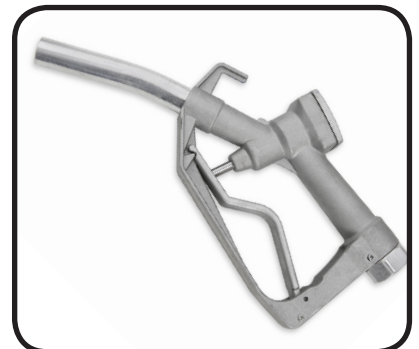
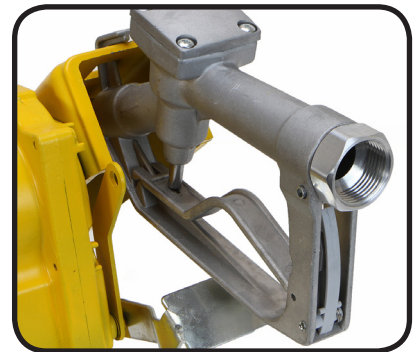




12V 1/4 HP 20GPM DIESEL GASOLINE KEROSENE FUEL TRANSFER PUMP KIT

ITEM: 21114



OWNER'S MANUAL AND SAFETY INSTRUCTIONS

SAVE THIS MANUAL: KEEP THIS MANUAL FOR SAFETY WARNINGS, PRECAUTIONS, ASSEMBLY, OPERATING, INSPECTION, MAINTENANCE AND CLEANING PROCEDURES. WRITE THE PRODUCT'S SERIAL NUMBER ON THE BACK OF THE MANUAL NEAR THE ASSEMBLY DIAGRAM (OR MONTH AND YEAR OF PURCHASE IF PRODUCT HAS NO NUMBER).

FOR QUESTIONS PLEASE CALL OUR CUSTOMER SUPPORT: (909) 628 4900 MON-FRI 9AM TO 3PM PST

WARNING

GENERAL SAFETY WARNINGS

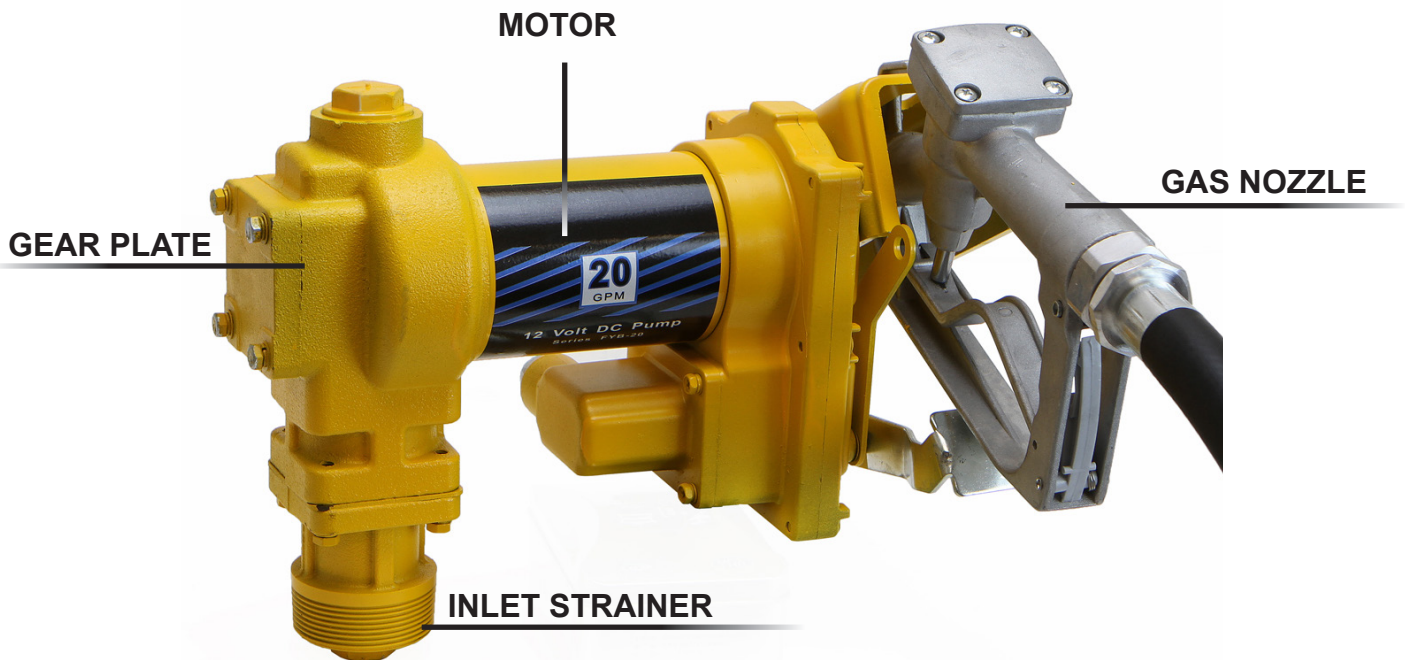
The warnings, precautions, and instructions discussed in this instruction manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator. Read carefully and understand all ASSEMBLY AND OPERATION INSTRUCTIONS before operating. Failure to follow the safety rules and other basic safety precautions may result in serious personal injury.

- **Read and understand all instructions.** Failure to follow all instructions may result in serious injury or property damage.
- **DO NOT** allow persons to operate or assemble the product until they have read this manual and have developed a thorough understanding of how it works.
- **DO NOT modify this product in any way.** Unauthorized modification may impair the function and/or safety and could affect the life of the product. There are specific applications for which the product was designed.
- **Use the right tool for the job. DO NOT** attempt to force small equipment to do the work of larger industrial equipment. There are certain applications for which this equipment was designed. This product will be safer and do a better job at the capacity for which it was intended. **DO NOT** use this equipment for a purpose for which it was not intended.
- **Keep children and bystanders away from the work area while operating the tool. DO NOT** allow children to handle the product.
- **DO NOT** operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust. Power tools create sparks which may ignite the dust or fumes
- People with pacemakers should consult their physician(s) before use. Electromagnetic fields near heart pacemakers could cause pacemaker interference or pacemaker failure. In addition, people with pacemakers should:
 - Avoid operating alone.
 - Properly maintain and inspect to avoid electrical shock.
 - Properly ground power cord. Ground Fault Circuit Interrupter (GFCI)
- Keep work area clean. Cluttered areas invite accidents and injuries. **DO NOT** smoke near the pump or use the pump near an open flame.
- **DO NOT** overreach. Keep proper footing and balance at all times. **DO NOT** reach over across running machines.
- **DO NOT** operate the tool if under the influence of drugs or alcohol.
- Stay alert, watch what you are doing and use common sense. **DO NOT** operate the tool if you are tired.
- Replacement parts and accessories. When servicing, use only identical replacements parts. Use of any other part will void the warranty.
- Pump has a built in check valve with pressure relief to prevent fluid thermal expansion from causing unsafe system pressures. **DO NOT** install additional check valves or foot valves during installation without proper pressure relief valves built into them. Housing or plumbing cracking may result.



SAVE THESE WARNINGS

PRODUCT INFORMATION



Ideal for pumping gas, diesel fuel, kerosene, E15 and Bio-Diesel. Contractor-grade, industry-standard pump has an explosion-proof motor with permanent magnet. Security: Pump equipped for padlocking. Ball Bearing Construction, No Lubrication Required. 1/4 Horsepower. 265 Watts. 22 Amps. 20 Gallons per minute (GPM) Flow. Speed: 2600 RPM. 37 Feet Max Head. 8 Feet Suction Head. 8 Feet Discharge hose. 1" Inlet and Outlet Port. Duty Cycle: 30 Minutes. Package Dimensions: 21.9 x 14 x 11.9 inches. Oil Seal Type. Bypass valve. Self Priming Pump. Color May Vary (Blue, Yellow)

FEATURES

- 1/4 Horsepower
- 265 Watts. 22 Amps
- 20 Gallons per minute (GPM) Flow
- Speed: 2600 RPM
- Oil Seal Type
- Bypass valve
- Self Priming Pump
- Duty Cycle: 30 Minutes. Package Dimensions: 21.9 x 14 x 11.9 inches
- Integral Inlet Screen
- 2" Male NPT on Bung Adapter
- Pump Equipped for Padlocking
- 1" Female NPT on Suction Port
- Ball Bearing Construction
- No Lubrication Required
- 37 Feet Max Head. 8 Feet Suction Head. 8 Feet Discharge hose. 1" Inlet and Outlet Port.

COMPATIBLE LIQUIDS			NON-COMPATIBLE LIQUIDS		
DIESEL	KEROSENE	HEPTANE	ACETONE	AMMONIA	BENZANE
GASOLINE	MINERAL SPIRITS	HEXANE	HYDROCHLORIC ACID		BLEACH

CAUTION: If in doubt about compatibility of a specific liquid, contact the supplier of fluid to check for any adverse reactions to the wetted materials shown in the parts list.

ASSEMBLY

- The hose used with this pump must be of conductive jacket design or have a ground wire connecting inlet and outlet fittings to avoid build up of static charge.
- Systems should be set-up to require a minimum amount of suction lift. Maximum vertical distance from the surface of the fluid in the tank to the inlet of the pump is 9ft for gas and 10ft for diesel fuel.
- A filter should be used on the pump outlet to ensure that no foreign material is transferred to the fuel tank.
- The tank or barrel must be properly vented.
- Use a gasoline and oil proof pipe compound on all joints.
- A water separator should be used for pumping diesel.

ATTACHING THE PUMP TO THE TANK OR BARREL

1. Tightly screw the extension pipe into the inlet flange of the pumping unit. Attach the second pipe and suction pipe to the extension pipe in the same manner.
2. Cut the suction pipe to a length that will place its end within 3" of the BOTTOM of the tank. **DO NOT** rest the suction pipe on the bottom of the tank.
3. Screw the inlet flange of the pump into the tank or barrel opening inlet flange must be completely and securely threaded into an undamaged tank or barrel bung.
4. Install the hose and nozzle to the pump before connecting the power wires together. Ground wires must be connected.
5. The tank or barrel should be anchored down to prevent tipping when full or empty.

IF CONNECTED TO A VEHICLE

1. **DO NOT** attempt to power the pump from thin vehicle wiring such as the cigarette lighter wire.
2. The ground wire must **ALWAYS** be independently connected to the chassis of the vehicle being fueled and/or container being filled. **DO NOT** connect the green and black wires together, for example.
3. Unless the pump body and tank/chassis are at the same electrical potential, sparking due to static charge or wiring faults could ignite fuel fumes, resulting in an explosion.
4. If the pump is to be powered from a vehicle power system, it is recommended that permanent wiring and connections be made to vehicle power system which includes a 30 amp slow blow fuse.

CONNECTING THE PUMP

Read and understand all of the electrical wiring instructions before proceeding.

1. Remove the pump's electrical junction box cover and straighten the 3 wires to make the stripped wire ends accessible outside of the junction box.
2. Screw the furnished cable connector in to the conduit opening in the pump junction box.
3. Strip 6" of the outer insulating covering from one end of the furnished electrical cable being careful not to damage the wire insulation.
4. Pass the stripped end of the furnished cable through the cable connector until 2" of the unstripped wire is within the junction box.
5. Strip 1/2" of the insulation from the ends of the cable wires. Connect these wires to the matching colored pump wires using wire nuts. Be sure no bare wires are exposed.

OPERATION

6. Fold the wires into the junction box and replace the cover.
7. Make sure all the screws are seated so there is no space between the cover and the junction box.
8. Run the electrical cable to the vehicle power system, supporting the cable as necessary and protecting it from the sharp edges, heat and anything that could damage the cable.
9. Strip the outer cable covering as necessary. Make a solid electrical connection to the vehicle frame with the ground green/white wire.
10. To determine if the vehicle electrical system is negative (-) or positive (+) ground, check the battery marking of the terminal that is wired to the vehicle frame or motor block. For vehicles with a negative ground, connect the negative (black) to the vehicle frame. For vehicles with a positive ground, connect the positive (red) wire to the vehicle frame.
11. Attach one end of the 30amp fuse holder to the end of the remaining wire. Connect the other end of the fuse holder to the ungrounded side of the power source. The battery terminal or the end of the battery cable is recommended.
12. Check all connections to make sure they are correct. Install the 30 amp slow blow fuse in the fuse holder.

OPERATION

To ensure ultimate performance, the pump must be setup according to INSTALLATION section of this manual. On the initial start-up, it may be necessary to hold the nozzle open a few seconds to allow the pump to prime:

1. Remove the nozzle from the pump and insert into the tank.
2. Turn the pump ON by lifting the switch lever.
3. Begin fuelling by squeezing the nozzle lever.

CAUTION: The pump motor is equipped with thermal overload protection. If overheated, it will shut off without any damage to the windings. Be sure to turn off the pump power if this occurs. As the motor cools, it will start without warning if the power is on.

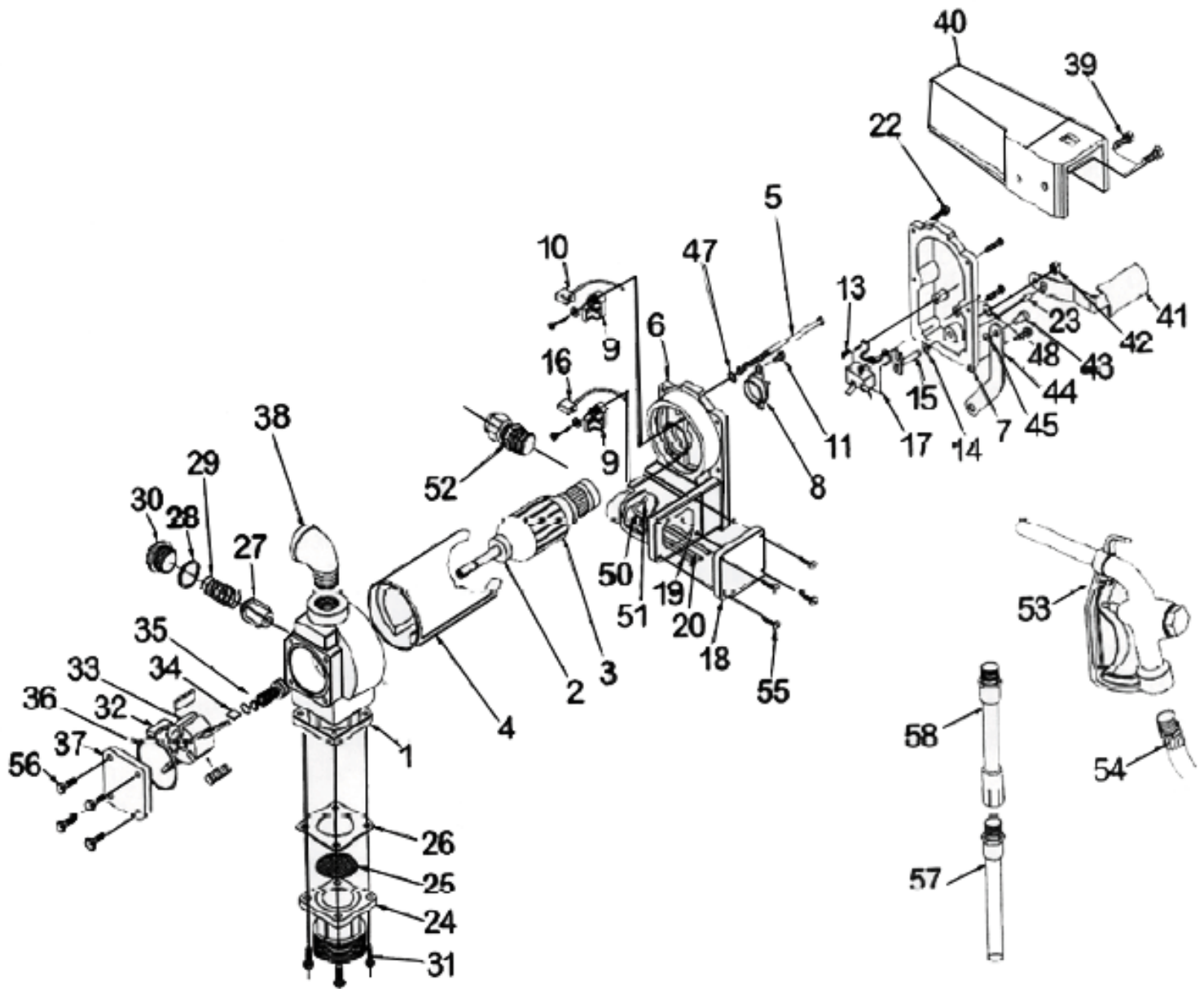
MAINTENANCE

- Disconnect power to the pump before servicing the pump.
- To keep the pump running at its best, thoroughly flush pumps to be stored for long periods of time with diesel fuel.
- Remove and clean the strainer screen after every 20 hours of operation. Cleaning frequency depends on the fluids being pumped.
- For your safety, service and maintenance should be performed regularly by a qualified technician.
- Take motors needing service to an authorized repair shop to maintain “explosion proof” integrity.

TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	SOLUTION
PUMP DOES NOT PRIME	Suction line problem	Check for leaks in suction line
	Bypass valve open	Remove and inspect valve
	Vanes sticking	Check vanes and slots for wear
	Gasket leakage	Tighten covers and joints
	Excessive rotor or vane wear	Check rotors and vanes for excessive wear or damage
	Outlet is blocked	Check pump outlet, hose, nozzle and strainer screen for blockage
	Motor not operating	Rotor should turn clockwise pump end, if not, return for repair
	Motor runs backwards	Check wiring for correct polarity
PUMP HUMS BUT DOES NOT OPERATE	Dirt in pump cavity	Clean out pump cavity
	Motor failure	Motor bearings frozen, return for repair
LOW CAPACITY	Excessive dirt in strainer	Remove and clean strainer
	Suction line problem	Check suction line for leaks or restrictions
	Bypass valve sticking	Remove and inspect valve
	Hose damaged	Replace hose
PUMP RUNS SLOWLY	Incorrect voltage	Check incoming line voltage
	Wiring problem	Check for loose wires
	Casting out of line	Motor frame must be installed with punch mark in line with notch in motor casting
	Brush problem	Check brushes for excessive wear and adequate spring tension
	Motor problem	Inspect armature and commutator
MOTOR STALLS	Low voltage	Check incoming line voltage
	Excessive rotor or valve wear	Check rotors and vanes for excessive wear or damage
MOTOR OVERHEATS	Pumping high viscosity fluids	Fluids can only be pumped for short periods of time. Less than 1/2 hour duty cycle
	Clogged strainer	Remove and clean strainer
	Restricted suction pipe	Remove and clean pipe
	Weak armature	Replace armature
MOTOR WILL NOT TURN ON	No power	check incoming power source
	Switch failure	Check line switch
	Thermal protector failure	Check thermal protector
FLUID LEAKAGE	Bad O-ring gasket	Check all O-ring gaskets
	Dirty shaft seal	Clean seal and seal activity
	Bad shaft seal	Replace seal
	Incompatible fluid	Refer wetted parts list to fluid manufacturer

PARTS



PARTS LIST

#	DESCRIPTION	QTY	#	DESCRIPTION	QTY	#	DESCRIPTION	QTY	#	DESCRIPTION	QTY
1	PUMP HOUSING	1	17	LINE SWITCH	1	33	ROTOR	5	46	1/4 ECT LOCK WASHER	1
2	BALL BEARING	2	18	JUNCTION BOX COVER	1	34	ROTOR KEY	1	48	5/16 RETAINING RING	1
3	ARMATURE ASSEMBLY	1	19	NEGATIVE WIRE LEAD	1	35	ROTOR COVER	1	49	GROUND WIRE	1
4	MOTOR FRAME/MAGNET	1	20	POSITIVE WIRE LEAD	1	36	ROTOR COVER GASKET	1	51	#8 32 x 3/8 GROUND SCREW	1
5	1/4-2 x 5 THRU BOLT	2	22	10-24 x 3/4 TORX	6	37	SEAL ASSEMBLY	1	52	CABLE CONNECTOR	1
6	MOTOR CASTING ASSEMBLY	1	23	5/32 x 1/2 PIN	1	38	STEEL ELBOW	1	53	NOZZLE	1
7	SWITCH PLATE & BUSHING	1	24	INLET FLANGE	1	39	5/16 -18 x 3/4 HHCS	1	54	HOSE	1
8	THERMAL PROTECTOR	1	25	SCREEN	1	40	NOZZLE COVER	2	55	10-24 x .50TORX	4
9	BRUSH HOLDER	2	26	INLET GLASKET	1	41	SWITCH LEVER	1	56	1/4-20 x .5HHCS	4
10	NEGATIVE BRUSH	1	27	BYPASS VALVE	1	42	5/15 x 18 LOVKNUT	1	57	SUCTION PIPE	1
11	#8-32 x 1/2 TORX	1	28	BYPASS VALVE GASKET	1	43	#14 X 5/8 DRIVE SCREW	1	58	SUCTION PIPE EXTENSION	1
13	#8-32 x 3/8 TORX	2	29	BYPASS SPRING	1	44	LOCKING LINK	1	59	PUMP BODY COMPLETE	1
14	5/16 SPRING WASHER	1	30	BYPASS CAP	1	45	1/4 SPRING WASHER	1			
15	SWITCH SHAFT ASSEMBLY	1	31	1/4 -20 x 3/4 HHCS	1	46	1/4 ECT LOCK WASHER	1			
16	POSITIVE BRUSH ASSEMBLY	1	32	VANE	4	48	5/16 RETAINING RING	2			

DISCLAIMER

PLEASE READ THE FOLLOWING CAREFULLY

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Record Product's Serial Number Here: _____

Note: If product has no serial number, record month and year of purchase instead.

Note: Some parts are listed and shown for illustration purposes only and are not available individually as replacement parts.

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Before returning to your retailer, our customer service team is here to help.



Call Us: 909.628.4900

Email Us: info@starktoolsusa.com

Hours of Operation: 9am - 3pm PST Monday - Friday

PRODUCT MADE IN CHINA