

Please read and save this Repair Parts Manual. Read this manual and the General Operating Instructions carefully before attempting to assemble, install, operate or maintain the product described. Protect yourself and others by observing all safety information. The Safety Instructions are contained in the General Operating Instructions. Failure to comply with the safety instructions accompanying this product could result in personal injury and/or property damage! Retain instructions for future reference. AMT reserves the right to discontinue any model or change specifications at any time without incurring any obligation.

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**WARNING** Periodic maintenance and inspection is required on all pumps to insure proper operation. Unit must be clear of debris and sediment. Inspect for leaks and loose bolts. Failure to do so voids warranty.

# Submersible Pumps

## 12VDC Series

Refer to pump manual 1808-636-00 for General Operating and Safety Instructions.

### Description

The AMT Submersible 12VDC pump is designed for use in remote locations without electricity and for emergency back-up during power failure. Unit comes assembled and requires minimum 55 amp-hour battery for proper operation. For use with non-flammable liquids compatible with pump components.

### Specifications

Discharge	1-1/2" NPT
Suction	3/8" diameter holes in strainer
Horsepower	1/3
Motor	12VDC
Amps	30
Enclosure	Totally enclosed, submersible
Cord/Switch	30 ft. 12VDC type with on/off switch and battery clips
Construction	Aluminum pump and housing with cast iron impeller and plated steel strainer
Seals	Buna/Carbon/Ceramic mechanical seal, Buna o-ring and fibre gasket
Temperature Range	40° to 104° F (4° to 40° C)
Weight	30 Lbs.
Dimensions	6" L x 9" W x 22" H

### Operating and Installation Instructions

**Hose:** Since the pump develops relatively low pressure, it is recommended that non-collapsible hose be used for maximum pumping rates.

**Hoisting and Lowering:** Attach a line to the metal handle on the top of the pump for hoisting or lowering the unit.

**Do not use power cable for handling unit.**

**To Operate:** Lower unit into liquid to be pumped and activate switch. Do not run dry; damage to shaft seal will result.

**RUNNING TIME:** This unit draws about 30 amperes and can be operated about 1 hour on a fully charged 55 amp-hour battery and still permit starting of vehicle under normal conditions. Caution should be used when running time exceeds 30 or 40 minutes without engine running to recharge battery, particularly in cold

weather when battery efficiency is lowered. Battery size (amt-hour rating) and the use of other accessories such as lights and radios, etc. must be taken into consideration for practical running periods without engine running.

**OVERLOAD PROTECTION** is provided by means of a 40 amp automatic reset circuit breaker located under top cover.

### TROUBLE SHOOTING

**NOTE:** Most common cause of failure to run is due to hardened mud and sand at impeller. Remove strainer to check.

**CAUTION** *Should unit not operate,*

*always check freeness of rotation of impeller by inserting screwdriver through hole in base plate into slot in end of shaft.*

**MOTOR WILL NOT RUN:**

**IMPORTANT** *Read all safety warnings and instructions in this manual completely before installation*

*and start-up of the pump. It is the responsibility of the purchaser to retain this manual for reference. Failure to comply with the recommendations stated in this manual will damage the pump and void factory warranty.*

1. *Make sure the vehicle and the pump are not in contact during connection.*
2. *Do not use power cable for handling unit.*
3. *Do not run pump completely dry for extended periods. Damage to shaft seal may result*

**WARNING** **DANGER:** *Not for use with fluids that have a flash point below 100° F (38° C) (example: gasoline, alcohol). Sparking could result in death.*

**AMT standard terms and warranty can be found at [www.amtpump.com](http://www.amtpump.com)**

1. Poor connection at battery.
2. Impeller locked with foreign material.
3. Insufficient impeller clearance.
4. Damaged power cable or loose connection internally in motor assembly.
5. Bad switch or circuit breaker. Connect power leads directly to motor leads to check.
6. Worn motor brushes or out of position to make contact with armature.

### PERFORMANCE LOW:

1. Strainer screen partially plugged.
2. Impeller rubbing. Check freeness of rotation with screwdriver inserted through hole in base plate into slotted end of shaft.
3. Battery not fully charged.
4. Discharge restriction such as kinked hose or excessive discharge head.

### MOTOR RUNS BACKWARDS:

1. Check wiring for correct polarity.

**SERVICE & REPAIR INSTRUCTIONS**

**DISASSEMBLY:**

Impeller and shaft seal can be inspected and serviced from lower end of pump by removal of 4 cap screws securing base plate, strainer screen and suction cover. Screwdriver slot is provided in end of motor shaft to turn shaft while holding impeller for removal. This permits removal of impeller without disassembly of upper motor housing to hold motor shaft.

Alternately, there is a shaft extension with two flats on the rear of the motor for use when the impeller is difficult to remove. The upper motor cover must be removed to expose this shaft extension.

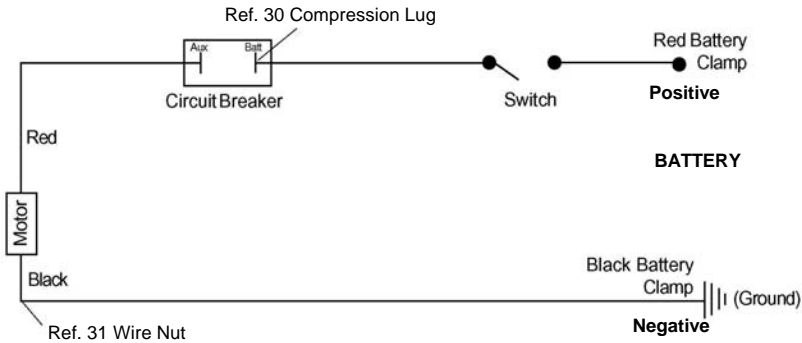
To service motor, remove 4 hex nuts and bump top cover free from housing tube. Raise sufficiently to disconnect power cable connections. Slide

housing tube up from pump casing and motor will be exposed for service or removal.



Make certain that wire leads are installed

per diagram below. Install top cover as indicated by arrow and instruction on top of cover. Make sure wires do not contact motor shaft when installing motor cover.



Ref No.	Description	Part Number	Qty Req'd
1	Self Tapping Screw	included with Ref 11	2
<b>2</b>	<b>Motor Cover Kit</b>	<b>5890-040-90</b>	<b>1</b>
3	Hex Nut	included with Ref 4	1
<b>4</b>	<b>Handle Kit</b>	<b>5890-100-90</b>	<b>1</b>
<b>5</b>	<b>Gland Nut Kit (1 each 5,6 &amp; 7)</b>	<b>5890-420-90</b>	<b>2</b>
6	Gland spacer	included with Ref 5	2
7	Sealing Ring	included with Ref 5	2
8	Hex Nut	included with Ref 10	4
9	Lock Washer	included with Ref 10	4
<b>10</b>	<b>Stud Kit (1 each 8, 9 &amp;10)</b>	<b>5890-140-90</b>	<b>4</b>
<b>11</b>	<b>Circuit Breaker Kit</b>	<b>5890-350-90</b>	<b>1</b>
12	Hex Head Bolt	included with Ref 21	4
13	Lock Washer	included with Ref 20 & 21	8
<b>14</b>	<b>Seal &amp; Gasket Kit</b>	<b>5890-300-90</b>	<b>1</b>
15	Hex Head Bolt	included with Ref 20	4
<b>16</b>	<b>Impeller Kit</b>	<b>5890-010-90</b>	<b>1</b>
17	Shims (set of 3)	included with Ref 16	1
18	Suction Cover	included with Ref 20	1
19	Strainer Plate	included with Ref 20	1
<b>20</b>	<b>Strainer &amp; Cover Kit</b>	<b>5890-020-90</b>	<b>1</b>
<b>21</b>	<b>Casing Volute Kit</b>	<b>5890-001-90</b>	<b>1</b>
22	O-ring	included with Ref 14	2
23	Mechanical Seal	included with Ref 14	1
<b>24</b>	<b>Casing Tube</b>	<b>5890-080-90</b>	<b>1</b>
25	Motor Assembly	Replace Pump	1
26	Cable Clamp	included with Ref 28	1
27	Screw	included with Ref 28	1
<b>28</b>	<b>Cord &amp; Switch Kit</b>	<b>5890-351-90</b>	<b>1</b>
29	Lock Washer	included with Ref 28	1
30	Compression Lug	included with Ref 11	1
31	Insulated Wire Nut	included with Ref 11	1
N/S	<b>Brush Kit, set of 2</b>	<b>5890-352-90</b>	<b>1</b>

Replacement parts shown in bold text only are available for proper repair of pump.

