THE INFORMATION PRESENTED HEREIN IS FOR USE BY SKILLED HYDRAULIC ELEVATOR PROFESSIONALS

SPECIAL CONSIDERATIONS:

Make all adjustments at minimum pressure (no load on elevator) except where noted. "IN" is ALWAYS (CW) clockwise. "OUT" is ALWAYS (CCW) counterclockwise. ***THE CONTROL PLATE ADJUSTERS HAVE SEAL NUTS, NOT LOCK NUTS.*** Adjust nut only to set seal friction (friction will maintain adjustment). When adjustment procedure calls for coils to be disconnected, disconnect them electrically. Do not remove them physically. Make adjustments with a minimum oil temperature of 80˚ F, not to exceed 100˚ F maximum. Maxton recommends the use of a 5 micron filtration system. 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.

GAUGE PORTS:

Gauge ports 1/8 pipe sizes are provided at points A, B and S.
A Port: Pump pressure (RELIEF, WORKING PRESSURE).
B Port: Jack pressure (STATIC, DOWN RUNNING).
S Port: Low pressure switch port.
Note: The minimum operating pressure at port B should be at least 50 psi (3.4 bar) as car is moving down full speed with no load. See flow chart.

*** SAFETACH** performance meter validates valve adjustment by providing direct speed and acceleration (g-force) readouts.

OPERATIONAL DATA:

Min. / Max. Pressure:	50-800 psi (3.4-55 bar)
Max. Rated Flow:	185 gpm (700 l / min.)
Operating Temperature:	80˚-150˚ F (26˚- 65˚ C)
Optimal Temp. Range.	100˚-130˚ F (38˚- 54˚ C)
Oil Type:	Hyd. ISO VG 32 150 SUS @ 100˚ F (38˚ C)

Note: Consult factory when applications exceed pressure ratio over 2.5 to 1, example (Max. / Min. :280 / 100)

UP SECTION ADJUSTMENTS (Start with car at lower landing)

1 **BPS** Disconnect the **US** coil, turn **UA** IN (CW) register an up call and turn **BPS** IN (CW) until the car just moves. Next, turn the **BPS** adjuster OUT (CCW) until it stops the movement of the car, then OUT 1/ 2 turn more. Snug lock nut on **BPS** adjuster and stop pump. NOTE: If car does not move with **BPS** fully IN (CW), the valve may be oversized for the job (consult factory for proper valve sizing). Reconnect the **US** coil.

2 **UA** Register an up call (pump running, **U** & **US** coils energized, car should not move), slowly turn **UA** OUT (CCW) to attain full up speed within 24 to 36 inches. *** (Accel 0.04g-0.09g).**

3 **UL** Disconnect the **U** coil. Turn **UL** adjuster IN (CW) to stop and register an up call. Leveling speed should be 3 to 5 fpm. (If not, readjust **LS***). Turn **UL** adjuster OUT (CCW) to attain 9 to 12 fpm leveling speed. Reconnect the **U** coil and lower the car to lowest landing. ***(Read leveling speed).**

4 **UT** Register an up call and turn **UT** IN (CW) so that the car slows to provide 4 to 6 inches of stabilized up leveling. Repeat steps 3 and 4 as necessary. ***(Decel 0.04g-0.09g).**

5 **US** With **US** adjuster fully OUT (CCW), car should stop 1/4" to 3/8" below floor. After a normal up run, turn **US** IN (CW) as needed to bring car to floor level. ***(Stop 0.04g-0.09g).** The pump must be timed to run ½ second after the car has reached the floor.

6 With empty car at bottom floor, disconnect **U** & **US** coils and register a call. The car must not move. If movement occurs, check **BPS** and **US**.

LS* Dot on the **LS** adjuster should be referenced to the line between F / S. When necessary, disconnect the **U** coil and turn the **UL** adjuster IN (CW) to stop. Move the **LS** adjuster slightly toward S for slower or F for faster leveling speed. Set coarse adjustment from 3 to 5 fpm with the **LS** adjuster, then repeat step 3. *** (Level Speed Test 3 to 5 fpm).**

DOWN SECTION ADJUSTMENTS (Start with car at upper landing)

7 **D** Register a down call to set proper down speed with down speed adjuster **D** as required. Tighten the lock nut (snug) & send car to upper landing. ***(Read high speed).**

8 **DA** Start by turning **DA** and **DL** adjusters IN (CW) to stop. Register a down call and, turn the **DA** adjuster slowly OUT (CCW) until the car accelerates smoothly. Send car to upper landing. ***(Accel 0.04g-0.09g).**

9 **DT** Register a down call and turn **DT** IN (CW) so that the car slows to provide 4 to 6 inches of stabilized down leveling. *** (Decel 0.04g-0.09g).**

10 **DL** Disconnect **D** coil. Register a down call and set down leveling speed at 6 to 9 fpm with the **DL** adjuster. Tighten the lock nut (snug). Reconnect **D** coil. *** (leveling speed 6 to 9 fpm).**

11 **DS** Turn **DS** IN (CW), when necessary, for a softer stop. *** (Stop 0.04g-0.09g).**

ML MANUAL LOWERING: Turn **ML** screw OUT (CCW) to lower car downward at leveling speed when necessary.

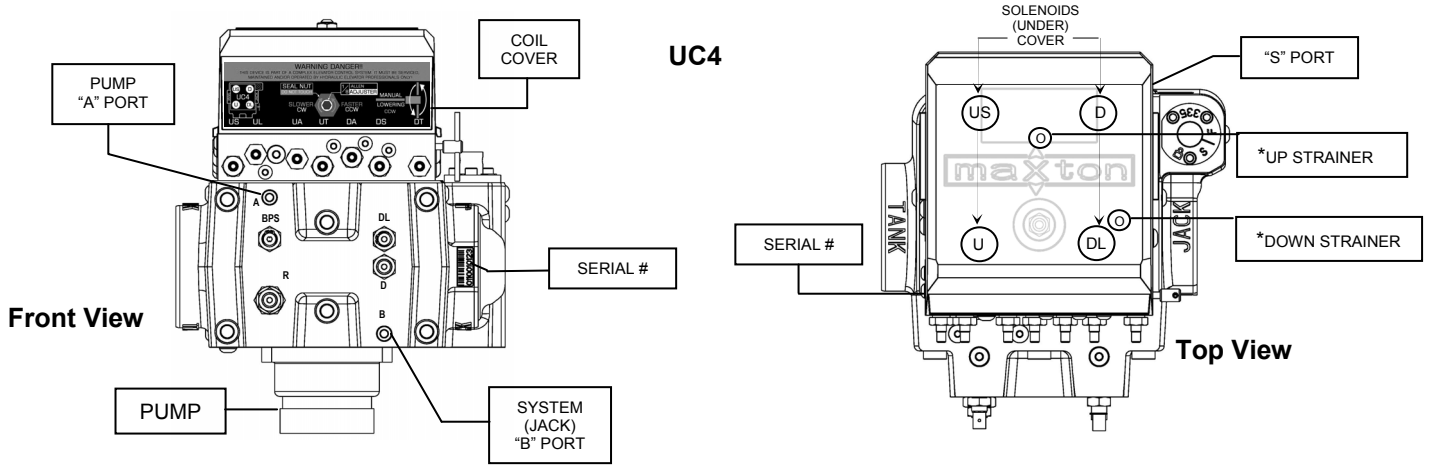
R RELIEF:
a. Land car in pit and install pressure gauge in **A** port.
b. Register an up call with a fully loaded car, making note of Maximum operating pressure.
c. Turn **UA** and **RELIEF** adjuster OUT (CCW) to stop.
d. Close the manual shut off valve to the jack.
e. Register an up call, observe pressure gauge and turn **RELIEF** IN (CW) to increase pressure. Final setting should be in accordance with local code requirement not to exceed 150% of maximum operating pressure.
f. Tighten the lock nut (snug).
g. Restart to check the pressure relief setting. Seal as required.
h. Open the manual shut off valve to the jack
i. Readjust **UA** for proper Up Acceleration.***(Accel 0.04g-0.09g).**

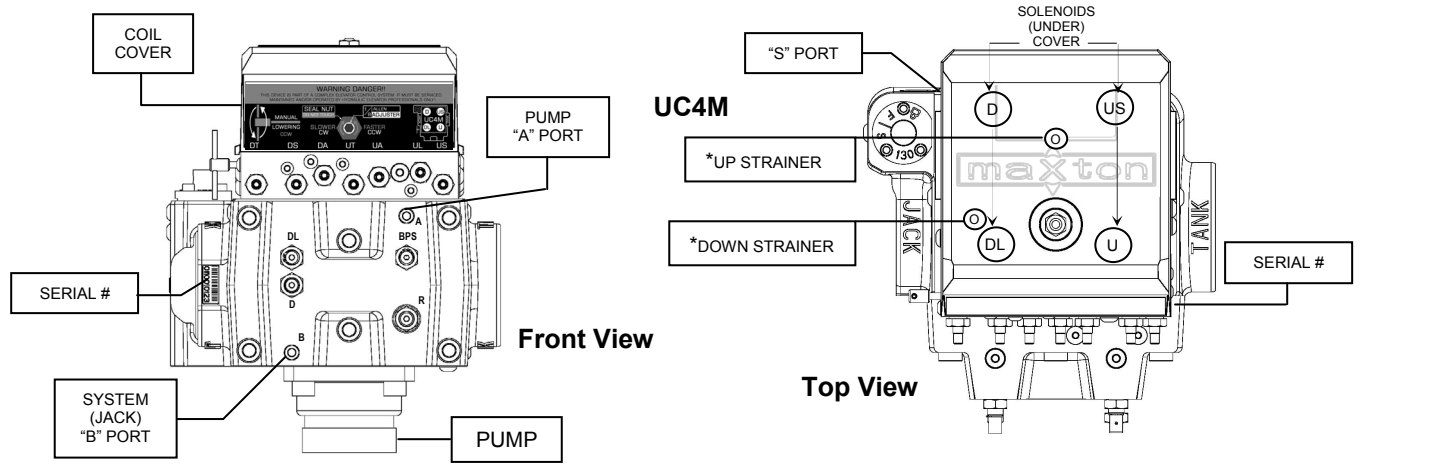
DEFAULT SETTINGS
If valve is received from Maxton, only minor adjustments may be required.

CONTROL PLATE					
US	UP STOP	OUT	(CCW)	to stop.	(faster rate)
UL	UP LEVEL	IN	(CW)	to stop.	(slower speed)
UA	UP ACCELERATION	IN	(CW)	to stop.	(slower rate)
UT	UP TRANSITION	OUT	(CCW)	to stop.	(faster rate)
VALVE BODY					
BPS	BY-PASS SIZING	OUT	(CCW)	to stop.	(delays up start)
LS*	LEVEL SPEED (factory set)	DOT ON LINE			(set 3-5 fpm)
R	RELIEF (factory set)	APPROX 450 psi (CW increases pressure)			

DEFAULT SETTINGS
If valve is received from Maxton, only minor adjustments may be required.

CONTROL PLATE					
DT	DOWN TRANSITION	OUT	(CCW)	to stop.	(faster rate)
DA	DOWN ACCELERATION	OUT	(CCW)	to stop.	(faster rate)
DS	DOWN STOP	OUT	(CCW)	to stop.	(faster rate)
ML	MANUAL LOWERING	IN	(CW)	to stop.	
VALVE BODY					
D	DOWN SPEED	OUT (CCW)	5 threads above lock nut.		(faster speed)
DL	DOWN LEVEL	OUT (CCW)	2 threads above lock nut.		(faster speed)





ATTENTION: All Maxton Valves ***MUST*** be installed with the solenoids in the upright (vertical) position.
When replacing a Maxton UC3 / UC3AM or UC4 / UC4M series valve, the pump flange assembly must also be replaced. It is subject to the same wear and tear as the valve.
*Strainer access is provided from the top of the control plate.
Prior to 2012 the sleeve and baseplate were an integral part of coil operation.
2012 to current the C-Frame and Bracket are an integral part of coil operation.

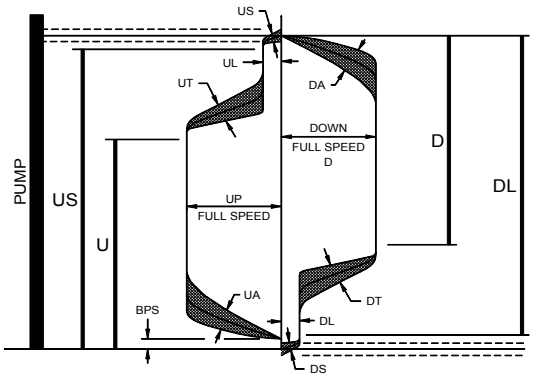
COIL OPERATING SEQUENCE

US — For up travel, energize when pump starts and de-energize to stop. With US energized and pump running, car will move up at leveling speed. For "soft stop", pump should run ½ second after US de-energizes.

U — Energize with US coil to run up at contract speed. De-energize at slowdown distance from floor. Slowdown distance = 2 inches for each 10 fpm of car speed NOT to exceed 6 inches for every 25 fpm of car speed.
If necessary increase slowdown distance to achieve 4-6 inches of stabilized up leveling.

DL — Energize to move car at leveling speed. De-energize to stop.

D — Energize with DL coil to run down at contract speed. De-energize at slowdown distance from floor. Slowdown distance = 2 inches for each 10 fpm NOT to exceed 6 inches for every 25 fpm of car speed.
If necessary increase slowdown distance to achieve 4-6 inches of stabilized down leveling.



ELECTRO-MAGNETIC COILS
U = UP COIL — D = DOWN COIL
US = UP STOP COIL — DL = DOWN LEVEL COIL

CAUTION: On Wye - Delta Up Start do not energize U and US Coils until motor is running on Delta