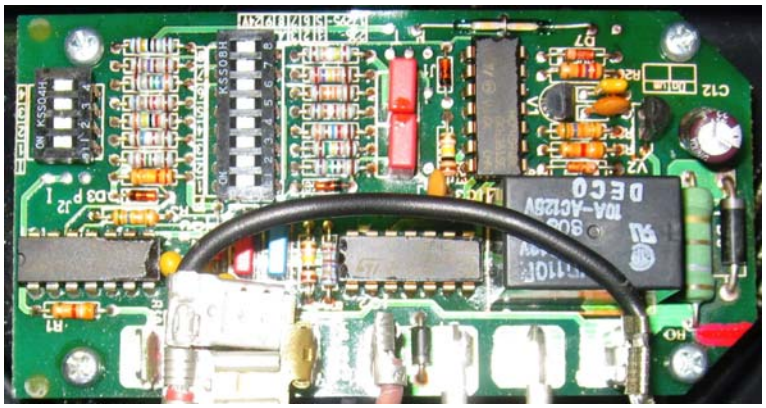
27 pt. Spyder Pump – Timer Update

Timer Version HP-103-I-B

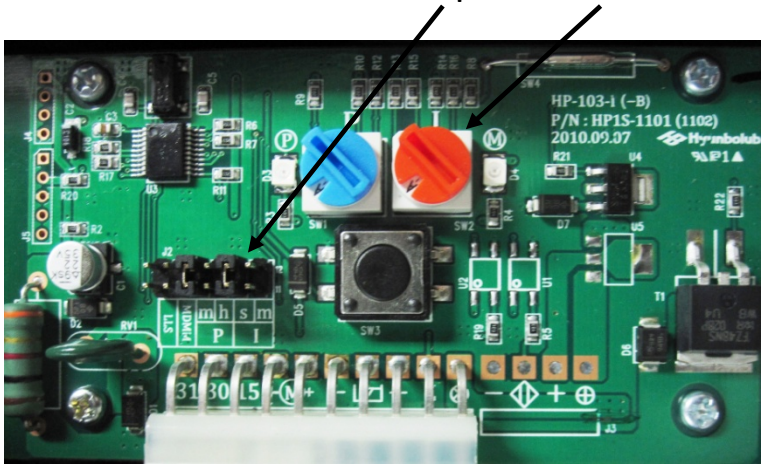
Lubecore International has made a running change in all 27 pt. Spyder Pumps going forward.

At present, it only affects 10.150 - 12V units. The 10.151 - 24V units will have this timer as well in the next order.

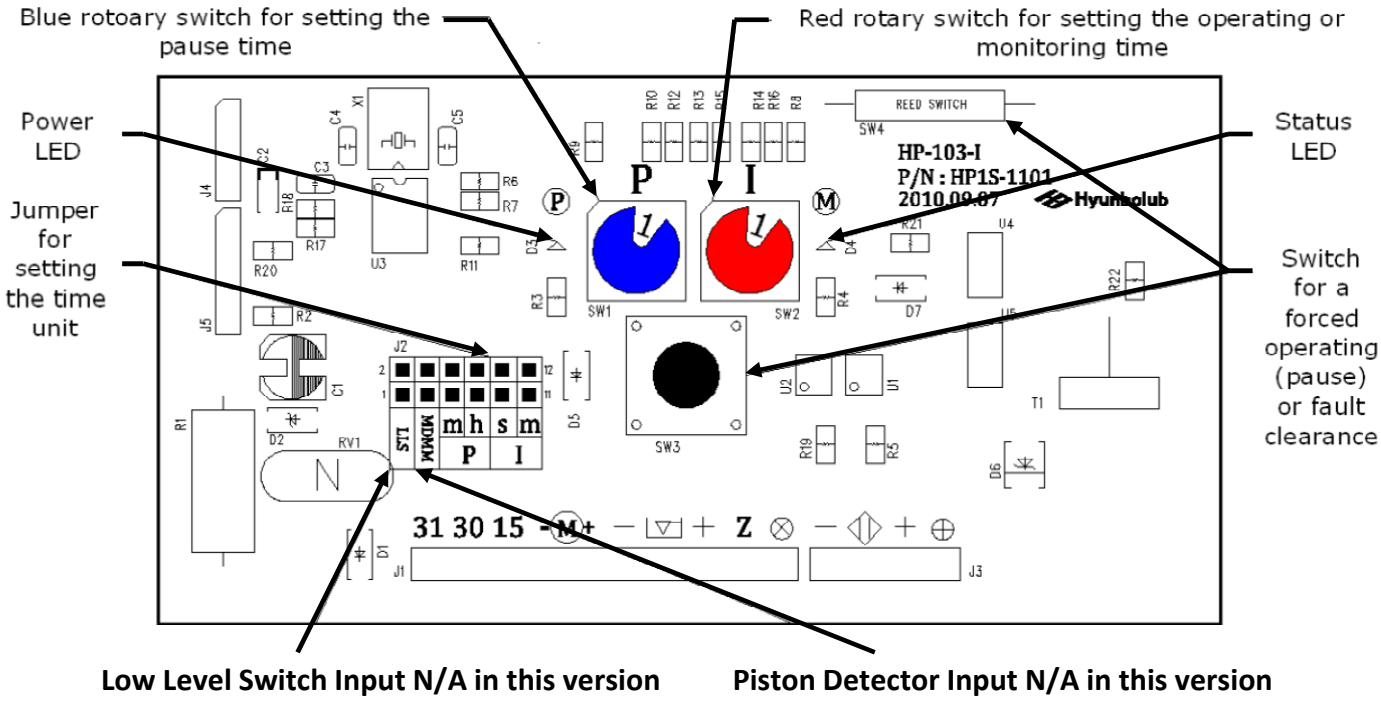
Original Timer with Dip-switches



New Timer with Jumpers & Dials



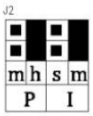
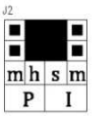
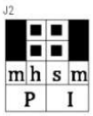
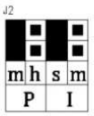
New Timer Board HP-103-I-B



New Timer Board Features

- A major difference is that this timer has EEPROM – electronically erase-able programmable read only memory. This means, when power is taken away from the board, the elapsed time of the current pump or pause phase is written to the memory. Upon introduction of power the board will start at that point, after a 6 second delay.
- The DIN connector harness still has 3 wires, but only the black (+) and brown (-) are connected to the board.
- The board has a “Power LED” to indicate power, and a “Status LED” to indicate when it is in a pump cycle.
- The board is now 10-30vdc.

There are now jumpers which are used to choose “Unit Time Settings” or Pause & Pump Time Ranges

Jumper Position				
Time Unit of pause time	Hour	Hour	Minute	Minute
Time Unit of operating time	Minute	Second	Minute	Second

Pause Time

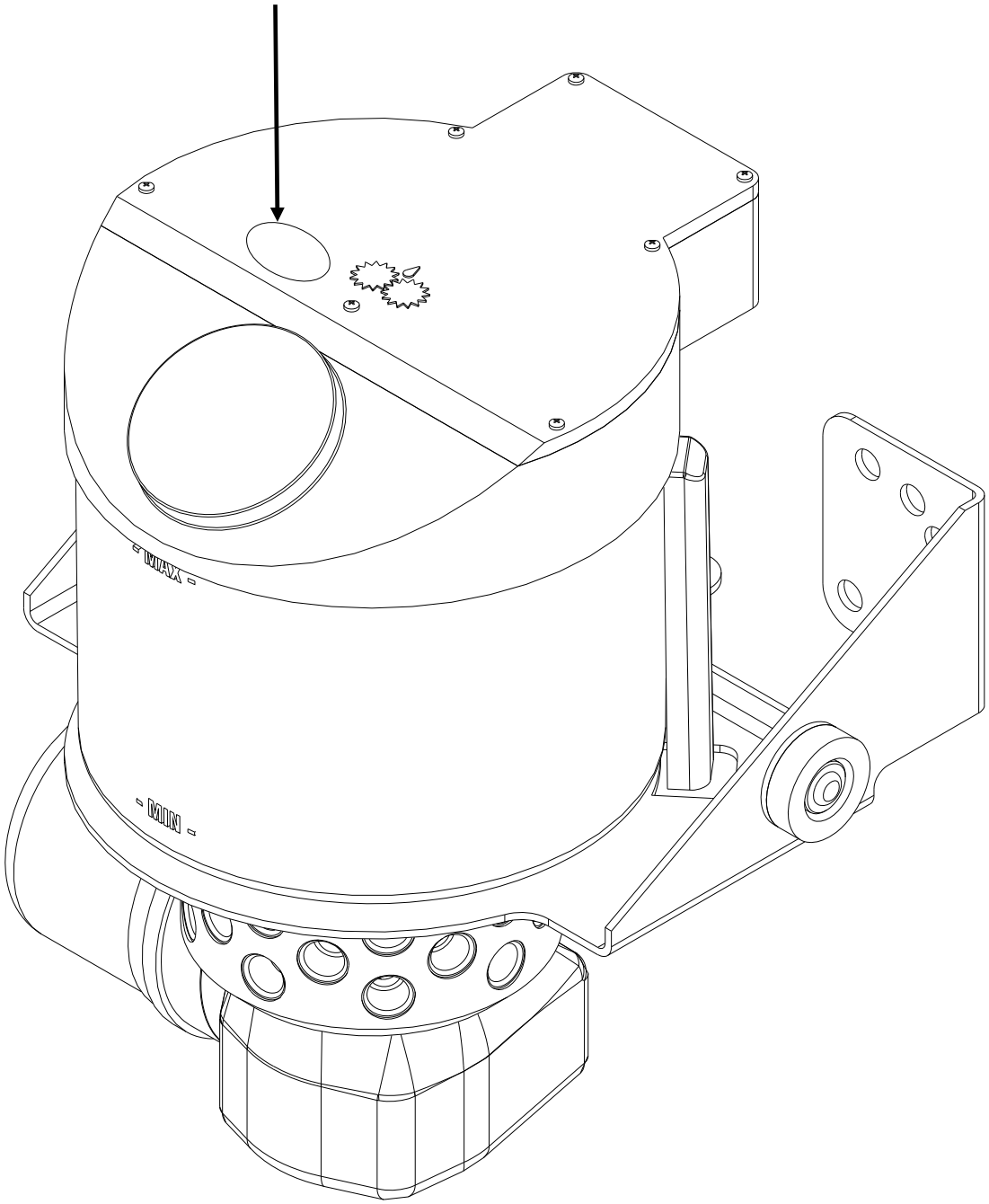
Position	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
Minute	Fault “D”	4	8	12	16	20	24	28	32	36	40	44	48	52	56	60
Hour		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

Operating Time

Position	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
Second	Fault “D”	8	16	24	32	40	48	56	64	72	80	88	96	104	112	120
Minute		2	4	6	8	10	12	14	16	18	20	22	24	26	28	30

- Note: When setting pump and pause times, turn both dials to ‘0’ till LED flashes, then set at chosen settings. Doing this resets the memory.
- There is now a button, right in the center of the board, with which a single cycle can be initiated. The magnetically operated reed switch is moved over to the right about an inch. The magnet has to be placed over it for 2-3 seconds before a single cycle will start. See next page.

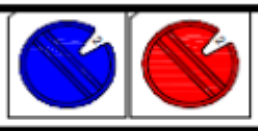
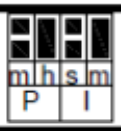
Place magnet here for 2-3 seconds to initiate or interrupt a pump cycle.



- The following pages show all available time settings available, as well as how much grease is delivered per pump time and element size. There are considerably more choices with this timer.

Sample Setting

4 minute pump time & 2 hour pause time

Dial Positions	Jumper Position			
				
P - Pause/Interval Time	Hour	Hour	Minute	Minute
I - Operating/Pump Time	Minute	Second	Minute	Second

Settings			
Mode	Dial	Time	Value
P - Pause/Interval Time	4	h	5
I - Operating/Pump Time	2	s	16

Dial	Operating/Pump Time		Dial	Pause/Interval	
Setting	Seconds	Minutes	Setting	Minutes	Hours
0			0		
1	8	2	1	4	1
2	16	4	2	8	2
3	24	6	3	12	3
4	32	8	4	16	4
5	40	10	5	20	5
6	48	12	6	24	6
7	56	14	7	28	7
8	64	16	8	32	8
9	72	18	9	36	9
A	80	20	A	40	10
B	88	22	B	44	11
C	96	24	C	48	12
D	104	26	D	52	13
E	112	28	E	56	14
F	120	30	F	60	15

Note: In the lower chart on the next page there are pump times in minutes . This timer can be used in different style pumps/applications where longer pump times are required. If the Spyder System has only 1 or 2 points to be connected that need pump times of longer than 2 minutes, we now have that capability.

MLP-127 V2 Pump Element Delivery Calculations by Pump Times

RPM	23	Pump Element Part Number & Delivery Per Stroke						
		11.401	11.402	11.404	11.406	11.408	11.410	11.412
	Pump Time	0.01	0.02	0.04	0.06	0.08	0.10	0.12
Setting	Seconds	Output In Pump Working Time						
1	8	0.03	0.06	0.12	0.18	0.25	0.31	0.37
2	16	0.06	0.12	0.25	0.37	0.49	0.61	0.74
3	24	0.09	0.18	0.37	0.55	0.74	0.92	1.10
4	32	0.12	0.25	0.49	0.74	0.98	1.23	1.47
5	40	0.15	0.31	0.61	0.92	1.23	1.53	1.84
6	48	0.18	0.37	0.74	1.10	1.47	1.84	2.21
7	56	0.21	0.43	0.86	1.29	1.72	2.15	2.58
8	64	0.25	0.49	0.98	1.47	1.96	2.45	2.94
9	72	0.28	0.55	1.10	1.66	2.21	2.76	3.31
A	80	0.31	0.61	1.23	1.84	2.45	3.07	3.68
B	88	0.34	0.67	1.35	2.02	2.70	3.37	4.05
C	96	0.37	0.74	1.47	2.21	2.94	3.68	4.42
D	104	0.40	0.80	1.59	2.39	3.19	3.99	4.78
E	112	0.43	0.86	1.72	2.58	3.43	4.29	5.15
F	120	0.46	0.92	1.84	2.76	3.68	4.60	5.52

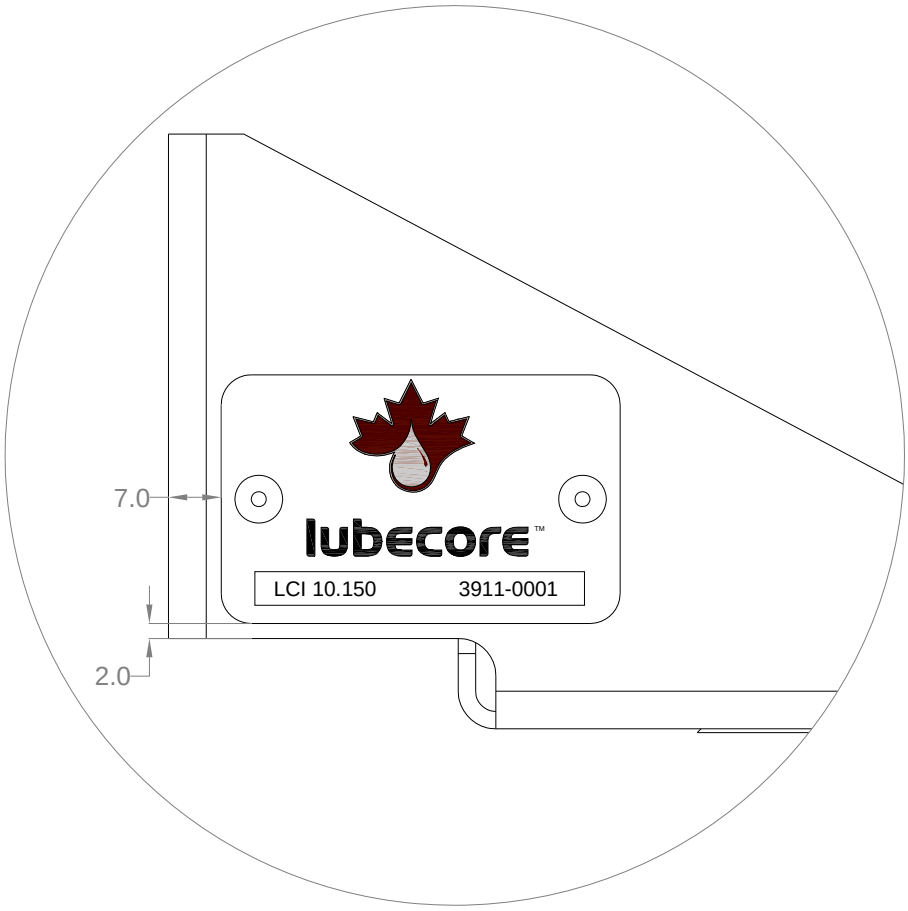
RPM	23	Pump Element Part Number & Delivery Per Stroke						
		11.401	11.402	11.404	11.406	11.408	11.410	11.412
	Pump Time	0.01	0.02	0.04	0.06	0.08	0.10	0.12
Setting	Minutes	Output In Pump Working Time						
1	2	0.46	0.92	1.84	2.76	3.68	4.60	5.52
2	4	0.92	1.84	3.68	5.52	7.36	9.20	11.04
3	6	1.38	2.76	5.52	8.28	11.04	13.80	16.56
4	8	1.84	3.68	7.36	11.04	14.72	18.40	22.08
5	10	2.30	4.60	9.20	13.80	18.40	23.00	27.60
6	12	2.76	5.52	11.04	16.56	22.08	27.60	33.12
7	14	3.22	6.44	12.88	19.32	25.76	32.20	38.64
8	16	3.68	7.36	14.72	22.08	29.44	36.80	44.16
9	18	4.14	8.28	16.56	24.84	33.12	41.40	49.68
A	20	4.60	9.20	18.40	27.60	36.80	46.00	55.20
B	22	5.06	10.12	20.24	30.36	40.48	50.60	60.72
C	24	5.52	11.04	22.08	33.12	44.16	55.20	66.24
D	26	5.98	11.96	23.92	35.88	47.84	59.80	71.76
E	28	6.44	12.88	25.76	38.64	51.52	64.40	77.28
F	30	6.90	13.80	27.60	41.40	55.20	69.00	82.80

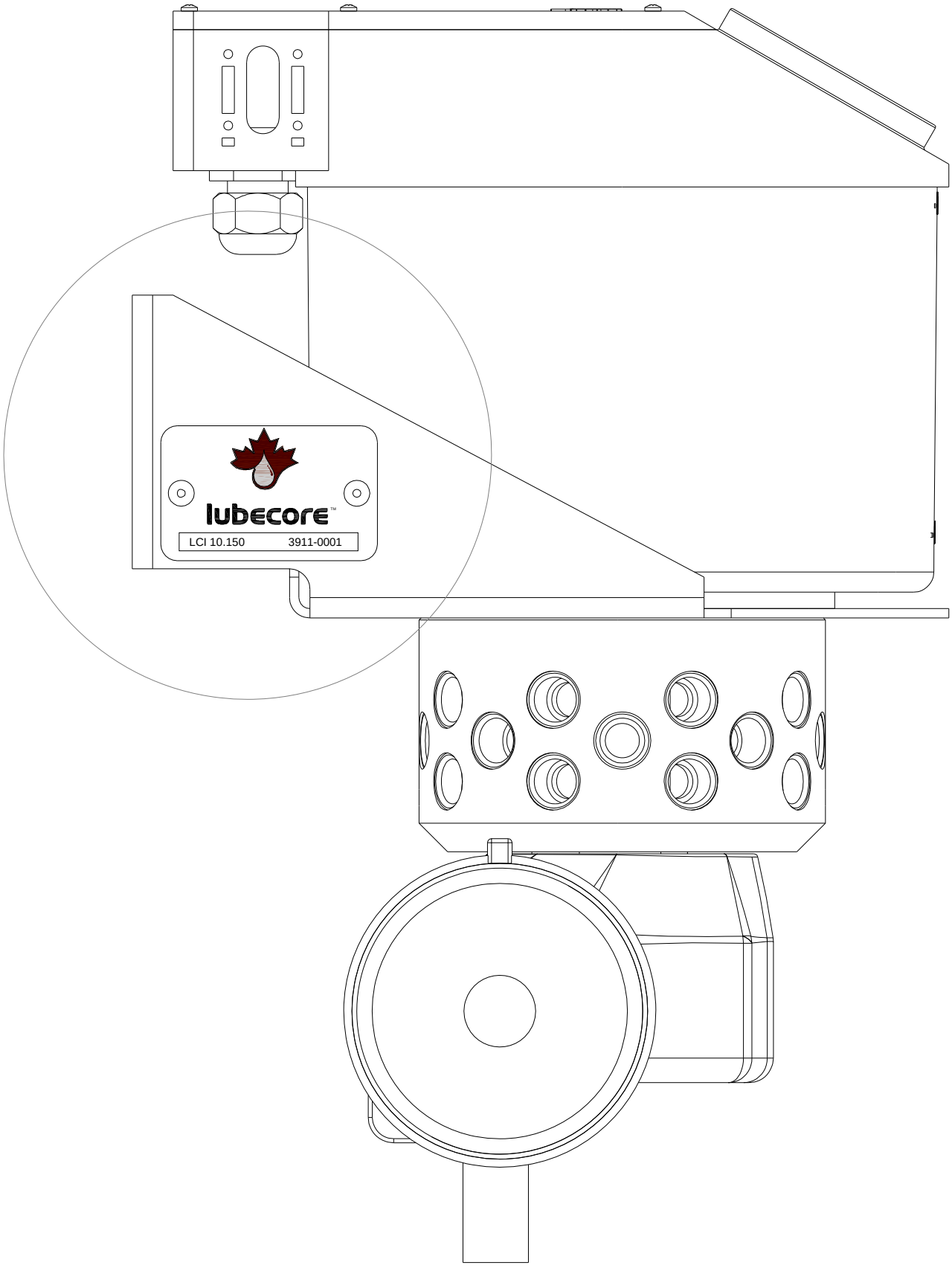
Identification of Original vs. New Pumps

Starting immediately, LCI will be putting an aluminum tag on the left side of the bracket. Any pumps brought in from now on will have a tag or sticker, for identification, installation, troubleshooting and warranty purposes. This tag will show LCI Part # (indicating voltage) and the week and year of production and the number.

10.150 – 12V

10.151 – 24v




lubecore
LCI 10.150
3911-0001