

Ground Switch



INSTALLATION, OPERATING AND MAINTENANCE INSTRUCTIONS



TIMBERWOLF SIREN TECHNOLOGY

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GENERAL

People’s lives depend on the proper installation of emergency vehicle warning device. Please carefully read and understand and follow these instructions for the TimberWolf Siren. If you are uncertain about any step in this manual, call Timber Wolf Siren Technology at (909) 881-5241.

WARNING: Before beginning the installation of this siren, confirm with the owner’s manual of the vehicle, in order to make sure that the 28 amp operation and 100 amp momentary starting draw will not affect engine or transmission electrical controls.

- To properly install this siren: you must have a good understanding of automotive electrical procedures and systems, along with proficiency in the installation and use of safety warning equipment.
- All effective sirens produce loud sounds which may cause, in certain situations, permanent hearing loss. You should take appropriate precautions such as wearing hearing protection.
- After installation and testing are complete, provide a copy of this instruction manual to all operating personnel.
- File these instructions with the complete vehicle manual or in a safe place and refer to them when maintaining and/or reinstalling the product.

1. RECEIVING AND UNPACKING

After unpacking the siren, inspect it for damage that may have occurred in transit. If the unit has been damaged, do not attempt to install or operate it. File a claim immediately with the carrier, stating the extent of damage. Carefully check all envelopes, shipping labels and tags before removing or destroying them.

2. CHECK PARTS KIT CONTENTS (PEDESTAL MOUNT)

2.1 Please check your parts package thoroughly for the following items.

<u>ITEM #</u>	<u>QTY</u>	<u>DESCRIPTION</u>
1	1	Foot Switch
2	1	50 Amp Auto Reset Circuit Breaker
3	1	In-Line ATO Fuse Holder
4	1	5 Amp ATO Fuse
5	4	#14-16 GA Blue #10 Ring Connector
6	3	#14-16 GA Blue Butt Splice
7	1	#8 - GA Red 3/8 Ring Connector
8	2	#8 - GA Red 5/16 Ring Connector
9	2	#8 - GA Red 1/4 Ring Connector
10	3	#8 - GA Red #10 Ring Connector



11	3	3/8-16 x 1 1/2 Mounting Bolts
12	3	3/8 Washer USS
13	3	3/8-16 Hex Lock Nut
14	1	10 ft Brown 16 AWG
15	1	10 ft Red 16 AWG
16	1	Magnetic Relay

3. PLANNING AND LAYOUT

- 3.1 Install the siren in a location which provides maximum signalling effectiveness and minimizes the sound reaching the vehicle's occupants. DO NOT MOUNT ON VEHICLE ROOF!

A Mechanical Siren can not be mounted like an electronic siren.

The siren is affected by road grime

The siren must be mounted so that it is in the fresh air stream. It is best if the stator slots are partially clear of the vehicle, in order to take advantage of the 90 degree side sound from the slots.

Some people have tried behind the bumper and in the wheel well mountings on the International and Freight Liner truck chassis. When the siren is mounted behind the bumper, a small tornado wind is caused under the truck, with the siren sucking up fine dust. Such mountings are not warranted.

- 3.2 Select a suitable mounting location which provides sufficient clearance on the under-side of mounting surface. Also, ensure that under-side of mounting surface is clear of any wires or brackets. If vehicle has a tilt-cab, check clearance with cab tilted prior to drilling any holes.
- 3.3 Plan electrical wiring path. Your siren is prewired with ten feet of wire.
- 3.4 Locate siren controls so vehicle and controls can be operated safely under all driving conditions.

4. INSTALLATION OF PEDESTAL FOOT

- 4.1 When drilling or cutting into a vehicle structure, be sure that both sides of the surface are clear of anything that could be damaged.
- 4.2 Using the supplied template (fig 1), scribe four drilling position marks on the mounting surface, three mounting holes and one hole for the wire loom.
- 4.3 **WARNING:** Avoid damage to brake lines, fuel lines, electrical wiring, and other vital parts. When drilling or cutting on any part of the vehicle, ensure that both sides of the surface are clear of parts that could be damaged.
- 4.4 Drill three 13/32" holes at the mounting hole position marks. Drill one 5/8" hole at the position marks scribed for the loom hole.
- 4.5 Route the power (8 AWG), control (16 AWG), and ground (8 AWG) leads through the loom and the holes in the mounting surface.
- 4.6 Position the siren base over the mounting holes. Insert three 3/8-16 bolts through the holes in siren pedestal base and mounting surface. Secure with flat washer and lock nut. Torque mounting bolts to 3/8-16 to 25 ft/lb.
- 4.7 To ensure a good vehicle ground connect the black number 8 wire to clean frame member or directly to cranking motor battery negative.
- 4.8 Mount foot switch appropriately in cab.

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5. ELECTRICAL CONNECTIONS

- 5.1 **GENERAL CONFIGURATION:** The siren is completely pre-wired. Power is supplied from the 8 AWG wires, and controls from 16 AWG wires. The electro-magnetic relay is mounted remotely. There is no need to remove the rear cover. All connections have been made.
- 5.2 **GENERAL OPERATION:** The brake is normally on, and is applied by spring pressure. The foot switch is normally in-operative. Control circuit power comes from the vehicle dash mounted warning lights master feed. The red and orange 16 AWG wire is connected there thru the in line fuse supplied. This orange wire takes power to the brake solenoid releasing the brake and takes power to the electro magnetic relay.

The foot switch when depressed completes the ground circuit through the brown 16 AWG trigger wire (C) closes the electro magnetic relay operating the siren. The main power lead is (B) the red 8 AWG wire. The circuit breaker (thermal, time reset) is to be mounted in line close to the main vehicle buss. Two foot switches can be connected in parallel.

- 5.3 Wire according to the wiring diagram (fig. 2).
- 5.4 Wire automatic controller according to diagram. (Fig. 3)

CAUTION: Disconnect negative battery terminal wire, when doing any maintenance or drilling any holes for installation or when making any wiring connections.

6. TROUBLE SHOOTING

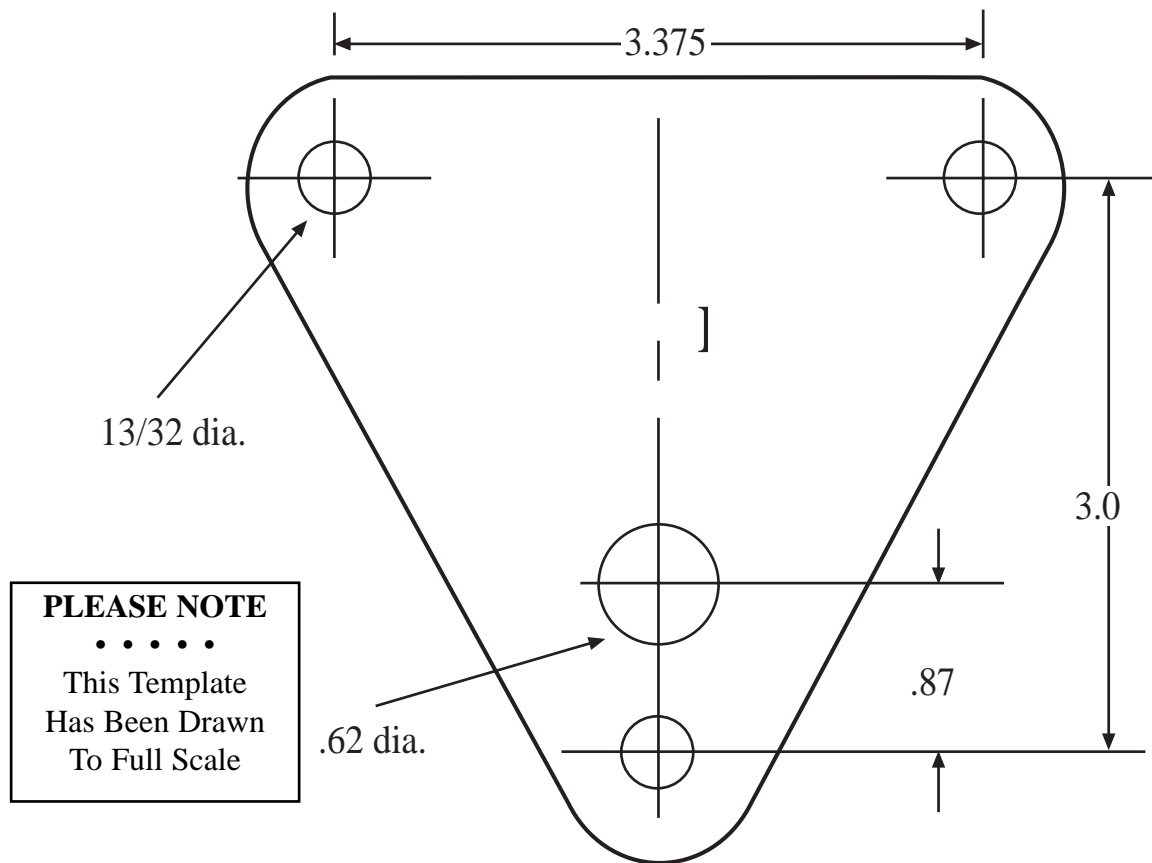
- 6.1 **CAUTION:** All effective sirens produce loud sounds which may cause, in certain situations, permanent hearing loss. Therefore, always wear proper ear protection when working on the siren.
- 6.2 Use VOM (meter) to prove wiring connections.
- 6.3 Refer to 5.2 general operation. when power is on at (A) one will hear a light click as the brake solenoid retracts. That proves power to the solenoid and magnetic relay. Next check ground control circuit at (C).



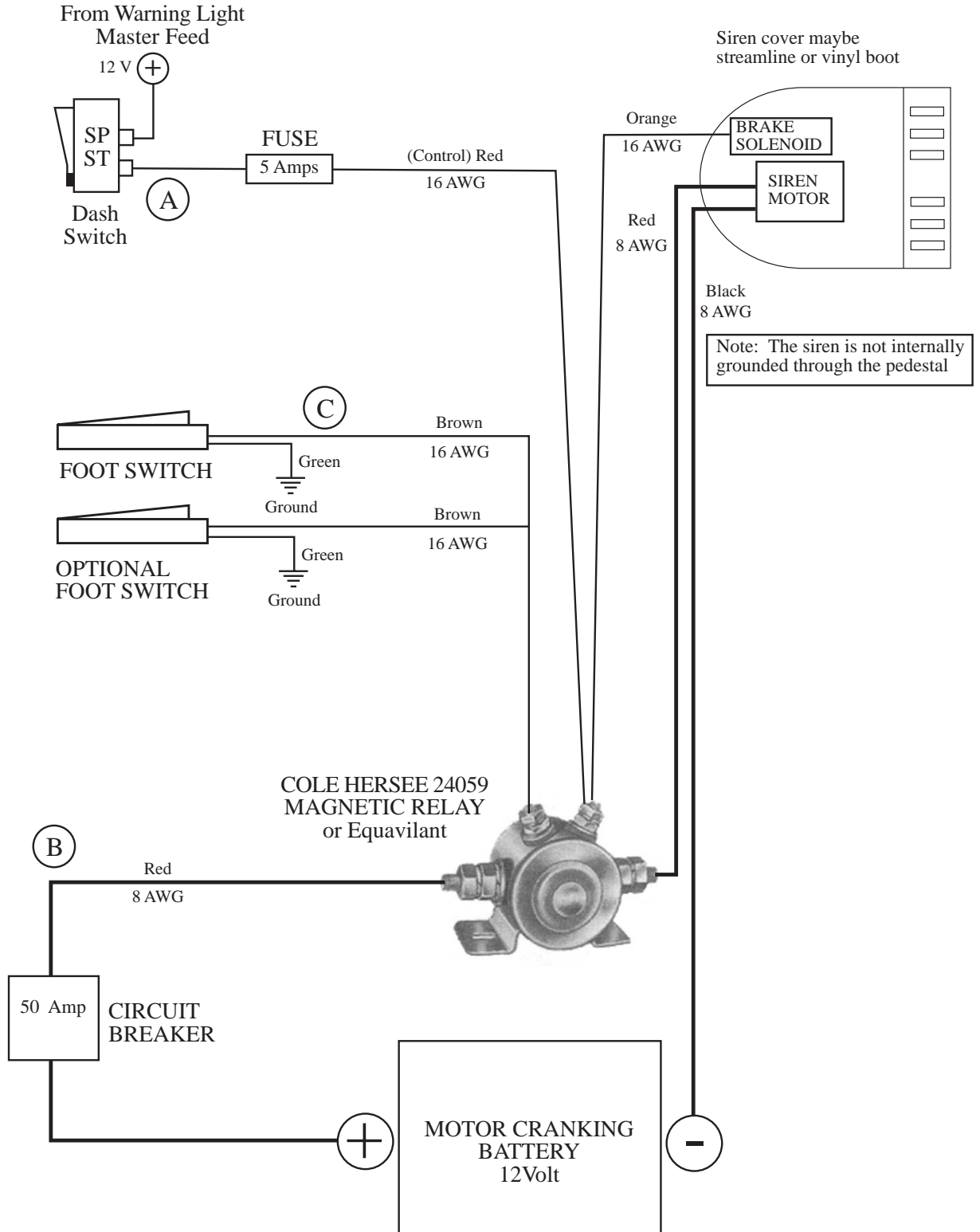
7. CARE AND OPERATION

- 7.1 All effective sirens produce loud sounds which may cause, in certain situations, permanent hearing loss. You should take appropriate precautions such as wearing hearing protection.
- 7.2 Ensure that the recommendations in OSHA Sound Level Standard (29CFR 1910) 1910.95 are not exceeded.
- 7.3 Although your warning system is operating properly, always be cautious because people may not hear, see, or heed your warning signal. You must recognize this fact and drive defensively. A siren assists you in calling for right of way, it DOES NOT guarantee you the right of way.
- 7.4 Also, situations may occur which obstruct your warning signal when natural or man made objects are between your vehicle and others. If these situations occur, be especially careful. Be extra cautious when responding during inclement weather.
- 7.5 It is important that you fully understand how to safely operate this warning system before use.
- 7.6 The siren is activated by depressing the foot switch. When the siren's sound has peaked, release the foot switch and allow it to coast down. Before the siren stops, depress the foot switch again. This produces a "wailing" sound which provides maximum signalling effectiveness and optimum siren life.
- 7.7 To stop the siren simply turn off the vehicle code 3 rocker switch for the warning lights.
- 7.8 The use of cleaning agents such as strong detergents, solvents, petroleum products, etc. can damage the chrome plated surfaces. Ordinary cleaning of the chrome plated parts can be accomplished by using a mild soap and water solution and a soft rag. Should fine scratches or a haze appear on the chrome parts, they can ordinarily be removed with a non-abrasive, high quality, one step, automotive paste cleaner/wax and a soft cloth.

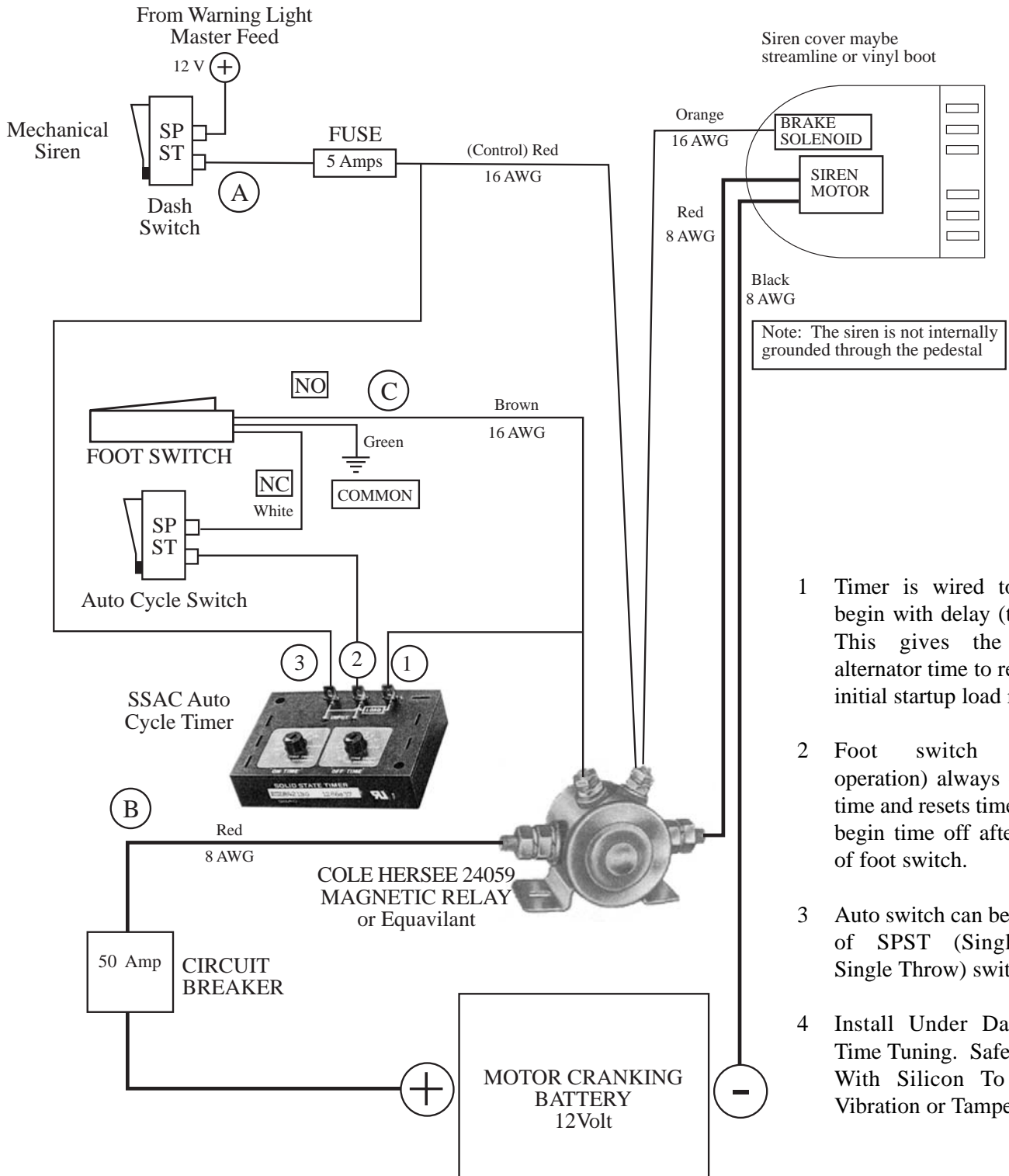
TIMBERWOLF MOUNTING TEMPLATE (Fig 1)



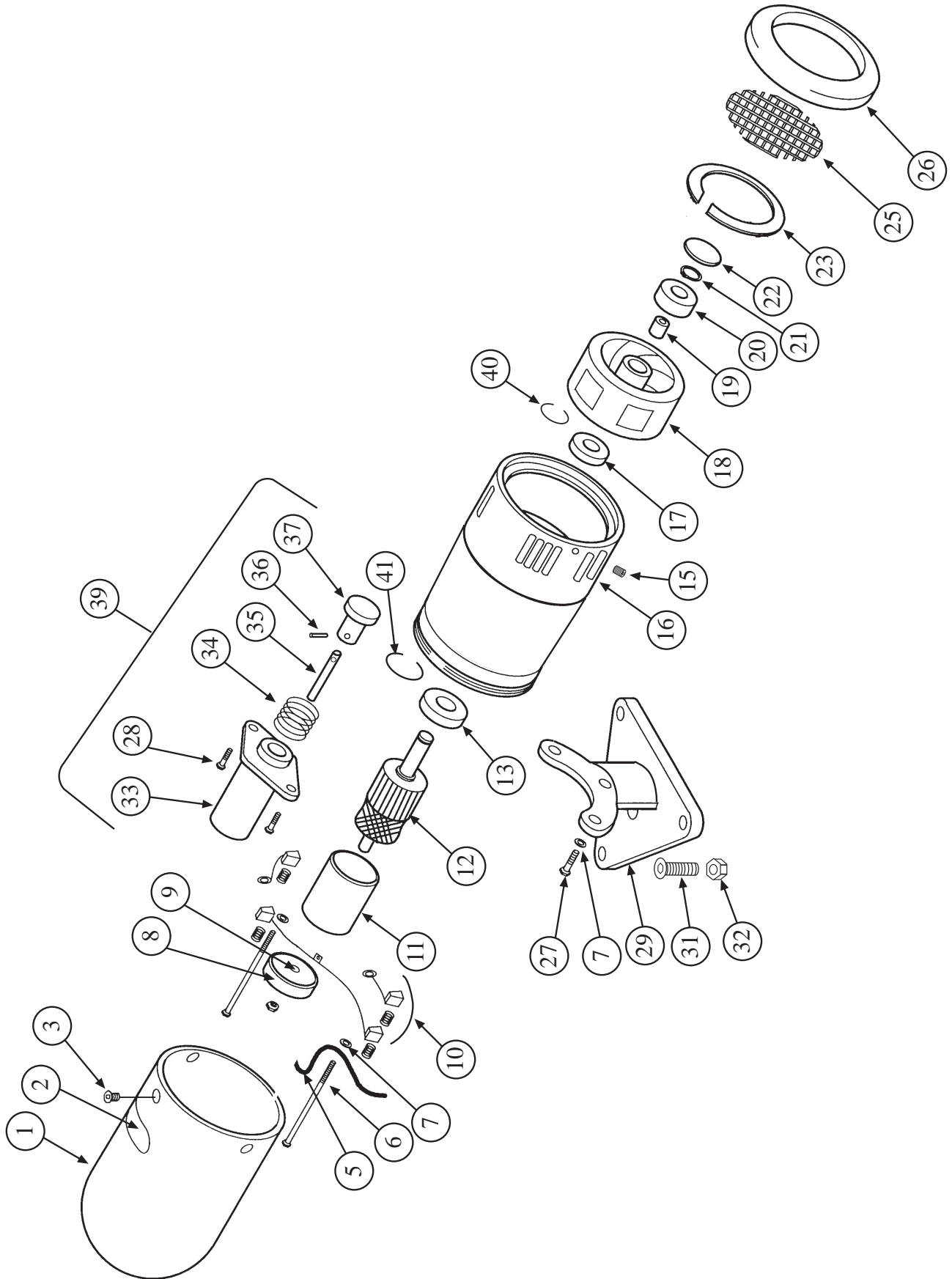
TIMBERWOLF SIREN WIRING DIAGRAM (Fig 2)



**OPTIONAL AUTO CYCLE TIMER
TIMBER WOLF SIREN WIRING DIAGRAM (FIG 3)**



- 1 Timer is wired to always begin with delay (time off). This gives the vehicle alternator time to respond to initial startup load request.
- 2 Foot switch (manual operation) always overrides time and resets timer. It will begin time off after release of foot switch.
- 3 Auto switch can be any type of SPST (Single Pole, Single Throw) switch.
- 4 Install Under Dash After Time Tuning. Safety Knobs With Silicon To Prevent Vibration or Tampering.





PARTS & ILLUSTRATIONS

ITEM	QUANTITY	PART NO.	DESCRIPTION
1	1	70473	Cover
2	1	70491	Name Plate
3	3	70020	Button Head Allen 8-32 x 1/4 ss
5	1	70490	Wiring Harness
6	2	70026	Bolts 1/4-20 x 4 1/2
7	5	70028	Lock Washer 1/4
8	1	70471	Brush End Bell
9*	1	70044	Bushing 335
10	2	70009	Brush Kit
11	1	70007	Motor Field
12	1	70742	Motor Armature
13*	1	70045	Bearing
15	1	70021	Set Screw Allen 8-32 x 1/4 ss
16	1	70510	Stator / End Bell
17*	1	70046	Bearing
18	1	70509	Rotor
19*	1	70048	Clutch
20*	1	70047	Bearing
21*	1	70037	Retainer Ring 3/8
22	1	70035	Rotor Cover
23	1	70038	Retainer Ring 4.0
25	1	70478	Screen
26	1	70505	Nose
27	3	70025	Bolt 1/4-20 x 3/4
28	2	70024	Bolt 1/4-20 x 1/2 FH SS
29	1	70499	Pedestal
31	3	70030	Bolt 3/8-16 x 1 1/2 ss
32	3	70031	Lock Nut 3/8-16 ss
33	1	70012	Solenoid
34	1	70040	Spring
35	1	70011	Solenoid Armature
36	1	70041	Roll Pin 3/32 x 1/2
37	1	70527	Brake Shoe
39	1	70495	Complete Brake Assy
40	2	70036	Retainer Ring 1.12
41	1	70039	Retainer Ring 1/2



LIMITED WARRANTY POLICY

TimberWolf Sirens warrants each siren to be free from defect in factory materials and workmanship for a period of two years subsequent to the first retail purchase. During the first two years period of this warranty your authorized TimberWolf dealer will repair or replace free of any charge for parts or labor, that are found to be defective.

Labor is covered only on the first year of this warranty policy.

This warranty will not apply to any siren which has been modified, repaired, or altered in such a manner as to effect its stability, performance or operation, and which has been subjected to misuse, abuse, negligence or accident.

The following examples would void warranty:

- 1) The siren has been abused or neglected proper maintenance.
- 2) Repairs made without prior written authorization.
- 3) The machine is involved in or damaged by an accident.
- 4) Siren damaged from foreign materials such as steel, rocks, nails, etc.

The owner is responsible for all regular maintenance as explained in the operators manual. Neglect in regular maintenance or failure to replace normal wear.

THIS WARRANTY IS EXPRESSLY IN LIEU OF ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OR MERCHANTABILITY OF FITNESS FOR A PARTICULAR PURPOSE AND OF ANY NON-CONTRACTUAL LIABILITIES INCLUDING PRODUCT LIABILITIES, BASED UPON NEGLIGENCE OR STRICT LIABILITY. TIMBERWOLF SIRENS WILL NOT BE LIABLE FOR CONSEQUENTIAL DAMAGES RESULTING FROM BREACH OF WARRANTY.

It is the owner's responsibility to report the claims promptly to TimberWolf Sirens or one of our authorized dealers from whom the equipment was purchased.

1. Dealer from whom purchased
2. Date purchased & delivered
3. Model number, serial of unit
4. Number of hours in use
5. Date failure occurred
6. Nature of failure.