



Lubecore Technical Announcement

Next Generation Pressure and Low Level Switches for Pneumatic Pumps & Associated Harnesses - Overview

Lubecore International introduces the next generation of pressure switch and low level switch for the Lubecore 210 Pneumatic Parallel System pump. These switches ease in-field installation and service while providing the excellent performance characteristics that Deutsch DT connectors are known for. Deutsch DT connectors have long been the connector of choice at Lubecore, and are also the OEM specified connector for a host of OEMs including Caterpillar and Hitachi.

Prior to introducing these two switches, Lubecore conducted extensive performance testing which highlighted the robust quality of these switches. We are excited to introduce these next generation switches as we fully expect them to be an improvement to the installation and service experience. *(Figure 1.)*

Field replacement of existing low level or pressure switches will require the harness connection end to be updated to Deutsch DT plug. To facilitate this, Lubecore is offering field replacement kits that include the switch and required connection components.

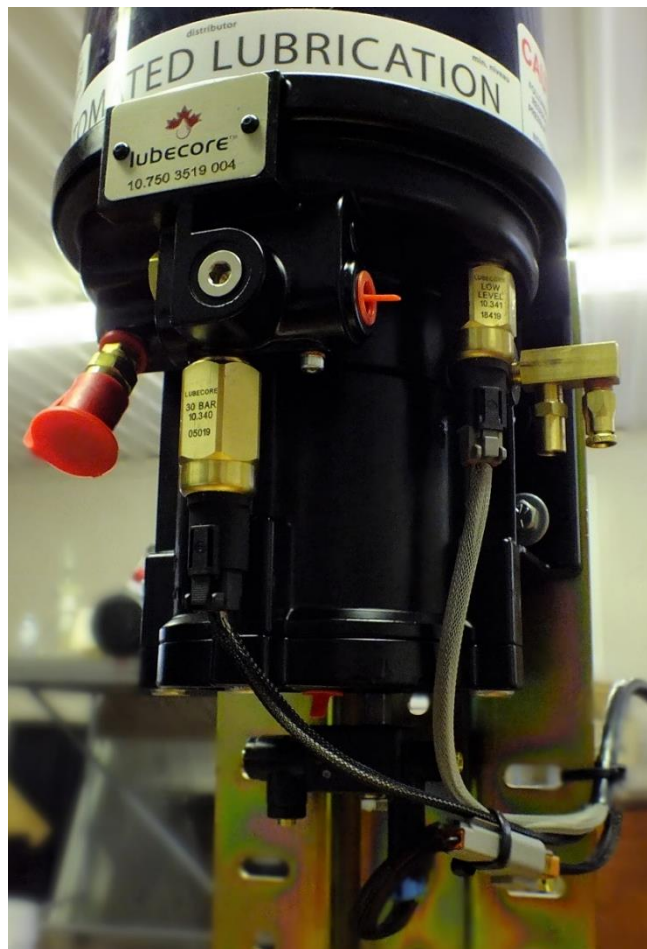


Figure 1

New switch part numbers and what they substitute are listed below:

New Part #	Description	Substitutes Part #
10.340	Pressure Switch for Pump - 30 BAR - DT	10.204
10.583	Field Replacement Pressure Switch Pneu. Pump DT 2019	NEW
10.579	Low Level Switch for 4kg Pneu. DT 2019	50.071
10.580	Low Level Switch for 6kg Pneu. DT 2019	50.072
10.581	Field Replacement Low Level Switch, 4kg Pneu. DT 2019	NEW
10.582	Field Replacement Low Level Switch, 6kg Pneu. DT 2019	NEW

Since these switches feature a different connector, the harnesses Lubecore builds for the parallel systems are also changing.

The new harness features fewer intermediate connections near the pump. The harness will now directly terminate at the mating connectors for the pressure and low level switches. The LED function for the solenoid/motor connection remains. To make it easier to install, grey colour sheathing and connector body are used for connection to the low level switch, while black sheathing and connector body are featured for the pressure switch.

Included in the update to the harnesses is the revision of the conductor colour positions within the timer connection plug. The affected colours are as follows:

Colour	Previous Position in Timer Connector / Function	New Position in Timer Connector / Function
Red	Pin #9 / Solenoid or Motor (-)	Pin #4 / Solenoid or Motor (+)
Black	Pin #2 / Pressure Switch	Pin #9 / Solenoid or Motor (-)
Green	Pin #4 / Solenoid or Motor (+)	Pin #2 / Pressure Switch

All other colours remain in connection configuration as they were in previous harnesses. The change to have solenoid/motor have red wire as positive, and black wire as negative brings conventional colour designation to the Lubecore harness, and should help to avoid reverse polarity. In order to indicate that the colour configurations for the timer plug have been updated, the sheathing for the in-cab portion of the harness is now red instead of black. (Figure 2.)



Figure 2



Figure 3

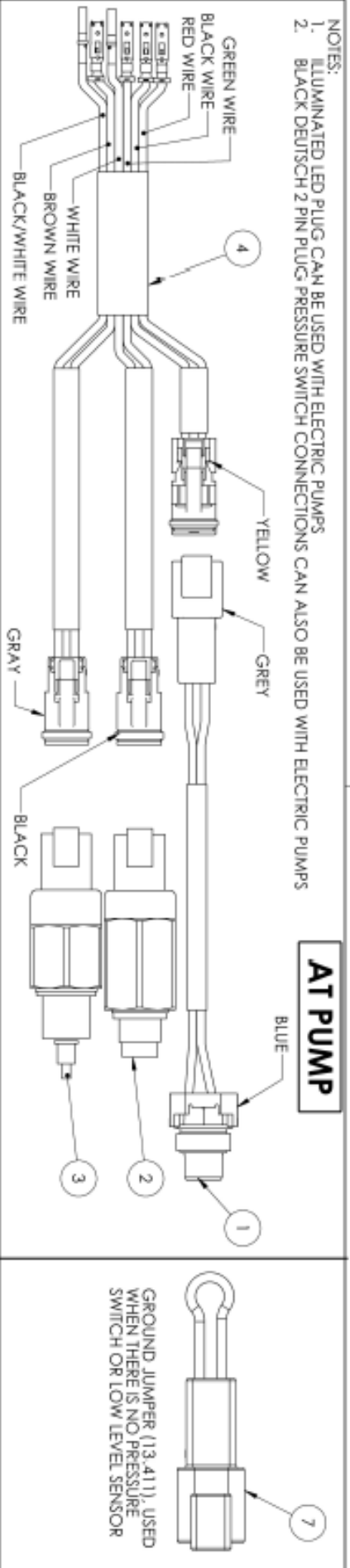
In the case that a pump is fit without either a low level switch or pressure switch, the circuit in absence of connection needs to be closed with a ground loop (Figure 3). This sealed loop is simple to connect near the pump at installation, and allows the pump to be updated with switches in the future.

New Harness part numbers and what they substitute are listed below:

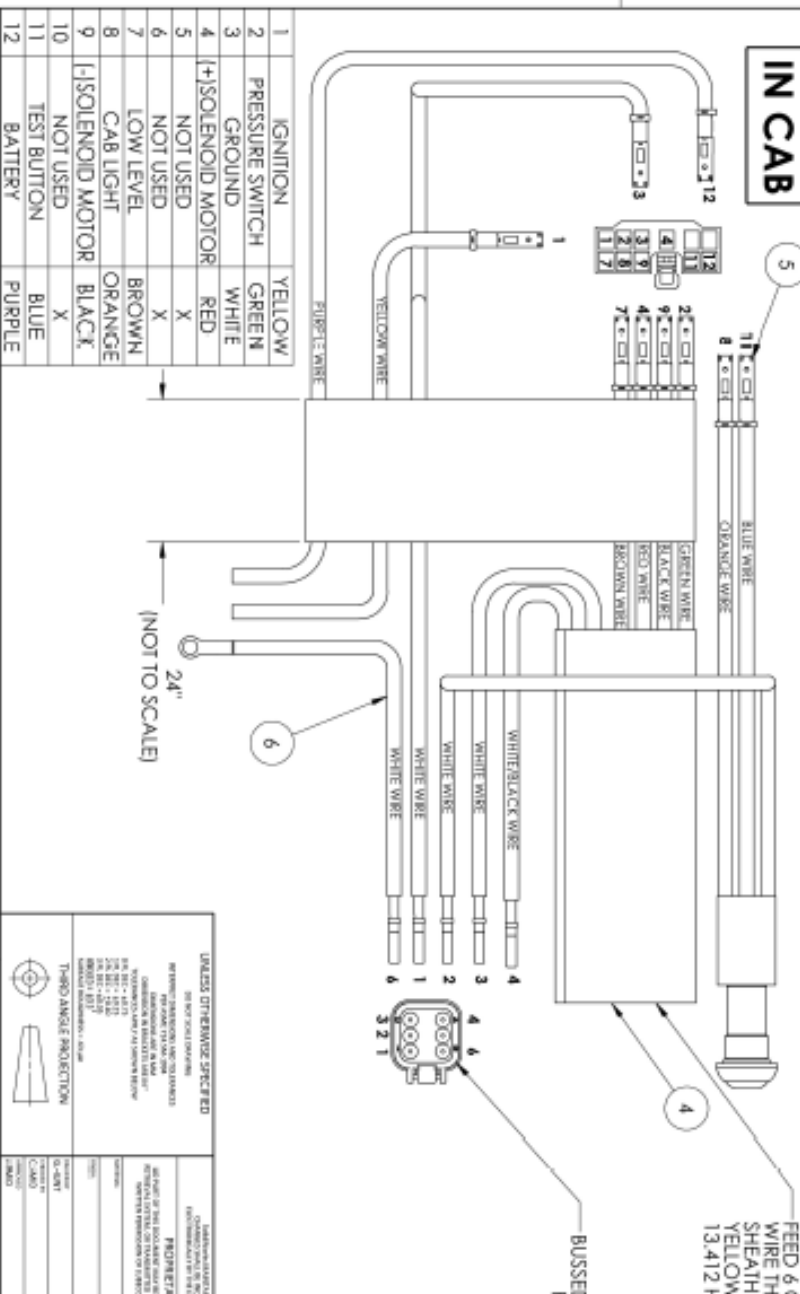
New Part #	Description	Substitutes Part #
13.413	Power Harness Kit 25' MK 2 Timer Pneu. Pump - 2019	54.900
13.412	Mark II Timer Harness – 2019	13.047
13.405	25' Power Harness – 2019	13.290
75.014	Installation Instruction Guide	75.012
13.389	Solenoid Harness	13.292
13.411	Ground Jumper (Used when there is no switch to connect to)	54.046

The images on the following 2 pages are the instruction sheet that will be included in the 13.413 harness kit. One is in colour and one in line format, as it may be more compatible for your printer.

- NOTES:
- ILLUMINATED LED PLUG CAN BE USED WITH ELECTRIC PUMPS
 - BLACK DEUTSCH 2 PIN PLUG PRESSURE SWITCH CONNECTIONS CAN ALSO BE USED WITH ELECTRIC PUMPS



IN CAB



FEED 6 CORE (PART NO. 13.405) WIRE THROUGH SUPPLIED RED SHEATHING ALONG SIDE THE WHITE, YELLOW AND PURPLE WIRES OF THE 13.412 HARNESS.

BUSED CONNECTOR FOR COMMON GROUND

CONNECT 6 WAY BUSS (PART NO. 13.211)

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	13.889	SOLENOID HARNESS/FOR FRONT MOUNTED TIMER	1
2	10.340	PRESSURE SENSOR	1
3	10.341	LOW LEVEL SENSOR	1
4	13.405	25' POWER HARNESS	1
5	50.587	IN CAB MANUAL TEST SWITCH	1
6	13.412	MKIII TIMER HARNESS-2019	1
7	13.411	GROUND JUMPER	1

UNLESS OTHERWISE SPECIFIED

ALL DIMENSIONS ARE IN INCHES
 UNLESS OTHERWISE SPECIFIED
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INGREDIENTS

AS PART OF THE QUALITY CONTROL PROCESS, Iubecore
 PERFORMS RANDOM TESTING OF THE HARNESS TO
 VERIFY THE QUALITY OF THE HARNESS. Iubecore
 WILL NOT BE RESPONSIBLE FOR DEFECTIVE HARNESSES
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 OR DEFECTIVE WIRING.

TERMINAL PROJECTION

TERMINAL PROJECTION

Iubecore

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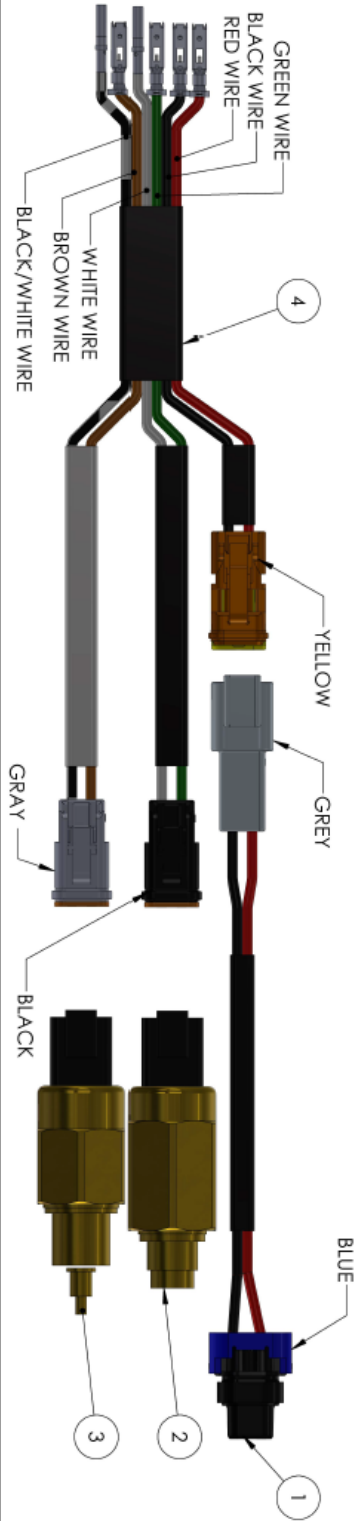
25' POWER HARNESS, MKIIII TIMER

75.014

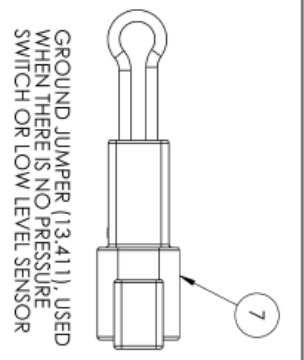
REV. 1.4

SHEET 1 OF 1

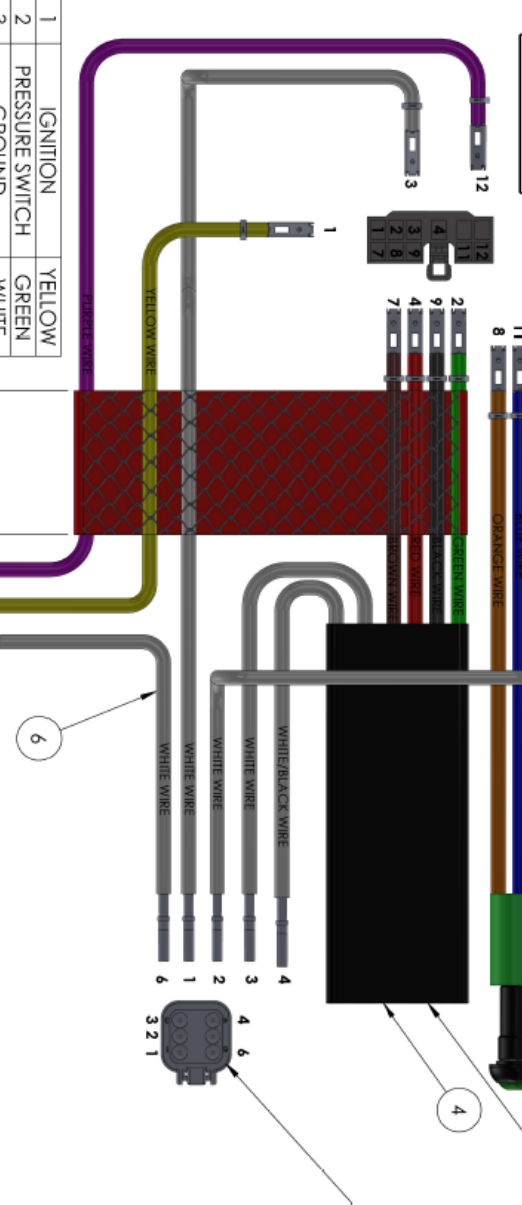
- NOTES:
- ILLUMINATED LED PLUG CAN BE USED WITH ELECTRIC PUMPS
 - BLACK DEUTSCH 2 PIN PLUG PRESSURE SWITCH CONNECTIONS CAN ALSO BE USED WITH ELECTRIC PUMPS



AT PUMP



IN CAB



1	IGNITION	YELLOW
2	PRESSURE SWITCH	GREEN
3	GROUND	WHITE
4	(+)SOLENOID MOTOR	RED
5	NOT USED	X
6	NOT USED	X
7	LOW LEVEL	BROWN
8	CAB LIGHT	ORANGE
9	(-)SOLENOID MOTOR	BLACK
10	NOT USED	X
11	TEST BUTTON	BLUE
12	BATTERY	PURPLE

FEED 6 CORE (PART NO. 13.405) WIRE THROUGH SUPPLIED RED SHEATHING ALONG SIDE THE WHITE YELLOW AND PURPLE WIRES OF THE 13.412 HARNESS.

BUSSED CONNECTOR FOR COMMON GROUND
CONNECT 6 WAY BUSS (PART NO. 13.211)

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	13.389	SOLENOID HARNESS/FOR FRONT MOUNTED TIMER	1
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3	10.341	LOW LEVEL SENSOR	1
4	13.405	25' POWER HARNESS	1
5	50.587	IN CAB MANUAL TEST SWITCH	1
6	13.412	MKII TIMER HARNESS-2019	1
7	13.411	GROUND JUMPER	1

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DRAWN: 8/28/19
CHECKED: 8/28/19
APPROVED: 8/28/19

PROPRIETARY

PLEASE CONTACT LUBECORE INTERNATIONAL INC. FOR ANY INFORMATION REGARDING THIS PRODUCT.

ITEM NO. 13.580

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Canada L0P 1B0
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25' POWER HARNESS, MKII TIMER

ITEM NO. **B**

NET WEIGHT: **75.014** lbs

SCALE: 1:4

SHEET 1 OF 1

For further clarity on the update to the wire position in the timer connector, please see the two charts below:

Truck Timer Terminal & Wiring Identification Before September 2019

Table 1 – Terminal and Wire Identification Table September 2019 and Earlier

Timer Pin	Function	Mark I Timer Plug (Used from 2008 - 2010)
#1	Ignition	
#2	Pressure Switch	
#3	Ground	
#4	Solenoid/Motor +	
#5	N/A	
#6	N/A	
#7	Low Level	Mark II Timer Plug (Used from 2010 to September 2019)
#8	Cab Light	
#9	Solenoid/Motor -	
#10	N/A	
#11	Test Button	
#12	Battery Live	

Truck Timer Terminal & Wiring Identification After September 2019

Table 2 Terminal and Wire Identification Table September 2019 and Later

Timer Pin	Function	Mark II Timer Plug (Used from September 2019 - Present)
#1	Ignition	
#2	Pressure Switch	
#3	Ground	
#4	Solenoid/Motor +	
#5	N/A	
#6	N/A	
#7	Low Level	
#8	Cab Light	
#9	Solenoid/Motor -	
#10	N/A	
#11	Test Button	
#12	Battery Live	

Pump kits that feature pressure switch and/or low level switch will also now feature new part numbers.

To highlight the changes, only the pumps that are affected by the new switches are listed below. If there are pumps that are not included in the list, it is because they do not contain either the pressure switch or low level switch.

New Pump part numbers and what they substitute are listed below:

New Part #	Description	Substitutes Part #
52.050	Pump/210 Pneu./EP0 Grease/4kg/PS	50.050
52.053	Pump/210 Pneu./EP0 Grease/4kg/PS/LL	50.053
52.054	Pump/210 Pneu./NO Grease/4kg/PS/LL	50.054
52.060	Pump/210 Pneu./EP0 Grease/6kg/PS	50.060
52.061	Pump/210 Pneu./NO Grease/6kg/PS	50.061
52.063	Pump/210 Pneu./EP0 Grease/6kg/PS/LL	50.063
52.064	Pump/210 Pneu./NO Grease/6kg/PS/LL	50.064

There are also high pressure ratio pneumatic pumps (30:1) that are affected by these next generation switches. The list of affected pumps is shown below:

New Part #	Description	Substitutes Part #
52.426	Pump/HP Pneu./EP2 Grease/4kg/LL	50.426
54.428	Pump/HP Pneu./EP2 Grease/4kg/PS/LL	50.428
54.432	Pump/HP Pneu./NO Grease/4kg/PS/LL	50.432
52.434	Pump/HP Pneu./EP2 Grease/6kg/LL	50.434
52.436	Pump/HP Pneu./EP2 Grease/6kg/PS/LL	50.436

Thank you for taking the time to read this memo. If you have any questions, please feel free to contact us and speak to our customer service representatives.



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