DIGILUBE PROGRAMMABLE LUBRICATION SYSTEM

INSTALLATION/OPERATIONAL MANUAL

1.0 INTRODUCTION The Digilube Programmable Lubrication System is ideal for lubricating a wide variety of conveyors and machines. The DL-5001 Head Controller (HC) which controls the lubricator is the most technologically advanced, yet easy to use microprocessor in the industry. A large four line LCD screen and 16 button key pad provide on-screen instructions for programming the unit and adjusting the lubricator for your particular conveyor. This manual provides complete information needed to install, program, service and order replacement components for your system.

2.0 DESCRIPTION

2.1 The DL series of Digilube's programmable lubricators provide pinpoint accuracy of lubricant to many different types of conveyors' lube points. Typical areas of lubrication include chain pins, open trolley bearings, free carriers, swivels, cat drive chains, roller chain, etc.

2.2 Each system consists of a lubricator with a DL-5001HC and a lubricant tank. The DL-5001HC is the brains of the system.. This programmable Head Controller has four (4) independent channels, 115 VAC or 24 VDC outputs, four digit PIN security code, easy-to-read LCD screen, 16-button key pad...and much more.

2.3 The lubricator can be connected to several different size lubricant tanks. The DL-806 Lubricant Tank - 6 gallon is mounted directly on the conveyor track in back of the lubricator, or positioned waist high on a column for easy filling.

2.4 The DL-865 Lubricant Tank - 65 gallon comes with or without a DL-9000 Power Supply (PS). This tank is designed to provide lubricant from a single source to multiple lubricators within a 700-foot radius. The DL-9000PS comes in either 115VAC or 24VDC output.

3.0 SPECIFICATIONS

3.1 LUBRICATOR WITH DL-5001HC

Dimensions/Weight	• Lubricator will vary depending on type of conveyor and/or if premounted.
DL-5001HC (Head Controller)	• 15 lbs - 8" x 10"
Circuitry	• Solid state electronics, microprocessor controlled
Power Requirements	• 115 VAC 3 Amps or 24 VDC 3 Amps
Operating Temperatures	• 45° F minimum, 140° F maximum
Authorization Security Code	• Four (4) digit, preset at factory at 0000
Memory	• EPROM
Lube Time (Volume Control)	• Adjustable in milliseconds (.001 - 9.999)
Paint/Color	• Powder/Gray with Burgundy Logo

3.2 LUBRICANT TANKS WITH DL-9000PS

Capacity/Dimensions	• DL-806 - 6 gal w/o DL-9000 PS, 18 ½"H x 12 ½"W x 15"L • DL-865 - 65 gal, 49"H x 22 ½W x 22 ½"L
Weight	• DL-806 - 60 lbs • DL-865 - 210 lbs
DL-9000PS/115 (Power Supply)	• 15 lbs - 8" x 10" 115 VAC output
DL-9000PS/24 (Power Supply)	• 17 lbs - 8" x 10" 24 VDC output (Optional)
Circuitry	• Electromechanical timer, control relay and hard wire circuitry
Power Requirements	• 115 VAC, 10 AMPS
Motor/Pump	• 115 VAC, 1/3 Hp, 6 Amps, Gear
Pressure Gage/Filter	• 160 psi, liquid filled, in-line
Lubricant Level	• Electronic sensor with red indicator - 65 gal • Clear PVC sight gage - 6 gal
Paint/Color	• Powder/Burgundy with gray logo
Lubricant Viscosity	• Approx. range: 30 - 500 SSU at 100 F

4.0 SEQUENCE OF OPERATIONS

4.1 DL-806 LUBRICANT TANK - 6 GALLON. In the "OFF COUNT" mode, the channels' valve(s) will not operate, although the detection sensor will still operate. An LED indicator on the sensor will signify the sensor is operating properly. The supply tubing (nylon, steel, copper, etc) connecting the tank to the solenoid valves will have 30 - 35 psi of lubricant pressure. A check valve at the tank will maintain this psi in the "OFF COUNT" mode.

4.2 When a lubrication cycle is about to begin (actually 8 sensor activation's prior to operation), the pump/motor will start and maintain lubricant pressure to the valve(s) throughout the lubrication cycle. Each time a sensor is activated, the valve will dispense lubricant onto the desired point(s). After completion of the lubrication cycle, the valve(s) will deactivate to normally closed. The pump/motor will continue to run for FIVE MINUTES and shut off. **Note: This also applies to a DL-865 lubricant Tank - 65 gallon without a Power Supply.**

4.3 During a lubrication cycle, if the conveyor stops, the pump/motor will run for FIVE MINUTES and then shut off. Once the conveyor restarts and the channels sensor activates the pump/motor will restart.

4.4 If the lubricant tank becomes empty, the pump/motor will also shut off and the red indicator lamp will turn on at the DL-5001HC. Once the tank is refilled with lubricant, the lamp will turn off, the pump/motor will turn on and the DL-5001HC will resume lubricating where it left off in the "ON COUNT" mode. **Note: If intermittent power loss occurs, the DL-5001HC will retain its memory count in the program.**

4.5 WHEN USING A DL-865 LUBRICANT TANK - 65 GALLON WITH DL-9000PS/115VAC POWER SUPPLY (PS). The DL-9000PS is designed to be trouble free and easy to install. Once the electrical hook ups and Low Pressure level Switch and High Pressure Level Regulator settings are adjusted, the DL-9000PS functions automatically.

4.6 The DL-9000PS supports two peripherals. A Low Pressure Level Switch (LPLS) and a High Pressure Level Regulator (HPLR). The LPLS turns on the pump/motor when the lubricant pressure in the supply tubing drops to its **Lowest PSI** setting. The HPLR maintains the lubricant pressure in the supply tubing to its **Highest PSI** setting.

4.7 When using dry film lubricants, the HPLR is factory-set between 30 - 35 PSI, depending on the length and elevation of supply tubing from the tank to the lubricator(s) and the number of solenoid valve(s) in the system. The LPLS is set 8-10 PSI lower than the HPLR.

4.8 When all channels in the system are in the "OFF COUNT" (NON-LUBRICATION) mode the pump/motor is off. The lubricant pressure in the supply tubing is maintained at the HPLR setting of 30 - 35 PSI by a check valve at the lubricant tank. The solenoid valve(s) will not be operating although the LED sensor(s) will be counting each detection.

4.9 When a channel's "OFF COUNT" reaches 0000, it goes into a lubrication cycle. As the valve(s) open and close, the lubricant pressure in the supply tubing begins to drop. Once it reaches the LPLS setting the pump/motor turns on. The pump/motor will continue to run until the HPLR setting has been maintained for 25 minutes. Once this occurs, the pump/motor will turn off, indicating that the solenoid valve(s) have been closed for that period of time.

4.10 One of two conditions exist. Either the channel(s) on the DL-5001HC have completed their lubricant cycle(s), or the conveyor has stopped. When the conveyor restarts and activates a sensor, the pump/motor will turn on automatically.

4.11 The pump/motor will also turn off it the lubricant tank runs out of lubricant and a red indicator lamp on the DL-9000PS turns on. Filling the tank will automatically restart the pump/motor and turn off the red lamp..

5.0 INDICATOR LAMPS

5.1 GREEN/CLEAR LAMPS
Indicates power to the DL-5001HC or DL-9000PS. This lamp will be on at all times, except during power loss..

5.2 YELLOW LAMPS
Indicates the pump/motor is running and a request for lubricant from a lubricator has occurred.

5.3 RED LAMP
Indicates the lubricant tank is out of lubricant. The red lamp also indicates the pump/motor have automatically shut down to prevent air from getting into the supply tubing. The red lamp will automatically turn off and the pump/motor will restart when the lubricant tank is refilled. **NOTE: The red lamp on the DL-5001HC does not operate when used with a DL-9000PS. The red lamp on the DL-9000PS will operate along with the green/clear and yellow lamps. Optional rotating tower indicators are also available.**

6.0 INSTALLATION

6.1 SITE SELECTION
The best location for a lubricator on a conveyor with a washer/oven is on a straight level section of rail between the load and unload area as usually there are no parts in this location. However many times the load & unload area is the same place and where people are working. The next best location would be after the raw parts are loaded before the washer. If lubricant does drip on a part it is washed off prior to painting.. It is very important that the conveyor chain be properly protected in the washer.

6.2 Mount at a point on the conveyor that ensures chain stability and that the chain is under tension.

6.3 Vibration should be minimal and bearings should be rolling as they pass the lubricator.

6.4 Avoid unstable or hazardous environments like high temperatures, water or chemical exposure.

6.5 We recommend that the tank be located on a structural column (6 gallon) waist high for ease of filling, out of high traffic fork truck areas. When using a 65 gallon tank with multiple lubricators, centralized the tank within the circumference of the lubricators.

7.0 MOUNTING THE LUBRICATOR

7.1 An enclosed track lubricator comes mounted on a track rack and a monorail I-Beam lubricator comes premounted on a track section for ease of installation. The lubricator can also be installed on the customers' existing conveyor and is usually done by a contractor or a Digilube Systems Service Representative.

7.2 Once the location has been determined, cut and weld the premounted track section in place or modify the existing conveyor track section. See illustration at **19.0** for Enclosed Track and **19.1** for I-Beam Rail.

7.3 Power Connections information, see 10.0., diagrams & illustrations at **18.1 -18.9**.

8.0 MOUNTING LUBRICANT TANKS

8.1 DL - 806 LUBRICANT TANK - 6 - GALLON

The DL-806 can be installed on conveyor rail right behind the lubricator or at a remote location for ease of filling.

8.2 If the tank is mounted with the lubricator, weld premounted track section in place and connect to 115VAC, 10 AMP continuous power source. See electrical diagram **18.2**.

8.3 For remote installation, locate tank as mentioned in **6.5.** When installing the nylon supply tubing , tape ends to prevent contamination during installation. Push the supply tubing firmly and as far as possible into the quick-connect fitting located next to the motor on the tank. Make sure the proper connection is made by pulling back on the tubing. This will lock-in the tubing. The supply tubing is fastened to the electrical conduit connecting the tank to the lubricator with wire ties. The tubing can also be connected to overhead building structural members with wire ties or beam clamps. Sharp bends in the supply tubing will slow or stop lubricant flow and must be avoided. To remove the tubing, push in on the fitting collar while pulling out on the tubing. The self-

locking fitting is reusable. The nylon tubing is usually 1/4" O.D. However, steel or copper tubing should be used for high-temperature service, which will require different fittings..See electrical diagram **18.2**.

8.4 If there is power to the DL-5001HC the red lamp will be on. Once the tank is filled with lubricant the red lamp will turn off.

9.0 DL-865/115VAC LUBRICANT TANK - 65 GALLON

91 Locate the tank in a protected area to avoid damage.

9.2 When installing nylon supply tubing, tape ends to prevent contamination during installation. Push the supply tubing firmly and as far as possible into the quick-connect fitting located next to the motor on the tank. Make sure the proper connection is made by pulling back on the tubing. This will lock-in the tubing. The supply tubing is fastened to the electrical conduit connecting the tank to the lubricator with plastic ties. The tubing can also be connected to overhead building structure members with ties and beam clamps. Sharp bends in the supply tubing will slow or stop lubricant flow and must be avoided. To remove the tubing, push in on the fitting collar while pulling out on the tubing. The self-locking fitting is reusable. The nylon tubing is usually 1/4" O.D. However, steel or copper tubing should be used for high-temperature service, which will require different fittings.

9.3 The DL-9000/115VAC Power Supply on the 65 gallon tank must be connected to the incoming 115VAC, 10 AMP power source. See diagram & illustrations **18.6 - 18.7**.

9.4 Duplicate **8.4.**

9.5 The LPLS is set at the factory to match the HPLR setting.. Should the pressure loss drop to the LPLS setting, it will close and signal the DL-9000PS to start the pump/motor. The LPLS setting must be checked and possibly changed if the HPLR setting is changed.

9.6 To adjust the LPLS, turn the thumb wheel clockwise to increase pressure loss required to start the pump/motor. Turn the thumb wheel counterclockwise to decrease the pressure loss required to start the pump/motor. You may test the LPLS adjustments by leaving one lubricator in a lubrication mode and observe the pressure gauge at the lubricant tank. When the pump/motor is operating and the desired high pressure is reached, push the "System Reset" toggle inside the DL9000PS. If the adjustment is correct, the pump/motor will not start until the pressure drops to LPLS setting which will then start the pump/motor. If it does not turn the pump/motor off, turn the thumb wheel clockwise to increase the pressure loss required to start the pump/motor.

10.0 POWER CONNECTIONS

10.1 DL-806 LUBRICANT TANK - 6 GALLON MOUNTED W/ LUBRICATOR

Connect incoming power to hot, neutral, and ground to J19 on the DL-5001HC's terminal strip. See diagram **18.2**.

10.2 DL-806 - LUBRICANT TANK - 6 GAL FROM A REMOTE LOCATION

If the tank is installed at a remote location, install four 14 gauge wires (1 black, 1 white, 2 red) from the DL-5001HC to the motor and float. At the DL-5001HC's terminal strip,. the black and white wires connect to J13 and the two red wires connect to J7. At the Tank, connect the two red wires to the two yellow float switch wires. Connect the black and white wires to the motor leads for **low voltage - 115 VAC.** Connect incoming power to hot, neutral, and ground to J19 on the DL-5001HC's terminal strip. See diagram **18.2**.

10.3 DL-865 LUBRICANT TANK - 65 GALLON W/ DL-9000PS/115VAC OUTPUT

The DL-9000PS 115VAC output is standard**.** An optional **DL-9000PS/24VDC** is also available. Both Power Supplies require 115VAC input. Connect the DL-9000PS to the conveyor's drive motor or from a continuous power source. Please consult Digilube System to determine which method is best for your conveyor..

10.4 DL-5001HC INPUT REQUIREMENTS CONNECTED TO DL9000PS/115VAC

Electrical connection between the DL-5001HC and DL-9000PS/115VAC is as follows: Connect hot, neutral, and ground 14 gauge wire to J19 on DL-5001HC's terminal strip and to 1, 2, 3 on DL-9000PS/115VAC's terminal strip. See diagrams & illustrations at **18.6, 18.7**.

10.5 DL-5001HC INPUT REQUIREMENT CONNECTED TO DL-9000PS/24 VDC

Electrical connects between DL-5001HC and DL-9000PS/24VDC output is as follows: Connect two strand 18 gauge shielded wire to J18 on DL-5001HC's terminal strip and to 11 & 12 on DL-9000PS/24 VDC's terminal strip. See diagrams & illustrations at **18.8, 18.,9**.

10.6 OPTIONAL AIR ASSIST DL-5001HC

Requires a minimum of 35 PSI and a maximum of 60PSI of air.

11.0 DL-5001HC DEFINITIONS

The Digilube system is controlled by the DL-5001HC. This microprocessor-based circuitry has four (4) independent channels which provide the user with the ability to insert the desired lubrication settings and to change settings whenever required while in the field. The DL-5001HC will automatically read these settings and incorporate them into its' performance.

11.1 "LINK MODE" DEFINITION

There are two ways of programming the DL-5001HC, either by LINK or by TIME. The LINK mode is used with a detection sensor. The sensor reads objects which pass in front of it like trolley wheels, chain pin links, rollers, etc. In a lubrication cycle, the sensor, when activated, will open up a solenoid valve and dispense lubricant. In both lubrication and non-lubrication modes, the sensor will count

the number of objects which will then be processed by the DL-5001HC. Once programmed, the DL-5001HC will input these detections and lubricate accordingly.

11.2 "TIME MODE" DEFINITION

The TIME mode is used without any sensors. It functions on TIME only. The user determines when and how much lubricant will be dispensed at a given lube point. This mode is used on cat drive chains, high speed chains, stationary lube points like sprockets and on machines.

11.3 "OFF COUNT" DEFINITION

In the LINK mode, the "OFF COUNT" means the number of completed cycles of the conveyor in a non-lubrication mode. EXAMPLE: A conveyor 300 feet long, traveling 600 feet during a non-lubrication mode has completed TWO "OFF COUNTS".

11.4 "ON COUNT" DEFINITION

The "ON COUNT"(LINK & TIME mode) means the total number of trolley wheels, center links, rollers ,etc that make up a complete cycle of the conveyor. This the lubrication portion the program. This number tells the DL-5001HC how long to lubricate. When a lube cycle begins, the "OFF COUNT" is at zero (0000). In the TIME mode, this corresponds to the number of shots of lubricant in the lube cycle.

11.5 TO DETERMINE "ON COUNT" FOR FORGED LINK X-CHAIN.

Take the number of center links that the detection sensor will detect in a one foot section and multiply it by the conveyors' length in feet.

EXAMPLE (1): A conveyor 500 feet long having an X348(3") pitch chain will activate the detection sensor 2.0 times per foot of chain length. Therefore 2 x 500 = 1000 "ON COUNTS.
EXAMPLE (2): A conveyor 500 feet long having an X458(4") pitch chain will activate the detection sensor 1.5 times per foot of chain length. Therefore 1.5 x 500 = 750 "ONCOUNTS".
EXAMPLE (3): A conveyor 500 feet long having an X678(6") pitch chain will activate the detection sensor 1.0 times per foot of chain length. Therefore 1.0 x 500 = 500 "ON COUNTS".

11.6 "LUBE TIME" DEFINITION

This determines the amount of time the solenoid valve(s) will be open. The longer the valve is open the more lubricant will be dispensed. A setting of 0000 is off. A 0.001 will dispense the least amount of lubricant and a 9.999 will dispense the largest amount.

EXAMPLE: A setting of 0001 equals 1 milliseconds
A setting of 0500 equals .500 seconds
A setting of 9999 equals 9.999 seconds

11.7 "DEBOUNCE TIME" DEFINITION

The DEBOUNCE TIME indicates the amount of time the DL-5001HC will not accept another input from the detection sensor, thus preventing multiple dispensings of lubricant at the points to be

lubricated. Generally a setting of 0500 or .5 sec will be sufficient. EXAMPLE: Sensing an irregular casting or multiple wheels on a free trolley carrier may cause unwanted inputs.

11.8 "FEET PER MINUTE" DEFINITION

The CONVEYOR SPEED provides a digital read-out on the main screen of how many feet per minute the conveyor is traveling. You simply input the number of detections per foot and the DL-5001HC will calculate it automatically.

11.9 "OZ/LUBE CYCLE" DEFINITION

OZ/LUBE CYCLE provides a digital read-out on the main screen of how much lubricant is being used for one complete lubrication cycle. This is calculated by selecting the value from the chart at **20.0**. This is based on the channel's TOTAL NUMBER OF "ON COUNTS", "LUBE TIME", LUBRICANT PSI AT SOLENOID VALVE, VALVES, DISPENSING TUBES AND SIZE..

11.10 "CONFIGURE MODE" DEFINITION

THE CONFIGURE MODE allows the user to change the four digit PIN security code This number keeps unwanted personnel from changing programmed settings. This mode also allows user to change the real-time clock for the TIME mode portion of the DL-5001HC. This allows for time zone differences, and time drift over a period of years. This mode can also change the baud rates(ASCII COMMUNICATION) if an optional modem is used.

11.11 "TEST MODE" DEFINITION

THE TEST MODE mode enables the users to override the program of the DL-5001HC. Each channel can be enable or disabled, manually open and close a solenoid valve or put into a continuous lube cycle. See 13.0 for detailed operation

11.12 "FORCE LUBE CYCLE" DEFINITION

The FORCE LUBE CYCLE zero's the OFF COUNTS. This will force a lube cycle on the next sensor detection. After the lube cycle has been completed, the channel will automatically return to it's programmed OFF COUNTS. See 14.0 for detailed operation

11.13 PIN SECURITY CODE

In order to program the DL-5001HC, it is necessary to know the four-digit PIN security code. This will enable the user to restrict the number of people authorized to maintain the equipment and to change program settings. The code is preset at the factory at 0000. See 15.0 on Configure mode for instructions on setting a different security code.

12.0 PROGRAMMING LINK MODE

Programming the DL-5001HC is very easy if a few things are kept in mind.

- Press "A" once for Program Mode
- Press "A" twice for Test Mode

- Press “B” to Force Lube Cycle
- Press “C” for Configure Mode

12.1 While programming a channel, remember the following:

- Press “A” to advance screens
- Press “D” anytime to return to Main Screen
- Follow the Screen Prompts
- When changing values, press * button to save the new values

12.2 MAIN COUNT SCREEN	**CH1**	**CH2**	**CH3**	**CH4**
OFF COUNTS	0000	0000	0000	0000
NUMBER OF LINKS	0000	0000	0000	0000
FEET PER MINUTE 0000	0000	0000	0000	
OZ/LUBE CYCLE	0000	0000	0000	0000

12.3 STEP BY STEP PROGRAMMING LINK MODE

The following example will take you step by step on programming a channel to lubricant chain pins on a monorail I-Beam conveyor. You have a 4” Monorail I-Beam conveyor with X458 chain links and it is a 1000’L. You want to lubricate the chain pins every fifth cycle, and you want to dispense a small amount of lubricant. The valve has two .042 I.D. dispensing tubes and you have determined the pressure at the solenoid valve is 30 PSI.

12.4 CHANNEL ASSIGNMENT

Monorail I-Beam Lubricator	Enclosed Track Lubricator
CH1 - Chain pins	CH1 - Vertical wheels
CH2 - Open trolley wheels	CH2 - Horizontal wheels/pivot points
CH3 - Cat drive chain/swivel	CH3 - Cat drive chain/swivels
CH4 - Free carrier	CH4 - Free carrier

12.5 FROM THE MAIN COUNT SCREEN

- Press “A” once
- Press “*” to enter Program Mode
- Enter PINsecurity code (preset 0000 at factory)
- Press “*” to continue
- Select channel
- Press “A” to continue
- Operation mode choose **LINK MODE** use “*” to select
- Press “A” to continue
- Enter OFF COUNTS 0005 **(PRESS * TO SAVE)**
- Press “A” to continue
- Enter # OF LINKS 1500 **(PRESS * TO SAVE)**
- Press “A” to continue
- Enter LUBE TIME 0001 **(PRESS * TO SAVE)**
- Press “A” to continue
- Enter DEBOUNCE TIME 0250 **(PRESS * TO SAVE)**
- Press “A” to continue

- Enter FEET PER MINUTE 10.0 **(PRESS * TO SAVE)**
- Press “A” to continue

12.6 You have just completed programming Channel 1, select another channel or press “D” to return to the Main Count Screen.

13.0 HOW TO OPERATE TEST MODE

The TEST MODE allows the user to enable/disable any channel, open/close any valve or begin a continuous lube cycle.

13.1 EXAMPLE 1: Screen One - Enable/Disable a channel. This feature is used primarily during installation. When adjusting the dispensing tubes for the first time, it allows the installer ,(while in a lube cycle) to adjust one valve at a time. This reduces an accumulation of lubricant on the rail, floor, parts, etc from misdirected dispensing tubes.

- From the Main Count Screen, Press “A” twice to enter Test mode
- Enter appropriate channel.
- Press “A” once to advance screen to Enable/Disable
- Press * to Enable channel
- Press * to Disable channel.
- Press “D” to return to Main Count Screen

13.2 EXAMPLE 2: Screen two - Open/Close a Valve. This feature is used mainly during installation/startup to bleed air out of the nylon supply tubing, or whenever air is trapped in the tubing.

- From the Main Count Screen, Press “A” twice to enter Test mode
- Enter appropriate channel
- Press “A” twice to advance the screen to Open/Close
- Press * to Open Valve,
- Press * again to Close Valve
- Press “D” to return to Main Count Screen

13.3 EXAMPLE 3: Screen three - Continuous Lube. This feature will immediately put the channel into a continuous lube cycle. Use this mode if the conveyor chain is extremely dry, and you want to lube it several cycles or if the conveyor requires continuous lubrication.

- From the Main Count Screen, Press “A” twice to enter Test mode
- Enter appropriate channel
- Press “A” three times to advance the screen to Continuous Lube
- Press “*” to read YES. The selected channel will now lubricate continuously

14.0 HOW TO OPERATE THE FORCE LUBE CYCLE

The FORCE LUBE CYCLE allows the user to begin a lube cycle immediately. This is usually done if the chain looks usually dry and you want to lube it but keep the existing program.

- Press “B” to advance screen to Force Lube Cycle
- Press * to Force Lube Cycle
- Enter appropriate channel and Press * to start

15.0 HOW TO OPERATE CONFIGURE MODE

The CONFIGURE MODE allows user to change PIN security codes, Real Time Clock (in the Time Mode only) and choose different Baud Rates for the optional ASCII Communication.

15.1 TO CHANGE PIN SECURITY CODE

- Press “C” to enter Configure Mode
- Press * to enter
- Enter present PIN security code __ __ __ __
- Press * to continue
- Press * to enter new PIN security code
- Enter new PIN security code __ __ __ __
- Press * to save.
- Press “D” to return to Main Count Screen or “A” to continue and set Real Time Clock

HR	MIN	SEC	MO	DA	YR
00	00	00	00	00	00

NOTE: Cursor will shift from the most significant digit to the next and back again. There is no need to press * to save.

- Press “D” to return to Main Count Screen or “A” to continue and set Baud Rate
- Press * to change baud rate(1200,2400,4800,9600)
- Press “D” to return to Main Count Screen or “A” to continue

16.0 PROGRAMMING TIME MODE

The TIME MODE is used to lubricate cat drive chains, sprockets, high speed chains where a sensor cannot be used and a wide variety of machines.

MAIN COUNT SCREEN	CH1	CH2	CH3	CH4
00 DAYS 00 HOURS	0000	0000	0000	0000
00 MIN. 00 SEC	0000	0000	0000	0000
FEET PER MINUTE	0000	0000	0000	0000
OZ/LUBE CYCLE	0000	0000	0000	0000

16.1 In the TIME MODE the user programs the channel for CYCLE TIME which indicates the time between lubrication cycles, ON COUNTS which indicates the number of shot of lubricant, LUBE TIME which determines how long the valve remains open, DURATION BETWEEN which indicates the length of time between each shot of lubricant.

16.2 STEP BY STEP PROGRAMMING TIME MODE FROM MAIN COUNT SCREEN

- Press "A" once for Program Mode
- Press "*" to enter
- Enter PIN security code (preset 0000 at factory)
- Press "*" to continue
- Select channel 1 - 4
- Press "A" to continue
- Operation mode, Press "*" to toggle to TIME MODE
- Press "A" to continue
- Enter CYCLE TIME days hours min. sec.
  00 00 00 00

(Cursor will shift from the most significant digit to the next and back again. There. is no need to press * to save.)

- Press "A" to continue
- Enter # of ON COUNTS in the cycle - 0500 **(PRESS * TO SAVE)**
- Press "A" to continue
- Enter LUBE TIME 0001 **(PRESS * TO SAVE)**
- Press "A" to continue
- Enter DURATION BETWEEN 0993 **(PRESS * TO SAVE)**
- Enter FEET PER MINUTE 003.0 **(PRESS * TO SAVE)**
- Press "A" to continue
- Enter OZ/LUBE CYCLE 0000 See Lube Chart at ?.?. **(PRESS * TO SAVE)**

16.3 One channel has been programmed in the TIME MODE. Select another channel or Press "D" to return to MAIN COUNT SCREEN

17.0 MAINTAINING THE LUBRICATION SYSTEM

The Digilube Lubrication System with the DL-5001HC is the most advanced lubricator on the market today. It will provide many years of trouble free lubrication. However, regular maintenance is a must to insure the equipment is operating properly, dispensing tubes properly adjusted and that the conveyor is getting the correct amount of lubricant. The plant maintenance personnel should inspect the system at least monthly if not weekly. The following maintenance steps should be adhered to closely:

17.1 Check lubricator to make sure dispensing tubes are properly adjusted. Make sure all dispensing tube outlets for each valve are at the same level to prevent dripping from lower tubes.

17.2 Inspect the sensor(s) LED for proper activation and make sure the sensor is tightly secured onto the bracket.

17.3 Inspect conveyor chain, trolleys, etc for sufficient amount of lubricant

17.4 Check and maintain a sufficient amount of lubricant in the tank to prevent automatic shutdown caused by an empty tank.

17.5 If the maintenance department does not have the personnel to devote to maintaining the equipment, a Maintenance Service Contract by Digilube Systems or an authorized representative is recommended.

21.0 SUGGESTED SPARE PARTS

Although Digilube Systems provides rapid response and shipping of replacement parts, we offer the following spare parts listing for the user to stock as desired:

21.1 DL-5001 HC LUBRICATOR

F12950 Valve, Solenoid 115 VAC
F13150 Valve, Solenoid 24 VDC
F12900 Valve, Solenoid 24 VDC (Air Assist only)

E07250 Sensor Inductive 24 VDC
E07101 Sensor Photo-Electric 24 VDC

F09450 Dispensing Tubes 1T-.042 [Low Viscosity Dry Film Lube]
F09455 Dispensing Tubes 2T-.042 [Low Viscosity Dry Film Lube]
F09460 Dispensing Tubes 3T-.042 [Low Viscosity Dry Film Lube]
F09465 Dispensing Tubes 4T-.042 [Low Viscosity Dry Film Lube]
F09650 Dispensing Tubes 1T-.060 [High Viscosity Lube]
F09655 Dispensing Tubes 2T-.060 [High Viscosity Lube]
F09660 Dispensing Tubes 3T-.060 [High Viscosity Lube]

E05850 Lamps Neon Indicator-28 VDC
E06300 DL-5001HC*

21.2 LUBRICANT TANK

E05855 Lamp Neon Indicator for DL9000PS 115 VAC
F12500 Pump - Gear*
E06550 DL-9000PS/115 VAC Output*
E06600 DL-9000PS/24 VDC Output*

21.3 If five or more Lubricators are being used in critical applications, such as oven conveyors, then stocking the major spare parts should be considered.

22.0 LIMITED WARRANTY

The Digilube Lubrication System is pretested and guaranteed to be in optimum condition when it leaves our factory. The DL-5001HC is fully guaranteed against defective materials and/or workmanship for a period of thirty-six (36) months from the date of purchase. Any portion of the DL-5001HC which fails during this period for either of the above reasons, excluding normal replacement parts such as indicator lamps, fuses, etc., , will be repaired or replaced at our option, if returned prepaid to our factory. All defective parts returned for warranty service is fully inspected to determine cause of failure before warranty is approved.
All other equipment components are guaranteed against defective materials or workmanship for a period of twelve months from the date of purchase. Our warranty is limited to the obligation to repair or replace our equipment only.

22.1 This warranty gives you specific legal rights and you may have other rights which vary from state to state.

22.2 The Digilube warranty will be void if any of the following conditions are found to exist relative to Digilube's equipment.

22.3 Electronics components tampered with, or short circuited

22.4 Damaged caused from voltage or environmental conditions exceeding the operating conditions.

22.5 Failure due to using lubricants that do not fall with the specified viscosity range. All non Digilube lubricants must be approved, in advance by Digilube Systems Inc. to maintain warranty coverage.