



**INTERLUBE SYSTEMS INC**  
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Dayton, OH 45414  
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## **Operating & Maintenance Instructions**

# **AC3 Lubrication System for USPS**

### **Introduction**

Interlube's AC3 system has been specifically designed to provide reliable and virtually maintenance free operation. Because of the importance of providing the correct lubricant amount to the chassis components, read this guide to become familiar with the AC3 lubrication system.

### **General Description**

The AC3 system includes the following components:

- Pump with integral timer, motor and reservoir
- Lubricant injectors
- Tubing to the lubrication points
- Fittings at the lubrication points

The AC3 pump has a radial manifold consisting of 24 ports. Each port can be fitted with a positive displacement lubricant injector. Each injector is dedicated to a single lubrication point.

The lubricant injector is connected to the lube point with tubing and a tube connector. Numbered sleeves are placed on the tubing at both the lubricant injector and the lube point to assure accurate installation and identification.

Four different lubricant injector output capacities are available to match lube point volume requirements. Lubricant injectors are color coded for easy identification. Unused pump manifold ports are plugged.

The pump has a 5-pound reservoir. Housed in the reservoir is a twin bladed impeller designed to draw grease evenly into the pumping chamber. Attached to one blade is a reservoir wiper, which gives a visual indication of cam rotation.

Located at the bottom of the pump is the motor housing. Inside is housed the motor and a circuit board. On the bottom of the motor housing is an LED, which indicates operation status and the manual run bottom.

The motor is coupled to a cam shaft, as the cam shaft is rotated the cam lobe will come across the injector piston and inject a measured amount of lubricant into each lube line.

### **Operation**

The AC3 system is wired to the vehicle ignition circuit. The timer has been preset to initiate a lube cycle every 30 minutes that the vehicle ignition circuit has been turned on. When the timer initiates a lube cycle it will energize the motor. The motor is coupled to the cam shaft located in the radial manifold at the pump. To which injectors are mounted. As the motor turns the cam shaft, the cam lobe will come across the injector lube piston and inject a measured amount of lubricant into the lube line. The motor will turn the cam shaft one complete revolution, this takes about one minute. Cam shaft movement can be verified by the wiper located on the paddle blade inside the reservoir.

Underneath the pump is an LED that indicates the following operation status:

Continuously ON: power supplied to pump and in delay mode

Slow Flash (4 sec OFF, 1/2 sec ON): motor is operating

Quick Flash (1 sec OFF, 1/2 sec ON): motor failure

To test the pump there is a manual run button located underneath the motor housing. Be sure to depress the button for at least one second to initiate a lube cycle.

### **Filling the reservoir**

To refill the reservoir, there is a fill adapter on the radial manifold positioned underneath the injectors. Do not overfill the reservoir. Fill only to one inch of the top. Always use recommended lubricants.

### **Maintenance - Inspection procedures**

The following inspection procedures are recommended to help ensure proper operation of the AC3 lubrication system. Once the reservoir refill interval has been determined, make certain that the interval is part of your scheduled maintenance.

- A. Inspect all lubrication points for fresh grease.
- B. Check the condition of all fittings and connections. Tighten or replace loose or damaged fittings.
- C. Check lubrication lines making sure that there are not any breaks. Check for wear or chaffing that may lead to failure. Reconnect, repair and reroute lines if necessary to eliminate a reoccurrence.
- D. Check pump operation by pressing manual run button, located at the underside of the pump. Observe LED Operation. Check for paddle rotation inside the reservoir by looking for wiper as it is rotated.

## **Troubleshooting**

### **A. All lubrication points appear dry**

1. CAUSE: Reservoir is empty  
REMEDY: Refill reservoir using correct lubricant.
2. CAUSE: No power to system  
REMEDY: Check all electrical connections and also the fuse. If fuse has blown check electrical supply source. Check for any short/damage wiring before replacing fuse. Replace fuse with 2amp ATO style.
3. CAUSE: Inoperative pump  
REMEDY: Refer to PROBLEM "D"

### **B. One or more lubrication points appear dry while others receive sufficient lubrication**

1. CAUSE: Broken or severed lube lines  
REMEDY: Determine cause, and if necessary, re-route or protect the lines to avoid a recurrence. Use coupling (LE 505-PC) to reconnect the line.
2. CAUSE: Inoperative injector  
REMEDY: Replace injector. Note injectors are color coded to designate output capacities.

### **C. All lubrication points are over lubricated**

1. CAUSE: Not long enough delay period.  
REMEDY: Adjust timer setting to 30 minute interval.

### **D. One or more lubrication points are over-lubricated**

1. CAUSE: Injector(s) are oversized.  
REMEDY: Replace the injector(s) with a smaller output injector.

### **E. Inoperative pump**

1. CAUSE: Circuit board is damaged  
REMEDY: Check electrical connections on circuit board terminal check for any damage to circuit board and replace if necessary.
2. CAUSE: Motor is inoperative  
REMEDY: Replace motor.

### Spare parts list

	Part number	Description
Pump Parts		
	AC3112	Complete pump assembly
	AC3/SP2/12V	12VDC circuit board
	AC3/SP8/12V	12VDC motor assembly
	AC3/SP9	reservoir assembly
	AC3/S P 10/12V	12VDC motor cover & circuit board
Injectors		
	78033	red injector (.01 cc output)
	78034	green injector (.015cc output)
	78035	yellow injector (.025cc output)
	78036	blue injector (.04cc output)
	34237	manifold port plugs
	78033	red injector (.01 cc output)
Tubing		
	152823-164	164ft 5/32OD prefilled nylon tubing
Fittings		
	LE505-PC	5/32 double ended connector
	LE 80512-PL	5/32 tube x 1/8NPT male straight
	38297S1	5/32 tube x 1/8NPT male swivel elbow
	38497S2	5/32 tube x 1/4UNF male swivel elbow

## INTERLUBE INSTALLATION RECORD

Customer: International/USPS

Part No.: 85942A2992

Description: AC3 16 point single axle

Pt. No.	Bearing Description	Color
1	king pin- top DS	blue
2	cam shaft DS	green
3	slack adj. DS	yellow
4	king pin - bottom DS	blue
5	tie rod DS	yellow
6	drag link- rear DS	yellow
7	drag link- front DS	yellow
8	king pin - top CS	blue
9	cam shaft CS	green
10	slack adj. CS	yellow
11	king pin -bottom CS	blue
12	tie rod CS	yellow
13	slack adj. DS	yellow
14	cam shaft DS	green
15	slack adj CS	yellow
16	cam shaft CS	green

## INTERLUBE INSTALLATION RECORD

Customer: International/USPS

Part No.: 85942A2993

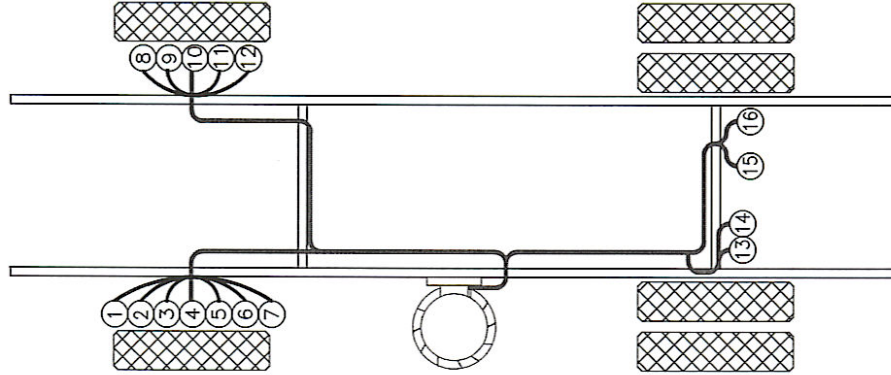
Description: AC3 20 point tag axle 1/24/2004

Pt. No.	Bearing Description	Color
1	king pin-top DS	blue
2	cam shaft DS	green
3	slack adj. DS	yellow
4	king pin- bottom DS	blue
5	tie rod DS	yellow
6	drag link- rear DS	yellow
7	drag link- front DS	yellow
8	king pin-top CS	blue
9	cam shaft CS	green
10	slack adj. CS	yellow
11	king pin- bottom CS	blue
12	tie rod CS	yellow
13	slack adj. DS	yellow
14	cam shaft DS	green
15	slack adj DS	yellow
16	cam shaft DS	green
17	slack adj. lift axle DS	green
18	cam shaft lift axle DS	red
19	slack adj. lift axle CS	green
20	cam shaft lift axle CS	red

DO NOT SCALE

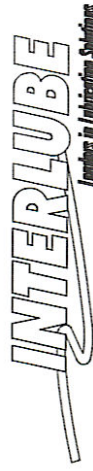
DRAWING NO.

85942A2992



LUBRICATION SCHEDULE				
LUBE PT	INJECTOR COLOR	DESCRIPTION	FITTING	
1	BLUE	KING PIN - TOP - DS	LE 80512-PL	
2	GREEN	CAM SHAFT - DS	38497S1	
3	YELLOW	SLACK ADJ - DS	38497S1	
4	BLUE	KING PIN - BOTTOM - DS	38497S1	
5	YELLOW	TIE ROD - DS	38497S2	
6	YELLOW	DRAG LINK - REAR - DS	38497S2	
7	YELLOW	DRAG LINK - FRONT - DS	38497S2	
8	BLUE	KING PIN - TOP - CS	LE 80512-PL	
9	GREEN	CAM SHAFT - CS	38497S1	
10	YELLOW	SLACK ADJ - CS	38497S1	
11	BLUE	KING PIN - BOTTOM - CS	38497S1	
12	YELLOW	TIE ROD - CS	38497S2	
13	YELLOW	SLACK ADJ - DS	38497S1	
14	GREEN	CAM SHAFT - DS	38497S1	
15	YELLOW	SLACK ADJ - CS	38497S1	
16	GREEN	CAM SHAFT - CS	38497S1	

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Interlube Systems Inc.  
Dayton Ohio 45414

CUSTOMER USPS - SINGLE AXLE

OEM INTERNATIONAL

INSTALLATION LAYOUT

KIT AC3 - 16 POINT

DRAWING NO.

85942A2992

DO NOT SCALE

DRAWING NO.

85942A2993

LUBRICATION SCHEDULE				
LUBE PT	INJECTOR COLOR	DESCRIPTION	FITTING	
1	BLUE	KING PIN - TOP - DS	LE 80512-PL	
2	GREEN	CAM SHAFT - DS	38497S1	
3	YELLOW	SLACK ADJ - DS	38497S1	
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5	YELLOW	TIE ROD - DS	38497S2	
6	YELLOW	DRAG LINK - REAR - DS	38497S2	
7	YELLOW	DRAG LINK - FRONT - DS	38497S2	
8	BLUE	KING PIN - TOP - CS	LE 80512-PL	
9	GREEN	CAM SHAFT - CS	38497S1	
10	YELLOW	SLACK ADJ - CS	38497S1	
11	BLUE	KING PIN - BOTTOM - CS	38497S1	
12	YELLOW	TIE ROD - CS	38497S2	
13	YELLOW	SLACK ADJ - DS	38497S1	
14	GREEN	CAM SHAFT - DS	38497S1	
15	YELLOW	SLACK ADJ - CS	38497S1	
16	GREEN	CAM SHAFT - CS	38497S1	
17	GREEN	SLACK ADJ LIFT AXLE - DS	38497S1	
18	RED	CAM SHAFT LIFT AXLE - DS	38497S1	
19	GREEN	SLACK ADJ LIFT AXLE - CS	38497S1	
20	RED	CAM SHAFT LIFT AXLE - CS	38497S1	

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CUSTOMER	USPS - TAG AXLE
OEM	INTERNATIONAL
INSTALLATION LAYOUT	
KIT	AC3 - 20 POINT
DRAWING NO.	85942A2993