

63-DC TRUCK WINCH

INSTRUCTION MANUAL



Read Manual Before Operating Machine

Table of Contents

Safety	5
Components and Assembly	6
Roll Up Door Mount	6
Swing Open Door Mount	6
Installation.....	6
Operation	7
Loading	7
Unloading.....	7
Troubleshooting Guide	8
Maintenance	9
Maintenance Checklist.....	9
Cleaning.....	9
Oil	9
Parts List and Diagrams	10

Safety

GENERAL RULES FOR SAFE OPERATION

Before use, anyone operating or performing maintenance on this equipment must read and understand this manual, as well as any labels packaged with or attached to the machine and its components. Read the manual carefully to learn equipment applications and limitations, as well as potential hazards associated with this type of equipment. Keep manual near machine at all times. If your manual is lost or damaged, contact National Flooring Equipment (NFE) for a replacement.

Personal

Dress properly and use safety gear.

Do not wear loose clothing; it may be caught in moving parts. Anyone in the work area must wear safety goggles or glasses, hearing protection during extended use, and a dust mask for dusty operations. Hard hats, face shields, safety shoes, etc. should be worn when specified or necessary.

Maintain control; stay alert.

Keep proper footing and balance, and maintain a firm grip. Observe surroundings at all times and use common sense. Do not use when tired, distracted, or under the influence of drugs, alcohol, or any medication that may cause decreased control.

Keep hands away from all moving parts and tooling.

Wear gloves when changing tooling. Remove tooling when machine is not in use and/or lower cutting head to the floor.

Do not force equipment.

Equipment will perform best at the rate for which it was designed. Excessive force only causes operator fatigue, increased wear, and reduced control.

Environment

Avoid use in dangerous environments.

Do not use in rain, damp or wet locations, or in the presence of explosive atmospheres (gaseous fumes, dust, or flammable materials). Remove materials or debris that may be ignited by sparks. Keep work area tidy and well-lit - a cluttered or dark work area may lead to accidents. Extreme heat or cold may affect performance.

Protect others in the work area and be aware of surroundings.

Provide barriers or shields as needed to protect others from debris and machine operation. Children and other bystanders should be kept at a safe distance from the work area to avoid distracting the operator and/or coming into contact with the machine. Operator should be aware of who is around them and their proximity. Support personnel should never stand next to, in front of, or behind the machine while the machine is running. Operator should look behind them before backing up.

Guard against electric shock.

Ensure that machine is connected to a properly grounded outlet. Prevent bodily contact with grounded surfaces, e.g. pipes, radiators, ranges, and refrigerators. When scoring or making cuts, always check the work area for hidden wires or pipes.

Maintenance & Repairs

Begin maintenance work only when the machine is shut down, unplugged, and cooled down.

Use proper cleaning agents.

Ensure that all cleaning rags are fiber-free; do not use any aggressive cleaning products.

Schedule regular maintenance check-ups.

Ensure machine is properly cleaned and serviced. Remove all traces of oil, combustible fuel, or cleaning fluids from the machine and its connections and fittings. Retighten all loose fittings found during maintenance and repair work. Loose or damaged parts should be replaced immediately; use only NFE parts.

Do not weld or flame-cut on the machine during repairs, or make changes to machine without authorization from NFE.

Equipment

Use proper parts and accessories.

Only use NFE-approved or recommended parts and accessories. Using any that are not recommended may be hazardous.

Ensure accessories are properly installed and maintained.

Do not permanently remove a guard or other safety device when installing an accessory or attachment.

Inspect for damaged parts.

Check for misalignment, binding of moving parts, loose fasteners, improper mounting, broken parts, and any other conditions that may affect operation. If abnormal noise or vibration occurs, turn the machine off immediately. Do not use damaged equipment until repaired. Do not use if power switch does not turn machine on and off. For all repairs, insist on only identical NFE replacement parts.

Maintain equipment and labels.

Keep handles dry, clean, and free from oil and grease. Keep cutting edges sharp and clean. Follow instructions for lubricating and changing accessories. Motor and switches should be completely enclosed at all times with no exposed wiring. Inspect cord regularly. Labels carry important information; if unreadable or missing, contact NFE for a free replacement.

Avoid accidental starting; store idle equipment.

When not in use, ensure that the machine is unplugged; do not turn on before plugging in. Store in a dry, secured place. Remove tooling when storing, and keep away from children.



CAUTION! ENSURE PROPER USE OF EXTENSION CORDS. IF AMP DRAW IS HIGHER THAN SHOWN ON TABLE OR CORD IS LONGER THAN 50 FT, SEE AN ELECTRICIAN.

ASSUMPTIONS: 3% ALLOWABLE VOLTAGE DROP, COPPER CONDUCTORS RATED FOR 75°C, 1.25 SAFETY FACTOR, CORD VOLTAGE RATING OF 600VAC, PROPER CORD TYPES (STO, STOW, SOOW).

Amp Draw	Gauge
0-12	14
13-16	12
14-24	10
25-40	8

PULLEY SAFETY GUIDELINES

Before use, anyone operating this equipment must read and understand these safety instructions.

Equipment

Pulley, rope, control unit, cords, and mounting area should be inspected before use.

Loose or damaged parts should be replaced immediately. Do not use if rope is cut or worn; do not use cable in place of rope. Winch power unit and supports should be inspected for loose fasteners. Only use NFE replacement rope and parts for correct specifications.

Power control unit should be enclosed at all times.

Ensure there is no exposed wiring.

Never use any type of hook to secure carpet for pulling.

A hook could become a dangerous projectile. Use a lasso only.

Remove/unplug remote switch and lay pulley on floor when not in use.

When roll is entering or exiting truck, stay out from under the roll when propped on rear of trailer.

Operating

Be aware of support personnel and their proximity.

Never stand in line of pull in case of rope breakage or unexpected movement of carpet roll.

If winch stalls, shut off immediately.

Release rope tension, free roll by other means, and restart pulling procedure.

Use a Ground Fault Circuit Interrupter (GFCI).

Using a stationary extraction system with a Ground Fault Circuit Interrupter (GFCI) up or downstream is recommended. If the machine is deactivated by the GFCI, the machine must be checked and cleaned. If operating the equipment in damp locations is unavoidable, a GFCI must be used to supply the power. Electrician's rubber gloves and footwear will further enhance your personal safety.

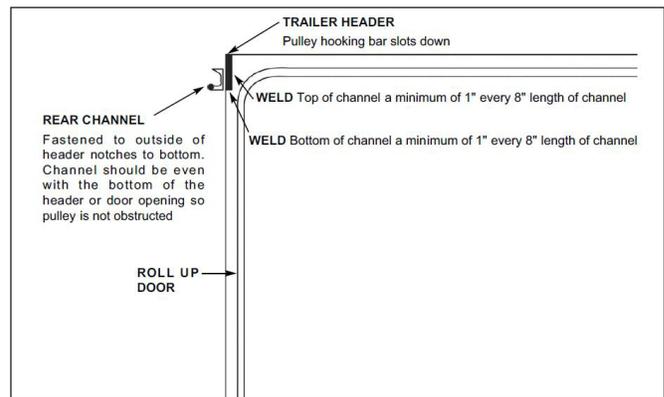
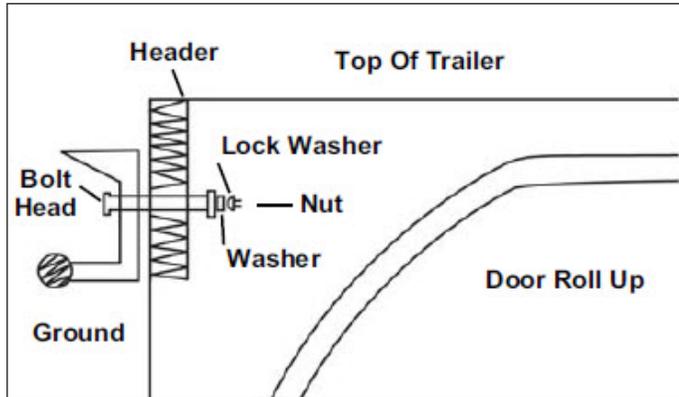
Do not hang on the rope or store rope under tension.

Components and Assembly

ROLL UP DOOR MOUNT

Exterior Channel Mount Swivel Pulley

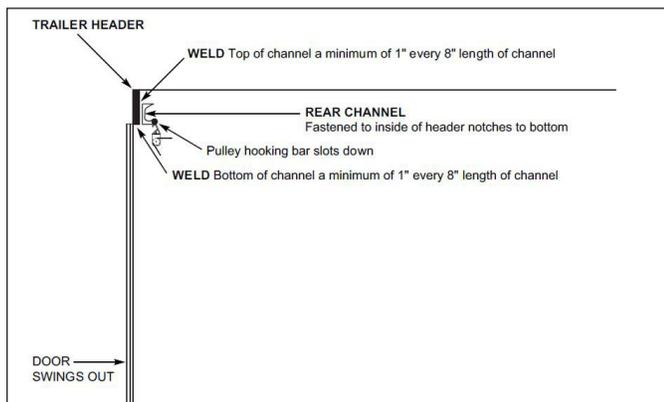
Clearance lights on top of trailer may need to be mounted above channel. Use entire bolt pattern if possible. No less than one bolt per hole set, staggering from top to bottom.



SWING OPEN DOOR MOUNT

Interior Channel Mount Swivel Pulley

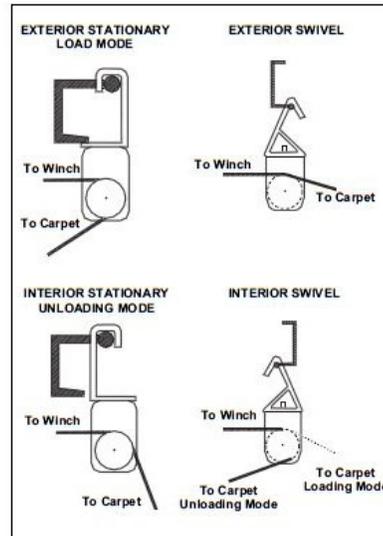
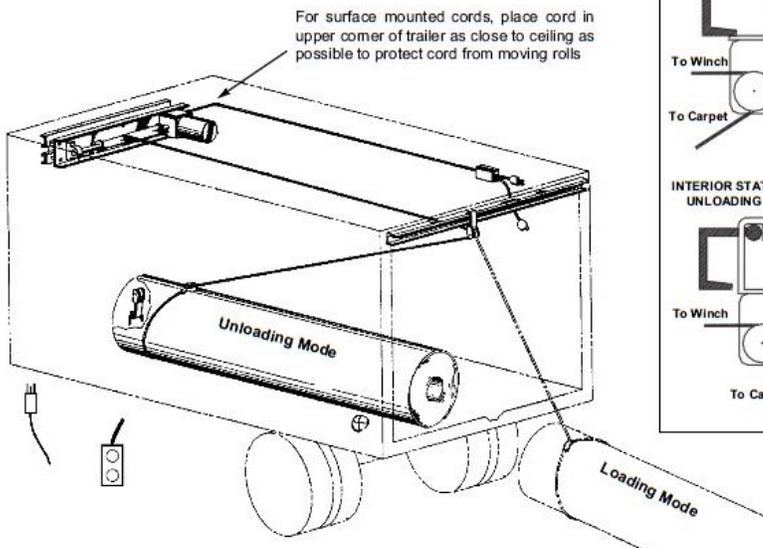
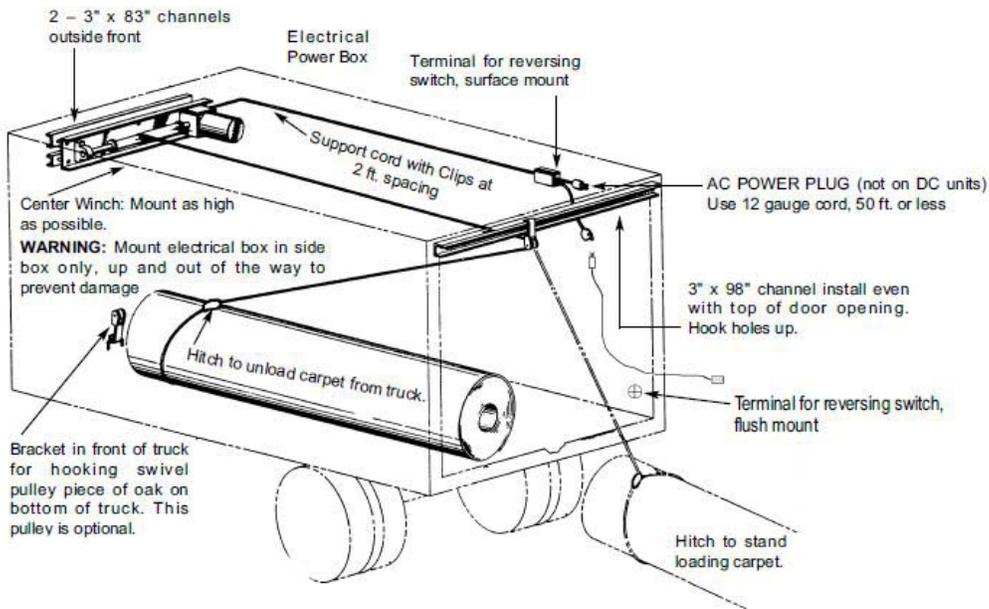
The bottom of the rear channel should be as close to the bottom or flush with the trailer header. Use rear pulley extension arm to attach pulley in high locations.



Components and Assembly

INSTALLATION

Ensure skilled mechanic installs this equipment. Do not install unit without front channels in place.



Operation

LOADING (FIGURE 1)

Exterior Channel Mount Stationary and Swivel Pulley Mounts

Pulley mounted properly at back of truck should be lined up with roll of carpet for straightest pull for both loading and unloading.

The drive shaft on the gear unit can be put into free wheeling by slipping off driving pin. This allows rope to be pulled out very quickly.

To get rope through the pulley, untie from lasso and slip rope through the pulley. Re-tie the knot, making sure the rear pulley is in proper position.

To load the truck, complete the following steps:

1. Go through back pulley and lasso front of roll by the truck.
2. Lift roll high enough to get end onto truck floor.
3. Loosen rope and re-hook to center of roll or 3/4 of the way.
4. Pull roll until it is one-half way on.
5. Loosen rope, take out of Pulley and refasten to the end of roll.
6. Pull roll on as far as wanted. Operator directs roll.



WARNING: REMOTE SWITCH ALLOWS OPERATOR TO BE IN OR OUT OF TRUCK. ANY MECHANICAL MACHINERY REQUIRES SAFETY PRECAUTIONS. STAND IN A POSITION TO PROTECT YOURSELF FROM A SLIPPING OR BREAKING ROPE. USE LASSO ONLY.

Internal and External Channel Mount

1. Ensure rear pulley is in proper position and mounted properly.
2. Run rope through the pulley; lasso around front of carpet and secure.
3. Pull front end of roll until resting on back end of truck (Figure 2) . Do not use hooks, only rope or nylon strap lassos.
4. With the front end of the roll resting on the end of the truck, lasso around the back of the carpet roll and secure (Figure 3).
5. Finish pulling roll onto truck.

UNLOADING (FIGURE 1)

Come through pulley at back end of truck to roll end nearest front end of truck going around end of carpet roll with lasso. Pull roll all the way out of truck dropping onto a dolly to wheel roll out of the way. Roll can easily be steered from truck by the driver using the remote control switch. Use a lasso only for securing roll.

If unit stalls, turn off immediately. Release pressure from winch. Free roll and restart.

Only use lasso to secure pulling of roll rope or strap. Do not use hooks or tube fastenate devices. If they dislodge under pressure they will become a dangerous projectile causing serious injury. If roll is to heavy, reduce roll size. Do not exceed units ability handling large or heavy rolls.

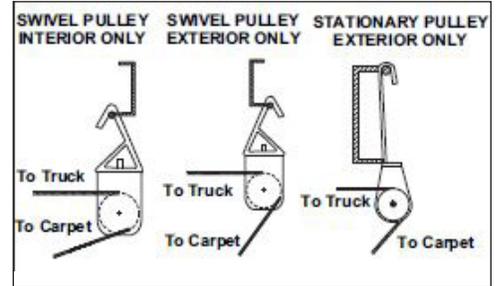


FIG. 1

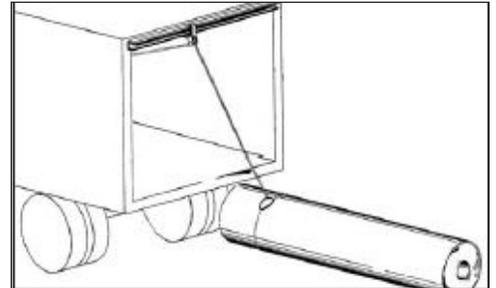


FIG. 2

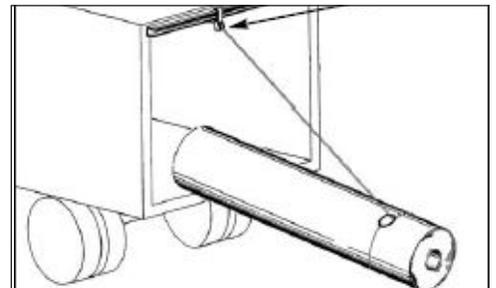


FIG. 3

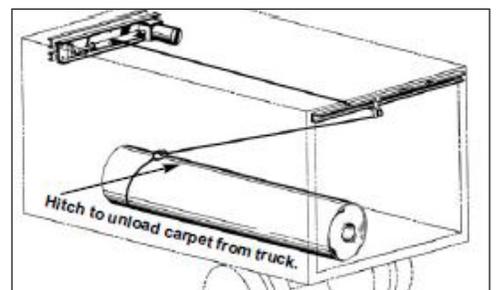


FIG. 4

Troubleshooting Guide

Problem	Cause	Solution
Unit fails to operate	Blown fuse or open circuit breaker	Replace fuse or reset circuit breaker
	No power	Check power source
	Defective motor	Repair or replace
	Excessive load	Reduce load
Input motor runs, but speed reducer output shaft doesn't run	No input key	Install key
	Defective gear(s)	Check and replace, if necessary
Intermittent rotation of output shafts	Poor electrical connection	Check connection
	Damaged gear assembly, possibly caused by shock load	Replace gear and avoid shock load if possible
Excessive noise	Worn bearings	Replace bearings
	Weight overload	Adjust tension, correct load, and/or replace bearing
	Insufficient lubrication	Check oil level
Oil leak	Vent plug not installed	Install vent plug
	Gasket broken or not seated	Replace or reseal gasket
	Damaged or worn seal	Replace seal
	Too much oil	Check oil level

Maintenance



WARNING: ENSURE POWER IS DISCONNECTED BEFORE ATTEMPTING TO SERVICE THIS MACHINE. IF THE POWER DISCONNECT POINT IS NOT VISIBLE, LOCK IT IN THE OPEN POSITION AND TAG IT TO PREVENT UNEXPECTED APPLICATION OF POWER. FAILURE TO DO SO COULD CAUSE SERIOUS INJURY.

MAINTENANCE CHECKLIST

- Inspect for damage or wear on all exposed power cords and switches, rope, rear pulley housing and hook, and other parts. Replace if needed.
- Oil level in gear box should be checked once a year (Amoco, EP1 synthetic)
- Drive shaft and pillow block bearing should be greased as needed.
- Inspect rear pulley (Figure 8) to ensure that the wheel and pivot bolt are secure and without wear, the wheel is not cracked and spins freely, and the axle bolt is tight.



FIG. 8

CLEANING

Properly selected and installed electric motors are capable of operating for long periods with minimal maintenance. Periodically clean dirt from open-type motors, especially in and around vent openings. Vacuuming avoids imbedding dirt in the windows.

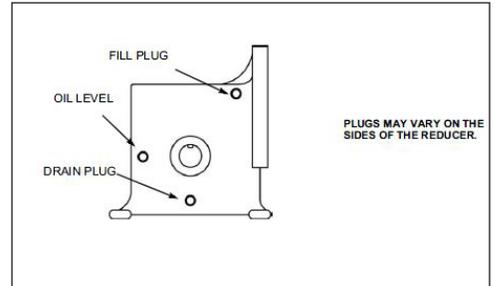


FIG. 9

OIL

For new reducers, change the oil 120 hours after the reducer starts operating (based on 8 hours per day operation). After the first change, change oil every 2,000 operating hours or every 6 months, whichever occurs first.

Use Mobil SHC® 634 gear lubricant or similar. ISO viscosity grade 460.



WARNING: EITHER TOO MUCH OR TOO LITTLE OIL CAN CAUSE REDUCER, BEARING, AND GEAR DAMAGE. IF OIL IS TOO LOW, PARTS WILL NOT GET ENOUGH LUBRICATION; TOO MUCH OIL IN THE REDUCER MAY CAUSE OIL TO LEAK OR CHURN AND FOAM, WHICH COULD LEAD TO OVERHEATING.

Adding/Changing Oil (Figure 9)

To add oil, complete the following steps:

1. Remove both the fill plug and oil level plug.
2. Place oil in the fill plug hole; keep adding oil until it starts to come out of the oil level plug hole. Re-place plugs.

To change the oil, drain the oil by removing the drain plug. Re-place the drain plug and complete the above steps to add oil.

Changing the Output Oil Seal

1. Remove the rope shaft and gear reducer from the unit.
2. Place some form of support (2x4, etc.) under the gear reducer shaft to keep it from bending.
3. Drive out the gear reducer shaft pin; pick out the old seal.
4. Clean out the area where the old seal was; install the new seal by pressing it into place.
5. Put some loctite around the middle of the pin and carefully press it back into the shaft. If the pin is loose, a new pin may be needed.
6. Check to see if the unit needs more oil before reinstalling the rope shaft.

Parts List and Diagrams

COMPLETE PARTS LIST

PART#	DESCRIPTION	QTY	PART#	DESCRIPTION	QTY
1 1451	REDUCER, GEAR, PIN AND PLATE ASSY	1	17 73219	BOLT, HEX HEAD CAP 3/8-16X5	6
2 400323	ASSEMBLY, CHANNEL, FOR TRUCK WINCH1		18 73233	BOLT, HEX HEAD CAP 3/8-16X3-1/2	5
3 63-1	BASE WLDT, TRUCK WINCH	1	19 73234	BOLT, HEX HEAD CAP 3/8-16X2 1/2	3
4 63-P1	PLUG, MALE, ML-2P, 125VAC, 15A	1	20 73236	NUT, HEX 3/8-16	15
5 63-P27	BOX, ELECTRIC, WIRED COMPLETE	1	21 73263	WASHER, FLAT SAE ZINC 3/8	30
6 63-P30	CLAMP, WIRE 3/8	20	22 73402	NUT, NYLOCK 1/2-13	1
7 63-P31	CLAMP, WIRE 3/4	10	23 73409	BOLT, HEX HEAD CAP 1/2-13X2-1/2	1
8 63-P8	GUARD, MOTOR	1	24 73620	SCREW, HD NUMBER 3 DRILL 10X1HX	40
9 63-P9	SHAFT, DRIVE	1	25 L124	LABEL, IMPROPER USE OF ROPE	1
10 63-PS	PULLEY, TRUCK	1	26 L14	LABEL, NATIONAL, GOLD	1
11 63-R	ROPE, 3/8"	109	27 L240	LABEL, WIRING, 63	1
12 63-S	SWITCH	1	28 L33B	LABEL, CAUTION MOVING PART	1
13 71112	BEARING, 1 ID	1	29 L38	LABEL, DISCONNECT POWER	1
14 72329	MOTOR, 1/2 HP, DC	1	30 L90	LABEL, SAFETY, 63-DC	1
15 73204	WASHER, LOCK, 3/8	15	31 L106	LABEL, PINCH POINT	1
16 73208	BOLT, HEX HEAD CAP 3/8-16X1-1/2	6	32 L1000	LABEL, PULLEY WARNING	1

GEAR REDUCER ASSEMBLY, 1451

PART#	DESCRIPTION	QTY	PART#	DESCRIPTION	QTY
1 1451-G	REDUCER, GEAR	1	4 73201	SCREW, HEX HEAD CAP, 3/8-16X1	4
2 1450-50	PLATE, SPACER, FOR GEAR	1	5 73204	WASHER, LOCK, 3/8	2
3 1450-28	PIN, DRIVE SHAFT	1			

ELECTRICAL BOX, 63-P27

PART#	DESCRIPTION	QTY	PART#	DESCRIPTION	QTY
1 400283	FUSE, ATO 30	2	8 63-P3	SOLENOID	4
2 6280-175	PLUG, FEMALE, L5-15R, 125VAC, 15A	1	9 63-P32	SCREW, GROUNDING, THREE WIRE	2
3 63-P15	TERMINAL, BATTERY CONNECTION	6	10 70750	HOLDER, FUSE, 30 AMP	2
4 63-P2	PLUG, FEMALE, ML-2R, 125VAC, 15A	2	11 72565	WIRE, 14/3	61
5 63-P22	BOX, ELECTRIC	1	12 72575	WIRE, WELDING, #4	43
6 63-P23	COVER, ELECTRIC BOX	1	13 72845	TIE, CABLE, BLACK, 11-3/4"	1
7 63-P29	BREAKER, CIRCUIT	1	14 73503	STRAIN RELIEF, STRAIGHT 1" .750-1	2

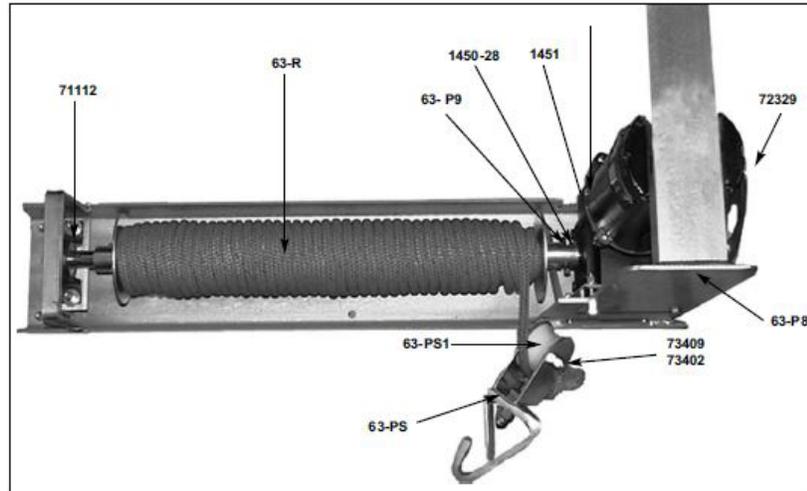
CHANNEL ASSEMBLY, 400323

PART#	DESCRIPTION	QTY	PART#	DESCRIPTION	QTY
1 63-P13	CHANNEL, FRONT	2	4 73234	BOLT, HEX HEAD CAP 3/8-16X2.5	2
2 63-P14	CHANNEL, READ	1	5 L01	LABEL, CAUTION 3X1/2	2
3 73207	NUT, NYLOCK 3/8-16	2	6 L08	LABEL, STAND CLEAR	2

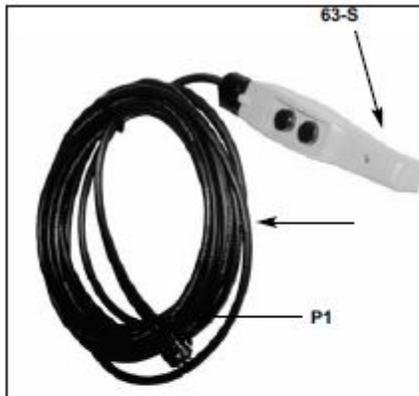
SERVICE PARTS

PART#	DESCRIPTION	QTY	PART#	DESCRIPTION	QTY
1 1451-19A	SEAL, GEAR REDUCER, 1" X 1-5/8" X 1/4"	1	4 63-P19	SWITCH ASSY, 40' FLUSH, TRUCK MOUNT	1
2 1451-19B	SEAL, GEAR REDUCER, 30MM X 50 MM	1	5 1450-40	OIL, GEAR, 1QT	
3 63-P12	HOLDER, FUSE				

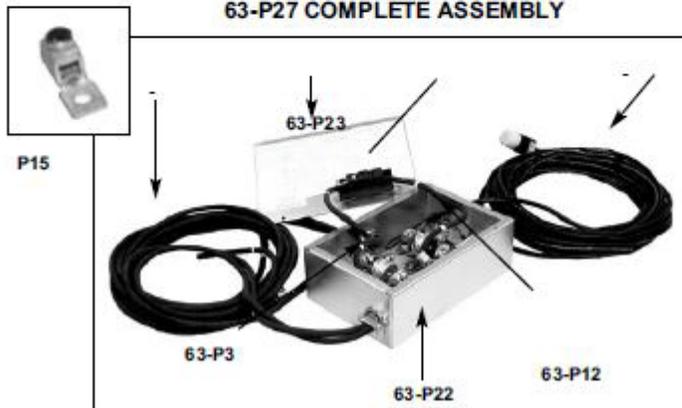
Parts List and Diagrams



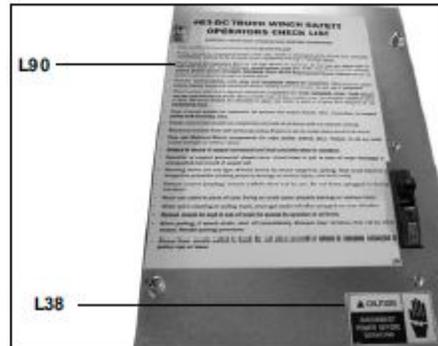
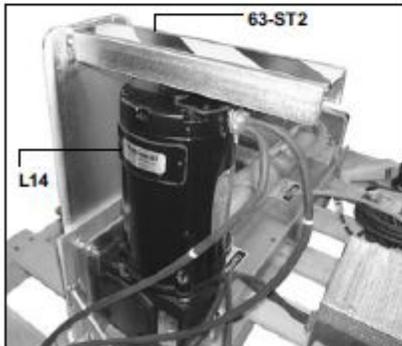
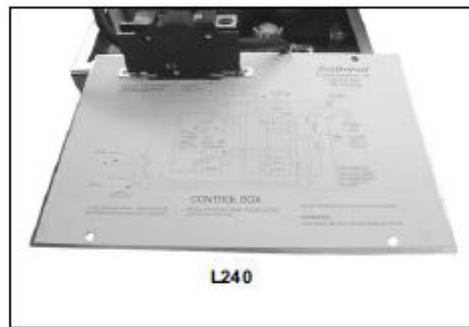
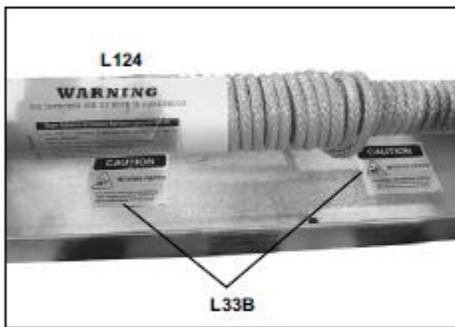
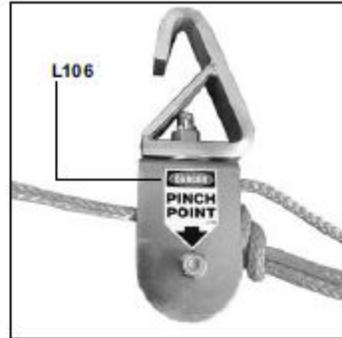
63-P19 COMPLETE ASSEMBLY



63-P27 COMPLETE ASSEMBLY



Parts List and Diagrams





9250 Xylon Avenue N • Minneapolis, MN 55445 • U.S.A.
Toll-free 800-245-0267 • Phone 763-315-5300 • Fax 800-648-7124 • Fax 763-535-8255
Web Site: www.nationalequipment.com • E-Mail: info@nationalequipment.com