seal Ring (Face Seal)
3	210200	Seal Ring (Closure adj.)	3	210700	Seal Ring (LS adjuster)
18	2105LC	Square C.S. Seal Ring (Face Seal)	2	2385LC	Square C.S. Seal Ring (Face Seal)
15	210500	Seal Ring (Closure adj., Seal Plug)	2	238500	Seal Ring
1	283330	BPS Adjuster Assembly	2	28371E*	Piston Ring & Expander (Up / Down)
29	210800	Seal Ring (1/4-28 Button head screw)	15	263900	Seal Ring (10-32 Button head screw)

\* Warning: When replacing Teflon Piston Ring (2371C0) the Expander Ring must be replaced as well.

**Disconnect power and land car on the buffers (zero system pressure) before installation. Do not save and reuse parts.**

<b>292920 SOLENOID KIT FOR UC4 / UC4M / UC4MR</b>					
Quantity	Part No.	Description	Quantity	Part No.	Description
1	29298A-2	Solenoid Seat Kit	4	282920	Solenoid Tube Assembly
1	292950	Ball Cage Kit	4	238500	Seal Ring (Solenoid Tube)

<b>29292A SOLENOID KIT FOR UC1A / UC1 / UC2A / UC2</b>					
Quantity	Part No.	Description	Quantity	Part No.	Description
1	29298A-2	Solenoid Seat Kit	1	28292A	Solenoid Tube Assembly
1	292950	Ball Cage Kit	3	282920	Solenoid Tube Assembly
4	238500	Seal Ring (Solenoid Tube)			

<b>29298A-2 SOLENOID SEAT KIT FOR UC4 / UC4M / UC4MR / UC1A / UC1 / UC2A / UC2</b>					
Quantity	Part No.	Description	Quantity	Part No.	Description
4	2298A0-2	Solenoid Seat	4	236000	Seal Ring
4	210800	Seal Ring			

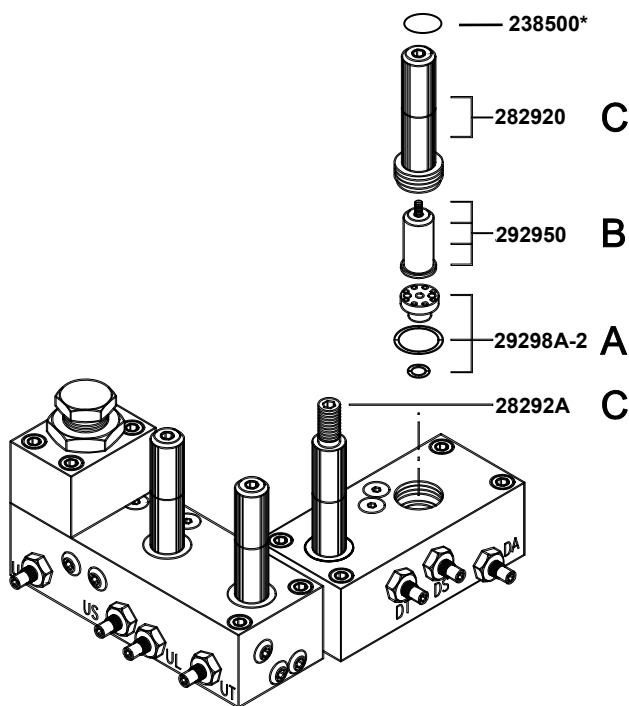
<b>292950 BALL CAGE KIT UC4 / UC4M / UC4MR / UC1A / UC1 / UC2A / UC2</b>					
Quantity	Part No.	Description	Quantity	Part No.	Description
4	282950	Ball Cage Assembly	4	229400	Spring

<b>29298EMV SOLENOID SEAT KIT with CHECK SEAT SEAL FOR EMV10 / EMV10T</b>					
Quantity	Part No.	Description	Quantity	Part No.	Description
2	312980	Solenoid Seat, EMV	2	236000	Seal Ring
2	210800	Seal Ring	2	311270	Seal Ring

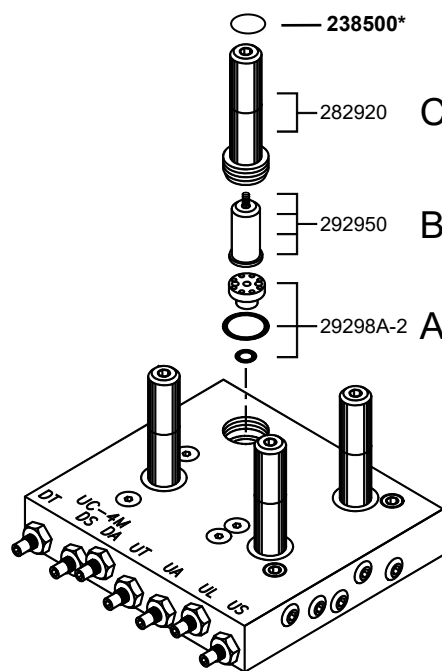
<b>29896EMV SOLENOID KIT FOR EMV10 / EMV10T</b>					
Quantity	Part No.	Description	Quantity	Part No.	Description
1	312980	Solenoid Seat, EMV	1	288960	Solenoid Tube Assembly
1	236000	Seal Ring	1	238500	Seal Ring (Solenoid Tube)
1	210800	Seal Ring	1	282950	Ball Cage
1	229400	Spring	1	311270	Seal Ring



SOLENOID KIT PART No.: 29292A UC1A / UC1 / UC2A / UC2				SOLENOID KIT PART No.: 292920 UC4 / UC4M / UC4MR		
QTY.	DESCRIPTION	ASSY NO.	SYMBOL	QTY.	DESCRIPTION	ASSY NO.
1	Solenoid Seat Kit	29298A-2	A	1	Solenoid Seat Kit	29298A-2
1	Ball Cage Kit	292950	B	1	Ball Cage Kit	292950
3	Solenoid Tube Assembly	282920	C	4	Solenoid Tube Assembly	282920
1	Solenoid Tube Assembly	28292A		4	Seal Ring	238500
4	Seal Ring	238500				
Replacement Recommendation			A & B	Replace every 2,000,000 cycles		
			A & C	Retrofit valves produced prior to July 1995.		



UC1A / UC2A CONTROL BLOCKS SHOWN



UC4M CONTROL PLATE SHOWN

**REPLACEMENT PROCEDURE**

1. Turn power off at main disconnect switch.
2. Land car on buffers (zero system pressure).
3. Use caution when handling seats. Tools should be used on the outer holes only to avoid damaging the sealing edge of the center hole. *\* 238500 should be installed dry.*
4. Dip seal rings in oil and install new parts as depicted above.
5. Make sure the solenoid seats are centered and all the way down before installing remaining parts.
6. Tighten solenoid tubes to 156 in lbs. (13 ft lbs).  
The solenoid tubes should be checked periodically for proper torque.

