









785-989-3100 www.summitbodies.com

## **FORWARD**

This guide is a reference for the new operator and a refresher for the experienced one. Read – study – and keep it with the truck.

This guide contains safety, operation, and maintenance information.

Illustrations or photos guide the operator through correct procedures of checking, starting, operating and stopping the systems. Note that some graphics or photos may differ slightly from truck to truck.

Operating techniques outlined in the guide are basic. Skill and techniques develop as the operator gains knowledge of their lube truck and products being delivered.

You are responsible for observing all applicable Federal, State, and Local Laws and Regulations and for following the manufacturer's instructions for operation and maintenance of the truck. The design and specifications allowed for appropriate weight distribution when loaded with products for delivery.

## **WARNING**

Improper operation of vehicle can cause injury or death.

BEFORE operating, the operator must do the following:

- Read all Operator Manuals supplied with the truck completely and carefully, understand all safety instructions, operation of controls, and safety equipment.
- Read all safety decals on the vehicle and truck bed.
- Learn and practice safe use of the operator controls in safe, clear area.

You are responsible for observing all applicable Federal, State, and Local Laws and Regulations and for following the manufacturer's instructions for operation and maintenance of the truck.

The design and specifications allow for appropriate weight distribution when loaded with products for delivery.

This information is provided for your benefit and you must comply with all DANGER, WARNING, and CAUTION notices.

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## **GENERAL**

The lube truck is designed to streamline maintenance. The extremely durable construction makes the Summit Truck Bodies lube truck a valuable resource for a variety of maintenance work.

This Operator Manual provides important information needed to safely operate the Summit Truck Bodies lube truck. This manual should be kept with all other vehicle manuals and considered a permanent part of the truck.

# REPLACEMENT MANUALS

Replacement operator manuals for the truck can be obtained by contacting:

Summit Truck Bodies Phone: (785) 989-3100 (866) 985-3100

## OWNER RESPONSIBILITY

Owner must understand and follow all applicable rules and regulations for your area, including Hazmat rules and regulations.

For any questions regarding safety, operation, or capacity of the truck, tanks, etc. and specific information related to parts and service procedures, contact:

Summit Truck Bodies Phone: (785) 989-3100 (866) 985-3100

# VEHICLE INFORMATION

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For easy reference record the chassis vehicle identification number and body serial number in the space provided.

Chassis Vehicle Identification Number (VIN)

**Body Serial Number STE-\_\_\_\_** 

## **SERIAL NUMBERS**

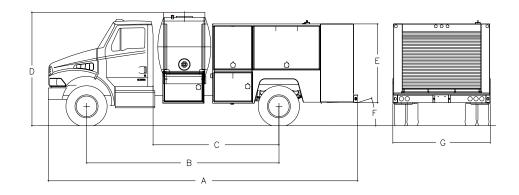
Have the body serial number and the chassis vehicle identification number (VIN) available when contacting Summit Truck Bodies for parts or service information.

The body serial number plates are located in two places.





# **SPECIFICATIONS:**



	Single Axle (shown)	Tandem Axle
A	*315"	*396"
В	196"	236"
C	128"	168"
D	*115-119"	*117"
E	80"	80"
F	*19-23"	*25"
G	100"	100"
H	*15-18 deg	*15 deg
Elliptical fuel tanks	1000 gallon	2000 gallon
Compartment		
Storage Capacity	67 cu. ft.	97 cu. ft.

<sup>\*</sup>Varies with chassis selected

# **SPECIFICATIONS:**

## **Available Product (fluid) Delivery Systems**

- Fuel
- Oils
- Antifreeze
- Salvage Oils
- Salvage Antifreeze
- Chassis Grease

# **Available Product (fluid) Delivery Tank Sizes (gallons)**

Mild or Stainless Steel	Poly
60	60
90	90
120	150
150	200
250	300

#### SAFETY DISCLAIMER

Summit Truck Bodies reserves the right to make technical changes for product improvements. This manual may container illustrations and photographs, for demonstration purposes, which slightly deviate from the actual product.

Safety information provided in this manual is a basic guide to operation. Summit Truck Bodies cannot anticipate every circumstance that might involve a potential hazard. Warnings in this manual and on the vehicle are NOT all-inclusive.

You are responsible for safe operation of this equipment. You must satisfy yourself that the operating procedures and work methods you use are safe; including those not specifically mentioned in this manual.

Follow State and Federal health and safety rules and/or local regulations for operating and maintaining this equipment.

This manual does not replace any laws and regulations. The operator and the equipment are required to comply with all applicable laws and regulations.

#### SIGNAL WORDS

Signal words are the word or words that call attention to the safety sign and designate a degree or level of hazard seriousness. The signal words used in this manual are DANGER, WARNING, and CAUTION.



**DANGER** indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.



**WARNING** indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



**CAUTION** indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury.



**CAUTION** used without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, may result in property damage.

#### SAFETY SYMBOLS

Safety symbols are provided to remind the operator of hazardous situations. Summit Truck Bodies provides symbols in an attempt to inform all operators of as many potential hazards as possible. These symbols cover many, but not all, potential dangers and hazards associated with this equipment.

Learn these and all safety symbols found on the vehicle decals and placards to prevent equipment damage, injury, or death.

Reference the Decals section of the manual for more details.

# OPERATOR RESPONSIBILITY



This equipment is potentially dangerous if proper safety procedures are not followed.

- Read all Operators Manuals before operating.
- Only operate the vehicle if you understand all safety instructions and warning.
- Use the equipment for its intended purposes only.
- Make no modifications or alterations.
- Check equipment daily and repair or replace worn or damaged parts immediately.

- Do not exceed maximum working pressures of any component.
- Protect hoses from possible damage and do not use other uses such as pulling.
- Do not lift pressurized equipment.
- Do not put product in any system not specifically and clearly marked for that product. Product may damage pumps and other components.
- INJECTION HAZARD; fluid injected into the skin is a serious injury. Get immediate medical attention.
- Do not point the dispensing valve at any part of the body.
- Do not attempt to contain leaks with any part of the body.
- Tighten all connections prior to operating equipment. Use only nozzles and extensions designed for use with the valve(s).

# OPERATOR QUALIFICATIONS

# **▲** DANGER

Operators must be properly trained, qualified, and authorized to operate the vehicle. Know the location, learn the specific purpose, and demonstrate safe and proper use of all controls, instruments, indicator lights, and safety and instruction labels. Safety is your responsibility.

Trained and qualified operators will:

- be in good physical and mental condition.
- Be properly instructed on how to operate the vehicle.
- Have read and understood the operation manual(s) and all applicable warnings, cautions, and safety regulations.

### MODIFICATIONS



DO NOT make modifications to the truck.

Unauthorized modifications or alterations will VOID the warranty. DO NOT modify, disable, or bypass any safety devices.

# BEFORE STARTING THE VEHICLE



Wear all appropriate protective equipment which can include; footwear, gloves, and safety glasses. Make sure clothing is snug and properly belted. DO NOT wear loose clothing, jewelry, watches, or anything that can catch on controls, or moving parts.

Keep a complete set of manuals with vehicle at all times.

Carefully read and understand all instructions before operating the vehicle.

Perform daily inspections and make any repairs or replacement of parts prior to operating the vehicle.

Keep fingers and feet away from moving parts or pinch points to prevent pinching or crushing.

#### **OPERATION SAFETY**



Never allow passengers to ride on the vehicle. DO NOT allow riders outside the cab.

Many fluids are flammable and can cause a fire or explosion. DO NOT smoke while refueling and keep sparks and open flames away from vehicle.



Contact with hot surfaces after the vehicle has been operated can result in serious personal injury.

## PRESSURE SAFETY



Do not exceed maximum working pressures of any component as defined in Troubleshooting section of manual.

Protect hoses from possible damage and do not use other uses such as pulling.

Do not lift pressurized equipment.

# VEHICLE MAINTENANCE



Follow the manufacturer's instructions for proper maintenance.

Death or serious injury can result from operating a vehicle before all repairs have been made and all proper maintenance is completed.

## SAFETY EQUIPMENT

Fire extinguishers (2)





## REPLACEMENT DECALS

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Become familiar with all safety and hazard decals, regulations, procedures. Make sure all decals and placards are attached to the vehicle and are legible.



700-30118



700-30302



700-30256



700-30255



700-30140



700-30136



700-30135



700-30135



700-30132



700-30129



700-30375



700-30139



700-30202



700-30195



700-30128



700-30384



SEMI-RIGID 700-30219



VINYL 700-30120

## **OPERATION**

# PLEASE READ AND UNDERSTAND THE OPERATION OF YOUR SPECIFIC TRUCK MAKE AND MODEL FROM THE OPERATOR'S MANUAL SUPPLIED BY THE TRUCK MANUFACTURER.

The following items are the use of truck functions which are necessary for the operation of these lube system deliveries.

#### TRUCK IGNITION SWITCH:

The Ignition switch is located on the dash in the truck cab. (Location will vary with truck model).

The truck IGNITION SWITCH supplies power for all functions of the Lube Truck. This power can be shut down with use of the EMERGENCY STOP switch located on top of the operation control panel for all Lube functions in the delivery compartment.



#### **PARKING / EMERGENCY BRAKE:**

The parking /emergency brake release is located on the dash panel in the truck cab. The switch cannot be activated until the truck generates approximately 90 psi (must read the truck manufacturer's operation manual for exact specification).

The PARKING / EMERGENCY BRAKE – when engaged will prevent the truck from moving with the engine running or not.

PULL TO PARK –To activate the parking or emergency brake, **Pull** knob out.

PUSH TO RELEASE –To release the parking or emergency brake, **PUSH** the knob in.



#### **POWER TAKE-OFF (PTO) SWITCH:**

The PTO switch (RED) is located on the dash in the truck cab. (Location will vary with truck model).

The red PTO switch activates the main hydraulic pump which supplies the oil to operate the delivery functions of the Lube Truck. The light in the switch will turn on when the PTO has been engaged.



#### **SERVICE / HOURMETER:**

The service / hourmeter located in the truck cab next to the Power Take-Off (PTO) switch displays the number of hours that the PTO switch is engaged.



#### STROBE LIGHT OPERATION:

The Strobe Light switch (BLACK) is located on the dash in the truck cab. (Location will vary with truck model).

The black STROBE LIGHT switch activates the two strobe lights (one at front and one at rear of cargo area) of the Lube Truck.

## SPECIFICATION PLATES & PLACARD LOCATIONS



## **DOT 406 Specification Plate Location:**

Both plates are located on the front of the driver's saddle pack below the bulk fuel tank.

## Front placard location:

Drill out the opposite corners of the placard mounting and attach to the front bumper with carriage bolts and locknuts (supplied) as shown:



The top corner may need to be clipped off to allow the front hood to clear when open.

#### **Rear decal Mount:**

Locate decal bracket left of center to not obstruct clearance lights and overhang the rear by 1.75" to clear roll-up door flange when open. Drill .093" holes thru the top surface and attach with the self drilling screws with rubber washers supplied. Apply silicone to the holes drilled to aid sealing from the top surface.

## **GENERAL MAINTENANCE**

#### DAILY MAINTENANCE INSPECTION

Make a visual walk around the lube truck. Look for loose bolts, worn or leaking air or hydraulic hoses and lines, leaks under the vehicle.

Check fire extinguisher charge pressure on each side of the lube vehicle.

Check tires for proper air pressure and visually for condition.

Check the function of all safety devices such as but not limited to; strobe light, back-up alarm (transmission must be shifted into reverse for the alarm to sound).

Repair or replace all non functional or damaged components prior to operation.

Maintain a clean and unobstructed hydraulic cooler for peak performance.

Check air compressor sight glass, oil should fill half of the sight glass.

#### AIR COMPRESSOR TANK DRAIN





Drain air tanks daily to remove condensation by opening valve (located in the Left front corner of the Diesel Reel).



These units consist of a filter, lubricator, and regulator commonly referred as a FLR. Drain the filter bowl by turning the petcock at the bottom of the bowl. Maintain the Lubricator by filling it with air tool oil or equivalent. This will provide lubrication to air reel motors and any tools attached to the Service Air reel.

#### ROUTINE MAINTENANCE



## **Blackmer Diesel Pump**

#### **Strainers**

Strainers must be cleaned regularly to avoid pump starvation. Schedule will depend upon the application and conditions.

#### Lubrication

Lubricate the ball bearings, and hydraulic motor couplings (if equipped), *every three* (3) months at a minimum.

#### **Recommended Grease**

Exxon – RONNEX MP Grease, or Mobil – MOBILITH AW-2 Grease, or equivalent.

### **Greasing Procedure:**

- 1. Remove the grease relief fittings from the bearing covers or hydraulic motor adapter.
- 2. Apply grease with a hand gun until grease begins to escape from the grease relief fitting port.
- 3. Replace the grease relief fittings.

DO NOT over grease pump bearings. While it is normal for some grease to escape from the grease tell-tale hole after lubrication, excessive grease on pumps equipped with mechanical seals can cause seal failure.

#### DIESEL FUEL FILTER REPLACEMENT

Replace delivery fuel filter element on a new lube body after the first 50 hours of service and every 100 hours of service after that. This is a minimum recommendation only, conditions of the fuel and environment should be taken into consideration. Filters must be replaced when required in order to function properly.

Filter element is located inside the rear reel compartment located at the rear of the lube vehicle. (Part number: 500-90111)

#### HYDRAULIC RESERVIOR





Fluid must be added if level is below the "Fill Level". To service reservoir or other hydraulic driven functions; close all ball valves leading to and from the reservoir. One is located within the compartment and one is located outside the compartment on all models.

Replace filter when indicator gauge indicates. Replace the main operating system hydraulic fluid each time the cleanliness level reaches ISO 18-16 or annually. Drain plug is located underneath the compartment.

Clean the hydraulic cooler fins every 200 hours in order to function properly. This is a minimum recommendation only, conditions of the cooler and environment should be taken into consideration. *Make sure the cooler airflow or compartment vent is never blocked*.

#### **REELS**

Grease necessary grease zerks on the reels located near the input product line.

#### PRESSURE WASHER

Check that the oil is at the correct level using the Dipstick (located on the top of the pressure washer pump), and topping off if necessary. Use Hypro Oil or SAE 30 weight oil formulated, high grade, non-detergent designed to prolong Pump life.

Change the oil after 40 hours of break-in operation. Thereafter, change the oil every year or 500 hours, whichever comes first.

#### Care of the Pump

After each use, flush the pump with a neutralizing solution for the liquid pumped. Follow this with a clear water rinse. For storage under freezing conditions, flush the pump with a 50/50 solution of automotive-type antifreeze and water.

#### AIR COMPRESSOR

Refer to Ingersoll-Rand Air Compressor Owners manual for routine maintenance procedures.

#### ACCESS LADDER

Grease lock mechanism every 100 hours of service in order to function properly. The grease zerk is located on the left side of the ladder near the pivot point of the ladder.

## PRODUCT FILLING FOR DELIVERY

#### **DIESEL FUEL FILLING:**

Standard Diesel Fuel filling is through the lock cap located on the top of the main tank.





A **Morrison Safety Valve** is located under the bulk fuel tank which is designed only to open when air is supplied to the valve.

#### **DIESEL FUEL DELIVERY:**

- 1. Extend hose from reel and position nozzle into designated vehicle for refilling.
- 2. Activate switch in the control box labeled "Diesel"
- 3. Squeeze lever to dispense fuel.

#### **REWINDING HOSE:**

- 1. Insert nozzle into nozzle holder.
- 2. Guide hose onto reel while pressing the reel rewind lever located on the right side of the hose reel.

### PRODUCT (OILS, ANTIFREEZE AND WATER) FILLING:







The fill hole is located in the center of the top of each product tank identified with a quarter turn locking cap. Also located on the top of the product tank is a direct read fill indicator with a remote gauge located near individual product reels in the rear compartment. Fill tank to full reading on the gauge or within 2" from top to allow for thermal expansion of the product.

#### PRODUCT DELIVERY:

Always allow hydraulic fluid in system to heat up to operating temperature before attempting to dispense or recover oil. Cold hydraulic systems can cause fluctuations in performance of a given product delivery or recovery system. Unless specified before delivery each system is set for 5 to 7 gallons per minute using 10 weight hydraulic fluid at about 70 degrees Fahrenheit. Your system's flow may need to be adjusted depending on required flow, product being pumped and temperature of fluid. Just one example to heat your oil would be to run the compressor with the FLR drain opened allowing the compressor to continuously run to circulate the hydraulic fluid.

#### MAIN OPERATION CONTROL PANEL:

The main OPERATION CONTROL PANEL is located inside the delivery reel compartment on the left side on Lube Trucks & on the right side on Lube Vans. All lighting and delivery functions are labeled at each switch to which lights or product is being activated and when activated the switch light is illuminated.



#### OIL PRODUCT (VARIOUS OILS) AND GEAR LUBE DELIVERY:

This delivery is the same functionality for different quantity of tanks of oil products to be delivered.

Oil Product delivery is activated by such labeled switch on the main control panel and must be activated at the beginning of the delivery cycle. The product being delivered is labeled on the nozzle hanger.

Reel out the necessary hose to easily reach the vehicle for the oil and begin the delivery. Release the nozzle when ample oil is delivered and slide anti-drip nozzle toward meter and reel in hose and hang the nozzle in the storage holder and de-activate switch.

#### **ANTIFREEZE / WATER DELIVERY:**

This delivery is the same functionality for different quantity of tanks of antifreeze or water products to be delivered.

Antifreeze / Water delivery is activated by such labeled switch on the main control panel and must be activated at the beginning of the delivery cycle. The product being delivered is labeled on the reel near the bib hanger.

Reel out the necessary hose to easily reach the vehicle for the antifreeze / water and begin the delivery. Release the bib when ample antifreeze / water have been delivered and reel in hose and hang the bib in the storage loop beside the reel and de-activate switch.

#### **NOTICE**

AFTER INITIAL FILLING OF PRODUCT TANKS, OR CHANGE IN PRODUCT MIX, OF THE OILS OR ANTI-FREEZE PRODUCTS YOU REQUIRE; PULL THE DELIVERY HOSE FULL LENGTH FROM THE REEL AND RUN 1 ½ - 2 GALLONS INTO THE WASTE TANKS TO REMOVE LUBRICANT RESIDUE FROM PUMP, HOSES, AND NOZZLE USED FOR TESTING AND PROTECTION OF HYDRAULIC COMPONENTS.

#### WASTE OIL & ANTI-FREEZE (SALVAGE) OPERATION

- o Hydraulic Gear Pump(Only available for Waste Oil).
  - Turn on the waste oil switch in the control panel located in the reel compartment to forward (unload) or reverse (fill).
  - Unroll the waste oil hose and add the extension tube by snapping together the quick coupling and install in the correct container for your operational choice.



#### o Air Diaphragm Pump

• Turn on the waste oil switch in the control panel located in the reel compartment to the "ON" position.





- Unroll the waste oil hose and add the extension tube by snapping together the quick coupling and install in the correct container for your operational choice.
- Select at the top of the Lincoln diaphragm pump to fill tank or empty tank.
- To begin pumping, rotate the waste oil regulator to the right slowly until priming of the pump is accomplished. The maximum pressure for this regulator is set to 100 psi. If the priming of the pump does not take as you turn the regulator to the right, rotate to the left between 20-30 psi for priming to begin

### **Waste Oil & Anti-freeze Operation (con't)**

• The shut-down switch is located at the top of the tank to aid in preventing spillage from overfilling. The tank will hold approximately 3 gallon additional fluids. You can over-ride this function by holding down the switch located in the control box (top row, fifth from left) to both add additional oil/ anti-freeze to finish your current job and or unload the waste oil/ anti-freeze tank.

#### **GREASE SYSTEM OPERATION**





Air Delivery

Hydraulic Delivery

The grease is delivered from a reel located in the rear compartment.

Turn the chassis grease switch to the "ON" position located inside the main control box also located in the rear compartment.

Grease pump will operate only when the nozzle handle is pulled to the on position and will stop when nozzle handle is released.

#### TO PRIME AIR GREASE PUMP:

- 1. Turn the Chassis Grease switch to the "ON" position
- 2. Squeeze the handle on the grease nozzle dispenser until grease begins to come from the dispenser.

#### TO PRIME HYDRAULIC GREASE PUMP:





- 1. Loosen bleeder screw ½ turn.
- 2. Turn chassis grease switch to the on position in the main control box.
- 3. Open the ball valve (located on the hydraulic motor inlet) slowly; allowing pump to stroke slowly until grease begins to come from the bleeder screw.
- 4. Close the ball valve.
- 5. Close the bleeder screw.
- 6. While holding the dispensing nozzle in the on position; slowly open the ball valve to full on position (pump should stroke between 65-75 strokes per minute).

#### **HYDRAULIC RESERVIOR:**





HYDRA-KOOL JR Mdl: HK4-20-12VDC High Performance Cooling System

#### **METERED NOZZLES**



Lincoln MH56F (Flexible) Oil Control Guns with Electronic Meter come standard on all Lube vehicles.

Optional Lincoln MH56R (Rigid) Oil Control Guns with Electronic Meter

#### **Operating the Metered Nozzles**

- 1. To latch the handle, squeeze the lever, push the button and release the lever.
- 2. To release the latch simply squeeze and release lever.

#### **Meter Operation:**

Each press of the **DISP** button will allow you to scroll. The **RESET** button allows you to reset the Batch Total.

#### PRESSURE WASHER



#### **Operating the Pressure Washer**

- 1. Attach the pressure wand to the pressure washer reel hose by locking the quick coupler onto the pressure wand.
- 2. Activate the switch in the control box labeled "Pressure Washer".
- **3.** Squeeze lever for pressurized fluid.
- **4.** To switch in between high and low pressure flow, simply grab the nozzle end and slide it towards you for High pressure and slide it away for Low pressure.

#### **Adjusting Centrifugal Pump Output**

- **1.** Make sure the orifice from the pressure port adapter of the hydraulic motor has been removed.
- 2. Close and lock down the bypass adjusting screw in the hydraulic motor.
- **3.** Set the hydraulic flow control valve for minimum hydraulic oil flow to the remote outlet.
- **4.** Start the vehicle and engage the PTO and allow the oil to circulate for approximately 10 to 15 minutes or until adequately warmed.
- 5. Prime the centrifugal pump with all valves open.
- **6.** Close the agitation line valve and open the control valve and the boom shut-off valve
- **7.** Slowly adjust the hydraulic flow control for this specific valve section until the desired boom pressure is attained.
- **8.** Open the agitation line valve until sufficient agitation is observed. If spray pressure drops, readjust the hydraulic flow control to restore it to the desired pressure.

### PRODUCT TANK SHUT-OFF VALVES



Individual tank shut-off valves are located in between the chassis frame rails for easy accessibility for servicing and maintenance.

## **OIL PRODUCT FILTERS**



Individual oil product filters are located in the rear reel compartment on the left side of the back wall. Replace filter when indicator goes from the color Green to Red.

#### **TROUBLESHOOTING:**

## **HYDRAULIC SYSTEM**

No hydraulic fluid Damaged or worn	Fill with fluid (minimum lower site glass)
hydraulic pump	Rebuild or replace place pump
Damaged relief valve	replace relief valve
Low hydraulic fluid level	Fill with fluid (minimum lower site glass)
Plugged hydraulic filter	Replace filter
Worn hydraulic pump Improper relief pressure	Rebuild or replace place pump
setting	Adjust relief valve
Cold hydraulic Fluid	Let machine warm up before operating hydraulic system
Low hydraulic fluid level Air leak between reservoir	Add hydraulic fluid
and pump	Repair leak
Water in hydraulic fluid	Change fluid
	Damaged or worn hydraulic pump Damaged relief valve  Low hydraulic fluid level Plugged hydraulic filter Worn hydraulic pump Improper relief pressure setting  Cold hydraulic Fluid  Low hydraulic fluid level Air leak between reservoir and pump

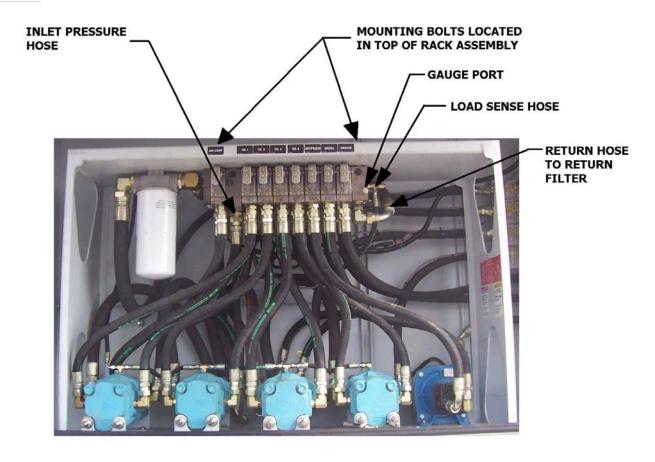
### Lubricants

Recommendation	Capacity	Specification/ Notes
Hydraulic Fluid	8 gallons	Conoco Super hydraulic oil 46 (ISO VG46) or equal
Grease	Air reel pivots (as required)	EP rated grease
		Fittings and grease applicator nozzle must be clean before applying grease. Replace all missing fittings.

## **Hydraulic System**

System Pressure	2400 psi maximum
Reservoir capacity	4 gallons
System Flow	32 gpm

For Troubleshooting on Individual Systems refer to Individual Product Troubleshooting Guides.



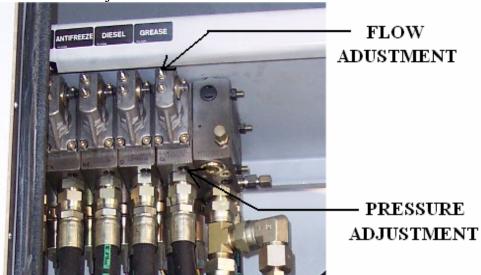
#### HYDRAULIC VALVE REPLACEMENT – LUBE TRUCK

Suggestion: Remove obstacles before disassembly as valve is very heavy.

- 1. Mark all hoses removed from valve:
- Front (outer) row is motor **pressure** hoses
- Rear (inside) row is motor <u>return</u> hoses
- 2. Mark all electrical connections to the valve section solenoids as removed.
- 3. Block valve to space up for solenoid clearance while removing and remove mounting hardware located on top of the valve frame.
- 4. Relocate all fittings from the existing valve to the new valve.
- 5. Place on riser block to protect the solenoids and reinstall valve.
- 6. Attach all electrical connections as were marked.
- 7. Attach all hydraulic hoses beginning with main pressure hose and next inside row and finally the outside row.

#### **VALVE OPERATION-SETUP ADJUSTMENTS:**

1. Pressure adjustment is done at the main control valve:

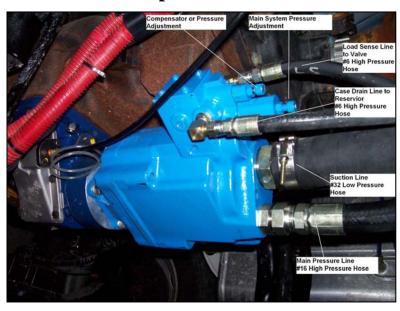


- 2. Remove air compressor pressure line and cap fitting to block oil from valve:
  - Turn on air compressor switch
  - Adjust pressure on the gauge to 2200psi
  - Re-connect pressure line
  - Adjust flow to allow compressor **rpm** to be 1800-1850
- 3. Pressure adjustment is located below each section labeled and adjust the pressure for all product deliveries with a 4mm hex wrench to 900-1050psi except grease which is adjusted to 1150-1300psi:
  - a. IN To Increase Pressure
  - b. Out To Decrease Pressure
- 4. Flow Adjustment is done at the main control valve:
- 5. Loosen locknut on upper adjusting 3mm screw and adjust flows for all products except grease by pumping fluids back into their respective product tanks and diesel tank and adjust the flow screws and retighten locknuts.
  - a. IN To Decrease Flow
  - b. OUT To Increase Flow
- 6. For Grease pump, loosen locknut on upper adjusting 3mm screw and adjust flow to allow pump to stroke between 65-75 cycles/ minute and re-tighten locknut while holding screw in position.
  - a. IN To Decrease Flow
  - b. OUT To Increase Flow
- 7. Pressure adjustment is done at the main control valve:

# **Pressure Settings for Individual Functions:**

Air Compressor:	2200 psi
Oil 1-5:	1000 psi
Anti-freeze:	1000 psi
Pressure Washer:	1000 psi
On Road Diesel:	1000 psi
Diesel:	1000 psi
Chassis Grease:	1250 psi
<b>Waste Oil:</b>	1000 psi

# **Load Sense Pump**



## **Waste Oil Pump Pressure Regulator**



Diesel Air Solenoid

When the "Diesel" or "Waste Oil" switch is activated, the solenoid valve is activated allowing air to flow to its destination either opening the Morrison Safety Valve on the Diesel system or Operating the Waste Oil Pump.

## **OPTIONAL FEATURES:**

## **DIESEL DELIVERY OPTIONS:**

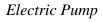




**Optional** Diesel Fuel Side fill is designed to work with gravity fed bulk tanks to load fuel into the fuel pod using the existing pump on the truck.

-- **Optional** Dual nozzle dispensing from the primary fuel pod. Option available with spring rewind or air operated reels.







Hydraulic Pump

**Optional** On Road Diesel system uses a separate tank, two digit fuel meter(Optional), spin-on filter, and dispenser to deliver clear diesel. Option available with a electric or hydraulic driven pump.

## **DIESEL DELIVERY OPTIONS (CON'T)**





**Optional** Three digit **fuel meter** with 1/10 accuracy and totalizer on the primary diesel system.

-- Optional Two digit fuel meter with 1/10 accuracy and totalizer on the secondary diesel.





**Optional** Diesel Fuel filling is through the "Wiggins" quick fill located on the driver's side of the main diesel tank. The quick fill system is designed to work with the Wiggins ZZ9A1 nozzle (not included).

-- Optional Wiggins ZZ9A1 nozzle – Part # 500-90138

## PRODUCT REMOTE FILL OPTION:





**Optional** Product Remote Fill allows operator to fill product tanks from the rear compartment by attaching to the quick couplers and pumping product into the tanks from ground level. Remote Level Gauges are located near each product hookup or individual reel.

## **COMPRESSORS:** (must choose one)



Ingersoll Rand HP-60. 60cfm Hydraulic Screw Compressor



Ingersoll Rand VHP-40. 40cfm Hydraulic Reciprocating Compressor

## **PRODUCT DELIVERY PUMPS:**



Hyd. Driven Oil Product Pumps



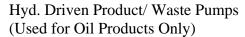
Air Driven Product Pumps (Used for Oil or Water)



Hyd. Driven Water Product Pump

## **WASTE DELIVERY PUMPS: (must choose one)**







Air Driven Product/ Waste Pumps 1" & ½" (Used for Oil or Water Products)

#### TANK HEATERS / WEBASTO HEATER OPTION





Webasto Heater and Artic Fox Hydra Liner tank heaters when used per recommended application, the Hydra Liner will provide up to 20 degrees F (11 degrees C) temperature rise in product in one hour in ambient temperatures down to minus 20 degrees F (minus 29 degrees C). Actual temperature rise will be affected by factors such as coolant temperature and flow rate, specific heat capacity of fluids and air movement around product tanks.

### COMPARTMENT HEATER OPTION

(Used with Webasto Heater Option)



## PRESSURE WASHER OPTION





Hypro hydraulic driven **pressure washer** with 1500 psi delivery and pressure wand.

# **BLOWOUT SYSTEM (USED ON WATER SYSTEMS)**





## 12/24V POWER BOOST SYSTEM



## FLEET BATTERY MAINTAINER OPTION





# ADDITIONAL WORK LIGHTS OPTION



# SECONDARY DIESEL OPTION (Electric or Hydraulic)





## **GREASE SYSTEM OPTION (Air or Hydraulic)**





**GETEC HYDRAULIC DRIVEN WELDER/ GENERATOR** 200 Amp to 400 Amp



## **REPLACEMENT PARTS:**





Our Service Department can assist your needs in quality replacement parts or help in resolving any issues you may have.



#### Warranty Period: 12 Months

Summit Truck Bodies, LLC (hereinafter "Summit") warrants each new service and lube body of Summit's manufacture to be free from defects in material and workmanship, under normal use and service for a period of one (1) year after initial purchase as derived from a completed warranty registration card. This Limited Warranty shall apply only to complete bodies of Summit's manufacture. Parts are covered by a separate limited warranty. EQUIPMENT AND ACCESSORIES NOT OF SUMMIT'S MANUFACTURE ARE WARRANTED ONLY TO THE EXTENT OF THE ORIGINAL MANUFACTURER'S WARRANTY AND ARE SUBJECT TO THEIR ALLOWANCE TO SUMMIT ONLY IF FOUND TO BE DEFECTIVE BY SUCH MANUFACTURER.

#### **Warranty Terms**

During the Limited Warranty period specified above, any defect in material and workmanship in any warranted item of Summit bodies not excluded below shall be repaired or replaced at Summit's option by a Summit representative or approved repair facility. Summit will pay for replacement parts and such approved repair shop's labor in accordance with Summit's labor reimbursement policy below. Summit reserves the right to supply remanufactured, replacement parts as it deems appropriate.

#### Retail Purchaser Responsibility

This Limited Warranty requires proper maintenance and periodic inspections of the bodies and accessories as indicated in the Operator's Manual furnished with each new Summit body. The cost of routine maintenance and services is the responsibility of the retail purchaser. The retail purchaser is required to keep documented evidence that these services were performed.

The Summit Truck Bodies, LLC Limited Warranty may be subject to cancellation if the above requirements are not performed.

Summit bodies or accessories with known failed or defective parts must be immediately removed from service.

#### **Exclusions and Limitations**

The warranties contained herein shall NOT APPLY TO:

- Any defect which was caused (in Summit's sole judgment) by other than normal use and service of the body or accessory or by any of the following: (i) accidents including but not limited to collision (ii) misuse or negligence (iii) overloading (iv) lack of reasonable and proper maintenance (v) improper repair or installation (vi) unsuitable storage (vii) non-Summit alteration or modification (viii) natural calamities (ix) vandalism
- 2. Any body or accessory whose identification numbers or marks have been altered or removed.
- Any body or accessory which any of the required or recommended periodic inspection or services have been performed using parts not manufactured or supplied by Summit or meeting Summit specification.
- 4. New bodies or accessories delivered to the retail purchaser in which the warranty registration is not returned within fourteen (14) days from the date of delivery.
- 5. Any defect which was caused (in Summit's sole judgment) by operation of the body or accessory not abiding by standard operating procedures outlined in the Operator's Manual.

- 6. Items not of Summit manufacture including but not limited to the chassis, crane, welder, hydraulic and PTO components, tool drawer packages, and electronic components are the responsibility of the respective product's manufacturer. Summit recognizes that these components are an important part of the end product and will facilitate the repair or replacement of such parts by a. providing replacement parts where possible; b. facilitating the shipment of part from the manufacturer; and/or c. directing the customer to an authorized repair facility for said part.
- 7. Costs incurred by Summit for replacement parts for items not of Summit manufacture will be invoiced to the customer. To be considered for warranty, the failed part must be returned, at the discretion of Summit, to Summit or the manufacturer of the part within fourteen (14) days. The part will be evaluated and if warranty is approved by the manufacturer credit will be issued to the customer in the form of a. Credit to a Summit account if one exists or b. Credit back to a charge card or c. Check to the customer.
- 8. Transportation costs, if any, of transporting unit to an approved repair facility.
- 9. In no event shall Summit's liability exceed the purchase price of the product.
- 10. Summit shall not be liable to any person under any circumstances for any incidental or consequential damages (including but not limited to loss of profits and out of service time) occurring for any reason at any time.
- 11. Diagnostic and overtime premiums are not covered under this Limited Warranty Policy.
- 12. Depreciation caused by normal wear, lack of reasonable maintenance, failure to follow operating instructions, misuse, or lack of proper protection during storage.
- 13. Accessory systems and electronics not of Summit's manufacture are warranted only to the extent of such manufacturer's respective Limited Warranty, if any.
- 14. Any installation of a body on chassis other than original factory installation.

#### **Parts Warranty**

Parts replaced in the warranty period will receive the balance of the first year Summit Truck Bodies, LLC Limited Warranty, during the first twelve (12) months. Replacement parts after the original warranty period are warranted to be free from defects in material for ninety (90) days or the part will be repaired or replaced without labor coverage for removal or installation.

#### **Summit Labor Reimbursement Policy**

Summit will consider labor reimbursement during the defined warranty period provided that the repair is pre-approved. Contact the Service Department at Summit for details.

#### **Shipping Costs**

Summit will pay for shipping of warranty parts by ground carrier. Expedited freight delivery is available at the expense of the owner. Shipping for the return of parts for warranty consideration will be at the owner's expense but will be reimbursed if the parts in question are deemed defective by Summit or by the manufacturer of the part.

#### **Exclusion of Warranties**

Except for the warranties expressly and specifically made herein, Summit makes no other warranties, and any possible liability of Summit hereunder is in lieu of all other warranties, expressed, implied, or statutory including but not limited to any warranties of merchantability or fitness for particular purpose. Summit reserves the right to modify, alter, and improve any product previously sold without incurring any obligation to replace any product previously sold without such modification. No person is authorized to give any other warranty or assume any additional obligation on Summit's behalf.