
LVC250LP

250 GALLON LOW PROFILE LAV CART

PRODUCT MANUAL



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*** Important ***

Read User's Manual Completely Prior to Operating, Towing, or Servicing Cart



LVC250LP

CUSTOMER: _____

SERIAL # _____

MANUFACTURING DATE: - _____



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User's Manuals

-Fill Rite Flow Meter User's Manual

-Westward 12V Battery Charger User's Manual

-Dakota Space Heater User's Manual



LVC250LP Manual Introduction

This manual incorporates information for Par-Kan Company's Ground Support Equipment Division Lavatory Cart, model LVC250LP and includes general information, operation, maintenance, overhaul and illustrated parts lists. This manual replaces all Par-Kan Company's LVC250LP manuals previously issued in their entirety.

This manual is a compilation of the best information available at the time of writing. If errors or misinformation are found, change requests should be submitted in writing to the manufacturer.

If you have any questions about this product or would like further information about Par-Kan Company's ground support equipment please contact the manufacturer at:

Par-Kan Company
Ground Support Equipment Division
P.O. Box 219
2915 West 900 South
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(260) 352-2141 (260) 352-0701 Fax



Par-Kan Company – Ground Support Equipment
Model LVC250LP Warranty

Par-Kan Company's Ground Support Equipment is warranted to the original purchaser to be free from defects in material and workmanship for a period of two years from the date of purchase as dated on Par-Kan's original invoice.

Par-Kan will replace during the warranty period, subject to an examination by an authorized representative of Par-Kan, any warranted part which proves defective in material and/or workmanship under normal installation, use, and service. Parts must be returned, and transportation charges prepaid to our factory. Any changes to Par-Kan equipment as a result of modifications, misuse, abuse, neglect, accident, vandalism, fire, flood, other acts of God, or improper installation will void this warranty.

If Par-Kan receives notice of such defects during the warranty period, Par-Kan will either, at its option, repair or replace products which prove to be defective. Other manufacturer's warranties may apply for parts purchased by Par-Kan. Par-Kan Company makes no other warranty, either expressed or implied, with respect to this product. Any special, incidental, or consequential damages arising from any breach of warranty are specifically excluded hereunder.



LVC250LP General Information

Steering:	Ball Bearing Turntable Steering
Wheels:	5 Bolt hub assembly with bearings (1,750 lb. load capacity each) Removable Spindles: 1-3/4" diameter Tires: 6.00 X 6.90 X 9.0 Pneumatic Carlisle Tire
Parking Brakes:	Tow bar activated friction brake
Tow Bar:	2-1/2" I.D. Swivel tow bar lunette ring 5 Ton capacity
Finish:	Painted Epoxy
Reflectors:	3" Diameter (Amber / Red) D.O.T. approved Location: Front, Rear, and Sides
Cart Design:	Bed: 14ga carbon steel Shell: 14ga carbon steel
Tank Design:	14ga stainless steel
Pump:	FloJet self priming electric pump
Options:	12 foot dump hose Winterization Package



LVC250LP Operating Instructions

1. Check to ensure the unit is unplugged from power source, all hoses are secured, and that all access doors and hatches are closed.
2. Release the parking break by pushing the tow bar back towards the unit and lifting up the brake latch with foot, the brakes will release as the tow bar is lowered into a horizontal position. Do not drop the tow bar.
3. Lay tow bar in a horizontal position and pin the tow bar to the towing vehicle. The tongue should be securely attached to the vehicle using all safety devices to ensure that the unit does not disconnect from the tow vehicle
4. Tow the unit to the desired location, (**CAUTION: DO NOT EXCEED 15MPH**), turn the tow vehicle engine off and set the parking brake.
5. Remove the dump hose from storage bracket and connect to aircraft. Remove the filler hose from the rear storage compartment. To remove cap from filler coupler grasp cap in left hand and grasp coupler in right hand, turn coupler counter-clockwise while turning cap clockwise, cap will release. (**CAUTION: POINT COUPLER AWAY FROM BODY WHEN REMOVING CAP, THE HOSE MAY BE UNDER PRESSURE**) Connect the filler hose to the aircraft and open the ball valve on filler hose. At the rear of the unit open the meter access door and reset the meter turn the power switch to on and dispense the desired amount of fluid. When transfer is complete turn off power switch, and close access door. Close the ball valve on filler hose and remove from aircraft, replace cap on filler coupler, stow filler hose in rear compartment. Disconnect dump hose from aircraft and stow on storage bracket. Ensure that all caps are securely installed on aircraft and that the access panel or panels have been secured. Check to ensure that all hoses have been disconnected and properly stored, pump is turned off, and that all access doors on unit are closed prior to moving unit. To empty the dump tank position dump pipe (located at left rear of vehicle) over dumping facility, open dump valve and empty contents, close valve after dumping is complete.
6. Tow the unit to designated parking area, and disconnect the tow bar from the tow vehicle. To activate the parking brake push tow bar towards unit until the brake latches. When tow bar is in the vertical position the parking brake is set. Plug the unit back into power source and check indicator lamp on right rear of unit to ensure power is being received.



LVC250LP Safety Precautions

TOWING:

The LVC250LP cart is designed for aircraft ramp use only; it is not intended for highway or off-road use. Towing speed should not exceed 15mph. When traveling over rough surfaces or during turning, speeds should be reduced. Always stow hoses and close all access doors prior to moving unit. **CAUTION: NEVER ATTEMPT TO MOVE THE UNIT WHILE HOSES ARE CONNECTED TO THE AIRCRAFT.**

PARKING:

When the unit is parked the tow bar should be latched in the upright, vertical, position to engage the parking brake. If unit is not connected to the tow vehicle the parking brake must be set to prevent the unit from rolling.

OPERATING:

Before moving unit, ensure that the power supply has been disconnected from the outlet. When moving the unit by hand, use caution, especially in wet conditions. When removing cap from filler coupler point coupler away from body, the hose may be under pressure. It is recommended that when servicing lavatory system that proper protective gear be worn at all times.



LVC250LP Specifications and Capabilities

Dimensions: Length :162"
Width: 64"
Height: 30"

Empty Weight: (Approx.) 1920 lbs.

Tank Capacity:
- Fill Tank 378.5 Liters (100 gal.)
- Waste Tank 567.8 Liters (150 gal.)

Pump Flow Rate:
FloJet 4.5 g.p.m.

Speed Limit: Towing speed should not exceed 15 mph.



LVC250LP Maintenance / Overhaul

Servicing:

Proper maintenance is an essential part of a long life for the LVC250LP. As with any equipment the cart needs inspections, lubrications and adjustments to keep it in good condition while providing maximum protection for the equipment.

WARNING: Before removing or installing any components, be sure the trailer is on level ground with the wheels securely blocked.

Wheels and Tires:

Check the tire pressure weekly. The proper pressure is labeled on the tire.

Check and adjust the wheel bearings during the first few days of operation.

To tighten wheel bearings:

1. Remove dust cap
2. Remove cotter pin from the castle nut and tighten the nut until there is a slight drag on the bearing while turning the wheel.
3. Loosen the nut one slot and reinsert the cotter pin.
4. Following this adjustment there should be a slight amount of drag on the bearing.
5. Replace the dust cap.

Wheel Bearing Lubrication:

Pack the wheel bearings every 6 months or as needed with S.A.E. multi-purpose grease.

Brake Adjustment:

Periodic adjustment of the brake is needed to assure proper operation.

1. Raise the tongue so that the tongue latch touches the tongue.
2. With the tongue in this position, check the rub brake, the rub brake should just touch the tires.
3. If the rub brake is not properly adjusted, adjust the draglink so that the rub brake touches the tire. To adjust the draglink loosen the locknuts and adjust the threaded rod accordingly, then retighten the lock nuts against the brake yoke.

Battery:

Check the battery water level monthly, the water level should be near the top, refill with distilled water.

FIFTH WHEEL STEERING

Check the steering assembly daily; ensure that the tow bar pin assembly and cotter pin are securely fastened to the lower fifth wheel box. **WARNING: FAILURE TO ENSURE THAT PIN IS SECURED COULD LEAD TO LOSS OF STEERING AND CONTROL OF THE UNIT.**

Storage:

When storing the unit for extended period of time, the following procedures are suggested

- Touch up all worn or damaged paint
- Lift and block unit with tires lifted off the ground.
- Remove battery
- Drain and rinse tanks
- Drain meter and hoses



LVC250LP Troubleshooting

If the brakes do not engage or disengage?

Check the brake yoke bar adjustment

If the steering on the unit will not turn?

Check to ensure the brake is not engaged

If the unit pulls to one side?

Check the tire pressure and bearings

If the tow bar will not stay in the locked position

Check the tow bar latch and latch bar for excessive wear

Check the brake yoke bar for any adjustment

If the unit will not pump fluid?

Check the fluid level in tank then check to ensure that all valves are open

Check the fill hose for kinks or blockages

If meter does not work properly?

- Check to ensure fluid is being pumped, if fluid is flowing stop pumping and reset meter



LVC250LP Illustrated Parts Listing

The illustrated parts list contains a breakdown of the LVC250LP. All parts contained in the lavatory cart that can be disassembled, repaired, manufactured, replaced or reassembled are listed.

Each sketched assembly is followed immediately by its detailed parts list.

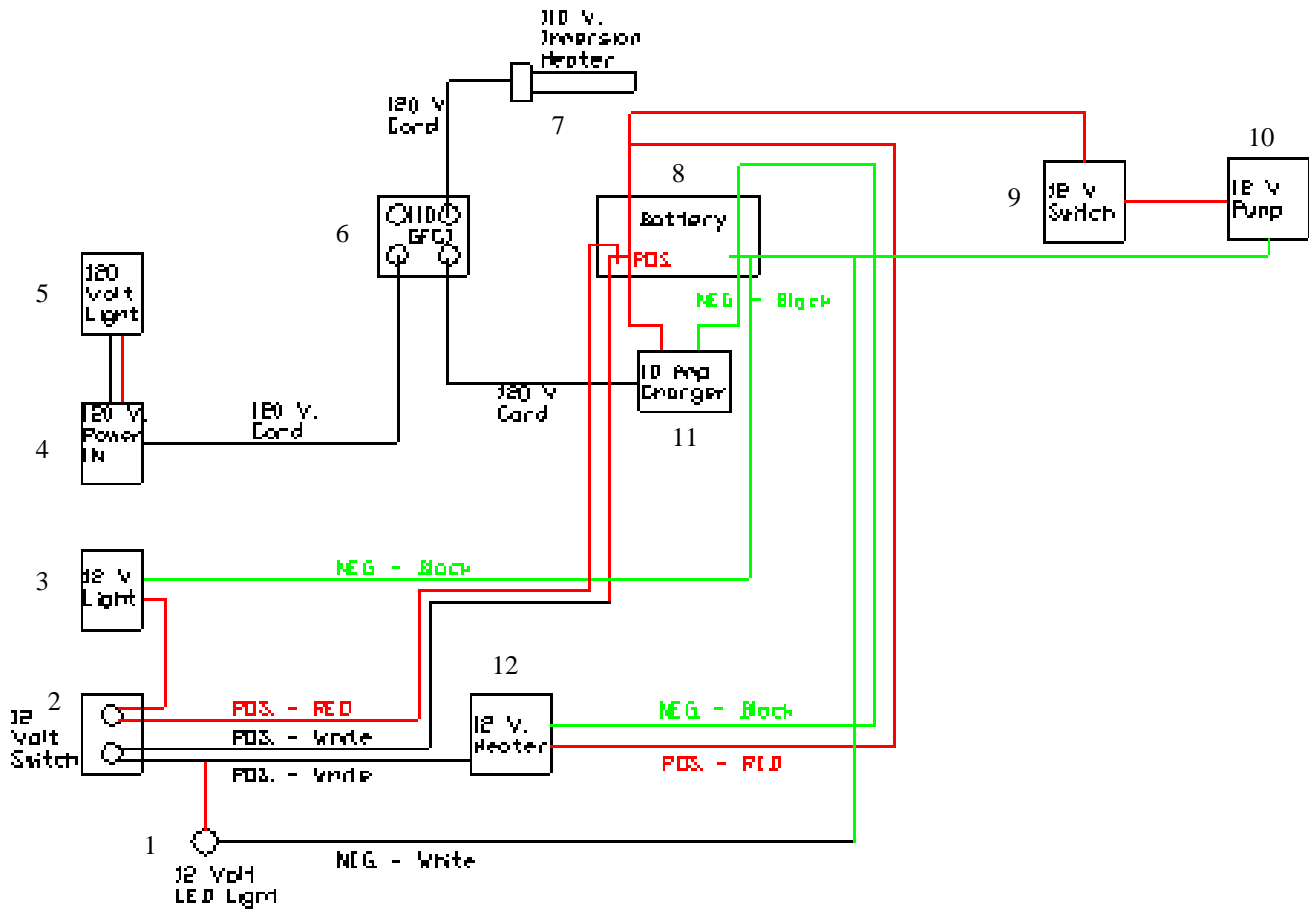
Item Number Column: The figure and index numbers key the detailed parts list to the applicable illustration.

Part Number Column: This column contains the manufacturer's and vendor's part numbers.

All parts listed on the following pages are available through Par-Kan Company.



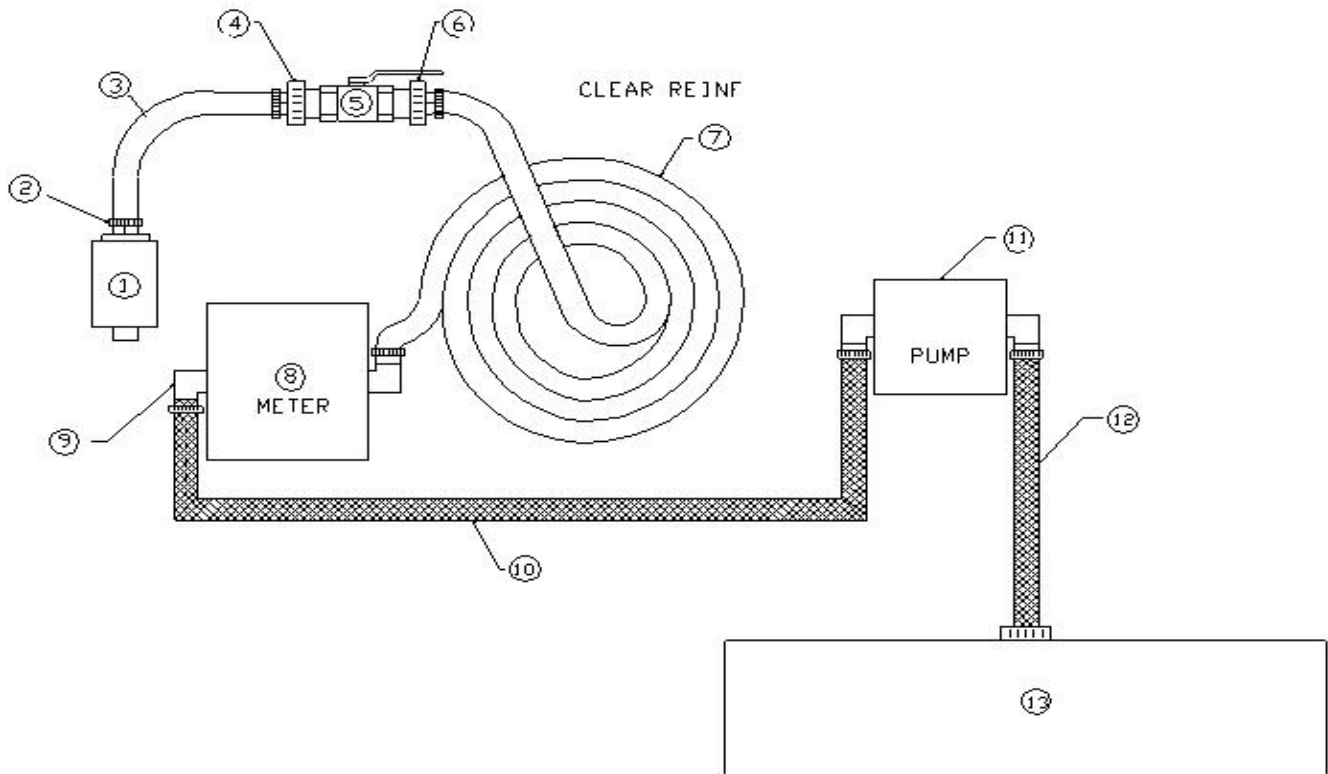
LVC250LP Electrical Diagram



Key #	Part Number	Description
1	640084	Indicator Light, Red LED dot
2	640057	Switch, Weatherproof Momentary On/Off/On
3	660010	Light, License Plate
4	630505	Receptacle, Plastic Box 1/2 FSE 2 Recp.
5	640030	Indicator Light
6	630504	Receptacle, GFCI White 120 20A FD
7	640204	Water Heater, W/Thermo-120V-1500W
8	640226	Battery, 12 Volt Deep-Cell GR 24 GSE
9	640022	Switch, Toggle
10	220561	Pump, Water 12V. W/Press. SW.(Flojet)
11	640252	Battery Charger, Automatic 12 Volt / 10 Amp.
12	640222	Heater, Electric Space 12 Volt DC



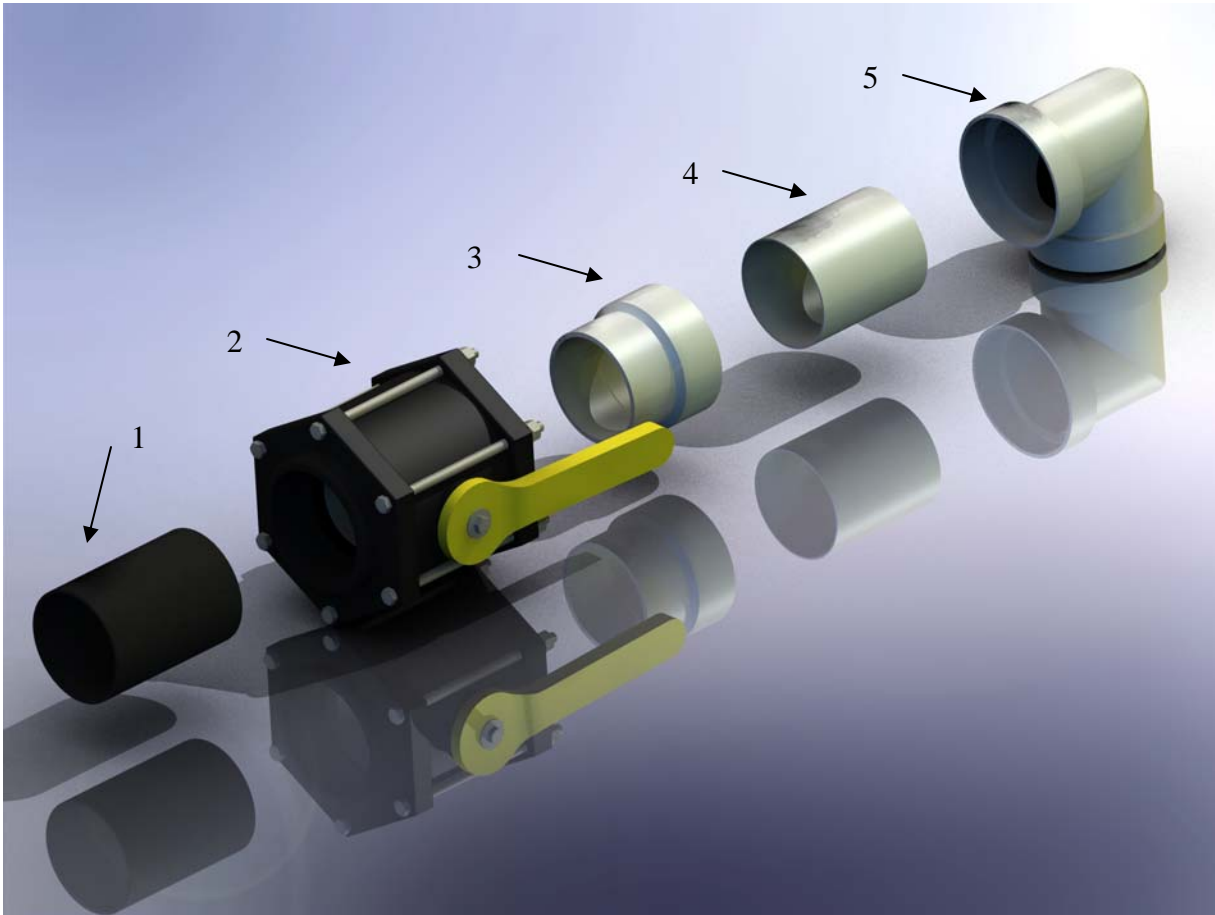
LVC250LP Plumbing Diagram Blue Water Tank



Key #	Part Number	Description
#1	220657	Coupling, Lav. Water Serv.!" Ext Collar
#2	220353	Hose Clamp, 3/4" SS **6812**
#3	220302	Hose, 1" ID Reinforced PVC Clear 6"
#4	224024	Adapter, 3/4" NPT X 1" Barb-Poly
#5	220203	Valve, 3/4" Ball/Brass
#6	224021	Adaptor, 3/4" NPT X 3/4" Barb Nylon
#7	220301	Hose 3/4" ID Reinforced PVC (Clear) 144"
#8	220612	Meter, Nickel Plt. Ports, LAV / PWC Meter
#9	225035	Elbow, 1" NPT X 3/4" Bango 90 degree
#10	220301	Hose 3/4" ID Reinforced PVC (Clear) 18"
#11	220561	Pump, Water 12 V. W/Press. SW. (Flowjet)
#12	220301	Hose 3/4" ID Reinforced PVC (Clear) 8"
#13	L250LP-8W000	100 Gallon Blue Water Tank



LVC250LP Plumbing Diagram Open Dump System



Key #	Part Number	Description
#1	222100	4" Nipple x 5" long
#2	220227	Bango Ball Valve
#3	223159	Adaptor, 4" Male to Female
#4	L280LP-8P600	4" PVC Schedule 40
#5	223285	4" Elbow



LVC250LP Decal Package

**METER
BATTERY/CHARGER
COMPARTMENT** 1

**FILL HOSE
COMPARTMENT** 2

**OPEN FILL VALVE BEFORE USE
CLOSE FILL VALVE AFTER USE** 3

**INSTALL FILL CAP
AFTER USE** 4

**LAVATORY
SERVICE** 5

**CHARGER
HEATER** 6



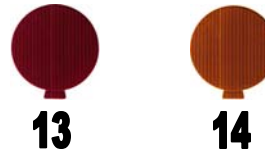
**FLUSH WATER
FILL PORT** 8

← REFILL LEVEL 9



SET BRAKE → 11

**DO NOT
RUN PUMP DRY** 12



**MAX. TOW SPEED
15 M.P.H.** 15



**NO
STANDING
ON TANK** 17

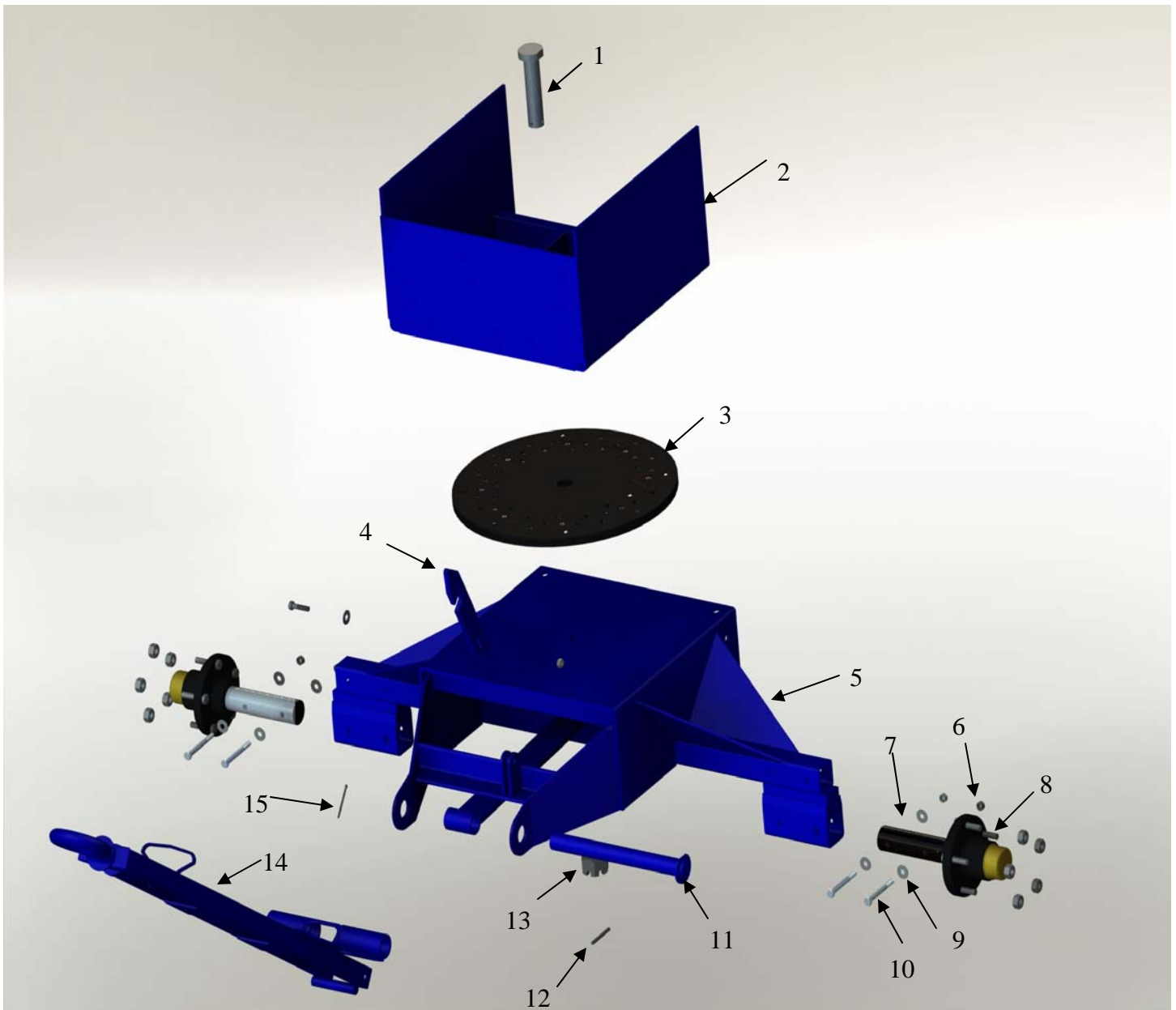


LVC250LP Decal Parts Listing

Key #	Part Number	Description
1	250037	Decal, Meter / Battery / Charger Compartment
2	250042	Decal, Fill Hose Compartment
3	250044	Decal, Open Before / Close After Use
4	250038	Decal, Install Fill Cap After Use
5	250041	Decal, Lavatory Service
6	250040	Decal, Charger / Heater
7	250069	Decal, Par-Kan Company
8	250052	Decal, Flush Water Fill Port
9	250021	Decal, Refill Level
10	250250	Decal, Made in the U.S.A
11	250026	Decal, Set Brake
12	250022	Decal, Do Not Run Pump Dry
13	250029	Reflector, 3" Round Red
14	250030	Reflector, 3" Round Amber
15	250024	Decal, Max To Speed 15 mph
16	250063	Decal, Caution – Operators Manual
17	250035	Decal, No Standing On Tank



LVC250LP 5th Wheel Assembly



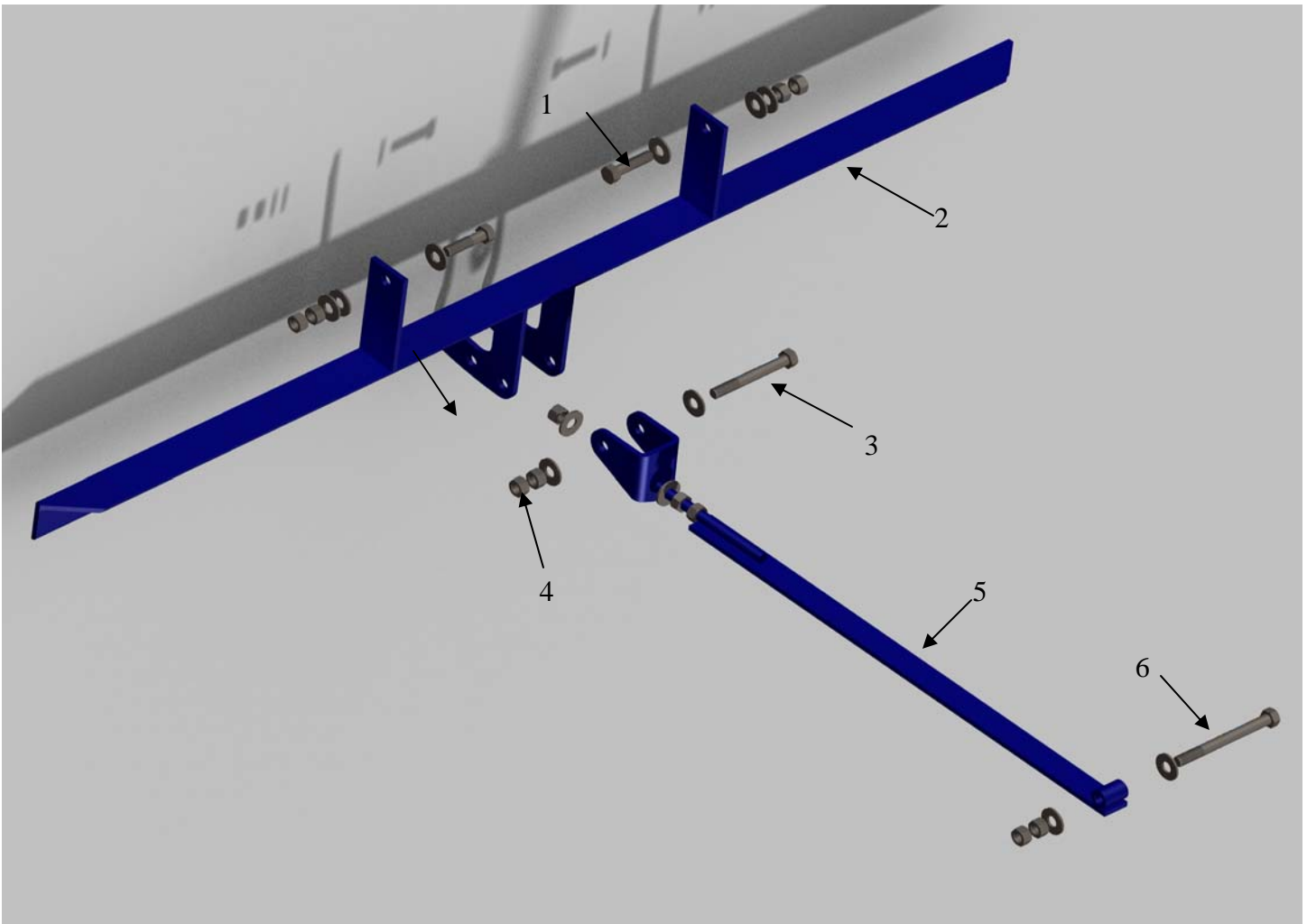


LVC250LP 5th Wheel Parts Listing

Key #	Part Number	Description
1	210361	5th Whl Bolt (1-1/4"-12X5 W/HCS) (Replaced)
2	L250LP-2W035	Upper 5th Wheel Weldment
3	241197	Turntable, Laminated W/ 3/4" Chrome Balls
4	CBC5010-2P501	Latch, Towbar
5	L250LP-2W016	Lower 5th Wheel Weldment
6	216507	Locknut, 3/8"-16 HEX 2-Way-Zinc
7	241000	Spindle
8	241025	Hub Assy. 5 Bolt 4-1/2" "Standard" GSE
9	217003	Washer, 3/8" USS Flat Zinc
10	211069	HHCS, 3/8"-16 X 3-1/2" GR5 Zinc
11	CBC510-2W041	Tow Bar Pin Weldment
12	210104	Roll Pin, 3/8" X 2 1/2" (Spring Pin)
13	216220	Nut, 1-1/4"-12 Slotted Hex Plain
14	270510	Tow Bar, Assy. Swivel TB-20PKS
15	210115	Roll Pin, 1/8" X 3/4"
16	L250LP-2S018	Lower 5th Wheel Assembly



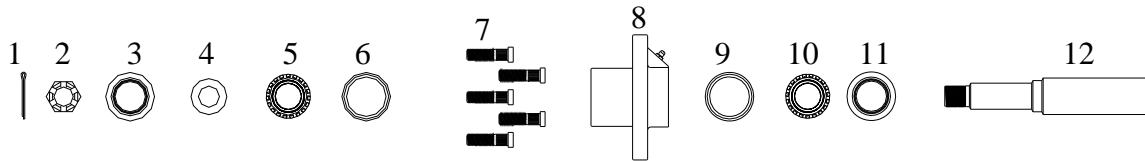
LVC250LP Brake Bar Assembly



Key #	Part Number	Description
1	211117	HHCS, 1/2"-13 X 2" GR5 Zinc
2	L250LP-1W000	Brake Bar
3	211124	HHCS, 1/2"-13 X 4" GR5 Zinc
4	216511	Locknut, 1/2"-13 HEX 2-Way-Zinc
5	L250LP-1W001	Brake Adjustment Bar
6	211127	HHCS, 1/2"-13 X 5" GR5 Zinc



LVC250LP Spindle & Hub Assembly

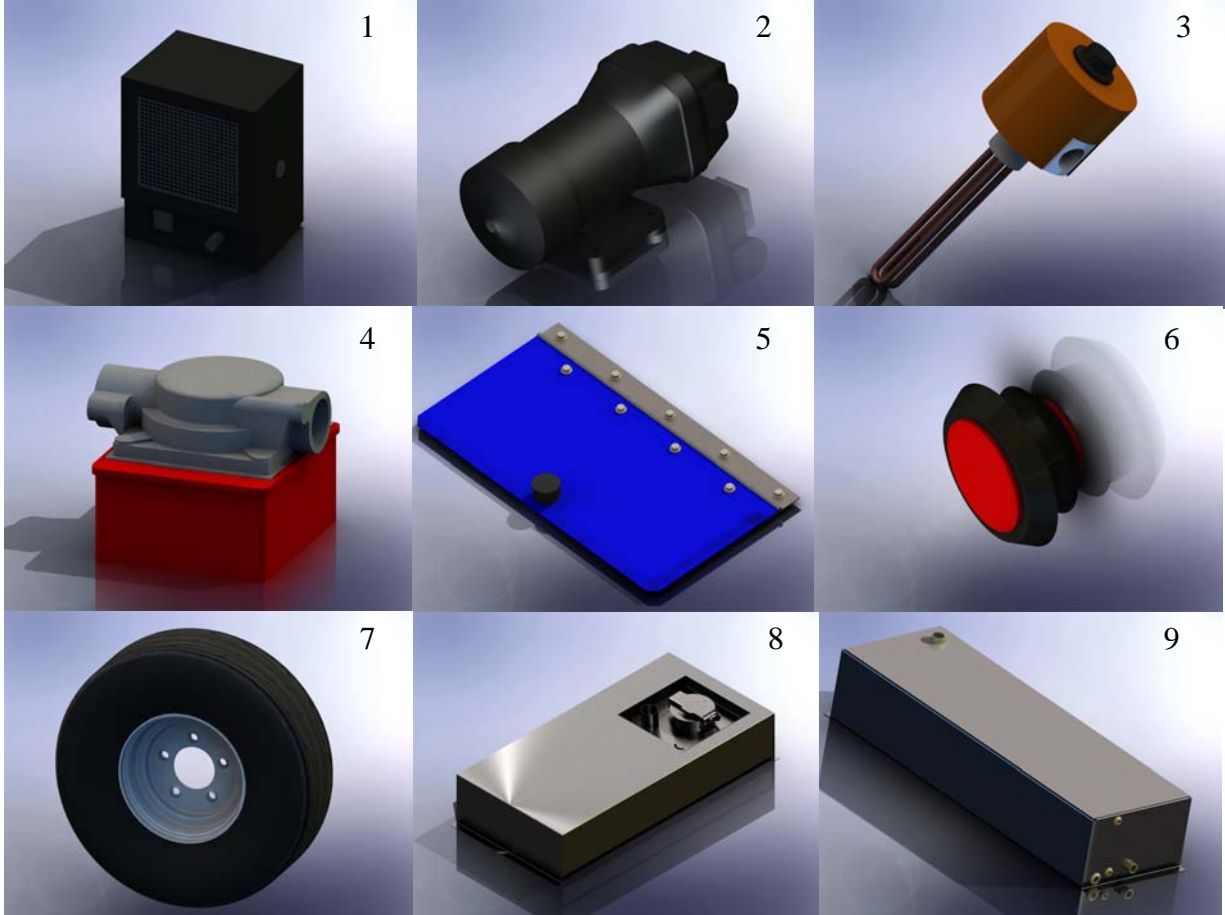


Key #	Part Number	Description
1	241108	Cotter Pin
2	241107	Spindle Nut
3	241109	Dust Cap
4	241106	Washer with D shaped hole
5	241105	Outer Bearing
6	241104	Outer Cup
7	241103	Lug Bolt
8	241025	Hub Assembly (Includes part numbers 1-11)
9	241102	Inner Cup
10	241101	Inner Bearing
11	241100	Grease Seal
12	241000	Spindle
**	241110	Lug Nut

** Not included in the illustration



LVC250LP Replacement Parts



Key #	Part Number	Description
#1	640222	Heater, Electric Space 12 Volt DC
#2	220561	Pump, Water 12V. W/Press. SW. (Flojet)
#3	640204	Water Heater, W/Thermo-120V-1500W
#4	220612	Meter, Nickel Plt. Ports, LAV / PWC Meter
#5	L250LP-4A001	Outer Shell Cover
#6	640030	Indicator Light
#7	241058	6.00 x 6.90 x 9.0 Carlisle Tire
#8	L250LP-8W001	150 Gallon Waste Tank
#9	L250LP-8W000	100 Gallon Blue Water Tank
#10	220680	Hose, 4" x 12" LAV Blue/Clear Crush Proof

