ABUSED WORLD WIDE

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Installation and Operator's Manual:

Electric Winch Systems

PE/E Series: PE6000(76-50230), PE8000(76-50240), E9000(76-50042)

SEC/SI Series: SE9500C(76-50246), SE12000C(76-50251), SI9500(76-50147), SI12000(76-50152)

MX Series: MX6(76-52130), MX8(76-52140), MX9(76-52040)

SX Series: SX9.5(76-52146), SX12(76-52151)

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MILE MARKER
ABUSED WORLD WIDE

Safety Warnings

When using this winch, safety precautions should always be followed to reduce the risk of personal injury and damage to the winch.

1) LEARN TO USE YOUR MILE MARKER WINCH:
a. After winch has been installed, take some time and practice using it so you will be familiar with ALL OPERATIONS. Periodically check the winch installation to ensure that all bolts are tight.
b. To ensure proper operation, carefully inspect for any damaged parts before operating the winch.

2) KEEP WINCHING AREA CLEAR:
Do not allow people to remain in the area during winching operations. Do not step over a taut wire rope or allow anyone else to do so. Due to the possibility of cable failure, direct all personnel to stand clear of any possible pathway. A snapped cable could cause winch failure, injury or death. Keep proper footing and balance at all times. Do not reach over or across the winch and/or pulling cable while the winch is in operation.

3) INSPECT WIRE ROPE AND EQUIPMENT FREQUENTLY:
The wire rope should be inspected for damage that could reduce it's breaking strength. A frayed rope with broken strands should be replaced immediately. Always replace the rope with a rope that is rated to sustain any load that the winch is capable of pulling. Any substitute must be IDENTICAL in strength, quality, lay and stranding to the Mile Marker cable originally supplied.

4) WORKING AREA CONDITIONS:
Keep the working area well lit. Do not use this winch in the presence of flammable gases or liquids.

5) KEEP CHILDREN AWAY:
Keep children away from working area. Never let children operate the winch.

6) DRESS PROPERLY:
Do not wear loose clothing or jewelry as they can be caught in moving parts. Protective, electrically non-conductive clothes and non-skid footwear is the only type of clothing you should be using when operating the winch. Wear restrictive hair covering to contain long hair.

7) USE LEATHER GLOVES:
When handling or rewinding wire rope always use hand protection to eliminate the possibility of cuts caused by burrs & slivers from broken strands.

8) DRUM ROPE:
Always make sure that there are at least 5 complete turns of rope left on the drum before winching.

9) KEEP HANDS AND FINGERS CLEAR OF WIRE ROPE AND HOOK WHEN OPERATING WINCH:
Never put your finger through the hook when reeling in the last few feet. If your finger should become trapped in the hook or rope, you could lose your finger. Never guide a wire rope under tension onto the drum with your hand.

10) NEVER HOOK THE ROPE BACK ONTO ITSELF:
Hooking the rope back onto itself creates an excessive strain that could break individual strands; this, in effect, weakens the entire wire rope.

11) KEEP PULLING DURATIONS AS SHORT AS POSSIBLE:
The winch is designed for intermittent use and cannot be used in constant duty applications. Do not pull more than one minute at or near rated load. If the motor becomes too hot to touch, stop and let it cool off for a few minutes. If the motor stalls, cut off the power immediately.

Safety Warnings-Cont'd

When using this winch, safety precautions should always be followed to reduce the risk of personal injury and damage to the winch.

12) DO NOT OVERLOAD:
For your safety and efficient performance, always use this winch at or under its rated capacity for your safety and for better performance. Do not use inappropriate attachments in an attempt to exceed its rated capacity.

13) AVOID CONTINUOUS PULLS FROM EXTREME ANGLES:
This will cause the rope to pile up at one end of the drum. When possible, please get the rope as straight as possible to the direction of the object.

14) NEVER OPERATE THE WINCH WITHOUT THE ROPE FAIRLEAD FITTED:
Operator injury or winch damage can result if a fairlead is not installed.

15) STAY ALERT:
Watch what you are doing. Use your common sense. Do not use this winch when you are tired, stressed or WHEN UNDER THE INFLUENCE OF DRUGS, ALCOHOL OR MEDICATION.

16) DISCONNECT SWITCH:
Unplug switch when not in use.

17) REPLACEMENT PARTS & ACCESSORIES:
When servicing, use only identical replacement parts. Usage of any other parts will void the warranty. Approved accessories are available from your local distributor.

Precautions

When using this winch, safety precautions should always be followed to reduce the risk of personal injury and damage to the winch.

1) Keeps hands and body away from Fairlead (cable intake slot) when operating.

2) Secure vehicle in position before using winch.

3) Do not exceed winch load weight capacity (see Winch Specifications).

4) Be certain winch is properly bolted to a structure (or vehicle) that can hold the winch load.

5) Always use proper couplings when connecting winch cable hook to load.

6) Do not lift items vertically. The winch was designed for horizontal use only.

7) Do not overload the winch (see Model Specifications). It will do the job better at the load it was intended.

8) Do not use inappropriate attachments to extend the length of the winch cable.

9) NEVER LIFT PEOPLE OR HOIST LOADS OVER PEOPLE.

10) Never come in between the winch and the load when operating.

11) Do not apply load to winch when cable is fully extended. Keep AT LEAST 5 FULL TURNS of cable on the drum.

12) After moving an item with the winch, secure the item. Do not rely on the winch to hold it for an extended period.

13) Examine winch before using. Components may be affected by exposure to everyday weathering, chemicals, salts, and rust.

14) Never fully extend cable while under load. Keep 5 COMPLETE TURNS of cable around the winch drum.

15) When loading a boat into a trailer without reel or side hull rollers, make sure the trailer is submerged in the water when the boat is loaded by the winch. Attempting to drag the boat on to the trailer while on land can cause winch failure and possible injury.

16) Never operate winch if cable shows any signs of weakening, is knotted or kinked.

17) Winch does not have a locking mechanism. Secure load after moving.

18) Do not cross over or under the cable while it is in process of loading.

19) Do not move vehicle with cable extended and attached to load to pull it. The cable could snap.

20) Apply blocks (such as a wheel choke) to vehicle when parked on an incline.

21) Re-spool cable properly.

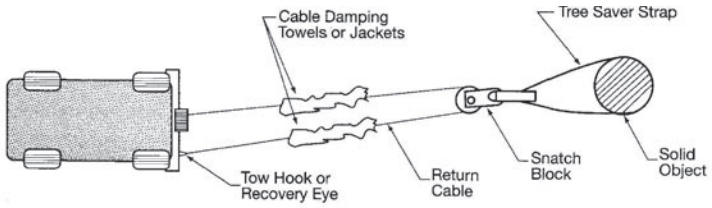
Winching Tips & Techniques

WINCHING TIPS AND USE OF A SNATCH BLOCK

•Use OEM tow hooks, recovery eyes or a clevis mount for attachment of a tow strap or winch cable. Warning: Never use a ball and /or ball mount as an anchor point for tow strap or winch cable. Severe personal injury or death could occur.

•Always heed all winch manufacturer's recommendations, cautions, and warnings.

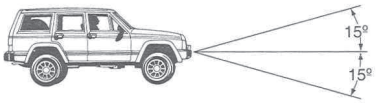
•Attach return cable to tow hook or recovery eye when using a snatch block. Always use a clevis to secure snatch block to strap, or severe damage could occur to persons and vehicle. (See Figure Below). Caution: Never attach return cable to winch mount. This may overload winch mount

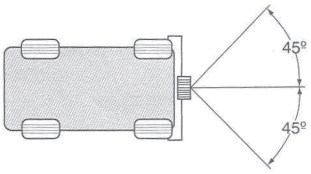


RATING

For maximum line pull rating, winch cable direction must not exceed:

1. 15º angle up or down from horizontal (See Figure Below).
2. 45º angle left or right from straight ahead (See Figure Below). Caution: Exceeding the maximum line pull rating may overload winch, winch mount, and/or front mounted





SAFETY TIPS

•NEVER DISENGAGE CLUTCH LEVER WHEN THERE IS A LOAD ON THE WINCH. Mile Marker electric winches utilize an automatic load holding brake, therefore no adjustment to clutch is needed to maintain load.

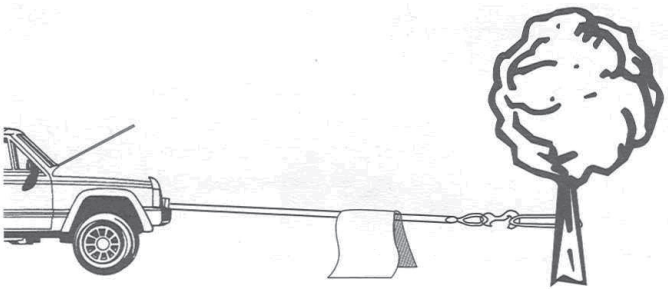
•Store the remote control cord in a safe place when not in use to prevent use by children or other unauthorized persons who could injure themselves or others or damage the controls.

•Do not operate winch inder the influence of drugs, alcohol, or medications.

•Isolate winch before putting hands in or around the fairlead or wire rope drum (The Danger Zone).

•DO NOT OVERLOAD YOUR WINCH. Do not maintain power to the winch if the drum stops. Overloads can damage the vehicle, winch or winch rope and create unstable operating conditions.

•It is recommended to lay a heavy blanket or jacket over the rope about halfway along to the hook attachment. If a rope failure should occur, the weight of the cloth will act as a damper and help prevent the broken rope from whipping (See Figure Below). Remember to move the blanket or jacket as winching proceeds, but halt winching when doing so. Partially raising the hood of the vehicle will also give a measure of protection to its occupants from broken rope or cable, consistent with sufficient forward visibility for the operator.



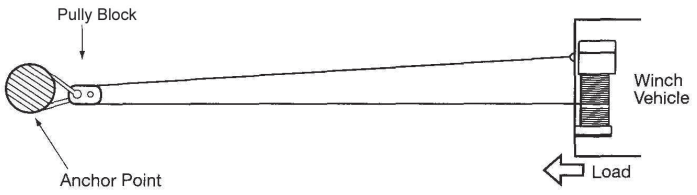
Winching Tips & Techniques

SELF-RECOVERY

1. Always attempt to get the cable as straight as possible to the direction of the vehicle. It is acceptable to start a pull at an angle if it is obvious that the vehicle will turn towards the hook anchoring point. Turning the steering wheel will assist the process. It is recommended that the driver is in the vehicle.
2. Make sure hand brake and foot brake are free and that the transmission is in neutral.
3. When the driver's attempt to regain vehicle traction is successful, he or she should be careful not to overrun the cable and risk the possibility of it being trapped under the vehicle.
4. DO NOT move your vehicle in reverse to assist the winch. The combination of the winch and vehicle pulling together could overload the cable and winch itself.

USE OF A PULLEY BLOCK OR SNATCH BLOCK

Vehicle self-recovery using the pulley block attached to the anchor point for direct pull. In this instance the vehicle becomes the "load" and the actual pulling power on the vehicle will be double at half winch rope speed. Never connect wire rope or hook back to winch mount!



Below: Direct pull on load using the winch vehicles as the anchor with pulley block attached to the load.

The most important aid to successful winching (after the winch) is the pulley block, which can be used to increase the pulling power of the winch of for indirect pulls. Pulley blocks can be used in two modes. First mode is attached to the load and second is secured to an anchor point.

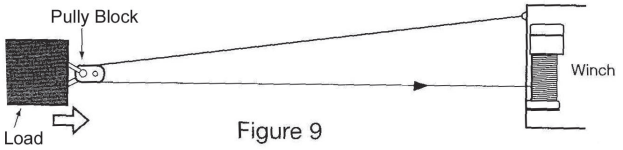
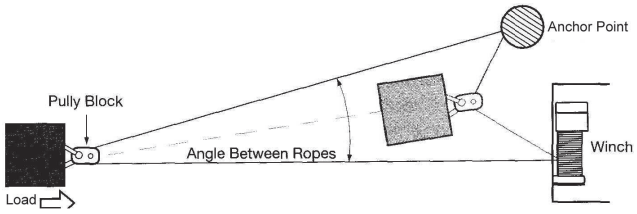


Figure 9

Below: Indirect pull necessitated by obstructions or soft ground. Pulley block attached to load using a suitable anchor point. Note the angled direction taken by the load and subsequent angle of rope feedback on the winch drum (extreme example shown). There may be unavoidable circumstances requiring this mode, though in general it is not recommended unless applied in stages by moving the anchor point or vehicle to avoid the sharp angled rewind on the winch drum. The actual load pulling power and rope speed will depreciate with any increased angle between the ropes.

The anchor point, when used must be secure, using a tree, another vehicle or any firm structure to which a pulley block can be used to your advantage.



USE OF A NYLON SLING AND SHACKLE

•A shackle should always be used when attaching winch hooks to nylon slings. NOTE: The shackle must pass through both eyes of the sling. The safe working load of the nylon sling is based on the use of both eye ends.
Never use the cable or hook to connect directly to the nylon sling.

USE OF GLOVES

•When handling or rewinding the cable always use gloves to eliminate the possibility of cuts caused by burrs and broken strands. Inspect cable and equipment frequently. The cable should be replaced immediately if any sign of burrs or broken strands are evident. A frayed cable with broken strands should be replaced immediately. Always replace the cable with a Mile Marker recommended replacement part. Any substitution must be IDENTICAL in strength, quality, lay and stranding. Never hook the cable back onto itself. Hooking the cable back onto itself creates an unacceptable strain, breaking individual strands which in turn weakens the entire cable. Use a sling. Avoid continuous pulls from extreme angles as this causes cable to pile up at one end of the drum.

Getting Started

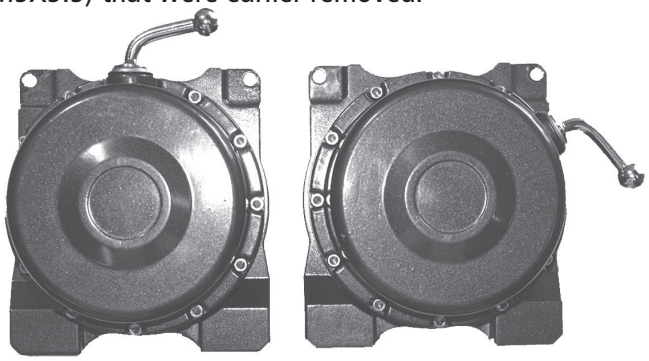
Unpacking Your Winch

•Unpack your new Mile Marker winch and carefully ensure that all the parts are included by referring to parts list and exploded view drawings provided in this manual.

NOTE: If you find any missing or broken parts, please call Mile Marker as soon as possible at the number present on the cover page of this manual.

Clocking Instructions (FOR SX, SEC, & SI models only)

Winch gear housing can be clocked in 12 ways enabling the user to position the clutch lever at 12 equidistant locations (0°, 30°, 60°….360°). Undo the 11 bolts (item # 10, M5X5.5) on the gear housing. Rotate the gear housing to any one of the above position so that all holes align. Secure the gear side housing to the winch leg by the 11 bolts (item # 10, M5X5.5) that were earlier removed.



Clocking Positions: 0° and 60°

Winch Mounting

NOTE: Mile Marker recommends the use of its mounting kits for proper winch installation and optimum winch performance. However, when not using Mile Marker Universal Mount, ensure that the mounting platform is strong enough to meet the maximum rated load of the winch in use. Mile Marker recommends steel plates with thickness of at least 0.25".

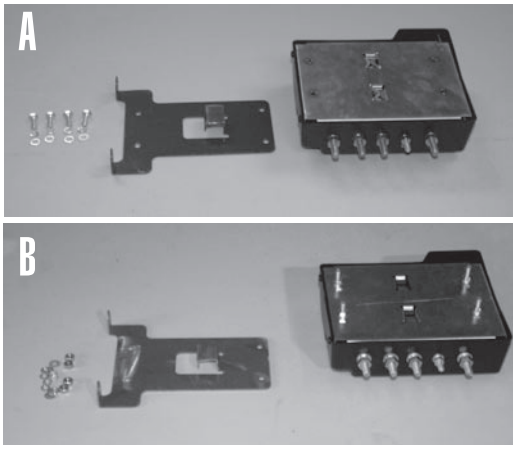
Winch should be aligned and secured to a solid part of the vehicle (front or rear) where the full rated load will be evenly distributed.

CAUTION: It is essential that the mounting surface be flat and the winch is mounted such that the three major sections (Gear housing end, drum and motor end) are in proper alignment.

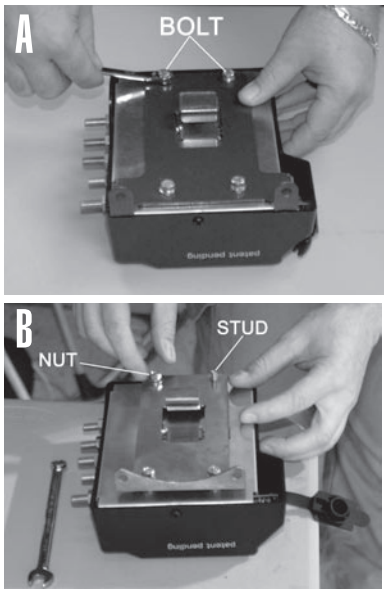
1. Drill four mounting holes (10mm in Dia.), where necessary, according to the bolt pattern mentioned in the winch specifications.
2. Fasten the winch body to the mounting platform using the four Capscrews (M10 X 34mm) and Nuts (M10) provided.
3. Torque the Capscrews to about 35 ft-lb (47.5 N-m).
4. All Mile Marker Mounting Channels come with fairlead holes. If you are using any other mounting platforms, drill two holes for the roller fairlead installation. Position the holes such that the fairlead opening hole stretches from the circumference of the drum to the end of the maximum permissible layers on the drum in the direction cable is being rolled.

CAUTION: When replacing the capscrews or when longer bolts are required, make sure that you use bolts of Grade 5 or greater.

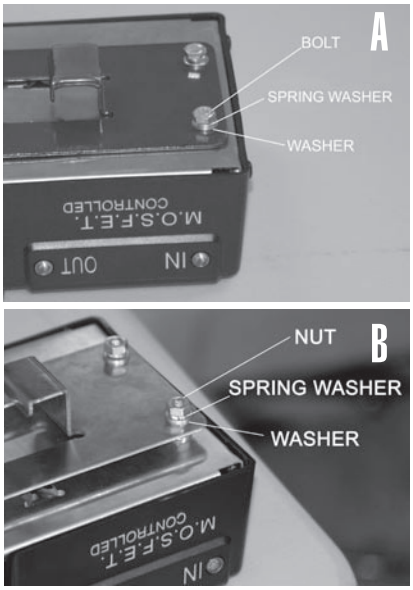
Control Box Installation



1-1: Hardware, Mount, and Control Box: (A) MX Models, and (B) PE/E Models



1-2: Mount Placement on Control Box: (A) MX Models, and (B) PE/E Models



NOTE: Your Mile Marker Control Box comes with an option of mounting it to the winch or at any remote location. However, Mile Marker recommends you to mount it to the winch following the instructions below. If you choose to mount it at any remote location, please ensure that: (a) the location does not interfere with any vehicle's moving / functioning parts, and (b) you use electrical cables with similar or better specifications as that provided by Mile Marker.

CAUTION: Make sure that all exposed electrical connections are covered with insulation boots to avoid electrical short.

Battery cables should not be drawn taut; leave some slack for cable movement. Also, ensure that they are routed properly with out any interference with the vehicular components that could potentially damage the cable or cause electrical short.

Long battery cable runs may have significant voltage drops that may cause the winch motor controller to not operate.

NOTE: The SI Series winch utilizes an integrated contol box, therefore only battery cable instruction applies to these models.

MX/PE/E Series Box Installation

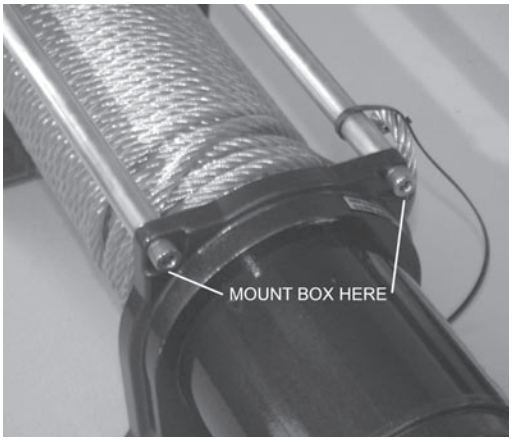
You will need a 14mm, 13mm, and a 10mm wrench and metric Allen wrenches. Also you will need general hand tools for mounting the winch.

1. Unpack the control box and its bracket (Fig. 1-1).
2. Align the studs/holes on the bottom of the control box with the holes on the bracket and fasten the control box to the bracket using the provided washers (#6 Metric), spring washers (# 6 metric) and Bolts (M6)or Nuts (M6) (Figs. 1-2 & 1-3).
3. Mount the motor control box to the motor die casting (Figs. 1-4 through 1-6).
4. Further secure the bracket to the motor using the provided tie-wrap (Fig. 1-7)

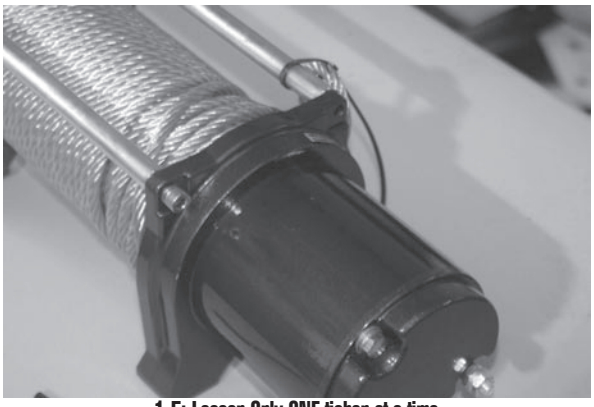
Control Box Installation Cont'd

MX/PE/E Series Winches Cont'd

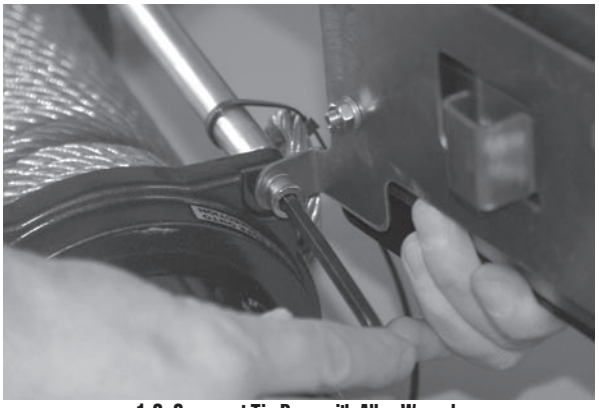
5. Slip the boots onto pertinent cables and make electrical connection in accordance with the schematic (Figs. 1-8 & 1-9). Slide the boots onto all the electrical connections made.
6. The small black wire MUST attach to the battery ground terminal.
7. Refer to the Winch Operation section and test the winch for proper functioning. If the winch drum is rotating in the opposite direction when pressed IN, switch the cables going into the motor and re-test.



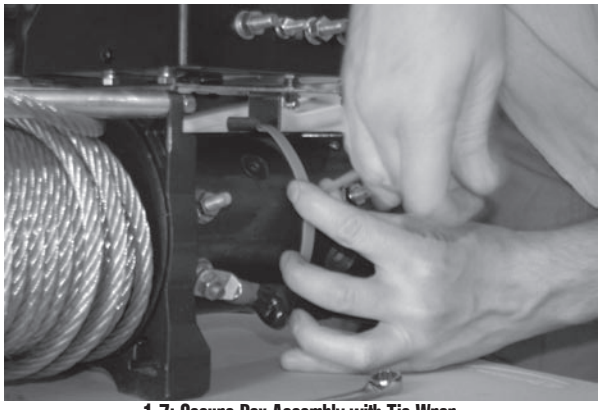
1-4: Mounting Point on Tie Bar for Control Box MX/PE/E Series



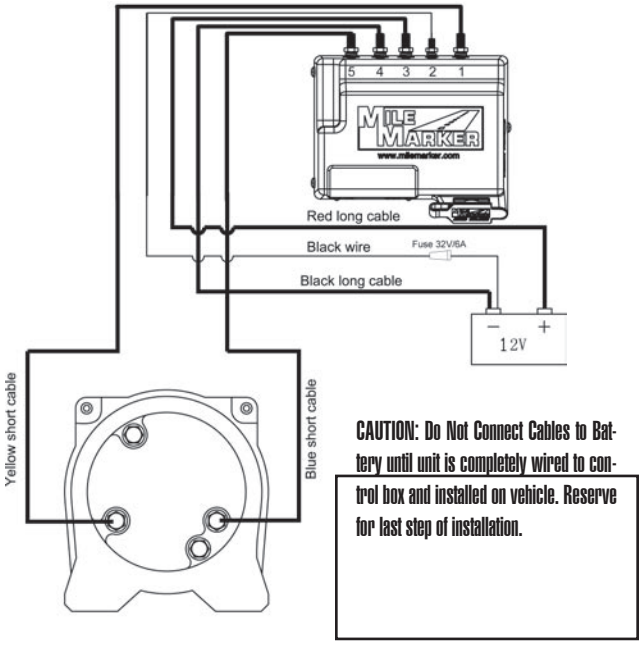
1-5: Loosen Only ONE tiebar at a time



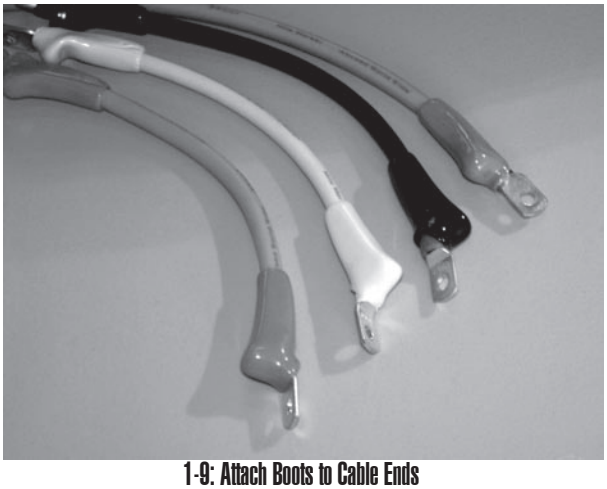
1-6: Secure at Tie Bars with Allen Wrench



1-7: Secure Box Assembly with Tie-Wrap



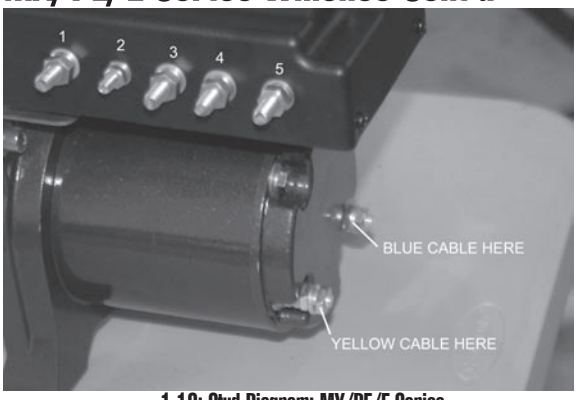
1-8: Complete Wiring Schematic: MX/PE/E Series



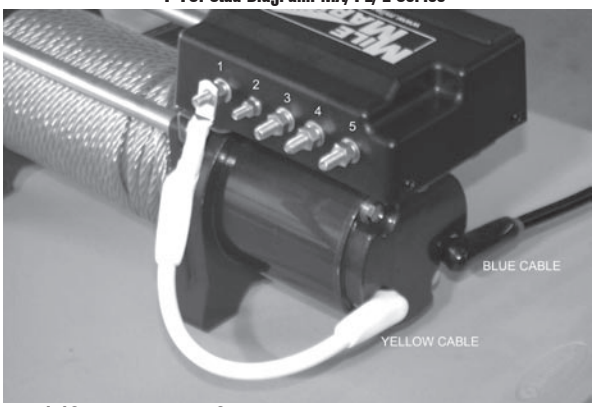
1-9: Attach Boots to Cable Ends

Control Box Installation Cont'd

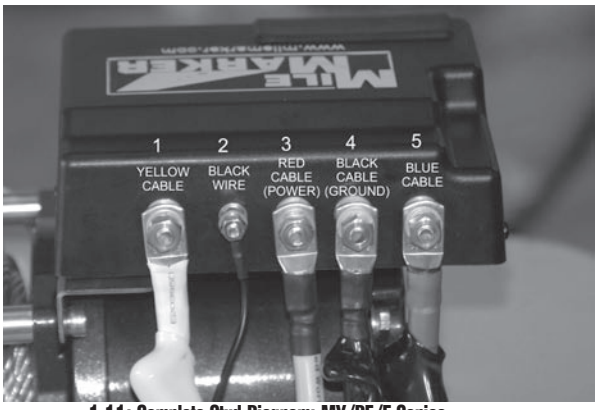
MX/PE/E Series Winches Cont'd



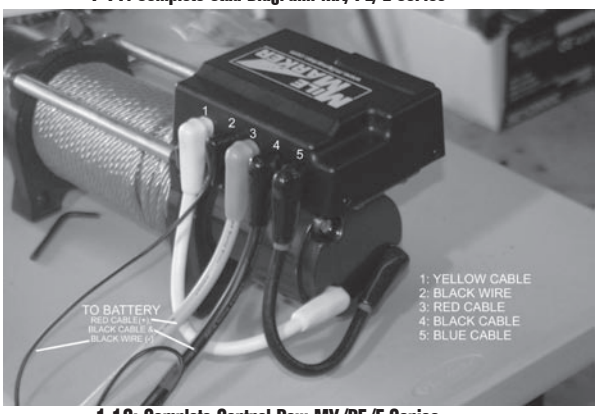
1-10: Stud Diagram: MX/PE/E Series



1-10: Yellow and Blue Cables: Winch Motor and then to Box



1-11: Complete Stud Diagram: MX/PE/E Series

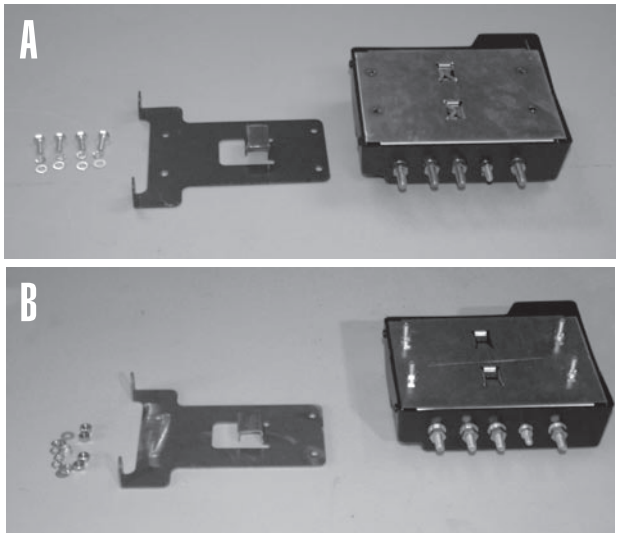


1-12: Complete Control Box: MX/PE/E Series

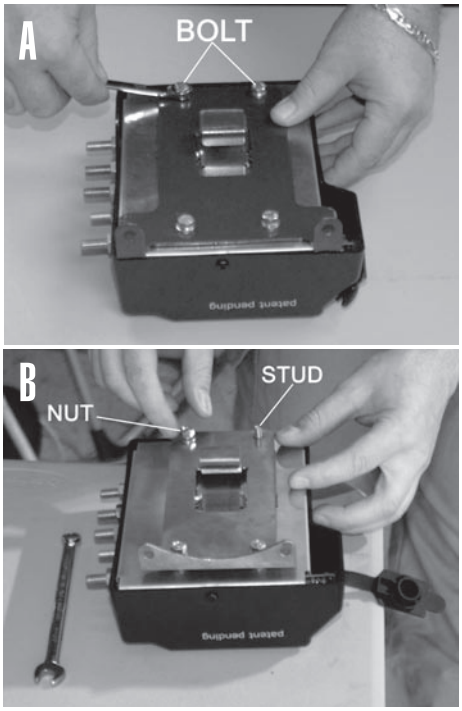
SX/SEC Series Box Installation

You will need a 14mm, 13mm, and a 10mm wrench and metric Allen wrenches. Also you will need general hand tools for mounting the winch.

1. Unpack the control box and its bracket (fig. 2-1).
2. Align the studs/holes on the bottom of the control box with the holes on the bracket and fasten the control box to the bracket using the provided washers (#6 Metric), spring washers (# 6 metric) and Bolts (M6)or Nuts (M6)
3. Mount the motor control box to the motor die casting (figs. 2-4 & 2-5).



2-1: Hardware, Mount, and Control Box: (A) SX and (B) SEC

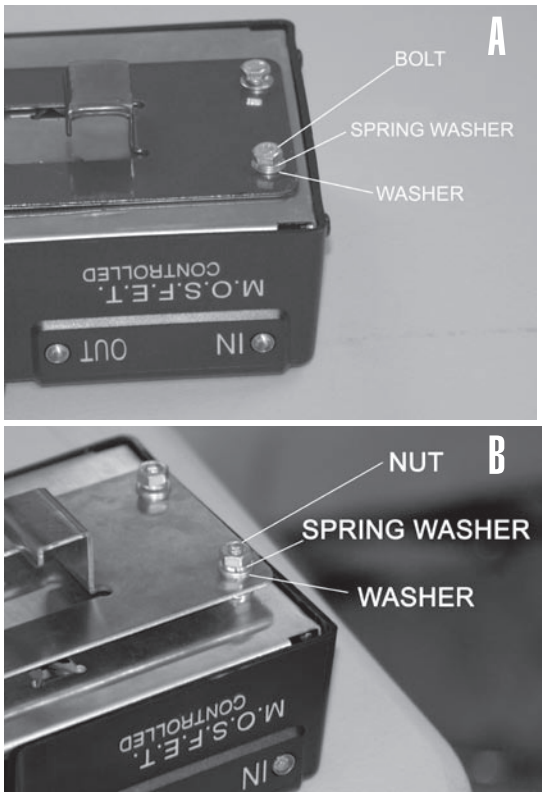


2-2: Mount Placement on Control Box: (A) SX Models, and (B) SEC Models

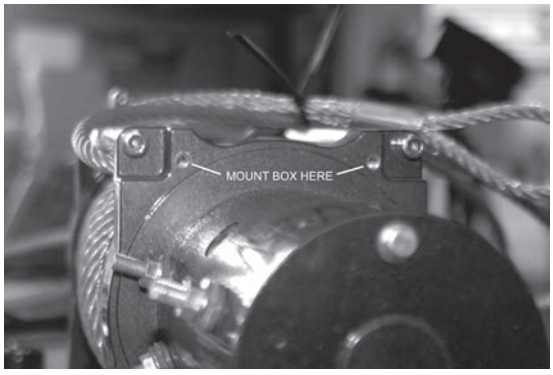
Control Box Installation Cont'd

SX/SEC Series Winches Cont'd

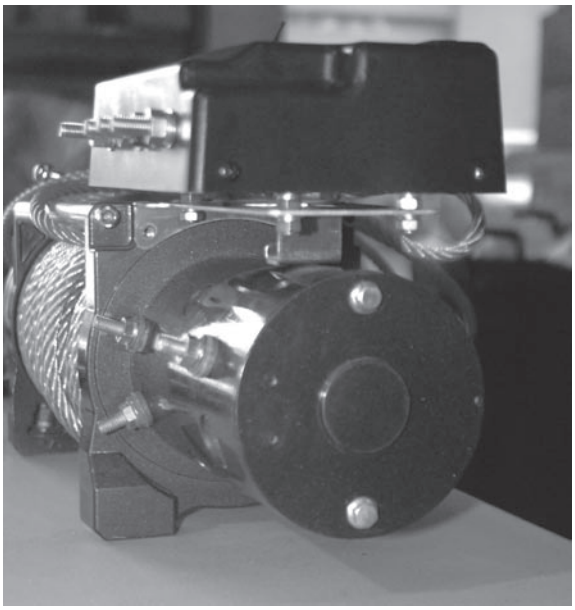
4. Further secure the bracket to the motor using the provided tie-wrap (Fig. 2-6).
5. Slips the boots onto pertinent cables and make electrical connection in accordance with the schematic below. Slide the boots onto all the electrical connections made (figs. 2-7 through 2-12).
6. The small black wire MUST attach to the battery ground terminal (fig. 2-13).
7. Refer to the Winch Operation section and test the winch for proper functioning.



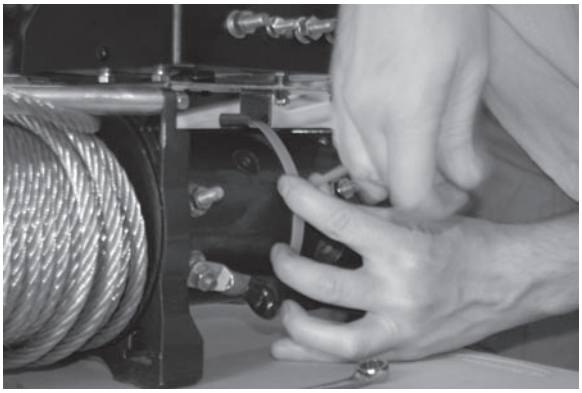
2-3: Hardware Placement on Control Box: (A) SX Models, and (B) SEC Models



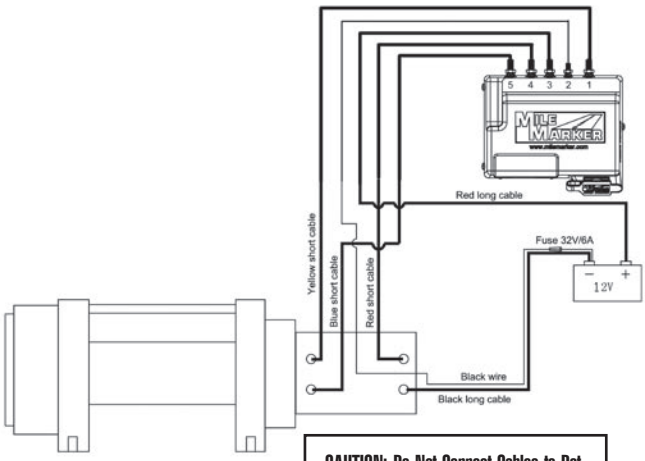
2-4: Mounting Point on Die Cast for Control Box SX/SEC Series



2-5: Control Box Aligned with Mounting Points: SX/SEC Series



2-6: Secure Box Assembly with Tie-Wrap

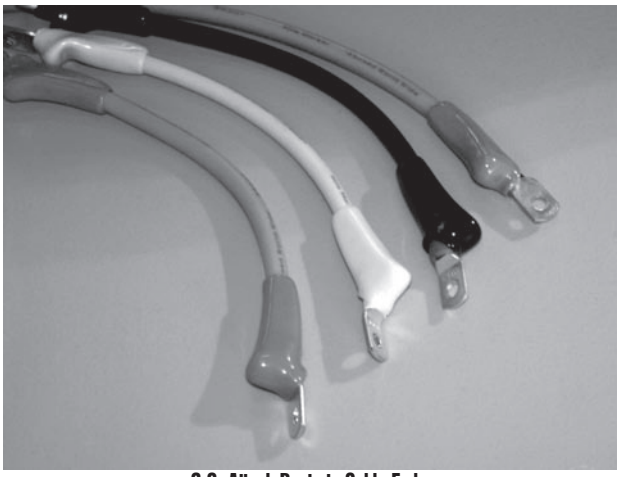


CAUTION: Do Not Connect Cables to Battery until unit is completely wired to control box and installed on vehicle. Reserve for last step of installation.

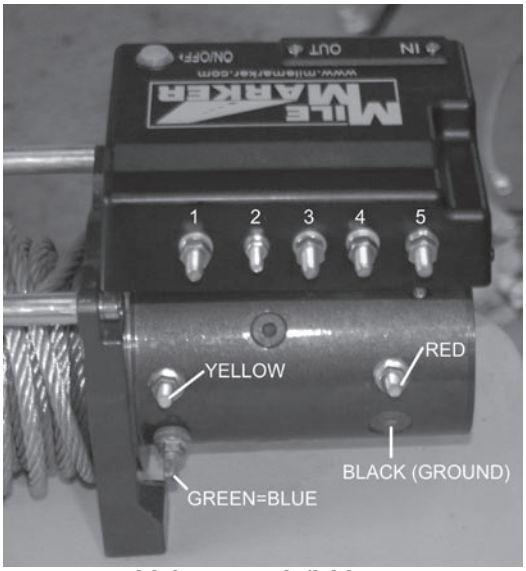
2-7: Complete Wiring Schematic: SX/SEC Series

Control Box Installation Cont'd

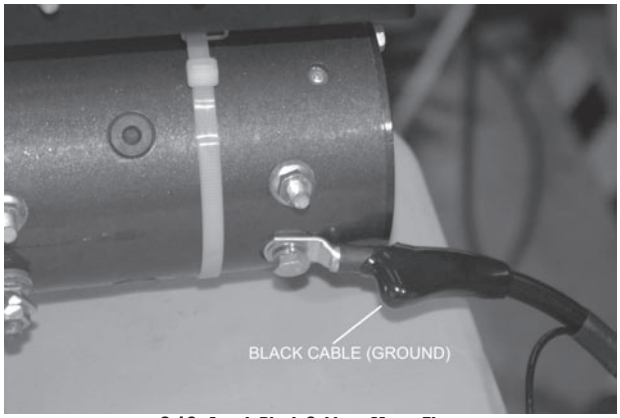
SX/SEC Series Winches Cont'd



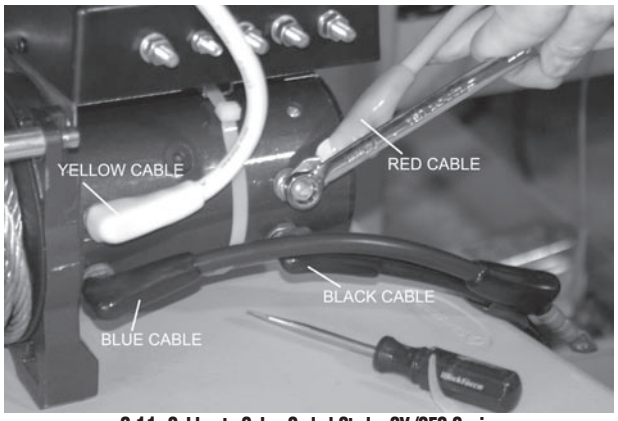
2-8: Attach Boots to Cable Ends



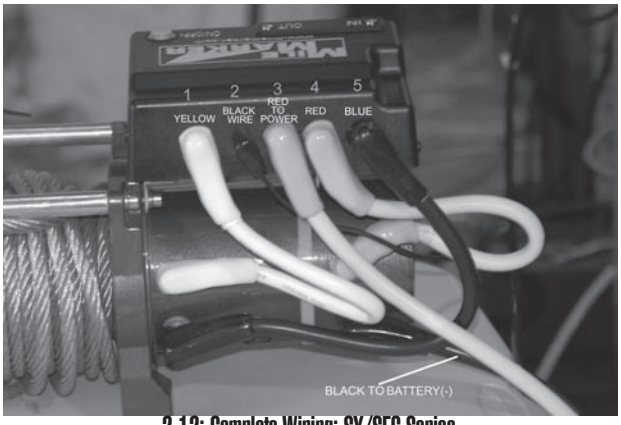
2-9: Stud Diagram: SX/SEC Series



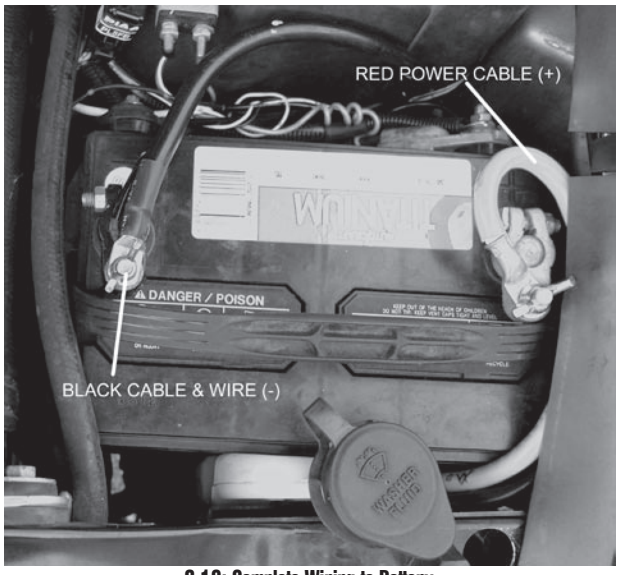
2-10: Attach Black Cable to Motor First



2-11: Cables to Color Coded Studs: SX/SEC Series



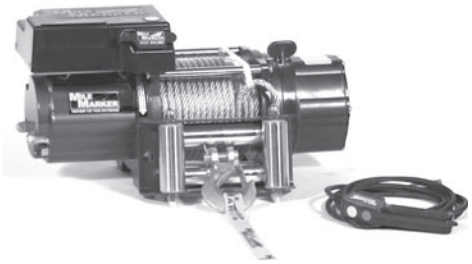
2-12: Complete Wiring: SX/SEC Series



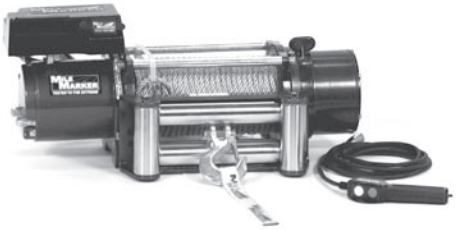
2-13: Complete Wiring to Battery

PE/E Series Winch Systems

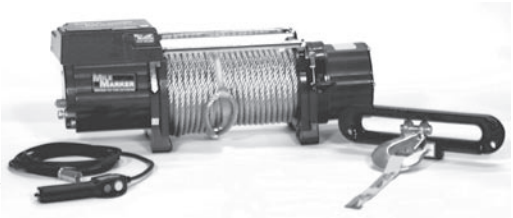
Including Models: PE6000 (PN: 76-50230), PE8000 (PN: 76-50240), E9000 (PN: 76-50042)



PE6000



PE8000



E9000

PE/E Series Features: Planetary Gear System, Automatic Load Holding Brake, Free Spooling Mode, Power In & Power Out, low-profile cotrol pack, galvanized aircraft cable with replaceable hook

Specs:

	PE6000	PE8000	E9000
Part Number	76-50230	76-50240	76-50042
Rated Line Pull-Single Line	6,000 lbs. (2722 kg)	8,000 lbs. (3629 kg)	9,000 lbs. (4,090 kg)
Gear Train	Planetary Gear System	Planetary Gear System	Planetary Gear System
Gear Reduction Ratio	210:1	210:1	210:1
Motor (Permanent Magnet)	3.6 hp (2.7kw), 12v, 24v	4.1hp (3kw), 12v, 24v	4.5 HP 12V, 24V
Cable Supplied	5/16″ (7.94 mm) x 85′ (26.06 m)	5/16″ (7.94 mm) x 100′ (30.5m)	3/8 in (9.53 mm) x 100ft. (30.5 m)
Drum Size (Diameter/Length)	2.5″ (63 mm) x 5.512″ (140 mm)	2.5″ (63 mm) x 9″ (228 mm)	2.5″ (63 mm) x 9″ (228 mm)
Overall Dimensions (LxWxh)	17.244″ x 6.22″ x 7.283″ (438 mm x 158 mm x 185 mm)	21″ x 6.22″ x 7.283″ (558.8 mm x 158 mm x 185 mm)	21.45″ x 6″ x 6.38″
Mounting Bolt Pattern	6.535″ x 4.5″ (166 mm x 114.3 mm)	10″ x 4.5″ (254 mm x 114.3 mm)	10″ x 4.5″
Shipping Weight	68 lbs. (31 kg)	80 lbs. (36 kg)	84 lbs.

PE/E Performance Specifications:

PE6000

Performance of First Layer

Line Pull LB	Line Pull KG	Line Speed fpm	Line Speed mpm	Motor Current (amp) 12v	Motor Current (amp) 24v
0	0	15	4.6	35	15
1000	454	11	3.4	80	50
3000	1361	8	2.5	100	90
5000	2268	5	1.5	145	120
6000	2722	4.6	1.4	170	140

Line Pull & Cable Capacity by Cable Layer

Layer	Rated Line Pull LB	Rated Line Pull KG	Capacity ft	Capacity meters
1	6000	2722	12.7	3.87
2	5000	2268	27.5	8.38
3	4250	1928	44	13.41
4	3720	1687	64	19.41
5	3300	1497	85	25.91

PE8000

Performance of First Layer

Line Pull LB	Line Pull KG	Line Speed fpm	Line Speed mpm	Motor Current (amp) 12v
0	0	13	3.9	35
2000	907	11	3.3	100
4500	2041	9	2.7	180
6000	2722	6	1.8	230
8000	3628	5	1.5	300

Line Pull & Cable Capacity by Cable Layer

Layer	Rated Line Pull LB	Rated Line Pull KG	Capacity ft	Capacity meters
1	8000	3629	15	4.6
2	6335	2874	38	11.6
3	5243	2378	64	19.51
4	4473	2029	95	29
5	3900	1769	100	30.5

E9000

Performance of First Layer

Line Pull LB	Line Pull KG	Line Speed fpm	Line Speed mpm	Motor Current (amp) 12v
0	0	10	3.9	35
2000	907	8.8	2.7	85
4000	1810	7.3	2.2	130
6000	2722	6	1.8	200
8000	3628	5	1.5	260
9000	4082	4.3	1.3	300

Line Pull & Cable Capacity by Cable Layer

Layer	Rated Line Pull LB	Rated Line Pull KG	Capacity ft	Capacity meters
1	9000	4082	15	4.6
2	6500	2948	38	11.6
3	5500	2494	64	19.51
4	4800	2177	95	29
5	4200	1900	100	30.5

PE/E Series Winch Systems

Safety Features

Over Temperature

1. The winch motor controller on-board computer can detect if the winch temperature has gotten too hot. When your winch gets too hot then the LED lights will flash and the on-board computer will shut the winch motor off.
2. The winch motor controller computer will not turn the winch back on until the winch is at a safe operating temperature.

OUT Time Delay

1. If the winch motor controller on-board computer detects that the OUT button has been pressed for about 10 seconds the winch motor will turn off.
2. After about 5 seconds the on-board computer will allow you to use the OUT button again to spool the winch cable out.

Winch Operation

NOTES: For optimal winch performance, it is recommended that you use a fully charged 12V battery with at least 650 Cold Cranking Amperes. Further, it is advised to keep the engine running during the winch operation, so that the battery is being charged continuously.

All Mile Marker PE/E winches are equipped with a Cam Ring that engages / disengages the clutch. Clutch, when engaged, will couple the gear train with winch drum; this is also called as Locking of the winch. Clutch when disengaged de-couples the gear train from the winch drum enabling the drum to rotate independently; this is also called Freespooling of the winch.

CAUTION: Before you start using your new Mile Marker winch, you will have to re-wind the entire cable on the drum under a load of at least 500 lbs (227 Kgf) starting with at least 5 wraps on the initial layer. Failure to do so will result in the outer wraps pressing against the inner warps resulting in the damage of the cable.

Always have at least 5 wraps of cable on the winch drum before winching.

Always ensure that the clutch is fully engaged or fully disengaged to avoid any injuries and damages.

All electrical winches are for intermittent use only. Never run the winch for more than 1 min at maximum rated load. Wait until the motor cools down before resuming winching operation. Usage of a snatch block is recommended to reduce the load on the winch motor.

All Mile Marker Electric Winches come with an Automatic Load Holding brake; so never run the winch against the brake (OUT on the hand control) for more than 10 seconds. Failure to do so might result in damage of the brake and motor.

Always stay clear off from the loaded winch cable.

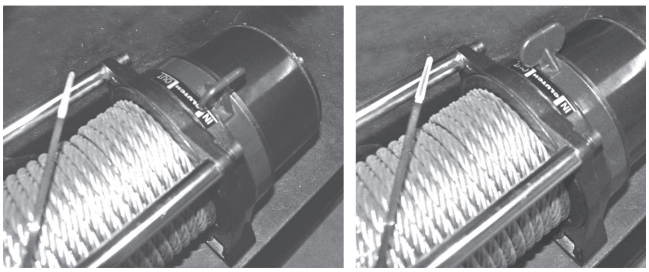
PE/E Series Winch Systems

Winch Operation Cont'd

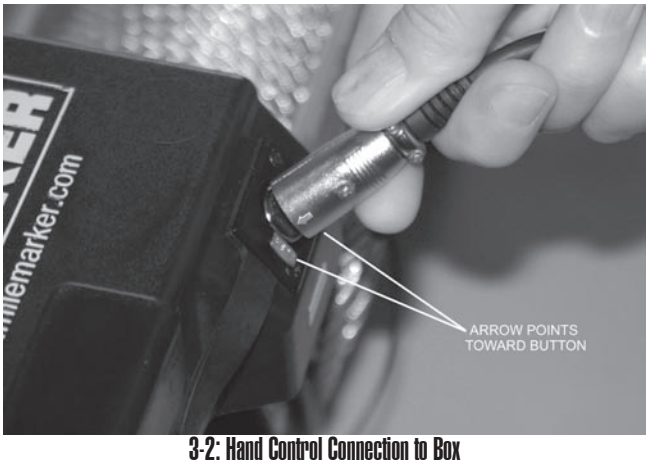
Instructions

1. Disengage the clutch by moving the Cam Ring to OUT Position (or Freespool mode) (Fig. 3-1).
2. Reel-out the cable and connect to the desired anchor point (while self recovery) or vehicle being recovered.
3. Fully Engage the clutch by moving the Cam Ring to IN Position (Fig. 3-1).
4. Lift the protective boot covering the hand control plug-in. Insert the hand control plug. The remote control's BLUE lights should TURN ON. (Fig. 3-2)
5. Start winching IN (GREEN lights on the remote control should TURN ON, Figs. 3-3 & 3-4)) slowly to remove the slack on the cable and ensuring that the cable is winding onto the drum properly (with out any overlapping or gaps). Never disengage the clutch while the cable is under load!
6. When finished winching, slowly let off the load by winching OUT (RED lights on the remote control should TURN ON, Fig. 3-3), unhook the cable and rewind the cable onto the drum.
7. Unplug the hand control and push the protective boot cover back on to the Plug-in (Fig. 3-5).

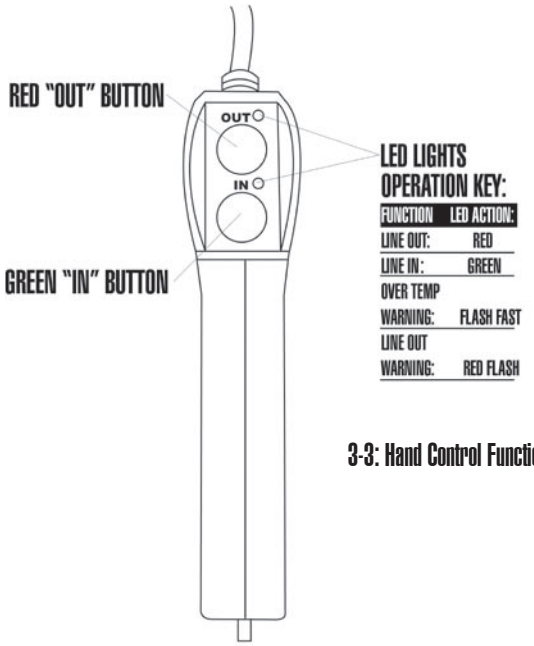
ENGAGED DISENGAGED



3-1: Clutch Engagement

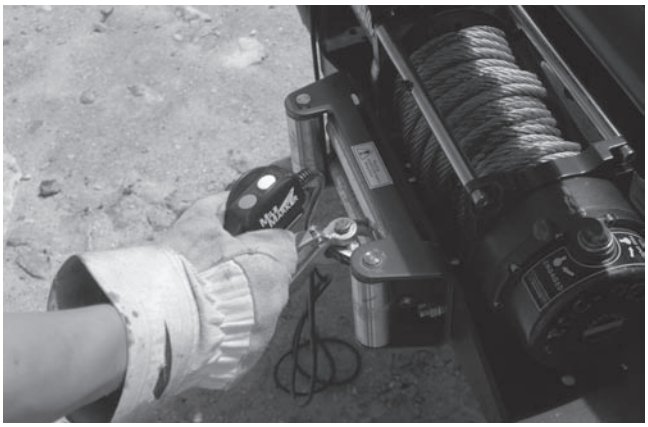


3-2: Hand Control Connection to Box

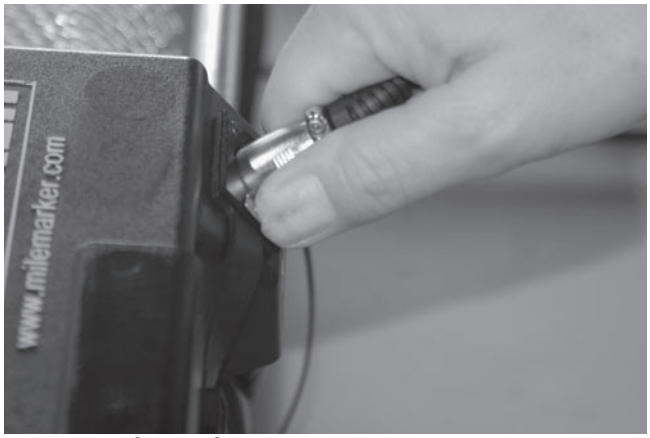


FUNCTION	LED ACTION:
LINE OUT:	RED
LINE IN:	GREEN
OVER TEMP WARNING:	FLASH FAST
LINE OUT WARNING:	RED FLASH

3-3: Hand Control Function



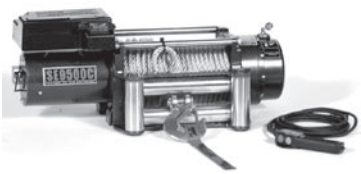
3-4: Hand Control Operation



3-5: Hand Control Removal: Push Button to Release

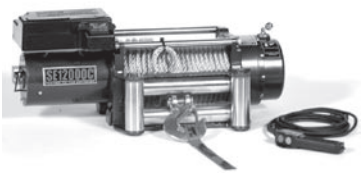
SEC/SI Series Winch Systems

Including Models: SE9500C (PN: 76-50246), SI9500 (PN: 76-50147), SE12000C (76-50251), SI12000 (PN: 76-50152)



SE9500C

SI9500



SE12000C

SI12000

SEC/SI Series Features: Planetary gear system for fast line speed, Automatic load-holding brake, Free spooling, Power In and Power Out., Low electric current, Hardened drum, Illuminated hand control, 4.8 Hp (3.6kw) heavy duty series wound DC motor

Specs:

	SEC/SI 9500	SEC/SI 12000
Part Number	76-50246/76-50147	76-50251/76-50152
Rated Line Pull-Single Line	9,500 lbs. (4,309 kg)	12,000 lbs. (5443 kg)
Gear Train	Planetary Gear System	Planetary Gear System
Gear Reduction Ratio	212:1	295.75:1
Motor (Permanent Magnet)	4.8 hp (3.6 kw), 12v, 24v	4.8hp (3kw), 12v, 24v
Cable Supplied	3/8" (9.53 mm) x 100' (30.5 m)	3/8" (9.53 mm) x 100' (30.5m)
Drum Size (Diameter/Length)	2.5" (63.5 mm) x 9" (228.6 mm)	2.5" (63.5 mm) x 9" (228.6 mm)
Overall Dimensions (LxWxh)	21.57" x 6.3" x 7.91" (SEC) or 10" (SI) (438 mm x 158 mm x 201 mm or 254 mm)	21.57" x 6.3" x 7.91" (SEC) or 10" (SI) (558.8 mm x 158 mm x 185 mm)
Mounting Bolt Pattern	10" x 4.5" (254 mm x 114.3 mm)	10" x 4.5" (254 mm x 114.3 mm)
Shipping Weight	SEC: 92 lbs. (31 kg) SI: 93 lbs. (42.1 kg)	SEC: 92 lbs. (42 kg) SI: 93 (42.1 kg)

SEC/SI Performance Specifications:

SEC/SI 9500

Performance of First Layer

Line Pull		Line Speed (12 Volt)		Line Speed (24 Volt)		Motor Current	
						12 V	24 V
lbs	kg	fpm	mpm	fpm	mpm	Amp	Amp
0	0	18.70	5.70	22.97	7.00	85	58
2000	907	13.12	4.00	18.37	5.60	150	110
4000	1814	10.50	3.20	13.45	4.90	210	135
6000	2722	7.90	2.41	12.80	3.90	270	185
8000	3629	5.91	1.80	10.50	3.20	320	220
9500	4309	4.32	1.32	9.02	2.75	365	240

Line Pull & Cable Capacity By Layer

Cabe Layer	Rated Line Pull		Cable Capacity	
	lbs.	kgs.	ft	meters
1	9500	4309	15	4.6
2	7500	3403	38	9.6
3	6200	2812	64	15.2
4	5300	2403	95	21.2
5	4630	2100	100	30.5

SEC/SI 12000

Performance of First Layer

Line Pull		Line Speed (12 Volt)		Line Speed (24 Volt)		Motor Current	
						12 V	24 V
lbs	kg	fpm	mpm	fpm	mpm	Amp	Amp
0	0	14.60	4.45	16.50	5.00	90	58
2000	907	12.81	3.90	15.10	4.60	145	95
4000	1814	9.68	2.95	13.45	4.10	185	120
6000	2722	7.90	2.41	11.11	3.39	230	160
8000	3629	7.07	2.15	9.50	2.91	270	190
10000	4536	5.06	1.54	8.26	2.52	315	230
12000	5443	4.45	1.36	7.15	2.18	375	250

Line Pull & Cable Capacity By Layer

Cabe Layer	Rated Line Pull		Cable Capacity	
	lbs.	kgs.	ft	meters
1	12000	5443	15	5
2	10200	4627	38	11.5
3	8400	3810	64	19.5
4	7300	3310	95	29
5	6500	2948	100	30.5

SEC/SI Series Winch Systems

Safety Features

Over Temperature

1. The winch's on-board computer can detect if the winch temperature has gotten too hot. When your winch gets too hot then the LED lights will flash and the on-board computer will shut the winch motor off.
2. The winch motor controller computer will not turn the winch back on until the winch is at a safe operating temperature.

OUT Time Delay

1. If the winch's on-board computer detects that the OUT button has been pressed for about 10 seconds the winch motor will turn off.
2. After about 5 seconds the on-board computer will allow you to use the OUT button again to spool the winch cable out.

NOTE: SI Model winches are not available with the Over Temperature and OUT Time Delay Features at this time.

Winch Operation

NOTES:For optimal winch performance, it is recommended that you use a fully charged 12V battery with at least 650 Cold Cranking Amperes. Further, it is advised to keep the engine running during the winch operation, so that the battery is being charged continuously.

All Mile Marker SEC/SI winches are equipped with a Clutch Lever that engages / disengages the clutch. Clutch, when engaged, will couple the gear train with winch drum; this is also known as Locking of the winch. The Clutch, when disengaged, de-couples the gear train from the winch drum enabling the drum to rotate independently; this is also called Freespooling the winch.

CAUTION: Before you start using your new Mile Marker winch, you will have to re-wind the entire cable on the drum under a load of at least 500 lbs (227 Kg) starting with at least 5 wraps on the initial layer. Failure to do so will result in the outer wraps pressing against the inner wraps resulting in the damage of the cable.

Always have at least 5 wraps of cable on the winch drum before winching.

Always ensure that the clutch is fully engaged or fully disengaged to avoid any injuries and damages.

All electrical winches are for intermittent use only. Never run the winch for more than 1 min at maximum rated load. Wait until the motor cools down before resuming winching operation. Usage of a snatch block is recommended to reduce the load on the winch motor.

All Mile Marker Electric Winches come with an Automatic Load Holding brake; so never run the winch against the brake (OUT on the hand control) for more than 10 seconds. Failure to do so might result in damage to the brake and motor.

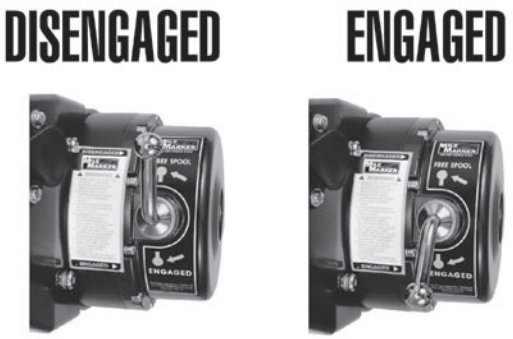
Always stay clear of the loaded winch cable.

SEC/SI Series Winch Systems

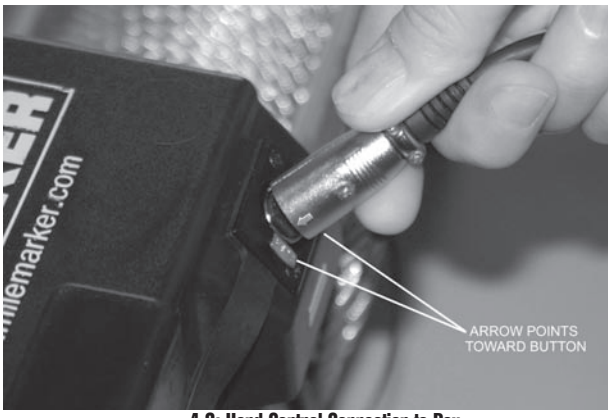
Winch Operation Cont'd

Instructions

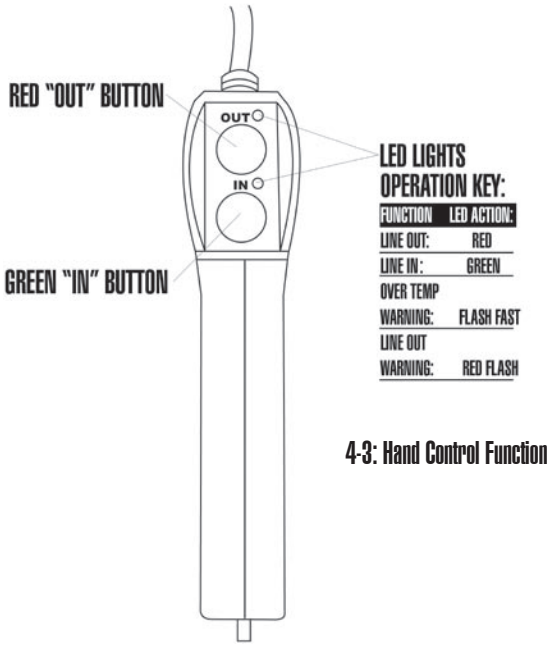
1. Disengage the clutch by moving the Clutch Lever to Disengage Position (or Freespool mode)(Fig. 4-1).
2. Reel-out the cable and connect to the desired anchor point (self recovery) or vehicle being recovered.
3. Fully Engage the clutch by moving the Clutch Lever to Engage Position(Fig. 4-1).
4. Lift the protective boot covering the hand control plug-in. Insert the hand control plug. The remote control BLUE lights should TURN ON. (Fig. 4-2)
5. Start winching IN (GREEN lights on the remote control should TURN ON, Figs.4-3 & 4-4) slowly to remove the slack on the cable and ensuring that the cable is winding onto the drum properly (with out any overlapping or gaps). Never disengage the clutch while the cable is under load!
6. When finished winching, slowly let off the load by winching OUT (RED lights on the remote control should TURN ON), unhook the cable and re-wind the cable onto the drum (Fig. 4-3).
7. Unplug the hand control and push the protective boot cover back on to the Plug-in (Fig. 4-5).



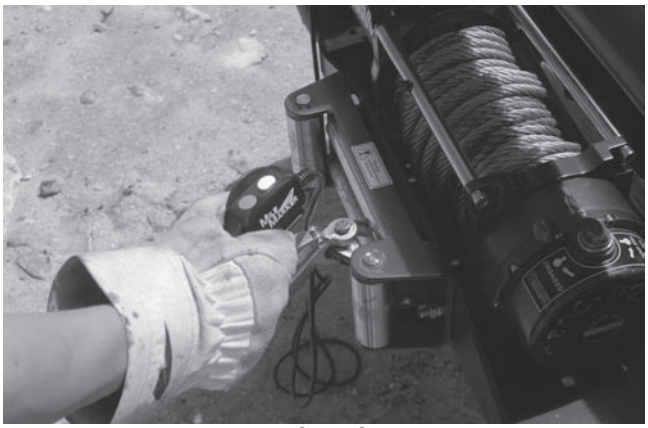
4-1: Clutch Engagement



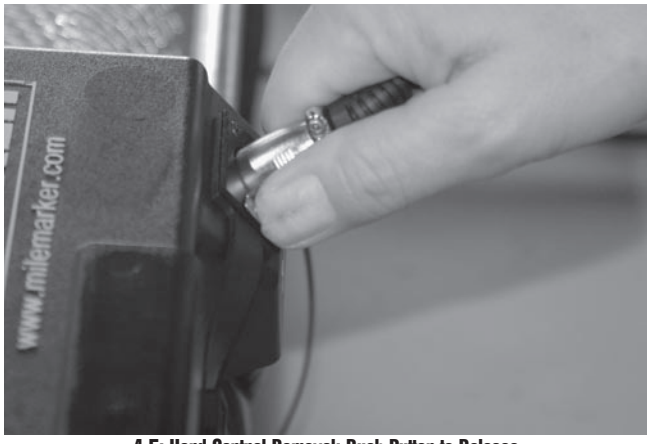
4-2: Hand Control Connection to Box



4-3: Hand Control Function



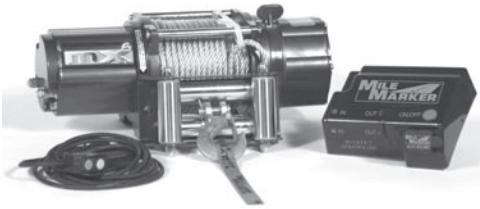
4-4: Hand Control Operation



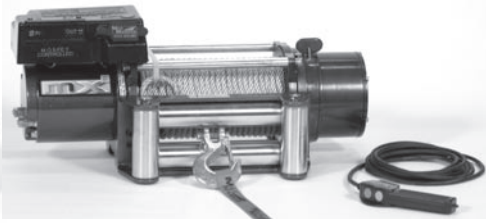
4-5: Hand Control Removal: Push Button to Release

MX Series Winch Systems

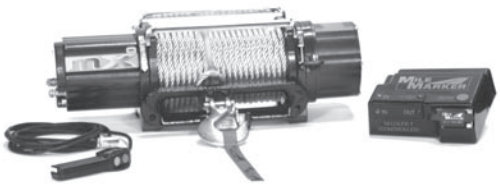
Including Models: MX6 (PN: 76-52130), MX8 (PN: 76-52140), MX9 (76-52040)



MX6



MX8



MX9

MX Series Features: Low Profile M.O.S.F.E.T. Control Pack with LED Feedback Lights, Illuminated Remote Control and Standard Wireless Remote Included, Automatic Power Down, Hi-Temp Warning Buzzer, Permanent Magnet Motor, Planetary Gear System, Automatic Load Holding Brake, Free Spooling, Power In and Power Out, Low Electric Current

Specs:

	MX6	MX8	MX9
Part Number	76-52130	76-52140	76-52040
Rated Line Pull-Single Line	6,000 lbs. (2722 kg)	8,000 lbs. (3629 kg)	9,000 lbs. (4,090 kg)
Gear Train	Planetary Gear System	Planetary Gear System	Planetary Gear System
Gear Reduction Ratio	210:1	210:1	210:1
Motor (Permanent Magnet)	3.6 hp (2.7kw), 12v, 24v	4.1hp (3kw), 12v, 24v	4.5 HP 12V, 24V
Cable Supplied	5/16" (7.94 mm) x 85' (26.06 m)	5/16" (7.94 mm) x 100' (30.5m)	3/8 in (9.53 mm) x 100ft. (30.5 m)
Drum Size (Diameter/Length)	2.5" (63 mm) x 5.512" (140 mm)	2.5" (63 mm) x 9" (228 mm)	2.5" (63 mm) x 9" (228 mm)
Overall Dimensions (LxWxh)	17.244" x 6.22" x 7.283" (438 mm x 158 mm x 185 mm)	21" x 6.22" x 7.283" (558.8 mm x 158 mm x 185 mm)	21.45" x 6" x 6.38"
Mounting Bolt Pattern	6.535" x 4.5" (166 mm x 114.3 mm)	10" x 4.5" (254 mm x 114.3 mm)	10" x 4.5"
Shippiong Weight	68 lbs. (31 kg)	80 lbs. (36 kg)	84 lbs.

MX Performance Specifications:

MX6

Performance of First Layer

Line Pull		Line Speed		Motor Current (amp)	
LB	KG	fpm	mpm	12v	24v
0	0	15	4.6	35	15
1000	454	11	3.4	80	50
3000	1361	8	2.5	100	90
5000	2268	5	1.5	145	120
6000	2722	4.6	1.4	170	140

Line Pull & Cable Capacity by Cable Layer

Layer	Rated Line Pull		Capacity	
	LB	KG	ft	meters
1	6000	2722	12.7	3.87
2	5000	2268	27.5	8.38
3	4250	1928	44	13.41
4	3720	1687	64	19.41
5	3300	1497	85	25.91

MX8

Performance of First Layer

Line Pull		Line Speed		Motor Current (amp)
LB	KG	fpm	mpm	12v
0	0	13	3.9	35
2000	907	11	3.3	100
4500	2041	9	2.7	180
6000	2722	6	1.8	230
8000	3628	5	1.5	300

Line Pull & Cable Capacity by Cable Layer

Layer	Rated Line Pull		Capacity	
	LB	KG	ft	meters
1	8000	3629	15	4.6
2	6335	2874	38	11.6
3	5243	2378	64	19.51
4	4473	2029	95	29
5	3900	1769	100	30.5

MX9

Performance of First Layer

Line Pull		Line Speed		Motor Current (amp)
LB	KG	fpm	mpm	12v
0	0	10	3.9	35
2000	907	8.8	2.7	85
4000	1810	7.3	2.2	130
6000	2722	6	1.8	200
8000	3628	5	1.5	260
9000	4082	4.3	1.3	300

Line Pull & Cable Capacity by Cable Layer

Layer	Rated Line Pull		Capacity	
	LB	KG	ft	meters
1	9000	4082	15	4.6
2	6500	2948	38	11.6
3	5500	2494	64	19.51
4	4800	2177	95	29
5	4200	1900	100	30.5

MX Series Winch Systems

Safety Features

Low Voltage/Low System Charge Warning

1. If the vehicles charging system (measured at the motor control pack) drops below a safe voltage the LED lights will flash. This is to warn you that your charging system is dangerously low and you may not be able to safely use your winch much longer.
2. If the vehicle's charging system (measured at the motor control pack) continues to drops below a safe voltage then LED lights will flash and the winch's on-board computer will shut the winch off. This is to protect your winch and your vehicle.
3. After a short time and if the vehicles charging system is at a safe voltage then the winch controller on board computer will let you use the winch again.
4. You cannot OVERRIDE this Low-Voltage Feature!

Over Temperature Warning

1. The winch's on-board computer can detect if the winch temperature has gotten too hot. When your winch gets too hot then the LED lights will flash and the on-board computer will shut the winch motor off.
2. If you press the IN and OUT buttons and the same time on the wired remote control than you can OVERRIDE this safety feature and continue to use the winch.

NOTE: OVERRIDING the safety feature will void your warranty and is UNSAFE! See the over ride feature for more details.

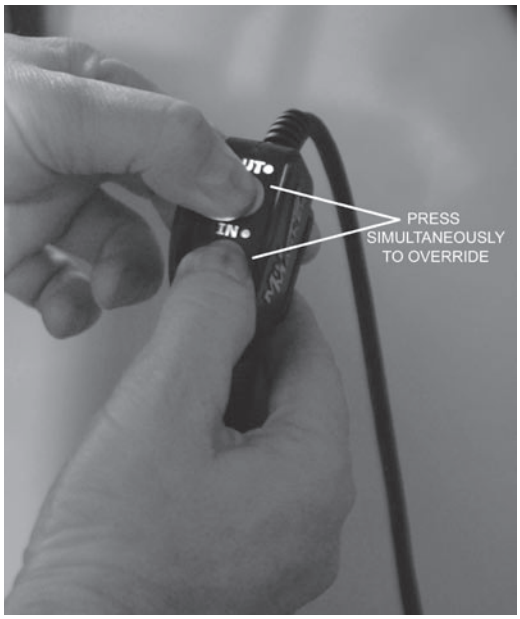
Line OUT Time Warning

1. If the winch's on-board computer detects that the OUT button has been pressed for about 10 seconds the winch motor will turn off.
2. After about 5 seconds the on-board computer will allow you to use the OUT button again to spool the winch cable out.
3. If you press the IN and OUT buttons at the same time on the wired remote control than you can OVERRIDE this safety feature.

NOTE: OVERRIDING the safety feature will void your warranty and is UNSAFE! See the over ride feature for more details.

OVERRIDE

1. If the winch motor control on-board computer detects a problem it will shut down the winch motor and flash the LED lights. These safety features are designed to ensure your safe operation and protect the product from misuse, allowing the winch to aid you in recovery time and time again.
2. The on-board computer will record in the flash memory what problem happened.
3. By pressing the IN and OUT buttons on the wired remote at the same time you can go into a manual OVERRIDE, and regain normal winch operation.
4. If you OVERRIDE any of the on-board computer safety features you WILL VOID YOUR WARRANTY!



5-1: Safety Feature Override

MX Series Winch Systems

Wireless Remote Control

1. Turn the control pack "OFF" (red light on top of control pack will NOT be illuminated)
2. Remove the wired remote control and store in a safe place.
3. Turn the motor control on (red light on top of control pack will be illuminated).
4. Turn the wireless remote control on (slide switch on the left side).
5. Pressing the IN button will activate IN and spool the winch cable in.
6. Pressing the OUT button will activate the OUT and spool the winch cable out.
7. If the winch's on-board computer detects any safety feature it will shut off the winch and flash the wireless remote control's LEDs and the winch control box LEDs.
8. There is no OVERRIDE feature when using the wireless remote control.
9. After you are done using the wireless remote, be sure to turn it off to save battery life.

NOTE: If you lose your wireless remote control you will need to contact Mile Marker for a replacement. Each wireless remote control has a unique binary password. Your wireless remote control will ONLY work with YOUR winch, until programmed otherwise.

Winch Operation

NOTES: For optimal winch performance, it is recommended that you use a fully charged 12V battery with at least 650 Cold Cranking Amperes. Further, it is advised to keep the engine running during the winch operation, so that the battery is being charged continuously.

All Mile Marker MX winches are equipped with a Cam Ring that engages / disengages the clutch. Clutch, when engaged, will couple the gear train with winch drum; this is also known as Locking the winch. The Clutch, when disengaged, de-couples the gear train from the winch drum enabling the drum to rotate independently; this is also called Freespooling the winch.

CAUTION: Before you start using your new Mile Marker winch, you will have to re-wind the entire cable on the drum under a load of at least 500 lbs (227 Kg) starting with at least 5 wraps on the initial layer. Failure to do so will result in the outer wraps pressing against the inner warps resulting in the damage of the cable.

Always have at least 5 wraps of cable on the winch drum before winching.

Always ensure that the clutch is fully engaged or fully disengaged to avoid any injuries and damages.

All electrical winches are for intermittent use only. Never run the winch for more than 1 min at maximum rated load. Wait until the motor cools down before resuming winching operation. Usage of a snatch block is recommended to reduce the load on the winch motor.

All Mile Marker Electric Winches come with an Automatic Load Holding brake; so never run the winch against the brake (OUT on the hand control) for more than 10 seconds. Failure to do so might result in damage to the brake and motor.

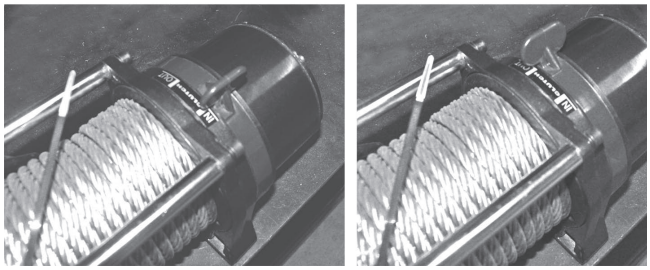
Always stay clear off from the loaded winch cable.

MX Series Winch Systems

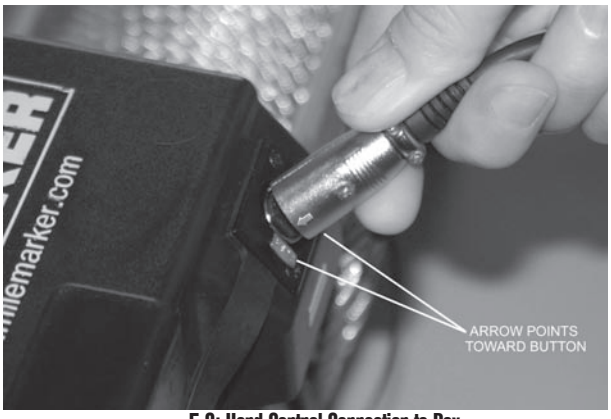
Winch Operation

1. Disengage the clutch by moving the Cam Ring to OUT Position (or Freespool mode) (Fig. 5-2).
2. Reel-out the cable and connect to the desired anchor point (self recovery) or vehicle being recovered.
3. Fully Engage the clutch by moving the Cam Ring to "IN" Position (Fig. 5-2).
4. Lift the protective boot covering the hand control plug-in. Insert the hand control plug. The remote control BLUE lights should TURN ON. Now you are ready to winch! (Fig. 5-3).
5. Start winching IN (GREEN lights on both, Remote Control and Control Box, should TURN ON, Figs. 5-4 & 5-5) slowly to remove the slack on the cable and ensuring that the cable is winding onto the drum properly (with out any overlapping or gaps). Never disengage the clutch while the cable is under load!
6. When finished winching, slowly let off the load by winching OUT (RED lights on both, Remote Control and Control Box should TURN ON, Fig. 5-4), unhook the cable and re-wind the cable onto the drum.
7. Unplug the hand control and push the protective boot cover back on to the Plug-in (Fig. 5-6).

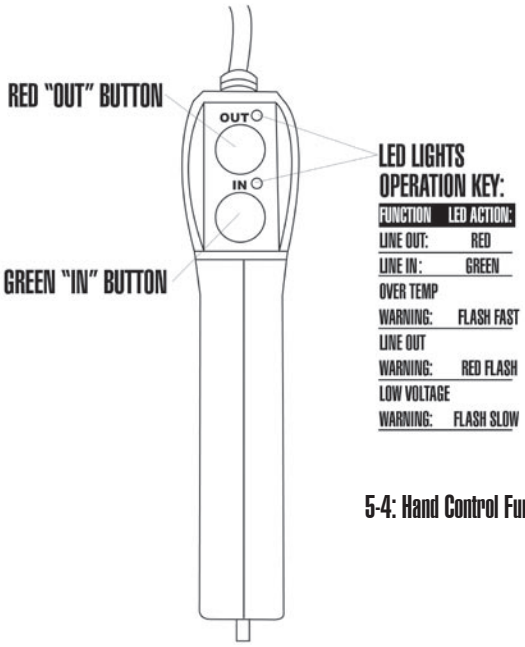
ENGAGED **DISENGAGED**



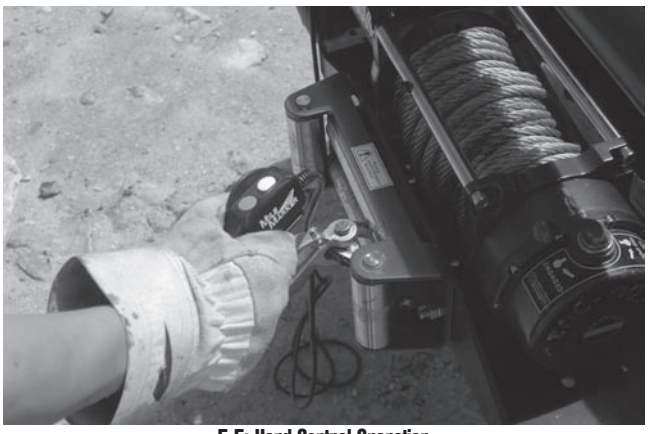
5-2: Clutch Engagement



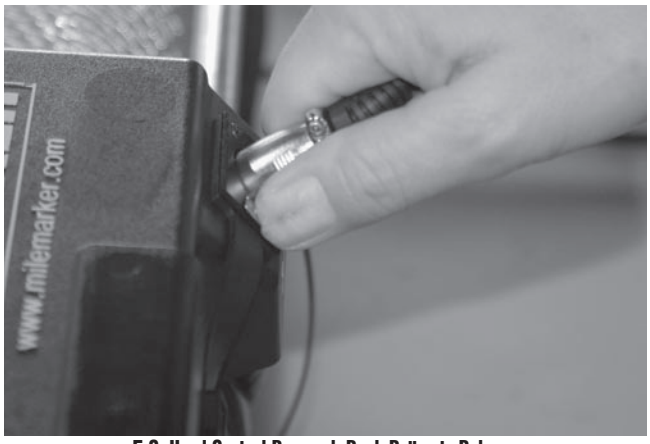
5-3: Hand Control Connection to Box



5-4: Hand Control Function



5-5: Hand Control Operation



5-6: Hand Control Removal: Push Button to Release

SX Series Winch Systems

Including Models: SX9.5 (PN: 76-52146), SX12 (PN: 76-52151)

SX9.5

SX12

SX Series Features: Low Profile M.O.S.F.E.T. Control Pack with LED Feedback Lights, Illuminated Remote Control and Standard Wireless Remote Included, Automatic Power Down, Hi-Temp Warning Buzzer, Series Wound Motor, Planetary Gear System, Automatic Load Holding Brake, Free Spooling, Power In and Power Out, Low Electric Current

Specs:

	SX9.5	SX12
Part Number	76-52146	76-52151
Rated Line Pull-Single Line	9,500 lbs. (4,309 kg)	12,000 lbs. (5443 kg)
Gear Train	Planetary Gear System	Planetary Gear System
Gear Reduction Ratio	212:1	295.75:1
Motor (Permanent Magnet)	4.8 hp (3.6 kw), 12v, 24v	4.8hp (3kw), 12v, 24v
Cable Supplied	3/8" (9.53 mm) x 100' (30.5 m)	3/8" (9.53 mm) x 100' (30.5m)
Drum Size (Diameter/Length)	2.5" (63.5 mm) x 9" (228.6 mm)	2.5" (63.5 mm) x 9" (228.6 mm)
Overall Dimensions (LxWxh)	21.57" x 6.3" x 10" (548 mm x 160 mm x 254 mm)	21.57" x 6.6" x 11.8" (548 mm x 167 mm x 299.7 mm)
Mounting Bolt Pattern	10" x 4.5" (254 mm x 114.3 mm)	10" x 4.5" (254 mm x 114.3 mm)
Shippiong Weight	92 lbs. (42 kg)	92 lbs. (42 kg)

SX Performance Specifications:

SX9.5

Performance of First Layer

Line Pull		Line Speed (12 Volt)		Motor Current 12 V
lbs	kg	fpm	mpm	Amp
0	0	18.70	5.70	85
2000	907	13.12	4.00	150
4000	1814	10.50	3.20	210
6000	2722	7.90	2.41	270
8000	3629	5.91	1.80	320
9500	4309	4.32	1.32	365

Line Pull & Cable Capacity By Layer

Cabe Layer	Rated Line Pull		Cable Capacity	
	lbs.	kgs.	ft	meters
1	9500	4309	15	4.6
2	7500	3403	38	9.6
3	6200	2812	64	15.2
4	5300	2403	95	21.2
5	4630	2100	100	30.5

SX12

Performance of First Layer

Line Pull		Line Speed (12 Volt)		Motor Current 12 V
lbs	kg	fpm	mpm	Amp
0	0	14.60	4.45	90
2000	907	12.81	3.90	145
4000	1814	9.68	2.95	185
6000	2722	7.90	2.41	230
8000	3629	7.07	2.15	270
10000	4536	5.06	1.54	315
12000	5443	4.45	1.36	375

Line Pull & Cable Capacity By Layer

Cabe Layer	Rated Line Pull		Cable Capacity	
	lbs.	kgs.	ft	meters
1	12000	5443	15	5
2	10200	4627	38	11.5
3	8400	3810	64	19.5
4	7300	3310	95	29
5	6500	2948	100	30.5

SX Series Winch Systems
Safety Features

Low Voltage/Low System Charge Warning

1. If the vehicles charging system (measured at the motor control pack) drops below a safe voltage the LED lights will flash. This is to warn you that your charging system is dangerously low and you may not be able to safely use your winch much longer.
2. If the vehicle's charging system (measured at the motor control pack) continues to drops below a safe voltage then LED lights will flash and the winch's on-board computer will shut the winch off. This is to protect your winch and your vehicle.
3. After a short time and if the vehicles charging system is at a safe voltage then the winch controller on board computer will let you use the winch again.
4. You cannot OVERRIDE this Low-Voltage Feature!

Over Temperature Warning

1. The winch's on-board computer can detect if the winch temperature has gotten too hot. When your winch gets too hot then the LED lights will flash and the on-board computer will shut the winch motor off.
2. If you press the IN and OUT buttons and the same time on the wired remote control than you can OVERRIDE this safety feature and continue to use the winch.

NOTE: OVERRIDING the safety feature will void your warranty and is UNSAFE! See the over ride feature for more details.

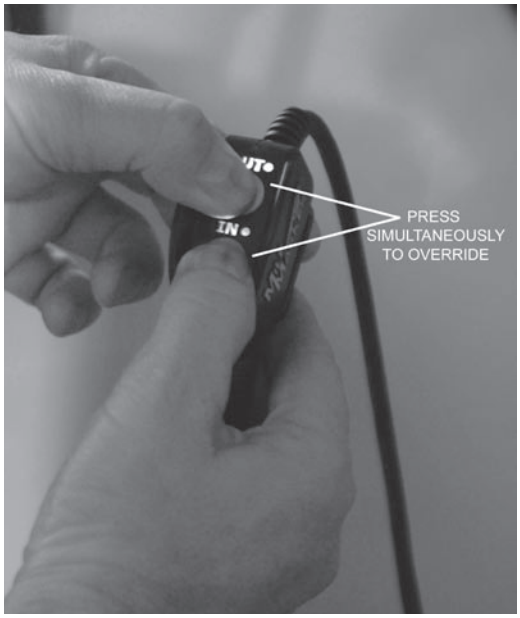
Line OUT Time Warning

1. If the winch's on-board computer detects that the OUT button has been pressed for about 10 seconds the winch motor will turn off.
2. After about 5 seconds the on-board computer will allow you to use the OUT button again to spool the winch cable out.
3. If you press the IN and OUT buttons at the same time on the wired remote control than you can OVERRIDE this safety feature.

NOTE: OVERRIDING the safety feature will void your warranty and is UNSAFE! See the over ride feature for more details.

OVERRIDE

1. If the winch motor control on-board computer detects a problem it will shut down the winch motor and flash the LED lights. These safety features are designed to ensure your safe operation and protect the product from misuse, allowing the winch to aid you in recovery time and time again.
2. The on-board computer will record in the flash memory what problem happened.
3. By pressing the IN and OUT buttons on the wired remote at the same time you can go into a manual OVERRIDE, and regain normal winch operation.
4. If you OVERRIDE any of the on-board computer safety features you WILL VOID YOUR WARRANTY!



6-1: Safety Feature Override

SX Series Winch Systems

Wireless Remote Control

1. Turn the control pack "OFF" (red light on top of control pack will NOT be illuminated)
2. Remove the wired remote control and store in a safe place.
3. Turn the motor control on (red light on top of control pack will be illuminated).
4. Turn the wireless remote control on (slide switch on the left side).
5. Pressing the IN button will activate IN and spool the winch cable in.
6. Pressing the OUT button will activate the OUT and spool the winch cable out.
7. If the winch's on-board computer detects any safety feature it will shut off the winch and flash the wireless remote control's LEDs and the winch control box LEDs.
8. There is no OVERRIDE feature when using the wireless remote control.
9. After you are done using the wireless remote, be sure to turn it off to save battery life.

NOTE: If you lose your wireless remote control you will need to contact Mile Marker for a replacement. Each wireless remote control has a unique binary password. Your wireless remote control will ONLY work with YOUR winch, until programmed otherwise.

Winch Operation

NOTES: For optimal winch performance, it is recommended that you use a fully charged 12V battery with at least 650 Cold Cranking Amperes. Further, it is advised to keep the engine running during the winch operation, so that the battery is being charged continuously.

All Mile Marker SX winches are equipped with a Cam Ring that engages / disengages the clutch. Clutch, when engaged, will couple the gear train with winch drum; this is also known as Locking the winch. The Clutch, when disengaged, de-couples the gear train from the winch drum enabling the drum to rotate independently; this is also called Freespooling the winch.

CAUTION: Before you start using your new Mile Marker winch, you will have to re-wind the entire cable on the drum under a load of at least 500 lbs (227 Kg) starting with at least 5 wraps on the initial layer. Failure to do so will result in the outer wraps pressing against the inner warps resulting in the damage of the cable.

Always have at least 5 wraps of cable on the winch drum before winching.

Always ensure that the clutch is fully engaged or fully disengaged to avoid any injuries and damages.

All electrical winches are for intermittent use only. Never run the winch for more than 1 min at maximum rated load. Wait until the motor cools down before resuming winching operation. Usage of a snatch block is recommended to reduce the load on the winch motor.

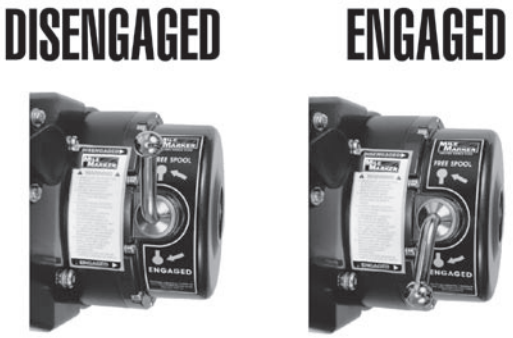
All Mile Marker Electric Winches come with an Automatic Load Holding brake; so never run the winch against the brake (OUT on the hand control) for more than 10 seconds. Failure to do so might result in damage to the brake and motor.

Always stay clear off from the loaded winch cable.

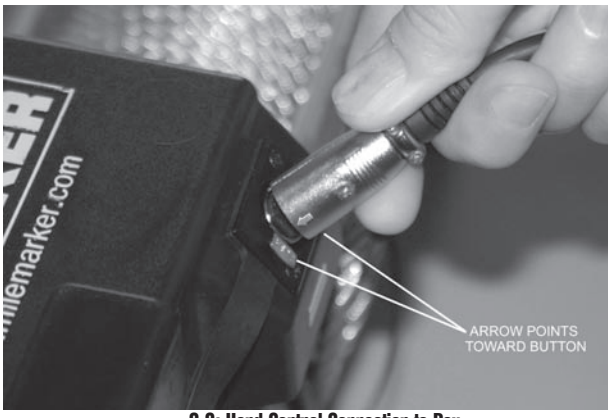
SX Series Winch Systems

Winch Operation

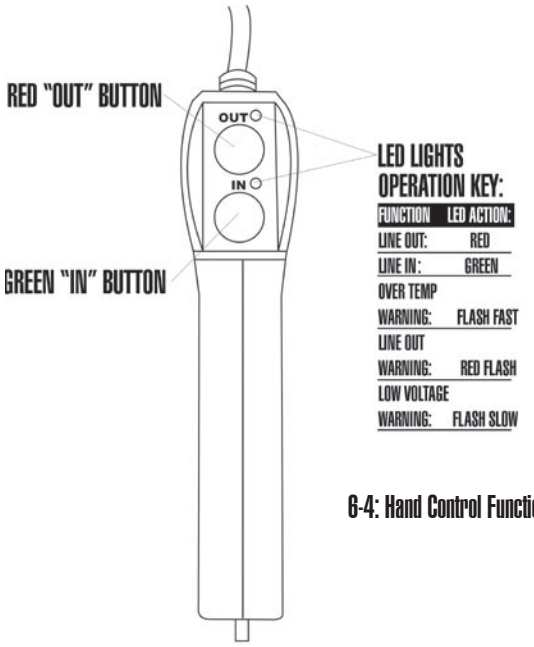
1. Disengage the clutch by rotating the Clutch Handle to "FREESPOOL" Position (Fig. 6-2).
2. Reel-out the cable and connect to the desired anchor point (self recovery) or vehicle being recovered.
3. Fully Engage the clutch by rotating the Clutch Handle to "ENGAGED" Position (Fig. 6-2).
4. Lift the protective boot covering the hand control plug-in. Insert the hand control plug. The remote control BLUE lights should TURN ON. Now you are ready to winch! (Fig. 6-3)
5. Start winching IN (GREEN lights on both, Remote Control and Control Box, should TURN ON, Figs. 6-4 & 6-5) slowly to remove the slack on the cable and ensuring that the cable is winding onto the drum properly (with out any overlapping or gaps). Never disengage the clutch while the cable is under load!
6. When finished winching, slowly let off the load by winching OUT (RED lights on both, Remote Control and Control Box should TURN ON, Fig. 6-4), unhook the cable and re-wind the cable onto the drum.
7. Unplug the hand control and push the protective boot cover back on to the Plug-in (Fig. 6-6).



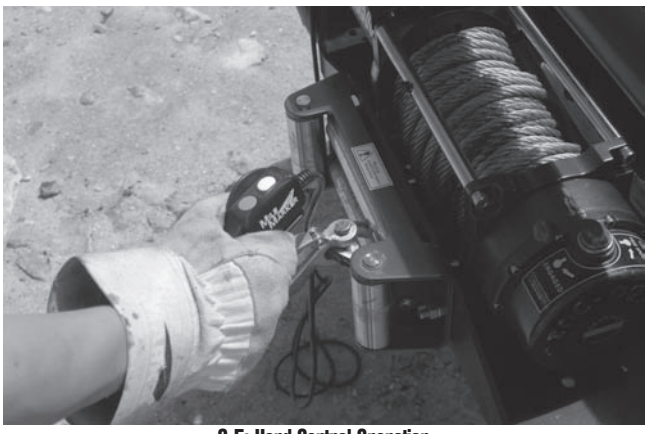
6-2: Clutch Engagement



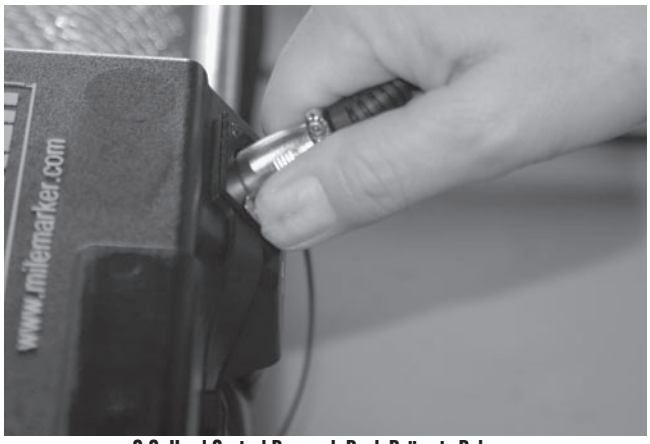
6-3: Hand Control Connection to Box



6-4: Hand Control Function



6-5: Hand Control Operation



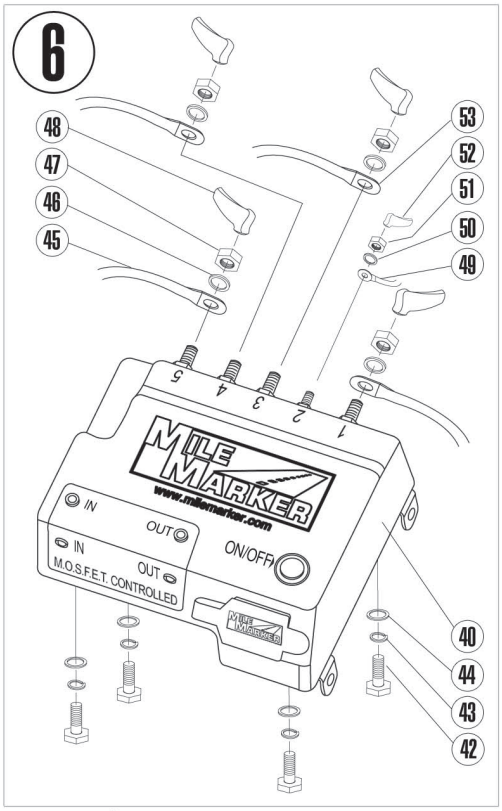
6-6: Hand Control Removal: Push Button to Release

Parts Breakdown & Assembly

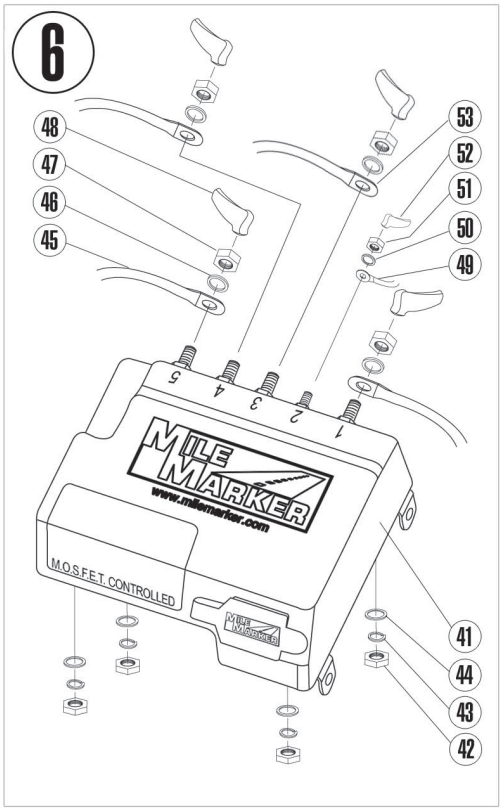
6,000 Pound Capacity: MX6(76-52130), PE6000(76-50230)

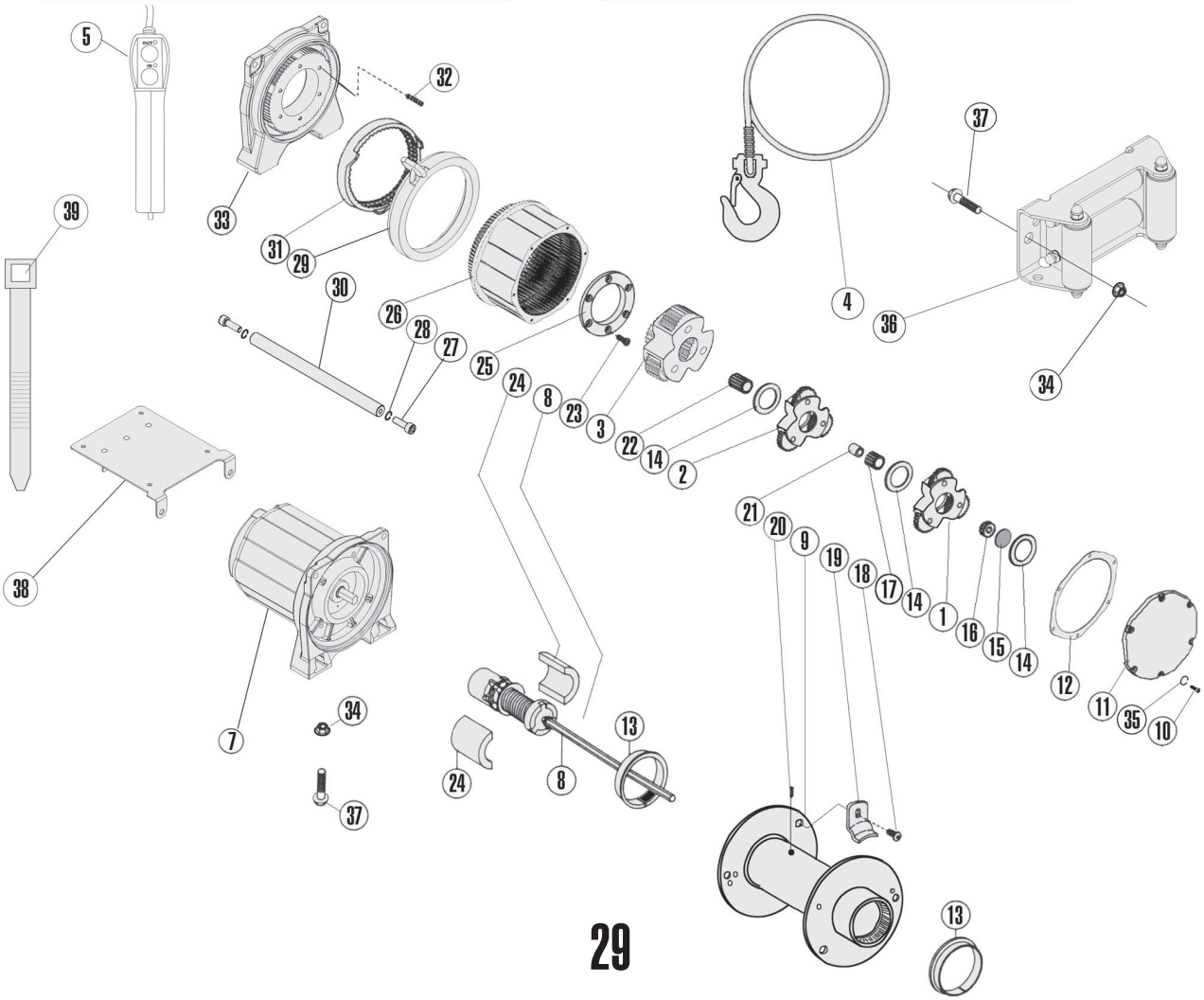
Item	Quantity	Part Number	Description
1	1	76-50140-01	Gear Carrier Assy. Input
2	1	76-50140-02	Gear Carrier Assy. Intermediate
3	1	76-50140-03	Gear Carrier Assy. Output
4	1	76-50130-04	Cable Assy. 85ft x 5/16 in.
5	1	93-52055	12' X Control
6	1	MX: 93-52000/PE:93-50200	Full Control Pack Assy. (X & S Box)
7	1	76-50130-07	Motor End Bearing Assy.
8	1	76-50115-08	Brake / Shaft Assy.
9	1	76-50115-09	Drum
10	6	76-50140-10	Screw M 5 x 12
11	1	76-50115-11	Gear Housing Cover
12	1	76-50115-12	Gasket
13	2	76-50140-13	Drum Bushing
14	3	76-50140-14	Thrust Washer
15	1	76-50140-15	Thrust Disc
16	1	76-50140-16	Gear input-sun
17	1	76-50140-17	Gear intermediate-sun
18	1	76-50140-18	Cap Screw M 6 x 10
19	1	76-50115-19	Cable Anchor
20	1	76-50130-20	Roll pin
21	1	76-50130-21	Shaft Bushing
22	1	76-50140-22	Gear Output-sun
23	6	76-50140-23	Cap screw M 6 x 19
24	2	76-50140-24	Brake Shoes
25	1	76-50140-25	Gear retainer ring
26	1	76-50115-26	Gear ring
27	4	76-50115-27	Bolt M6 x 20
28	4	76-50115-28	Spring Washer D6
29	1	76-50140-29	Cam Ring
30	2	76-50115-30	Tie Bar
31	1	76-50140-31	Locking Ring
32	6	76-50140-32	Spring
33	1	76-50140-33	End Bearing
34	4	76-50140-34	Nut M 10
35	6	76-50140-35	Spring Washer D5
36	1	76-50115-36	Roller Fairlead WH-4
37	6	76-50140-37	Screw M10 x 34
38	1	92-52140	Control Pack Bracket
39	1	76-50140-39	Plastic Tie-Wrap
40	1	93-52000M	X Box (MX6) Control Pack
41	1	93-52000S	S Box (PE6000) Control Pack
42	4	Hardware	M6 Bolt (MX) M6 Nut (PE)
43	4	Hardware	6 MM Spring Washer
44	4	Hardware	6 MM Flat Washer
45	3	93-52000-1(Blue)/93-52000-4(Red)/93-52000-5(Yellow)	Short Cables (Blue/ Red/ Yellow)
46	4	Hardware	8 MM Spring Washer
46B	4	Hardware	8mm Brass Flat Washer
47	4	Hardware	M8 Nut
48	5	93-52000-6(red),(yellow -7),(black-8),(blue-9)	Cable Boot (Red/Yellow/Black/Blue)
49	1	93-52000-2	Black Power Cable with (32v/6a) Fused Wire
50	1	Hardware	6 MM Spring Washer
50B	1	Hardware	6 MM Flat Brass Washer
51	1	Hardware	M6 Nut
52	1	93-52000-10	Small Black Wire Boot
53	1	93-52000-3	Red Power Cable

X BOX: MX6



S BOX: PE6000



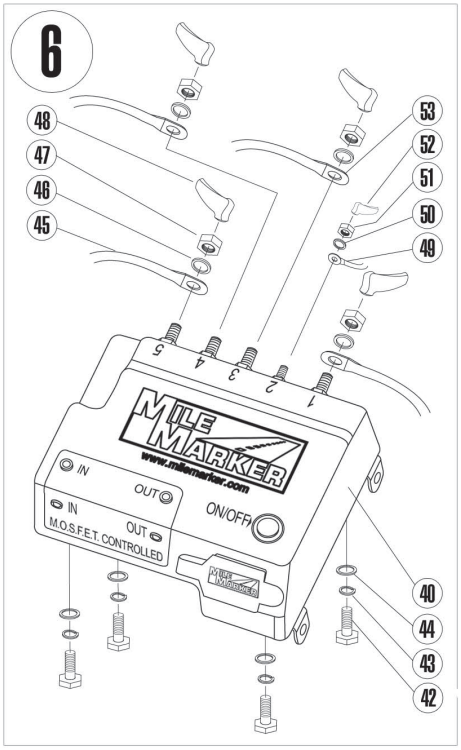


Parts Breakdown & Assembly

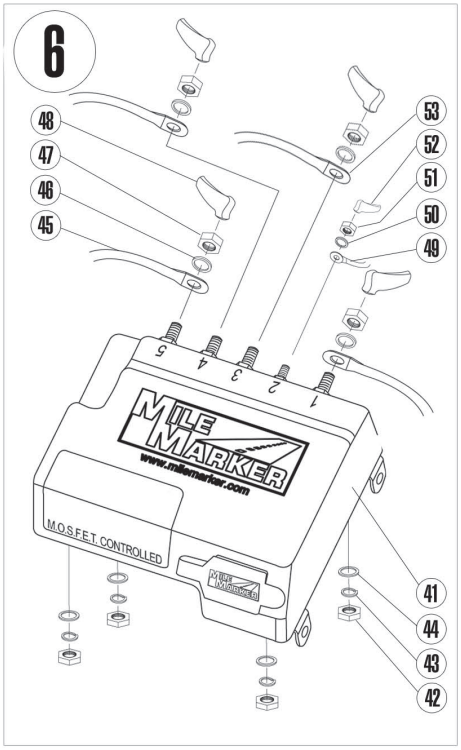
8,000 Pound Capacity: MX8(76-52140), PE8000(76-50240)

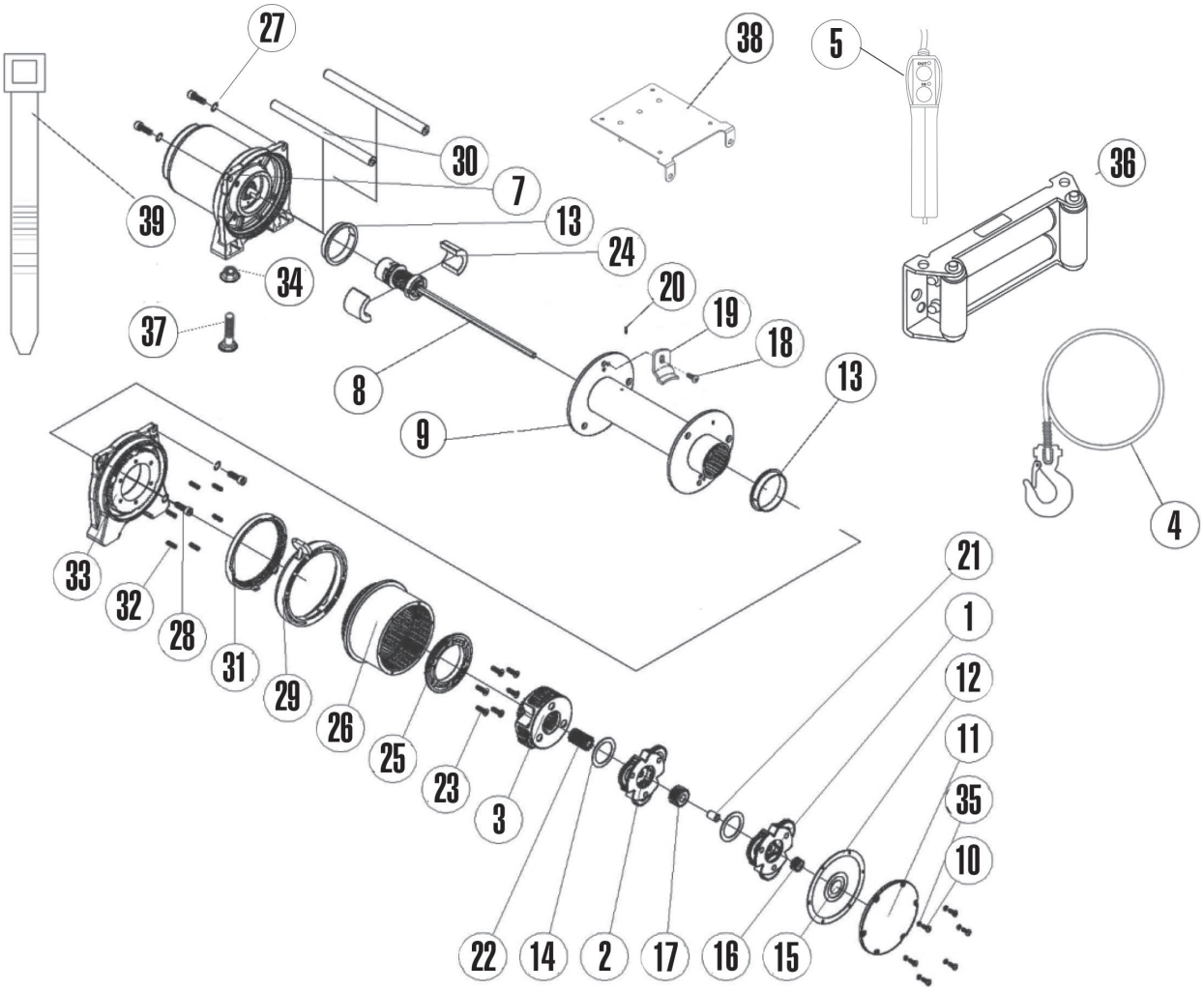
Item	Quantity	Part Number	Description
1	1	76-50140-01	Gear Carrier Assy. Input
2	1	76-50140-02	Gear Carrier Assy. Intermediate
3	1	76-50140-03	Gear Carrier Assy. Output
4	1	76-50130-04	Cable Assy. 85ft x 5/16 in.
5	1	93-52055	12' X Control
6	1	MX: 93-52000/PE:93-50200	Full Control Pack Assy. (X & S Box)
7	1	76-50130-07	Motor End Bearing Assy.
8	1	76-50115-08	Brake / Shaft Assy.
9	1	76-50115-09	Drum
10	6	76-50140-10	Screw M 5 x 12
11	1	76-50140-11	Gear Housing Cover
12	1	76-50140-12	Gasket
13	2	76-50140-13	Drum Bushing
14	3	76-50140-14	Thrust Washer
15	1	76-50140-15	Thrust Disc
16	1	76-50140-15	Gear input-sun
17	1	76-50140-17	Gear intermediate-sun
18	1	76-50140-18	Cap Screw M6 x 12
19	1	76-50140-19	Cable Anchor
20	1	76-50140-20	Roll pin D3 x 10
21	1	76-50140-21	Shaft Bushing
22	1	76-50140-22	Gear Output-sun
23	6	76-50140-23	Cap screw M6 x 20
24	2	76-50140-24	Brake Shoes
25	1	76-50140-25	Gear retainer ring
26	1	76-50140-26	Gear ring
27	4	76-50140-27	Screw M8 x 25
28	4	76-50140-28	Spring Washer D8
29	1	76-50140-29	Cam Ring
30	2	76-50140-30	Tie Bar
31	1	76-50140-31	Locking Ring
32	6	76-50140-32	Spring
33	1	76-50140-33	End Bearing
34	4	76-50140-34	Nut M 10
35	6	76-50140-35	Spring Washer D4
36	1	76-50140-36	Roller Fairlead WH-9
37	6	76-50140-37	Screw M10 x 34
38	1	92-52140	Control Pack Bracket
39	1	76-50140-39	Plastic Tie-Wrap
40	1	93-52000M	X Box (MX6) Control Pack
41	1	93-52000S	S Box (PE6000) Control Pack
42	4	Hardware	M6 Bolt (MX) M6 Nut (PE)
43	4	Hardware	6 MM Spring Washer
44	4	Hardware	6 MM Flat Washer
45	3	93-52000-1(Blue)/93-52000-4(Red)/93-52000-5(Yellow)	Short Cables (Blue/ Red/ Yellow)
46	4	Hardware	8 MM Spring Washer
46B	4	Hardware	8mm Brass Flat Washer
47	4	Hardware	M8 Nut
48	5	93-52000-6(red),(yellow -7),(black-8),(blue-9)	Cable Boot (Red/Yellow/Black/Blue)
49	1	93-52000-2	Black Power Cable with (32v/6a) Fused Wire
50	1	Hardware	6 MM Spring Washer
50B	1	Hardware	6 MM Flat Brass Washer
51	1	Hardware	M6 Nut
52	1	93-52000-10	Small Black Wire Boot
53	1	93-52000-3	Red Power Cable

X BOX: MX8



S BOX: PE8000



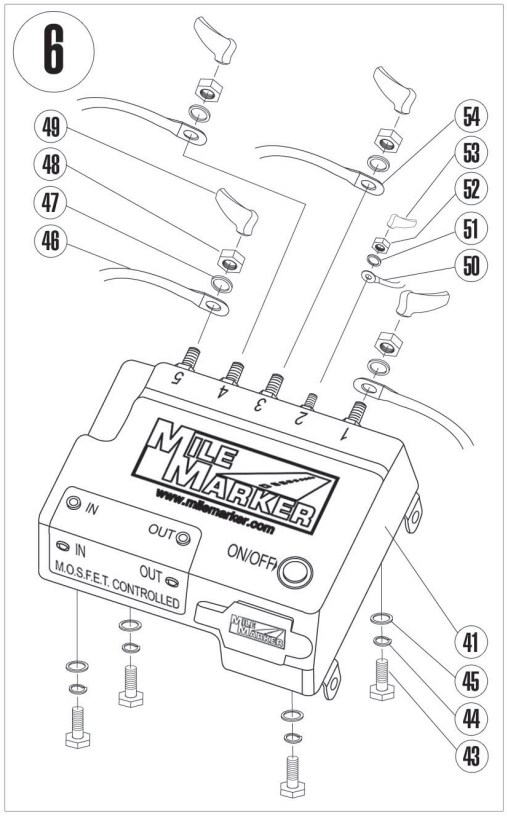


Parts Breakdown & Assembly

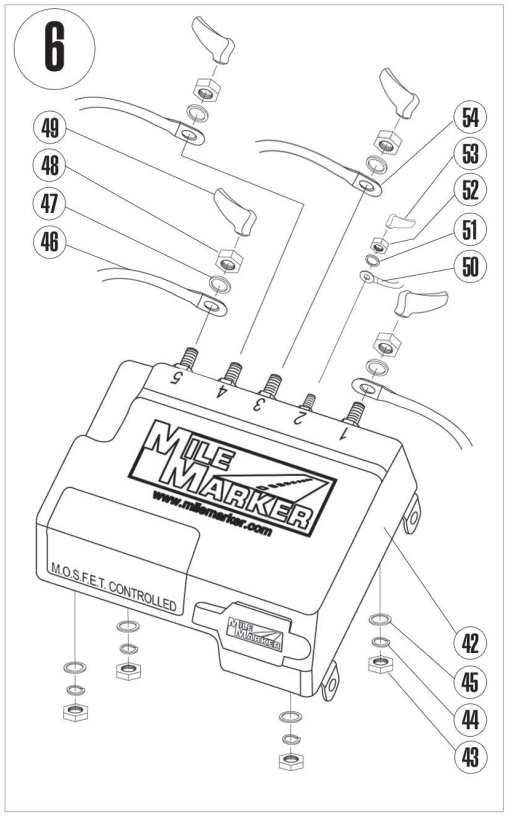
9,000 Pound Capacity: MX9(76-52040), E9000(76-50042)

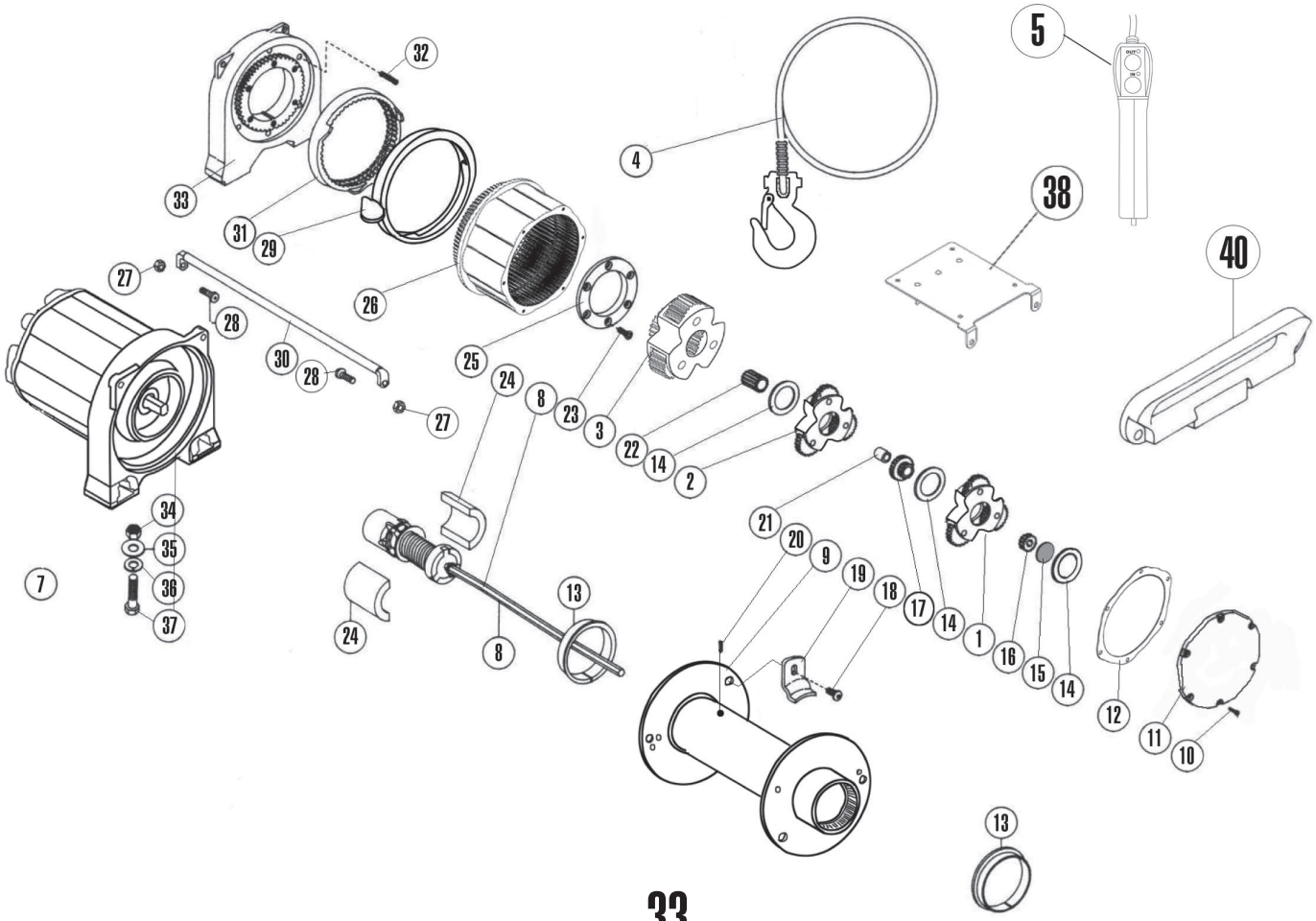
Item	Quantity	Part Number	Description
1	1	360100	Gear Carrier Assy. Input
2	1	360200	Gear Carrier Assy. Intermediate
3	1	360300	Gear Carrier Assy. Output
4	1	360400	Cable Assembly -100'x 3/8" (9.53mm)Dia.
5	1	93-52055	12' X Control
6	1	MX: 93-52000/E:93-50200	Full Control Pack Assy. (X & S Box)
7	1	360700	Motor End Bearing Assy.
8	1	360800	Brake / Shaft Assy.
9	1	360900	Drum
10	6	360001	Screw M4x12
11	1	360002	Gear Housing Cover
12	1	360003	Gasket
13	2	360004	Drum Bushing
14	3	360005	Thrust Washer
15	1	360006	Thrust Disc
16	1	360007	Gear input-sun
17	1	360008	Gear intermediate-sun
18	1	350009	Capscrew M6 x10
19	1	360010	Cable Anchor
20	1	360011	Roll pin D3 x 9
21	1	360012	Shaft Bushing
22	1	360013	Gear Output-sun
23	6	360014	Capscrew M6 x 19
24	2	360015	Ring half
25	1	360016	Gear retainer ring
26	1	360017	Gear ring
27	4	360018	Nut M6
28	4	360019	Capscrew M6x25
29	1	360020	Cam Ring
30	2	360021	Tie Bar
31	1	360022	Locking Ring
32	6	360023	Spring
33	1	360024	End Bearing
34	4	360025	Nut M 10
35	4	360026	Washer-flat D10
36	4	360027	Lockwasher D10
37	4	360028	Capscrew M10x35
38	1	92-52140	Control Pack Bracket
39	1	76-50140-39	Plastic Tie-Wrap
40	1	76-360410	Hawse Fairlead
41	1	93-52000M	X Box (MX6) Control Pack
42	1	93-52000S	S Box (PE6000) Control Pack
43	4	Hardware	M6 Bolt (MX) M6 Nut (E)
44	4	Hardware	6 MM Spring Washer
45	4	Hardware	6 MM Flat Washer
46	3	93-52000-1(Blue)/93-52000-4(Red)/93-52000-5(Yellow)	Short Cables (Blue/ Red/ Yellow)
47	4	Hardware	8 MM Spring Washer
47B	4	Hardware	8mm Brass Flat Washer
48	4	Hardware	M8 Nut
49	5	93-52000-6(red),(yellow -7),(black-8),(blue-9)	Cable Boot (Red/Yellow/Black/Blue)
50	1	93-52000-2	Black Power Cable with (32v/6a) Fused Wire
51	1	Hardware	6 MM Spring Washer
51B	1	Hardware	6 MM Flat Brass Washer
52	1	Hardware	M6 Nut
53	1	93-52000-10	Small Black Wire Boot
54	1	93-52000-3	Red Power Cable

X BOX: MX9



S BOX: E9000



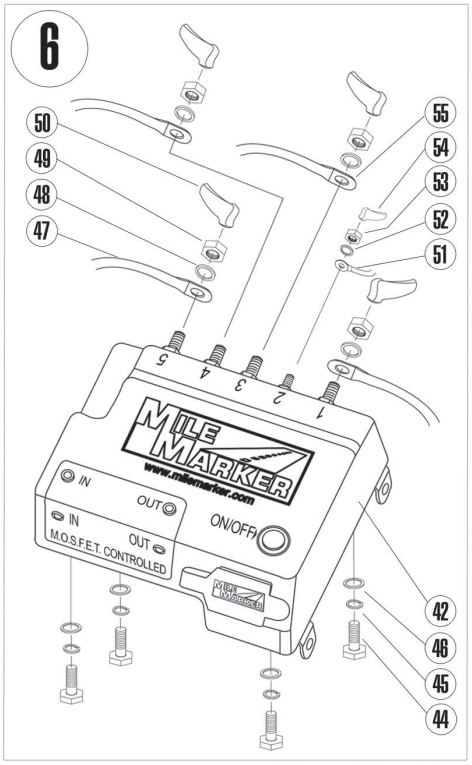


Parts Breakdown & Assembly

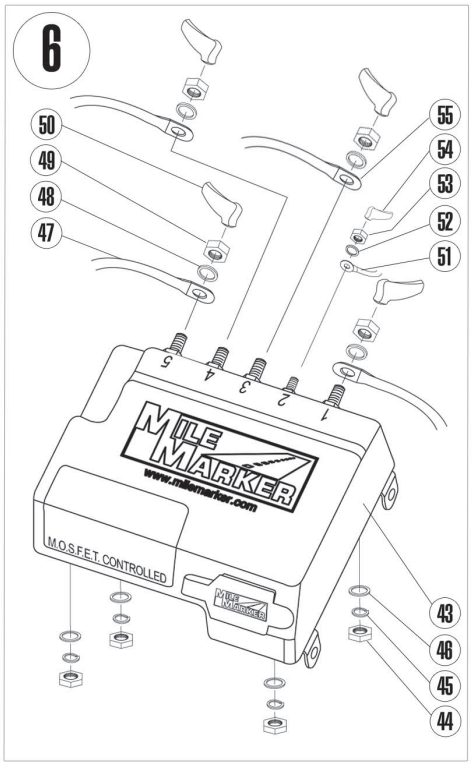
9,500 and 12,000 Pound Capacities: SI/SEC and SX Models

Item	Quantity	Part Number	Description
1	1	9.5K: 76-50146-01/12K: 76-50151-01	Gear Carrier Assy. Input
2	1	9.5K: 76-50146-02/12K: 76-50151-02	Gear Carrier Assy. Intermediate
3	1	76-50145-03	Gear Carrier Assy. Output
4	1	76-50145-04	Cable Assy. 100ft x 3/8 in.
5	1	93-52055/SI: 93-50055	12' X Control
6	1	SX: 93-52000/SEC:93-50200/SI:76-50152-06*	Full Control Pack Assy. (X & S Box) *SI Box (pg 36)
7	1	9.5K: 76-50151-07/12k: 76-50151-07	Motor End Bearing Assy.
8	1	76-50151-08	Brake / Shaft Assy.
9	1	76-50146-09	Drum
10	10	76-50151-10	Bolt M5x55
11	1	76-50151-11	Gear Ring Housing
12	2	76-50151-12	Gasket
13	2	76-50151-13	Dry Bearing
14	2	76-50140-14	Thrust Washer
15	1	76-501451-15	Seal
16	1	76-50151-15	Gear input-sun
17	1	9.5K: 76-50145-17/12K: 76-50150-17	Gear intermediate-sun
18	1	76-50140-18	Cap Screw M6 x 10
19	1	76-50115-19	Cable Anchor
20	1	76-50140-20	Roll pin D3 x 10
21	1	76-50151-21	Gear Ring-input, intermediate
22	1	76-50151-22	Gear Output-sun
23	1	76-50151-23	Retaining screw M5 x 16
24	2	76-50140-24	Brake Shoes
25	1	76-50140-25	Gear retainer ring
26	1	76-50140-26	Gear ring
27	4	76-50140-27	Screw M8 x 25
28	4	76-50140-28	Spring Washer D8
29	1	76-50140-29	Cam Ring
30	2	76-50140-30	Tie Bar
31	4	76-50152-31	Spring Washer D6
32	4	76-50152-32	Screw M6x12
33	1	76-50151-33	End Bearing
34	6	76-50140-34	Nut M 10
35	10	76-50140-35	Spring Washer D5
36	1	76-50140-36	Roller Fairlead WH-9
37	6	76-50140-37	Screw M10 x 34
38	1	76-50151-38	Seal Cover
39	1	76-50151-39	Clutch Handle
40	1	50-87283	Mount Channel**
41	1	92-52146	Control Pack Bracket
42	1	93-52000S	S Box (SEC Models) Control Pack
43	1	93-52000M	X Box (SX Models) Control Pack
44	4	Hardware	M6 Bolt (SX) M6 Nut (SEC)
45	4	Hardware	6 MM Spring Washer
46	4	Hardware	6 MM Flat Washer
47	3	93-52000-1(Blue)/93-52000-4(Red)/93-52000-5(Yellow)	Short Cables (Blue/ Red/ Yellow)
48	4	Hardware	8 MM Spring Washer
48B	4	Hardware	8mm Brass Flat Washer
49	4	Hardware	M8 Nut
50	5	93-52000-6(red),(yellow -7),(black-8),(blue-9)	Cable Boot (Red/Yellow/Black/Blue)
51	1	93-52000-2	Black Power Cable with (32v/6a) Fused Wire
52	1	Hardware	6 MM Spring Washer
52B	1	Hardware	6 MM Flat Brass Washer
53	1	Hardware	M6 Nut
54	1	93-52000-10	Small Black Wire Boot
55	1	93-52000-3	Red Power Cable

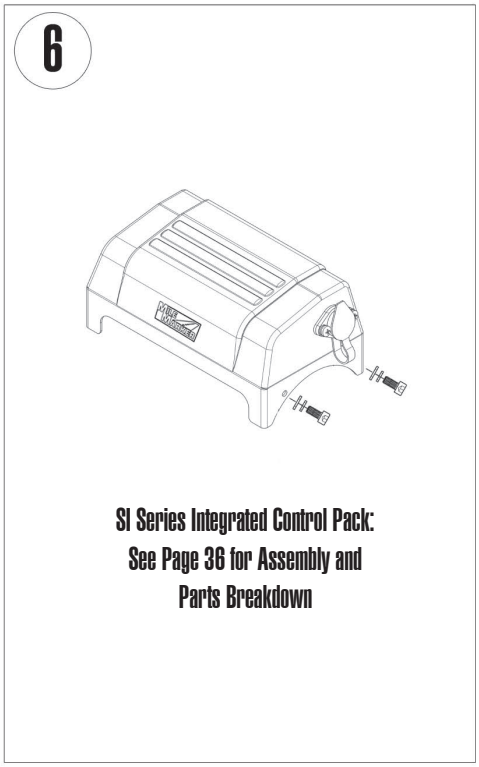
X BOX: SX9.5 & SX12 MODELS

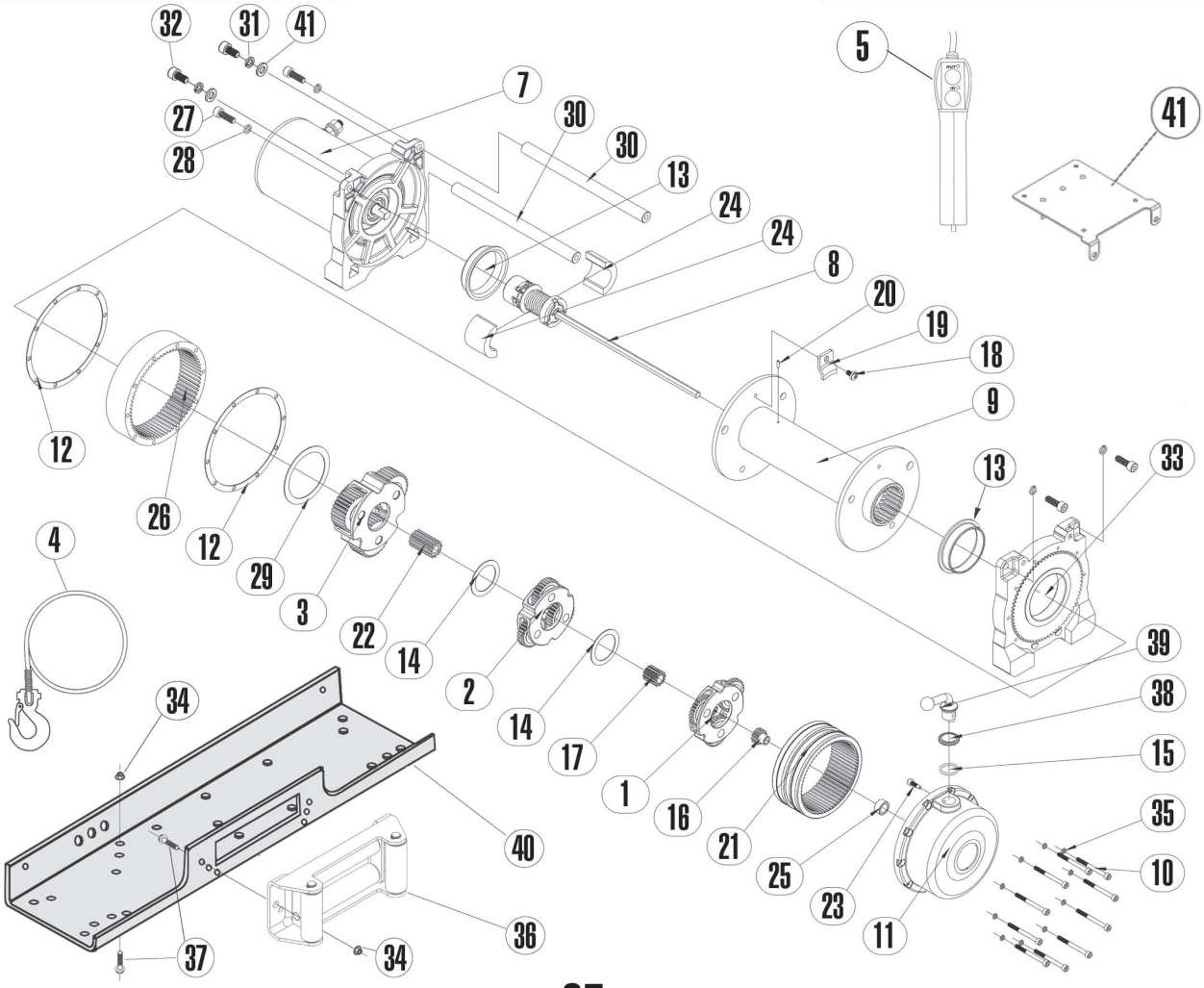


S BOX: SEC 9500/12000 MODELS



INTEGRATED CONTROL: SI MODELS



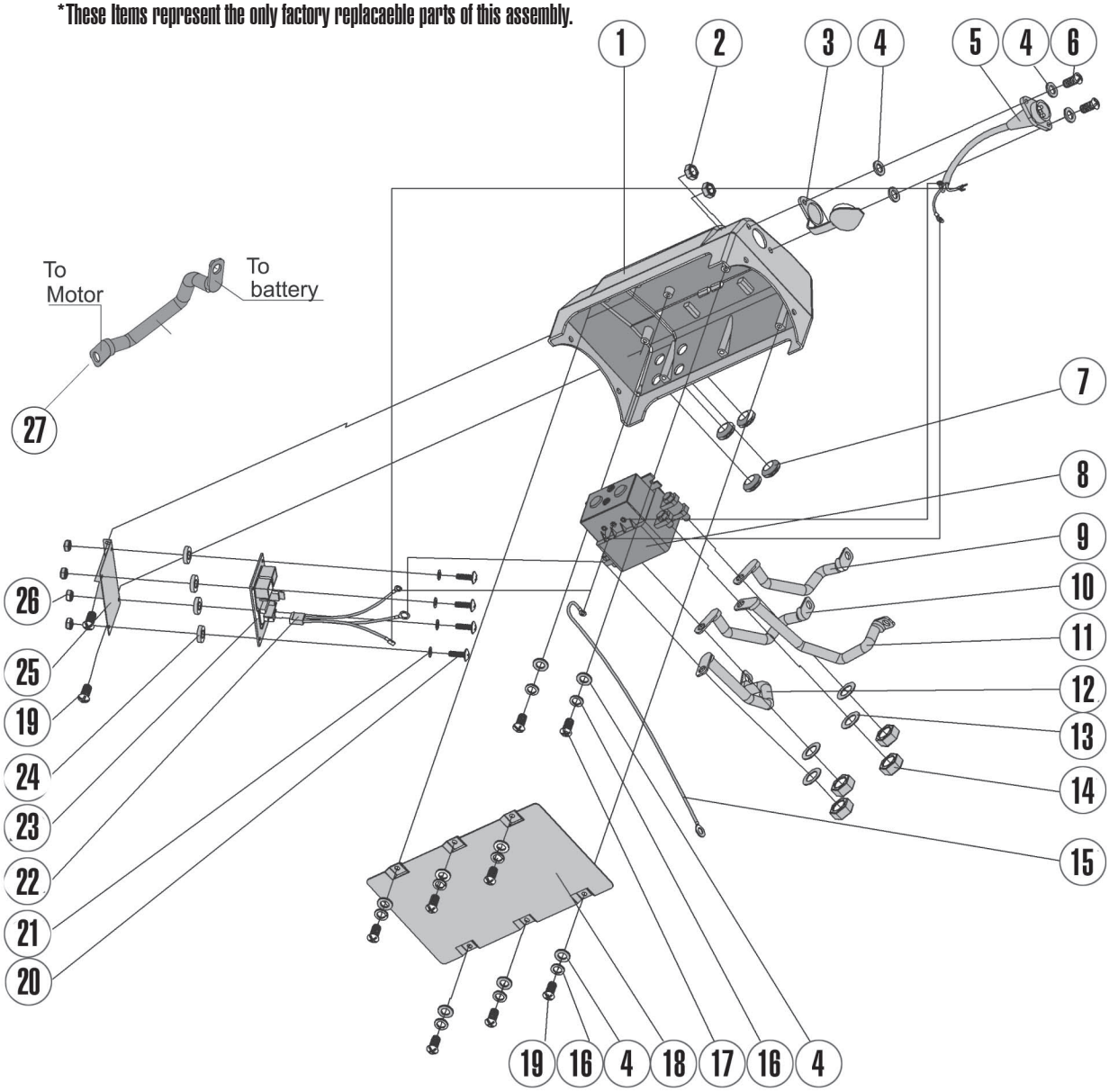


Parts Breakdown & Assembly

Item	Quantity	Part Number	Description
1	1	76-50152-S01*	Housing
2	2	-	Lock Nut M5
3	1	76-50152-S03*	Dust Boot
4	12	-	Washer D5
5	1	76-50152-S05*	Female Connector
6	2	-	Screw M5x16
7	4	-	Rubber Ring
8	1	76-50146-S14*	Solenoid
9	1	-	Cable 2 (output)
10	1	-	Cable 3 (output)
11	1	-	Cable 1 (output)
12	1	-	Cable (red, to battery)
13	2	-	Washer D8
14	4	-	Nut M8

Item	Quantity	Part Number	Description
15	1	-	Ground Cable (14AWG)
16	8	-	Spring Washer D5
17	2	-	Screw M5x10
18	1	-	Base Plate
19	8	-	Screw M5x8
20	4	-	Screw M3x10
21	4	-	Paper Washer D3
22	1	-	Wires (22AWG .3c)
23	1	-	PCB Circuit Board
24	4	-	Nylon Washer D5/10x4.5
25	1	-	PCB Mounting Plate
26	4	-	Nut M3
27	1	-	Cable 5 to Battery

*These Items represent the only factory replacaeble parts of this assembly.



Winch Maintenance

- All moving part within the Electric Winch has been lubricated using high temperature lithium grease at the factory. No further internal lubrication is required for the life of the winch.
- Lubricate the cable periodically using light penetrating oil.
- Electrical connections may corrode over a period of time due to environmental changes. This may result in reduced performance of the winch or even possible electrical shorting. Hence, always clean the electrical connections before and after using the winch.
- After every use of the winch, inspect the cable for damages such as kinks, broken strands etc. When damaged, replace the cable immediately!

CAUTION: It is recommended that you replace the cable with superior Mile Marker cables. If replacing from other sources, carefully compare for the maximum load capacity of the cable with that mentioned in the Specifications Section of this manual.

Troubleshooting

SYMPTOM	POSSIBLE CAUSE	SUGGESTED REMEDY
Motor does not turn on	Safety switch is OFF	Turn safety switch to ON position.
	Switch Assy not connected properly	Insert Switch Assy firmly to the connector.
	Loose battery cable	Tighten nuts on cable connectors
	Solenoid malfunctioning	Tap solenoid to free contact, applying 12 volts to coil terminal directly. Makes an audible clicking when activating.
	Defective Switch Assembly	Replace Switch Assy.
	Defective motor	Check for voltage at armature port with switch pressed. If voltage is present, replace motor.
	Water has entered motor	Drain and dry. Run in short bursts without load until completely dry.
Motor runs too hot	Long period of operation	Let winch cool down periodically.
Motor runs slowly or without normal power	Battery runs down	Recharge battery by running vehicle's engine.
	Insufficient current or voltage	Clean, tighten or replace the connector.
Motor runs but cable drum does not turn	Clutch not engaged	Ensure lever is completely in "engaged" position. If that does not work, contact qualified technician to check and repair.
Motor runs in one direction only	Defective or stuck solenoid	Tap solenoid to free contacts. Repair or replace solenoid.
	Defective Switch Assy	Replace Switch Assy

Warranty Information

Limited 2-Year Electric Winch Warranty

Mile Marker, Inc. offers a limited two (2) year warranty (to the original retail purchaser) for each new Mile Marker consumer/RV electric winch against manufacturing defects in workmanship and materials on all the mechanical components.

Electrical components consisting of motors, solenoids, wiring, wire connectors and associated parts have a limited one (1) year warranty.

New cable assemblies are warranted against defects in workmanship and materials when received by the retail purchaser. There is no applicable warranty after initial use.

Warranty registration cards for each winch must be submitted at the time of purchase or within 30 days by the end user. Warranty will only be valid for the original purchaser of the winch and installed on the vehicle for which it was originally registered.

Mile Marker electric winches are intended for recreational self-recovery usage. The warranty is void if the winch is used in commercial/industrial applications.

The obligation under this warranty, statutory or otherwise, is limited to the replacement or repair at the manufacturer's factory, or at a point designated by the manufacturer, of such part(s) as shall appear to the manufacturer, upon inspection of such part(s) as shall appear to the manufacturer, upon inspection of such part(s), to have been defective in material or workmanship. This warranty does not obligate Mile Marker, Inc. to bear the cost of labor or transportation charges in connection with the replacement or repair of defective parts, nor shall it apply to a product upon which repairs or alterations have been made, unless authorized by the manufacturer, or for equipment misused, neglected or improperly installed.

IMPORTANT NOTICE:
To the fullest extent permitted by applicable law, the following are hereby excluded and disclaimed:
1) All warranties of fitness for a particular purpose;
2) All warranties of merchantability;
3) All claims for consequential or incidental damages.
There are no warranties that extend beyond the description that appears on the face hereof.

Some states do not allow the above exclusions or disclaimers in consumer transactions and as such this disclaimer/exclusion may not apply to you.

To the extent such warranties of fitness or merchantability are deemed to apply to this product, they exist for only so long as the express limited warranty elsewhere set forth is in existence.

Mile Marker, Inc. reserves the right to change, alter or improve its products in design, materials or appearance without incurring any obligation to incorporate such changes in products that were previously manufactured.

This Warranty gives you specific legal rights and you may have other legal rights, which vary from state to state.To submit a warranty claim contact:

Warranty Administrator-Mile Marker, Inc
2121 Blount Rd
Pompano Beach, FL 33069

2121 Blount Road Pompano Beach, FL 33069
Phone (800) 886-8647 (954) 782-0604 Fax (954) 917-3398 Email: warranty@milemarker.com

First Name:_____
Last Name:_____
Age:_____
Sex: _____
Marital Status:_____
Level of Education:_____
City/Province: _____
Zip/Postal Code: _____
Country:_____
Telephone Number:_____
Email Address: _____
Which Mile Marker winch did you purchase?_____
Model Number:_____
Serial Number:_____
Date of Purchase:_____
Where did you purchase this product?_____
Store or catalog name: _____
Store location:_____
How satisfied were you with the dealer and/or sales staff? _____
Who installed or will install your Mile Marker product?_____
Is this the first time you have purchased a winch?_____
If no, what brand have you bought before?_____
What type of vehicle will this Mile Marker winch be installed on? _____
Year:_____Make:_____Model:_____
2WD:_____4WD:_____
What is the vehicles main use?_____
What other accessories have you purchased for your vehicle?_____
Do you belong to any 4-Wheel drive club? Yes or No
If so, what is the Club name:_____
What factors most influenced the purchase of your Mile Marker product? (Check all that apply)

- ☐ Mile Marker reputation
- ☐ Previous experience with Mile Marker Inc.
- ☐ Friend/Relative recommendation
- ☐ Salesperson's recommendation Salesperson Name: _____
- ☐ Compatibility with vehicle
- ☐ Quality/Durability
- ☐ Warranty
- ☐ Availability
- ☐ Price
- ☐ Internet
- ☐ Advertising

MILE MARKER

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