

Diesel Fuel Transfer Pump

Comes with 49-ft hose reel

Model: TMG-DFP10



- Please read the product manual completely before assembly
- Check against the parts list to make sure all parts are received
- Wear proper safety goggles or other protective gears while in assembly

Missing parts or questions on assembly?

Please call: 1-877-761-2819 or email: cs@tmgindustrial.com

Do not return the product to dealer, they are not equipped to handle your requests

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Thank You!

Thank you for your purchase of the portable pump! Your product comes with over 10 years of pump manufacturing experience behind it, providing you the value that comes with superior performance, user friendly design, outstanding durability, and solid, simple engineering. Experience that gives you peace of mind.

About This Manual

From initial concept and design through its final production, your pump is built to give you years of trouble-free use. To ensure it provides that service, and to avoid injury or death, it is critical that you read this entire manual prior to attempting to install or operate your new pump. Become familiar with the terms and diagrams, and pay close attention to the highlighted areas with the following labels:



DANGER! Emphasizes an area in which personal injury or even death **will** result from failure to follow instructions properly. Mechanical damage may also occur.



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CAUTION! Failure to observe a “Caution” may cause damage to the equipment.



IMPORTANT! These boxes contain information that illustrates a point that may save time, or be key to proper operation, or clarifies a step.

Safety Information



DANGER! Electrical wiring should be performed with extreme caution and in compliance with local, state, and national electrical code NEC/ANSI/NFPA 70, NFPA 30, and NFPA 30A, as appropriate for the intended use of the pump. Threaded rigid conduit, sealed fittings, and conductor seal should be used where applicable. The pump must be properly grounded. If installing in deviation of this manual, a licensed electrician must perform the installation. Improper installation or use of this product will result in serious bodily injury, or death!



DANGER! To ensure safe and proper operation of your equipment, it is critical to read and adhere to all of the following safety warnings and precautions. Failure to follow instructions below, improper installation, or use of this product, will cause serious bodily injury or death!

- **NEVER** smoke near the pump, or use the pump near open flames when pumping a flammable liquid! Fire can result!
- This product shall not be used to transfer fluids into any type of aircraft due to spark / static discharge possibility. Spark / static discharge will cause explosions.



DANGER! To minimize static electricity build up and possible explosion, use only static wire conductive hose when pumping flammable fluids, and keep the fill nozzle in contact with the container being filled during the filling process. Spark / static discharge will cause explosions.



WARNING! Threaded pipe joints and connections should be sealed with the appropriate sealant or sealant tape to minimize the possibility of leaks. Leaking fuel may cause the potential for fire and explosion.



CAUTION! The pump motor is equipped with thermal overload protection; if overheated, the motor will shut off to prevent damage to the windings. If this happens, you must turn off the pump power to reset this safety feature, and turn the pump back on when it has cooled to continue use. The pump will not restart until properly cooled.



CAUTION! This product is not suited for use with fluids intended for human consumption or fluids containing water. Materials of construction are not food grade. The pump is water tolerant, however, extended use with water will shorten the life of the vanes, and can cause swelling of the rotor. Flush / drain the pump after pumping water to be certain water does not stand in the pump body to prevent premature wear. Flush with a petroleum product (gasoline, diesel, light oil, etc) to eradicate residual water.



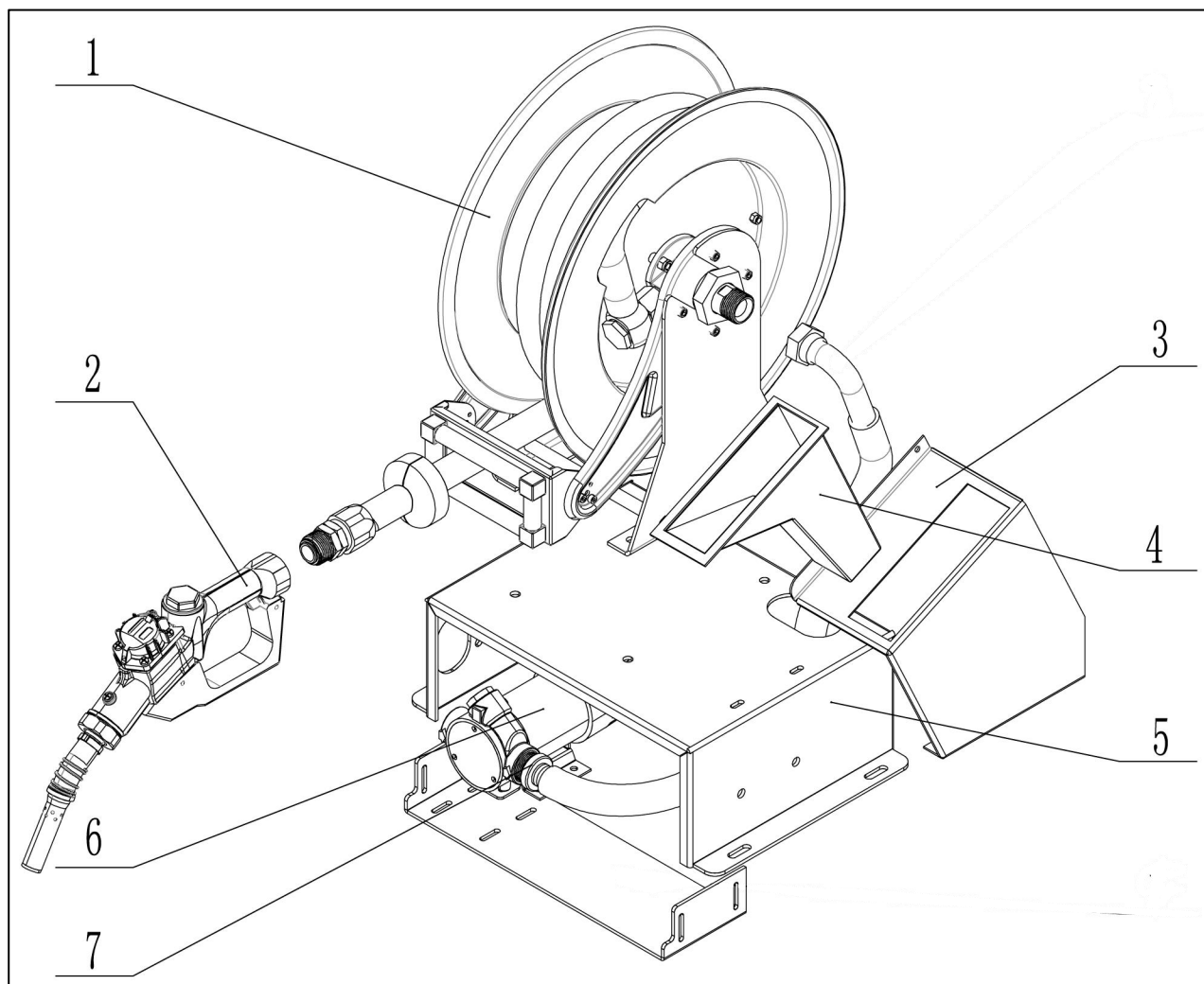
IMPORTANT! A Fill-Rite Filter should be used on the pump outlet to ensure no foreign material is transferred to the fuel tank. Foreign material can damage the equipment being fueled.

GENERAL SPECIFICATIONS

The Diesel Fuel Transfer Pump for your convenience and safety.

Each kits is equipped with:

- 1.Hose reel with 49' hose
- 2.Automatic gun
- 3.Automatic gun base
- 4.Automatic gun holder
- 5.Hose reel base
- 6.12V DC motor
- 7.Connector hose



Pump Installation

The pump is designed to be portable for your convenience and safety. It features a unique hinged vane design that eliminates the need for a bypass valve. Because of its unique nature, the pumps can be installed / used in several configurations. Read each configuration prior to beginning installation.



WARNING! The pump is designed primarily for portable applications, using skid tanks, drums, barrels, and other portable fuel containers to supply fuel. It is paramount to anchor the supply tank or drum to which the pump is connected to ensure no movement occurs in transit or while fueling. Failure to secure the tank or drum can cause unexpected and uncontrolled movement, resulting in damage, injury, death, and potential fire or explosion.



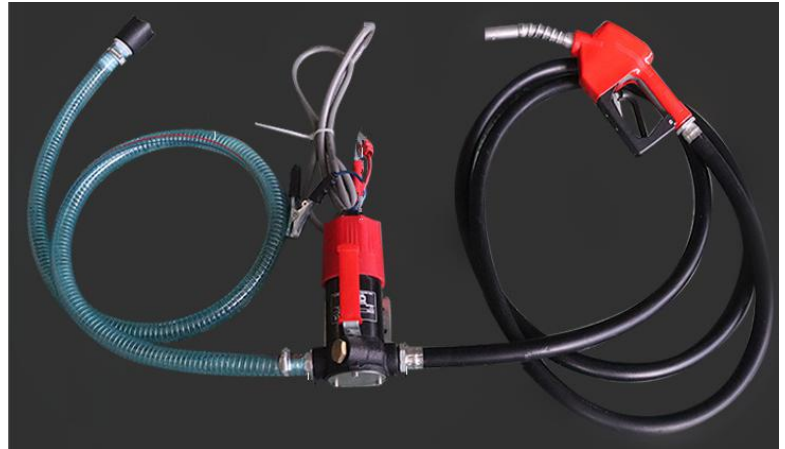
IMPORTANT! Do not use check valves or foot valves; valves reduce rate of flow and performance of the pump.

Suction Hose Configuration



WARNING! Threaded pipe joints and connections should be sealed with the appropriate sealant or sealant tape to minimize the possibility of leaks. Leaks create the potential for fire or explosion.

1. Select chemically compatible inlet and outlet hoses that contain a static discharge wire, are for use with flammable liquids, and are rated to at least 50 psi.
2. Reconfigure inlet and outlet flanges if necessary (optional). Instructions below.
3. Use a conductive nozzle or valve at the end of the discharge hose that can be shut off tightly to prevent accidental siphoning when the pump is not in use.
4. **NOTE:** If pumping from a metal container, the metal end of suction hose **MUST** be in contact with the metal container for electrical continuity.



NOTE: Hose lengths are longer than shown.

Fueling Safety

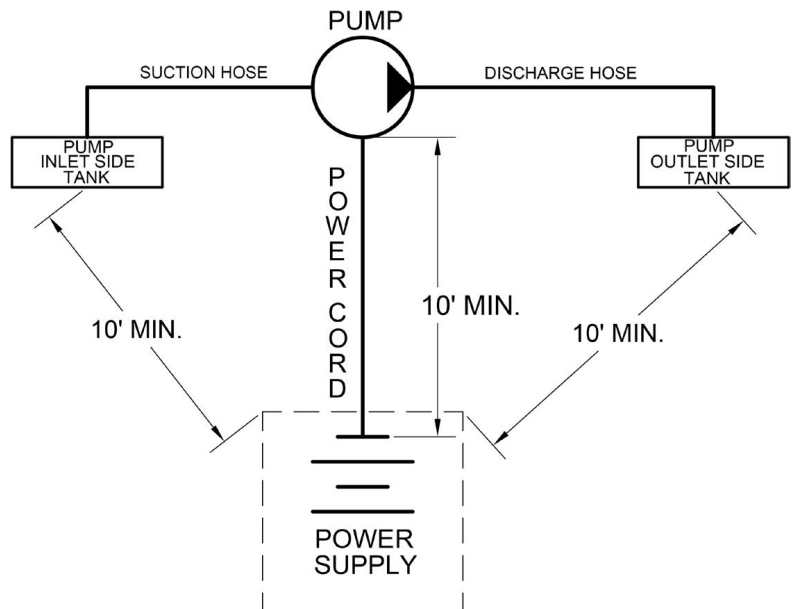


DANGER! Fumes accumulated while fueling create an Explosive Atmosphere. It is **CRITICAL** that all possible sources of ignition be removed to a safe distance or extinguished. Sources of ignition would include (but not be limited to) open flames, cigarettes, static discharge, or electrical connections that can create a spark. Explosion, fire, and severe injury or death will occur if the explosive vapors are ignited.

Fumes accumulated while fueling create an Explosive Atmosphere around the tank that is being filled. To avoid possible explosion of accumulated vapors, it is critical to keep possible sources of spark / ignition at safe distances from the fuel vapors.

The accompanying diagram shows minimum safe distances for safe fueling. 10' is the minimum safe distance between:

- Power source and fuel supply.
- Power source and tank being filled.
- Power source and pump.



<p>WARNING</p> <ul style="list-style-type: none"> • STATIC ELECTRIC SPARK EXPLOSION HAZARD • NEVER fill portable containers that are in or on vehicles 		<ul style="list-style-type: none"> • ALWAYS PLACE CONTAINERS ON GROUND • Keep nozzle in contact with container while filling. 		<p>A static electric spark can occur when filling portable containers sitting on truck bed liners, or on any vehicle's carpeting or floor matting.</p> <p>This spark will explosively ignite a gasoline vapor fire and cause SERIOUS INJURY or DEATH</p>
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Flange Configuration

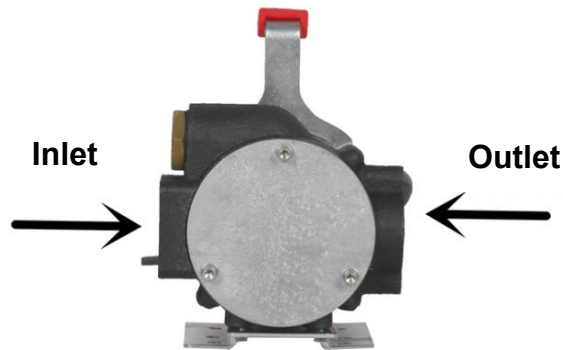


WARNING! Be certain seals and screen are properly positioned and clean any time the flanges are reconfigured. Improperly installed or dirty seals or screens could cause leaks and the potential for fire or explosion



CAUTION! Always be certain the power switch is accessible after reconfiguring the inlet and outlet ports.

The inlet and outlet flanges of your pump can be configured horizontally.



DC Power Connection



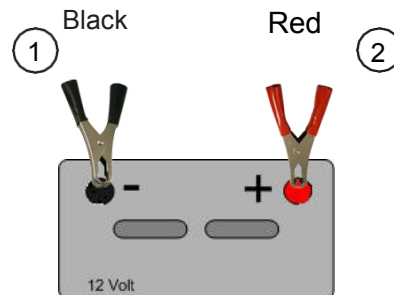
DANGER! Be certain the power switch is “OFF” prior to connecting the battery clamps / power cables to the power source or installing the cable into the pump to prevent unexpected starting of the motor. Unexpected motor start can cause unintended discharge of fuel, creating an explosion and fire hazard.

Inspect power cable before each use! Damage to the outer jacket of the cable that exposes wiring requires replacement of the power cable.

Install power cable by aligning flat on plug with front of pump. **HAND TIGHTEN ONLY!** The power cable terminates in black, and red clamps. All two clamps must be used.

1. Connect the black (negative) clamp to the negative post of the DC power source.
2. Connect the red (positive) clamp to the positive post last.

Clamps should be disconnected in reverse order.



Power Switch



DANGER! Be certain the power switch is “OFF” prior to connecting the battery clamps / power cables to the power source or installing the cable into the pump to prevent unexpected starting of the motor. Unexpected motor start can cause unintended discharge of fuel, creating an explosion and / or fire hazard.



WARNING! The pump body can become hot with extended use. Always use the handle to lift and carry the pump when moving it. Use caution when gripping the handle as exposed skin may be burned if it contacts a hot pump.



IMPORTANT! The RD series pump uses thermal overload protection to prevent overheating. If the pump shuts off due to thermal overload, turn the power switch “OFF”. Once the pump cools the switch can be set to “ON” again to reset the thermal protection.

The pump features a sliding ON / OFF power switch. The switch is located on top of the pump at the back of the pump housing. To operate the pump, push the switch to the desired position. Push “ON” to operate the pump, and push “OFF” to turn the pump off.

NOTE: The side where the switch button is depressed is the function the switch is performing.

Pump OFF



Pump ON



Operational Safety



DANGER! DO NOT use pump in enclosed areas when pumping hazardous or explosive fluids. Pumping area should be well ventilated. Concentrated vapors in an enclosed area are noxious and highly explosive!



WARNING! NEVER disconnect the power cable from the pump while pump is switched on or connected to a power source. **ALWAYS** switch the pump off and disconnect all the clamps from the power source **PRIOR** to disconnecting the power cable from the pump. Electrical shorts, sparks, or unexpected start up can occur.



WARNING! Use caution when operating or carrying the pump. The hoses and electrical power cable can be a trip hazard; caution should be exercised any time the pump is moved with the hoses and power cable connected to avoid tripping or entanglement.



WARNING! Pump assembly can become hot with extended use. Use caution when handling the pump after use; always use the handle to move or hold the pump. Pump has 30 minute on / 30 minute off duty cycle.



CAUTION! DO NOT operate the pump dry for more than 30 seconds. **DO NOT** operate the pump in bypass more than 5 minutes. Damage to the pump will occur.



CAUTION! DO NOT operate the pump if any part of the explosion proof motor construction is missing or compromised. Disassembly of the motor will compromise the explosion proof design and void any warranty.

Troubleshooting

This Troubleshooting guide provides basic diagnostic assistance.



DANGER! DO NOT open or attempt to repair the motor on your pump. Return it to the place of purchase for service. Opening the motor case will compromise the integrity of the Explosion Proof construction and void any existing warranty, approvals, and certifications (i.e.: ATEX, UL listing, CE, etc.).



DANGER! Disconnect all power prior to performing any service or maintenance. Failure to disconnect the power may cause electrical shock, or unexpected starting of the motor, resulting in injury or death.

Symptom	Cause	Cure
Pump won't prime.	Suction line problem.	Check suction line for leaks or restrictions; it may be too small in diameter, too long, not air tight, or too low vertically.
	Vanes sticking.	Check vanes for nicks, damage, obstructions, or excess wear. Replace as necessary.
	Excessive rotor, vane, rotor cover, or housing wear.	Inspect rotor, vanes, rotor cover, and housing for excess wear; replace as necessary.
	Inlet / Outlet blocked.	Check pump, hose, nozzle, and filter / strainer for blockage.
	Vapor lock.	Reduce vertical or horizontal distance from pump to liquid.
	Power connections reversed.	Correct power connections.
Low capacity.	Excessive dirt in screen.	Remove and clean screen.
	Suction line problem.	Check suction line for leaks or restrictions; it may be too small in diameter, too long, not air tight, or too low vertically.
	Excessive rotor, vane, rotor cover, or housing wear.	Inspect rotor, vanes, rotor cover, and housing for excess wear; replace as necessary.
	Hose or nozzle damage.	Replace hose or nozzle.
	Low fluid level.	Refill tank.
	Incorrect voltage.	Check incoming line voltage while pump is running.
	Vanes sticking.	Check vanes for nicks, damage, obstructions, or excess wear. Replace as necessary.
	Wiring problem.	Check for loose connections.
	Motor problem.	Return to place of purchase.
Motor stalls / fuse blows.	Short in wiring.	Inspect electrical cable for shorts and replace as necessary.
	Excess rotor or vane wear.	Check vanes for nicks, damage, obstructions, or excess wear. Replace as necessary.
	Pump rotor lock-up.	Clean and inspect rotor and vanes.
	Debris in pump cavity.	Clean debris from pump cavity.
	Components swell from pumping water.	Let pump dry completely.

Bold text indicates repairs that are not serviceable by the owner; pump must be returned to the point of purchase for repairs.

Troubleshooting (cont'd)

Symptom	Cause	Cure
Fluid leakage.	Bad o-ring gasket.	Check all o-rings.
	Bad shaft seal.	Return to place of purchase.
	Incompatible fluid.	Refer to wetted parts list (page 10).
	Loose fasteners.	Tighten fasteners.
	Inadequate plumbing seals.	Reseal plumbing connections.
Pump hums but will not operate.	Motor failure.	Return to place of purchase.
Motor overheats.	Pumping high viscosity fluids.	These fluids can only be pumped for short periods of time (less than the 30 minute duty cycle).
	Clogged screen.	Remove and clean screen.
	Restricted suction pipe.	Remove and clean pipe.
	Motor failure.	Return to place of purchase.
	Pump rotor lock-up.	Clean and inspect rotor and vanes.
	No power.	Check incoming power.
	Switch failure.	Return to place of purchase.
	Incorrect or loose wiring.	Check wiring / connections.
Motor inoperative.	No power.	Check incoming power.
	Switch failure.	Return to place of purchase.
	Motor failure.	Return to place of purchase.
	Motor overheated.	Switch off and allow to cool.
	Incorrect or loose wiring.	Check wiring / connections.
	Fuse has blown.	Replace 30A fuse.

Bold text indicates repairs that are not serviceable by the owner; pump must be returned to the point of purchase for repairs.

Cleaning the Inlet Screen

Regular inspection and cleaning of the inlet screen on your series pump helps maintain performance and flow. Access the screen by removing the inlet flange as described on .Clean, rinse, and dry the screen thoroughly before re-installing.

Inspect the screen, seals, and flange area for debris and damage. If screen or O-rings are damaged, replace with kit

Technical Information

Motor	
Power-DC	12V
HP(horsepower) rating	5/16HP
Amps	19A
RPM	2800
Duty cycle	30min. ON/ 30 min. OFF
Power cable length	6-1/2'
Power cable DC battery connectors	Yes
Pump	
Type- rotary, diaphragm, gear, vane	Rotary Hinged Vane
Flow Rate (with supplied hose / nozzle)	Up to 10 GPM
Flow Rate open flow - no hose or nozzle	Up to 15 GPM
Max discharge pressure	16 PSI
Head- Max (ft)	20'
Max suction(ft)	10'
Inlet - Size / Thread	1" NPT
Outlet – Size / Thread	1" NPT

Motor Information

The sticker on pump contains important technical, performance, and certification information.

Hose Reel



WARNING: Read carefully and understand all INSTRUCTIONS before operating. Failure to follow the safety rules and other basic safety precautions may result in serious personal injury.



WARNING: The warnings, cautions, and instructions discussed in this instruction manual

cannot cover all possible conditions or situations that could occur. It must be understood by the operator that common sense and caution are factors that cannot be built into this product, but must be supplied by the operator.

1. Keep the work area clean and dry. Damp or wet work areas can result in injury.
2. Keep children away from work area. Do not allow children to handle this product.
3. Store idle equipment. When not in use, tools and equipment should be stored in a dry location to inhibit rust. Always lock up tools and equipment, and keep out of reach of children.
4. 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. It will do the job better and more safely at the capacity for which it was intended. Do not modify this equipment, and do not use this equipment for a purpose for which it was not intended.
5. Use proper eye protection when assembling and using the kit.
6. Check for damaged parts. Before using this product, carefully check that it will operate properly and perform its intended function. Check for damaged parts and any other conditions that may affect the operation of this product. Replace damaged or worn parts immediately.
7. Do not overreach. Keep proper footing and balance at all times to prevent tripping, falling, back injury, etc.
8. DO NOT use the equipment when tired or under the influence of drugs, alcohol, or medication. A moment of inattention while operating this equipment may result in serious personal injury.
9. Industrial applications must follow OSHA requirements.



WARNING: To prevent personal injury, perform Pressure Relief Procedure before and after operating the control valve and before performing any disassembly or assembly.



WARNING: No complying with below requests will result in severe harm to your body even death.

1. EQUIPMENT MISUSE HAZARD: Equipment misuse can cause the equipment to rupture or malfunction and result in serious injury.
2. Only trained or authorized people should operate this kit.
3. Read all instruction manuals, tags, and labels before you operate this equipment
4. Use the equipment only for its intended purpose. If you are not sure, call the distributor.
5. Do not modify this equipment. If you need to replace the parts, use the standard parts or components.
6. Check equipment daily. Repair or replace worn or damaged parts immediately.
7. Do not exceed the maximum working pressure of the lowest rated system component. This equipment has a 580 PSI maximum working pressure.
8. Make sure all application comply with local, state, and national fire, electrical, and safety regulations.

9. Use fluids and solvents that are compatible with the equipment wetted parts. Refer to the Technical Data section of all equipment manuals. Read the fluid and solvent manufacturer's warnings.
10. Do not move or lift the equipment when the control valve is in use.
11. The operation environment must be fireproof, safety electric use and other security assured.
12. Do not point the dispensing valve at anyone or at any part of the body.
13. Do not stop or deflect leaks with your hand, body, glove or rag.
14. Do not use oil that has been polluted.
15. Do not put your hand or fingers over the fitting coupler
16. Follow the Pressure Relief Procedure in the OPERATION INSTRUCTIONS section if the grease fitting coupler clogs and before you clean or service this equipment.
17. Before each use, make sure that all connections are properly installed. Tighten all fluid connections before operating the equipment.

Check the hoses, tubes, and couplings daily. Replace worn or damaged parts immediately. Do not repair high-pressure couplings. You must replace the entire hose.



WARNING: To reduce the risk of static sparking, effectively ground all of this equipment.



WARNING: To reduce the risk of serious injury, the pressure release should be concerned. Please follow the Pressure Relief Procedure in OPERATION INSTRUCTIONS section for the release process.



WARNING: If this is a new installation, or if the oil in the lines is contaminated, flush the lines before you install the kit. No impurities or contaminant are allowed to enter the kit.

NOTE: Use oil resistant pipe sealant or Teflon Tape on all fitting threads.

1. OPERATION

WARNING: Follow the instructions in PRESSURE RELIEF PROCEDURE before each operation.

1. Check reel for correct operation by slowly pulling out the hose. A “clicking” noise will be heard every half revolution of the drum.
2. To latch the reel, pull out the hose and allow it to retract after hearing the first second or third “click”.

2. ADJUSTMENTS FOR HOSE REEL

(1) Adjusting spring tension

If necessary, adjust spring tension on reel by adding or removing wraps of hose from spool, one wrap at a time, until desired tension is obtained.

1. Pull out the hose until the latch pawl is engaged.
2. Loosen the stopper (part#46 of hose reel), then add wrap sorde crease the wraps. Add wraps to increase tension. Remove wraps to decrease tension.
3. Tighten the stopper (part#46 of hosereel),and adjust stopper position if necessary.



CAUTION: Do not exceed the winding mechanism’s spring capacity when adding wraps of hose. Add just enough wraps of hose to achieve the desired tension. The winding mechanism will be damaged if spring is over-tensioned.

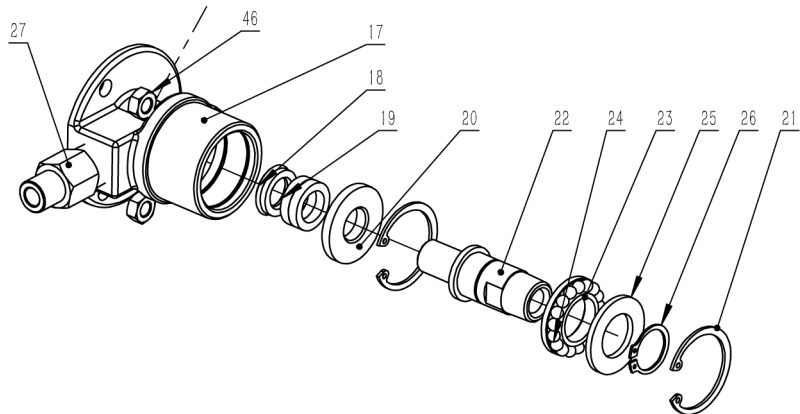
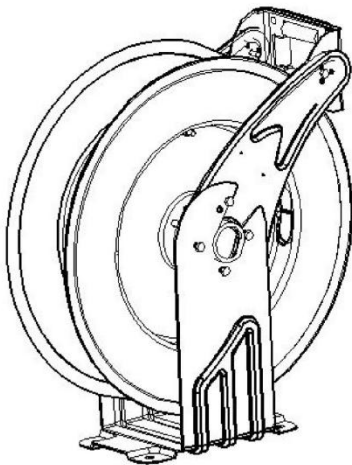
- (2) Adjusting the hose bumper
- (3) Removing and positioning guide arm

3.TO INSTALL THE HOSE

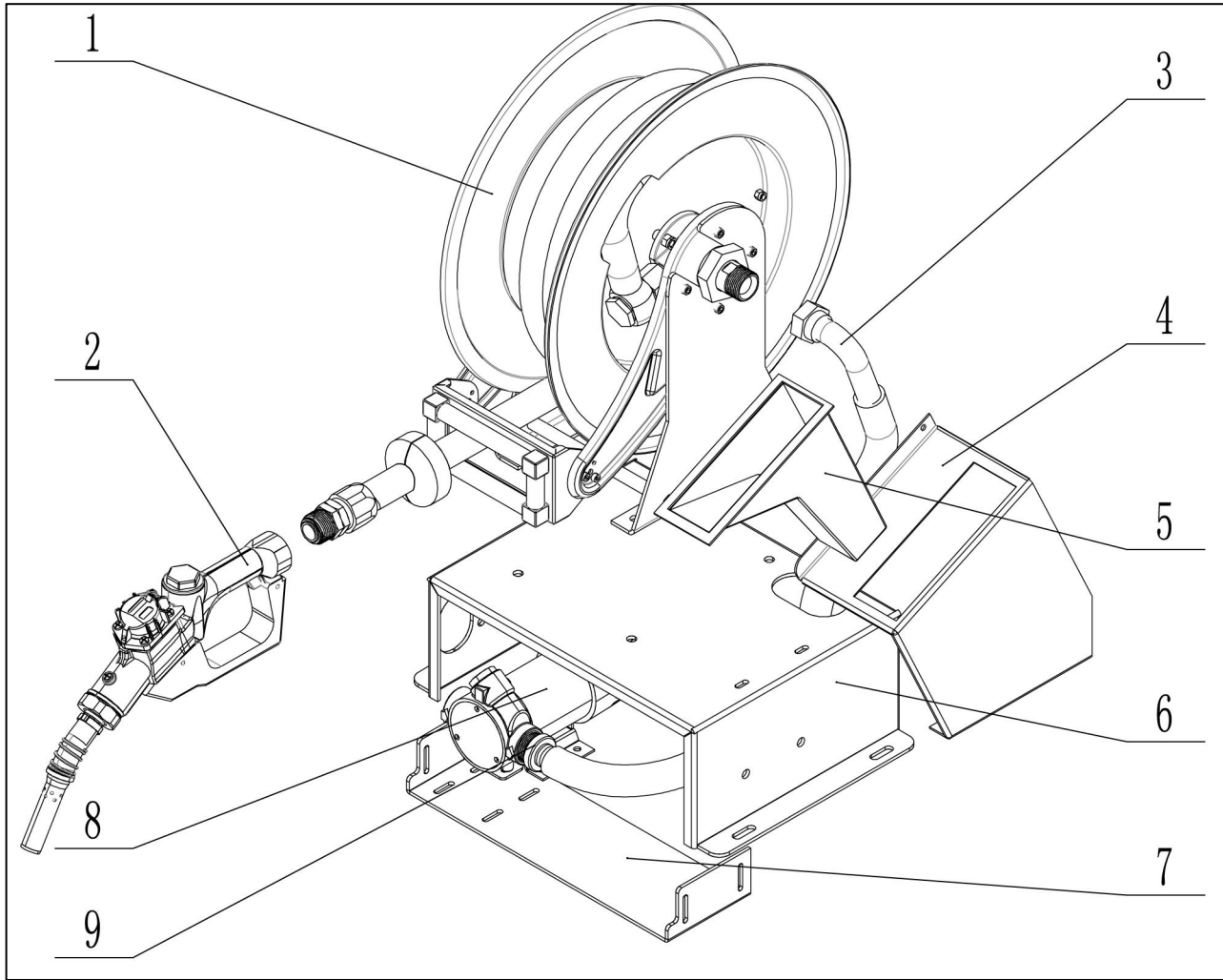
- 1.Route the hose through the guide arm roller sand opening of the spool. Apply thread tape or sealant to hose threads.
- 2.Screw hose fitting into threaded fitting on swivel. Tighten connection with a wrench on fitting. Install stopper on working end of hose if required.
- 3.Disengage latch paw land allow hose to retract.

4.Replacing the swivel

- 1.If the swivel leak,replace the O-ring or seal (#19) and washer (#18) by removing the lock washer (#21) and the part of the swivel shift.
- 2.If the balls (#24) wear out, replace by removing the lock washer(#21).
- 3.Replace the new seal by clipping the lock washer (#21). Replace the part of the swivel shift by clipping the lock washer (#21).



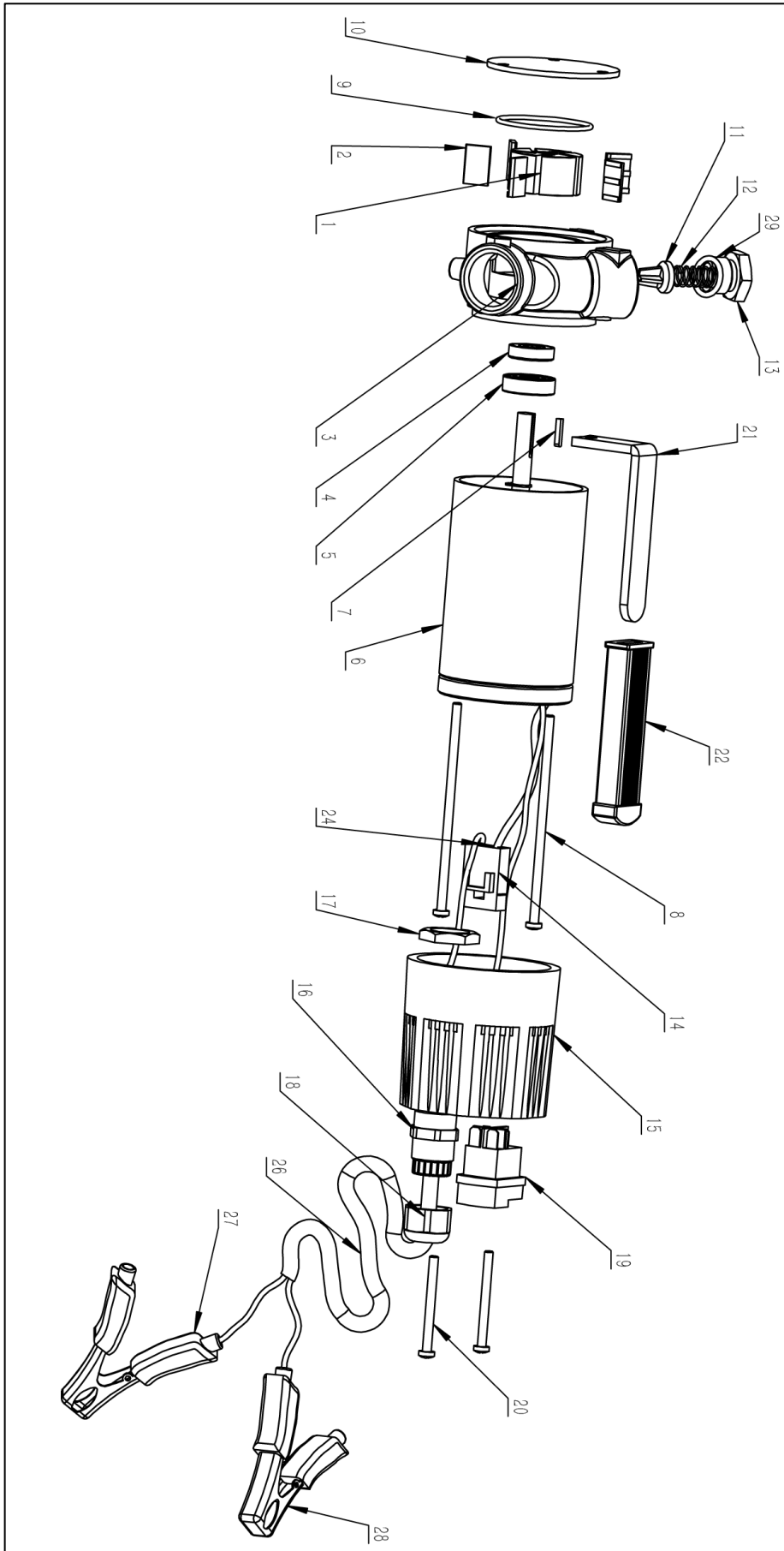
Exploded Drawings



Main Parts List

Ref#	Description	Qty	Ref#	Description	Qty
1	Hose reel	1	6	Hose reel base	1
2	Automatic gun	1	7	Fuel pump base	1
3	Elbow	1	8	Motor 12V DC	1
4	Automatic gun base	1	9	Connector hose	1
5	Automatic gun holder	1			

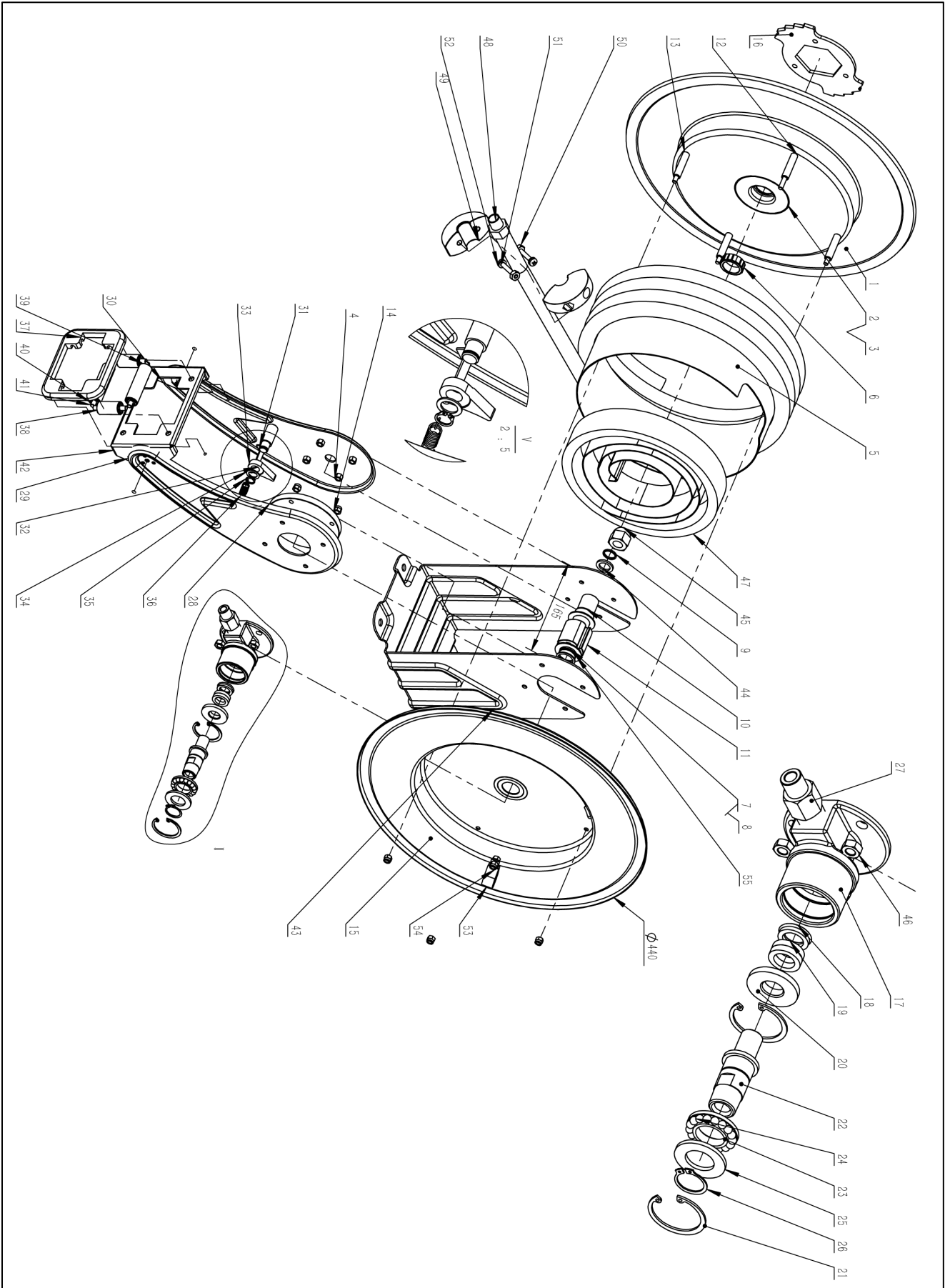
FEUL PUMP



Fuel Pump Past List

Ref#	Description	Qty	Ref#	Description	Qty
1	Motor 12V DC	1	15	Handle handle	1
2	Flat keys	1	16	Handle set	2
3	Deep groove ball bearings 6200-2RZ	1	17	Cross groove head screws M5X120	1
4	Oil seal 26X10-7	1	18	Insurance box	1
5	Pump body	1	19	Rear cover	1
6	Base	1	20	Switch	1
7	Leaf blade rotor	5	21	Tightening nut	1
8	Leaf blade	1	22	Positioning set	1
9	O loops	1	23	Lock the nut	1
10	Pump cover	1	24	Two-phase cable 12X2000	1
11	Plastic spool	1	25	Zero wire clip	1
12	Spring 11X40mm	1	26	Fire clamp	1
13	O loops 18X2.65	1	27	Cross groove head screws M5X55	2
14	Valve cover 27-1/2 H60	1			

HOSE REEL



Hose Reel Past List

Ref#	Description	Qty	Ref#	Description	Qty
1	Left gear	1	29	Handle handle	1
2	Central axle seat	1	30	Handle set	1
3	Ratchet mount	1	31	Cross groove head screws M5X120	1
4	Hexagon nut M6	4	32	Insurance box	1
5	Pipe winding	1	33	Rear cover	1
6	Copper sleeve	1	34	Switch	1
7	Central axis	1	35	Tightening nut	1
8	Flat 6*6*35	1	36	Positioning set	1
9	Bullet pad 16	1	37	Lock the nut	1
10	Shaft elastic retaining ring 25	2	38	Two-phase cable 12X2000	2
11	Spring sleeve	1	39	Zero wire clip	2
12	Double stud 1	1	40	Fire clamp	2
13	Double stud 2	3	41	Cross groove head screws M5X55	2
14	Hexagon anti-loosening nut M6	14	42	Bearing	
15	Right Block	1	43	Exit bracket	1
16	Ratchet wheel	1	44	Gasket 16	1
17	Body	1	45	Cover nut M16	1
18	High and low lip seal ring 16*24*6	1	46	Hexagon nut M8	3
19	Positioning circle	1	47	Flat spring	1
20	Limit gear	1	48	Tubing assembly	1
21	Flexible retaining ring for holes 40	2	49	Pipe clamp	2
22	Valve core	1	50	Nuts M6	2
23	Flat Bearing Inner Block	1	51	Flat ϕ 6	2
24	ϕ 6 of steel balls	17	52	Cross groove head screw M6*40	2
25	Flat bearing outer retaining ring	1	53	Pipe buckle	1
26	Shaft elastic retaining ring 22	1	54	Hexagon anti-loosening nut M6	1
27	Variable diameter joint	1	55	Gasket 25.5*40*1.5	2
28	Plastic baffle	1	56	M6*16 of inner hexagon screw	4