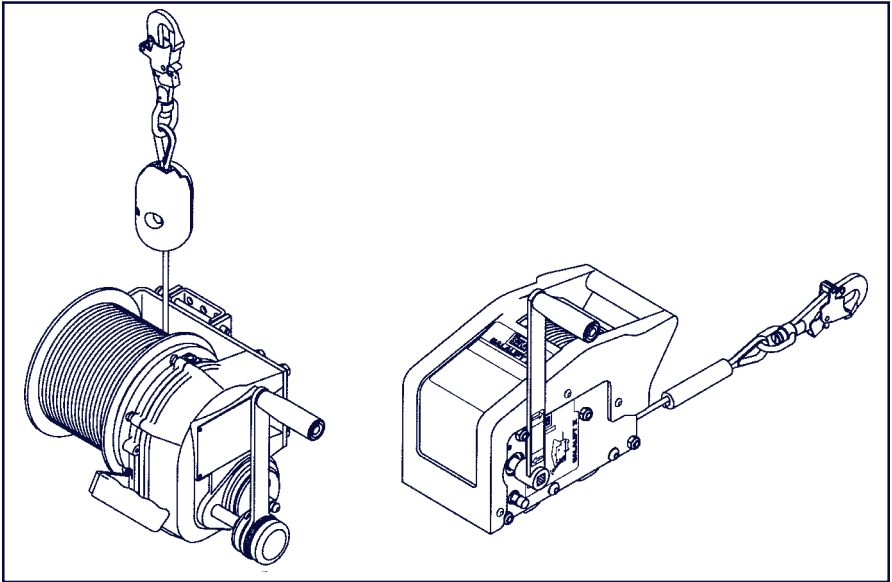




User Instruction Manual Salalift® and Salalift® II Winches L1850, L7400, L7401 Series

This manual is intended to meet industry standards, including OSHA 1910.146 and ANSI Z117.1-1989, and should be used as part of an employee training program as required by OSHA.



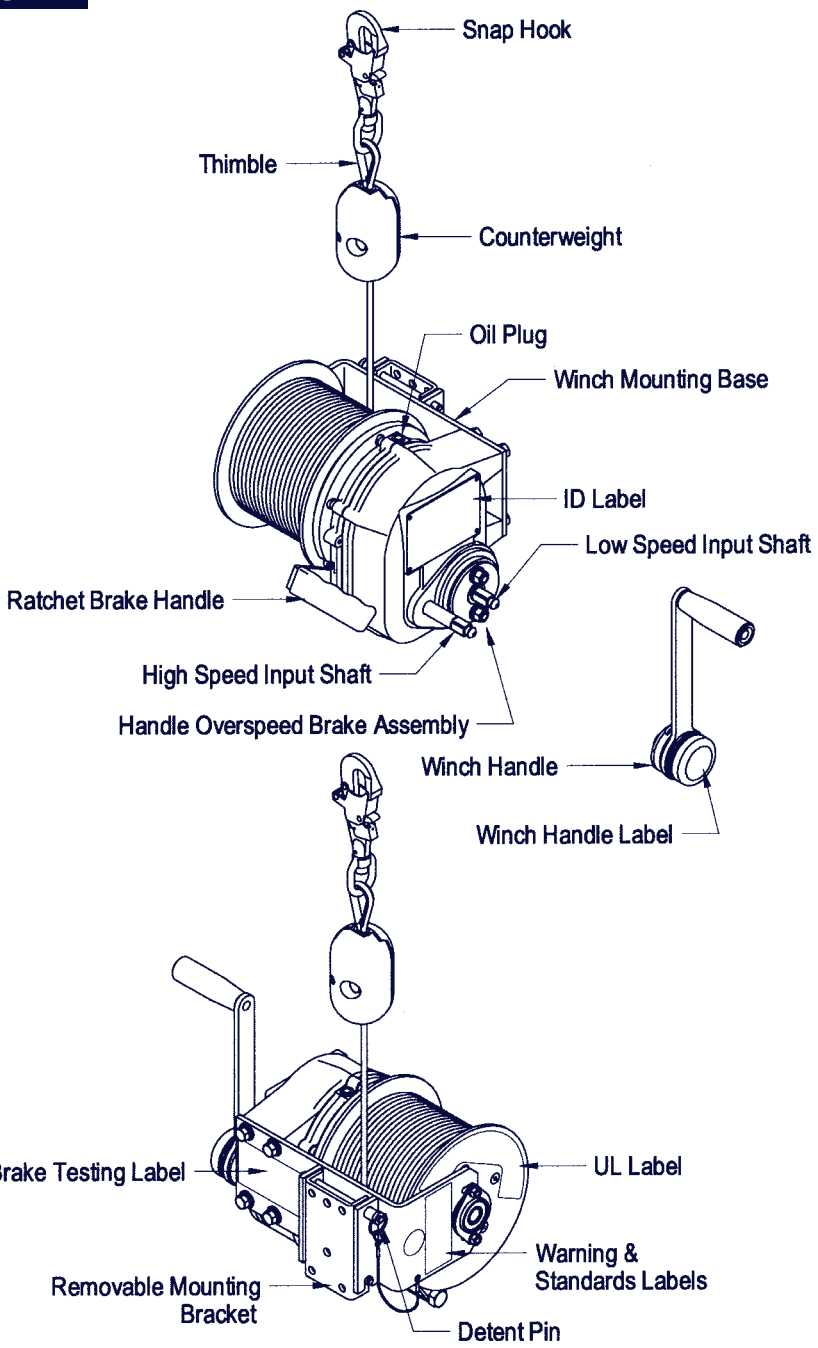
The L1850-60, L1850-60S, L1850-120, and L1850-120S Salalift Series Manually Operated Winches are classified by Underwriters Laboratories, Inc. as to the 350 lbs. load capacity only.

WARNING: *This product is to be used as part of a complete system. The user must follow the manufacturer's instructions for each component of the complete system. These instructions must be provided to the user of this equipment. Manufacturer's instructions must be followed for proper use and maintenance of this product. Alterations or misuse of this product, or failure to follow instructions may result in serious injury or death.*

IMPORTANT: *If you have questions on the use, care, application, or suitability for use of this safety equipment, contact DBI/SALA.*

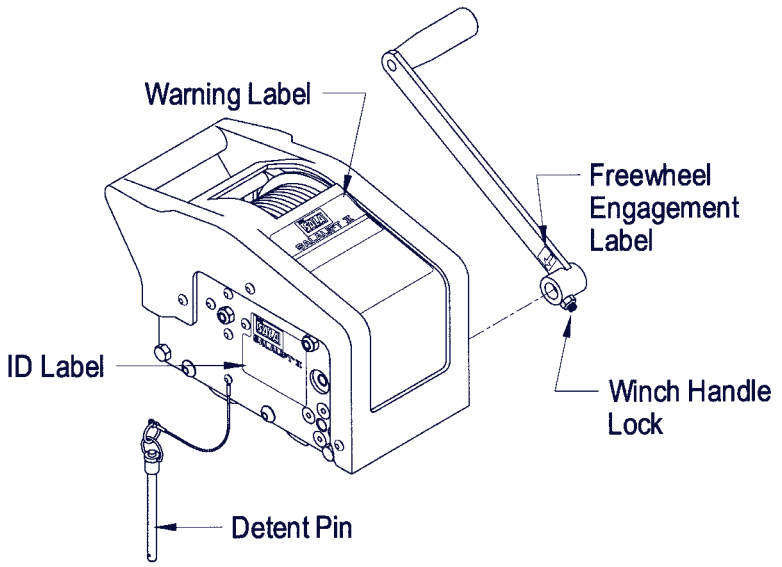
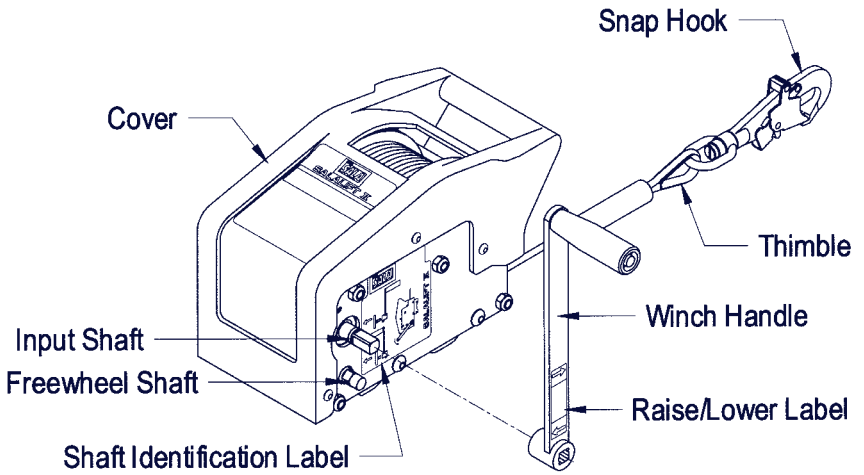
IMPORTANT: *Before using this equipment record the product identification information from the ID label on the winch in the inspection and maintenance log in section 9.0 of this manual.*

Figure 1



L1850 Parts Identification

Figure 2



L7400 Parts identification

DESCRIPTIONS

SALALIFT® Winches:

L1850-60: 60 feet of 1/4 inch galvanized wire rope, carrying bag.

L1850-60S: 60 feet of 1/4 inch stainless steel wire rope, carrying bag.

L1850-120: 120 feet of 1/4 inch galvanized wire rope, carrying bag.

L1850-120S: 120 feet of 1/4 inch stainless steel wire rope, carrying bag.

L1850-140: 140 feet of 1/4 inch galvanized wire rope, carrying bag.

L1850-140S: 140 feet of 1/4 inch stainless steel wire rope, carrying bag.

SALALIFT® II Winches:

L7400-60: 60 feet of 1/4 inch galvanized wire rope, carrying bag.

L7400-60S: 60 feet of 1/4 inch stainless steel wire rope, carrying bag.

L7401-90: 90 feet of 3/16 inch galvanized wire rope, carrying bag.

L7401-90S: 90 ft. of 3/16 inch stainless steel wire rope, carrying bag.

L7401-120: 120 feet of 3/16 inch galvanized wire rope, carrying bag.

L7401-120S: 120 feet of 3/16 inch stainless steel wire rope, carrying bag.

IMPORTANT: *For special (custom) versions of this product, follow the instructions herein. See supplemental instructions, if included, for additional instructions on custom equipment.*

1.0 APPLICATIONS

1.1 PURPOSE: DBI/SALA Salalift winches are to be used for work positioning (L1850 series only), personnel riding, material handling, climbing protection, or rescue and evacuation. These winch models are to be used with a DBI/SALA tripod, davit arm, or other support structure, and may be used in situations where personnel or materials need to be raised or lowered 60-140 feet.

1.2 WINCH APPLICATION TYPES:

- A. WORK POSITIONING:** The Salalift winch (L1850 series only) is used to suspend the worker in a work position, acting as the primary means of support. Applications include suspending a worker in a work seat or harness. A back-up personal fall arrest system must be attached to the suspended employee.

NOTE: *OSHA requires that manual or powered winches be independently evaluated and classified for use as a single point suspension system. See OSHA regulation 29 CFR 1926.451, and 29 CFR 1910.28.*

- B. PERSONNEL RIDING:** The Salalift or Salalift II winch is used to raise or lower a worker to a work level. At the work level the worker is no longer supported by the winch. It is recommended that the worker be connected to a back-up fall arrest system while being raised or lowered.
- C. RESCUE AND EVACUATION:** The Salalift or Salalift II winch is used to raise or lower an endangered or injured worker, or rescue personnel. Applications include permit and non-permit confined space entry work.
- D. CLIMBING PROTECTION:** The Salalift or Salalift II winch is used to protect a worker ascending or descending a fixed ladder or similar structure. It is recom-

mended that this use of the winch be restricted to structures where other means of climbing protection; such as permanently installed ladder safety systems or personal fall arrest systems are infeasible. For this application, the following conditions must be met:

1. Ladder or steps are in good condition and allows for a straight, continuous climb.
2. The worker climbing the ladder is wearing a full body harness and the winch line is connected to the dorsal (back) D-ring of the harness.
3. The winch operator is trained and competent in the operation of the winch.
4. No slack line is allowed to develop when the worker moves up or down the ladder.
5. DBI/SALA recommends, for the L1850 series winches only, that an energy absorbing lanyard be connected between the harness dorsal D-ring and the winch line.

1.4 LIMITATIONS: The following application limitations must be considered before using this product. Failure to observe product limitations could result in serious injury or death.

- A. INSTALLATION:** The winch must be installed in accordance with the requirements stated in section 3.0 of this manual.
- B. CAPACITY:** The maximum working load for this product is 350 lbs. (160 kg).
- C. PERSONAL FALL ARREST SYSTEMS:** Personal fall arrest systems used with the Salalift or Salalift II winch must meet applicable state and federal regulations and the requirements stated in section 3.3.
- D. PHYSICAL AND ENVIRONMENTAL HAZARDS:** Use of this equipment in areas with physical or environmental hazards may require that additional precautions be taken to reduce the possibility of damage to this equipment or injury to the user. Hazards may include, but are not limited to; high heat (welding or metal cutting), acid or caustic chemicals, corrosive environments such as exposure to seawater, high voltage power lines, explosive or toxic gases, moving machinery or sharp edges. Contact DBI/SALA if you have questions about the application of this equipment in areas where physical or environmental hazards are present.
- E. TRAINING:** This equipment is to be installed and used by persons who have been trained in its correct application and use.

1.5 Refer to national standards, including; ANSI Z117.1-1989, local, state, and OSHA requirements (26 CFR 1910.146), for more information on the application of this and associated equipment.

2.0 SYSTEM REQUIREMENTS

2.1 COMPATIBILITY OF COMPONENTS AND SUBSYSTEMS: DBI/SALA

winchers are for use with DBI/SALA approved components. Substitutions or replacements made with non-approved components may be incompatible, and may affect the reliability and safety of the complete system. Contact DBI/SALA with questions about compatibility of components.

2.2 COMPATIBILITY OF CONNECTORS: Connectors (hooks, carabiners, D-rings) must support 5,000 lbs. (22kN) minimum. Use caution when selecting connectors to ensure compatibility between connecting hooks and the mating connector. Noncompatible connections may disengage (roll-out). Connectors must be compatible in size, shape, and strength. Self locking snap hooks are required by ANSI Z359.1-1992 and are recommended by DBI/SALA.

2.3 SUPPORT STRUCTURE STRENGTH: The support structure to which the winch is installed must meet minimum strength requirements stated in section 3.4

3.0 OPERATION AND USE

WARNING: Do not alter or intentionally misuse this equipment, your safety may depend on it. Consult DBI/SALA when using this equipment with components or sub-systems other than those described in this manual. Some subsystem and component combinations may interfere with the operation of this equipment. Use caution when using this equipment around moving machinery or electrical hazards. Use caution when using this equipment around sharp edges or chemical hazards.

WARNING: Consult your doctor if there is any reason to doubt your fitness to use this equipment. Pregnant women or minors must not use a DBI/SALA winch, unless for unavoidable emergency use situations.

3.1 BEFORE EACH USE: Before each use of this equipment carefully inspect it to ensure it is in good working condition. Check for worn or damaged parts. Ensure all parts are present and secure. Check operation of winch; ensure that it will lift, lower, and hold the load under normal operation. Check winch and entire system for damage and corrosion. See section 5.0 for further inspection details. Do not use if inspection reveals an unsafe condition.

3.2 PLANNING: Plan your system and how it will function before starting your work. Consider all factors that affect your safety during use. Some important points to consider when planning your system are:

- A. HAZARD EVALUATION:** Evaluate job site hazards prior to starting work. Consult applicable OSHA and industry standards for guidelines and regulatory requirements on issues such as confined space entry, personal fall arrest systems (PFAS), and single point adjustable suspended scaffolds.
- B. WORK SITE GEOMETRY:** The installation and use of the support structure (tripod, davit arm and base) must be consistent with the geometric requirements stated in the associated manufacturer's instruction manuals. When suspending working lines from the support structure, check for obstructions or sharp edges in the work path. Avoid working where the user may swing and hit an object, or where lines may cross or tangle with that of another worker.
- C. SECONDARY OR BACK-UP FALL ARREST SYSTEM:** When using the

Salalift winch (L1850 series) as a support for work positioning, a secondary or back-up fall arrest system is required. See OSHA 29 CFR 1910.28 and 1926.451. The DBI/SALA tripod and davit arm has provisions for connection of a secondary or back-up PFAS. See sections 3.3 and 3.5(A).

D. RESCUE: A means of dealing with an accident or emergency must be planned in advance. Response time can play an important role in the survival of an injured worker. Users of this equipment must be trained in emergency procedures.

3.3 REQUIREMENTS FOR PERSONAL FALL ARREST SYSTEMS: PFAS used with the Salalift or Salalift II winch and support structure must meet applicable OSHA requirements.

- The PFAS should be rigged to minimize any potential free fall and never allow a free fall greater than 6 feet. It is recommended that the PFAS used with this equipment include a full body harness as the body support component. PFAS's that incorporate full body harnesses must maintain fall arrest forces below 1,800 lbs. and arrest the fall within 42 inches. Body belts, unless incorporated into a full body harness, are not recommended for use with this equipment. A typical PFAS includes a full body harness, connecting subsystem or component (self retracting lifeline or lifeline and rope grab), and the necessary connectors to couple the system together.
- Anchorages selected for PFAS must sustain static loads, applied in the directions permitted by the PFAS, of at least; (A) 3,600 lbs. (16kN) when certification exists (see ANSI Z359.1-1992 for certification definition), or (B) 5,000 lbs. (22kN) in the absence of certification. When more than one PFAS is attached to an anchorage, the anchorage strengths set forth in (A) and (B) must be multiplied by the number of PFAS attached to the anchorage. Per OSHA 1926.500 and 1910.66: Anchorages used for attachment of a PFAS shall be independent of any anchorage being used to support or suspend platforms, and must support at least 5,000 lbs. (22kN) per user attached, or be designed, installed, and used as part of a complete PFAS which maintains a safety factor of at least two, and is supervised by a qualified person.

WARNING: *Read and follow manufacturer's instructions for the personal fall arrest equipment selected for use with the winch and support structure.*

IMPORTANT: *For free fall and rescue applications body belts are not recommended for use. Body belts increase the risk of injury during fall arrest in comparison to a full body harness, and drastically reduces the tolerable suspension time. Limited suspension time, increased risk of injury, and the potential for improperly wearing a body belt may result in added danger to the user. DBI/SALA recommends using a full body harness for fall arrest and rescue applications.*

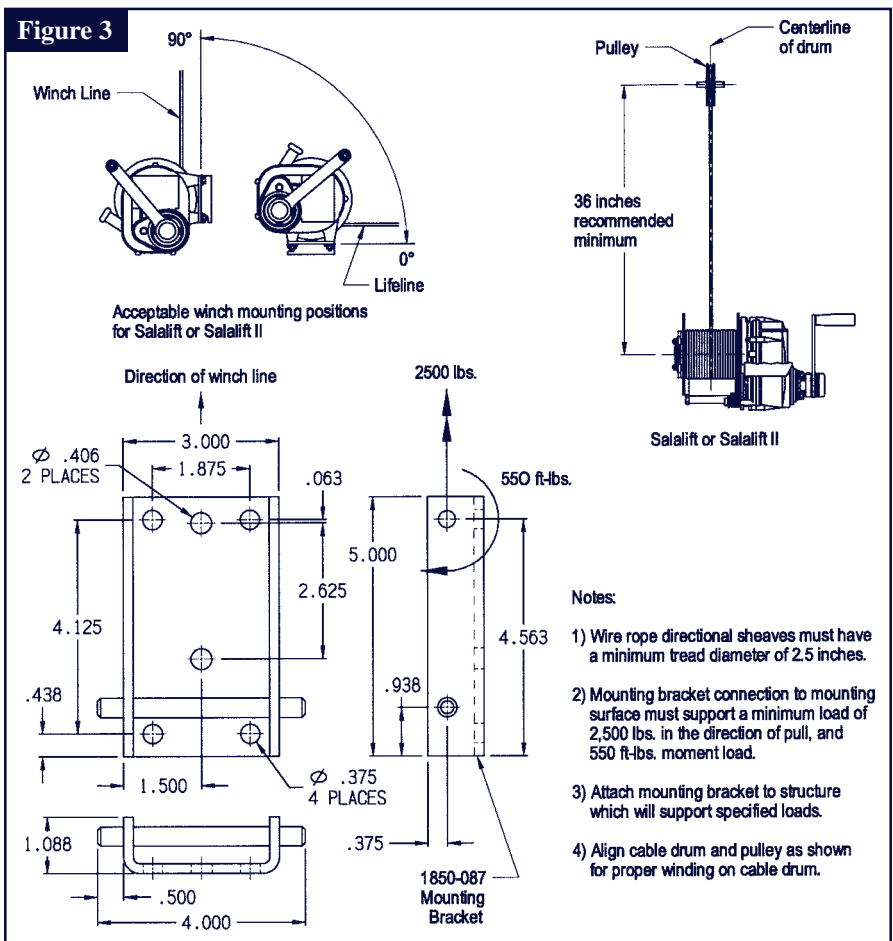
3.4 INSTALLATION OF WINCH TO SUPPORT STRUCTURE:

A. MOUNTING BRACKET: These winches incorporate a "quick-mount" style bracket for attachment to the support structure. DBI/SALA tripods, davit arms, and other support structures supplied by DBI/SALA, include a bracket that mates with the winch quick-mount bracket. All DBI/SALA winches include the quick-mount bracket. When using the L7400 series winch with the 4176 Wall Mount Bracket, a mounting adapter kit is required. Contact DBI/SALA for more information.

B. LOAD REQUIREMENTS: Figure 3 illustrates mounting the winch to the support structure and the load requirements. The mounting bracket must support the loads shown in Figure 3.

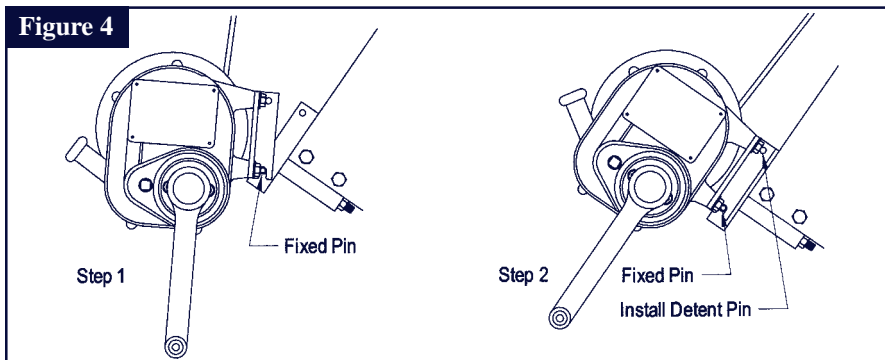
C. GEOMETRIC REQUIREMENTS: Refer to the support structure manufacturer's instructions for geometric requirements. Installations of the winch to support structures other than those provided by DBI/SALA must meet the geometric requirements shown in Figure 3. Position the support structure so the load and the lifeline of the winch can be directed over the work area when installed. For personnel use, do not position the support structure where the worker will have to swing under the support structure to reach the work area. Avoid positioning the support structure where the working line may abrade against sharp edges.

IMPORTANT: *Position the winch and support structure in a location which allows the operator to safely use the winch.*



D. QUICK-MOUNT INSTALLATION: See Figure 4. Mount the winch using the quick-mount bracket as follows:

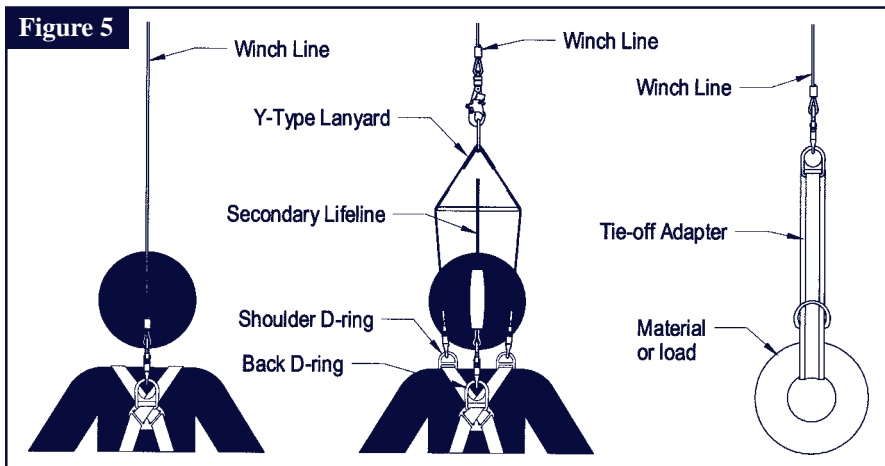
- Step 1.** Pull out locking detent pin by depressing button on end of pin. Lift winch into place and position slot in bracket over fixed pin on support structure bracket.
- Step 2.** Push top of winch in toward the support structure while bottom rotates on fixed pin. Align holes and push detent pin through until it stops. Ensure pin locks in place.
- Step 3.** Slowly pull out winch line. Route line over support structure pulley system. See support structure manufacturer's instructions for details.



E. WELDED INSTALLATIONS: If welding the mounting bracket to a support structure it is recommended that the welding be done by a certified welder. Portions of the mounting bracket that have been exposed due to welding should be painted or otherwise protected from corrosion.

3.5 OPERATION OF WINCH:

A. CONNECTING WINCH LINE TO LOAD: See Figure 5. For applications that do not require a secondary PFAS, the winch line should be connected to the worker's harness back D-ring. For applications requiring a secondary PFAS, the winch line should be connected to a Y-type lanyard and this lanyard should be at-



tached to the worker's harness shoulder D-rings. The secondary lifeline should be connected to the worker's harness back D-ring. For material handling applications, connect the winch line to the load using a tie-off adapter or other anchoring device.

- B. SALALIFT WINCH (L1850 Series):** Attach winch to support structure as described in section 3.4(D). Install winch crank handle onto the high or low speed shaft by aligning the handle with the shaft and pushing firmly inward until handle snaps in place. To release handle from shaft, depress handle release and pull handle off shaft. Pull ratchet lever downward and feed line off the drum by rotating the crank handle in the direction "down". Route line over support structure pulley system.

TO RAISE LOAD: Rotate winch crank handle clockwise when using low speed shaft and counter-clockwise when using high speed shaft. For worker safety, the crank handle incorporates an overload clutch which limits the winch lifting force on the high speed shaft to approximately 250 lbs. and 500 lbs. on the low speed shaft, thus reducing the possibility of injury should a worker become entangled during retrieval. Do not exceed the rated capacity of 350 lbs.

TO LOWER LOAD: Rotate winch crank handle in "up" direction until ratchet brake lever can be pulled down, then rotate the crank handle in down direction. When load is suspended from winch, use caution when ratchet brake lever is pulled down since the load will be transferred to the winch crank handle. To prevent loss of control of the load, do not block or restrict the ratchet lever from engaging the teeth on the drum, except by normal manual operation. If the operator fatigues, or for any reason desires to "hold" the load, allow the ratchet brake to engage and support the load.

- C. SALALIFT II WINCH (L7400 Series):** Attach winch to support structure as described in section 3.4(D). Install winch crank handle onto the input shaft by aligning the hub of the crank handle with the square drive marked "winch shaft" and pushing firmly inward until handle snaps in place (grip on handle should face outward). To release crank handle from shaft, pull handle off shaft. Feed line off winch drum by rotating crank handle in the lowering direction (counter-clockwise). Apply slight tension to line while feeding it off drum. Free-wheel mode may also be used, see section 3.5(C)(3). Route line over support structure pulley system.

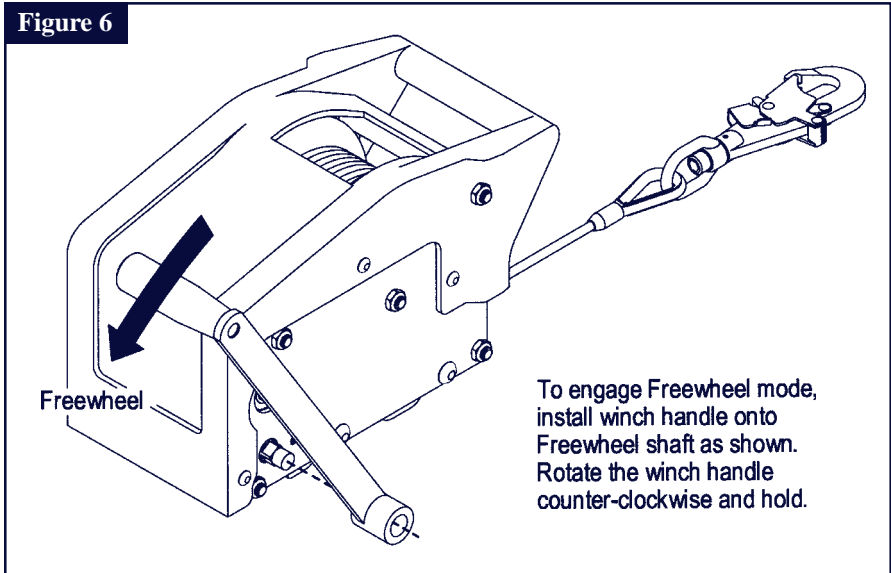
TO RAISE LOAD: Rotate winch crank handle in the raise direction (clockwise). To hold or momentarily suspend the load, stop cranking. The automatic clutch/brake will hold the load if handle is released. The winch incorporates an overload clutch limiting the lifting force to approximately 700 lbs., reducing the chance of injury if a worker becomes entangled during retrieval. Do not exceed the rated capacity of 350 lbs.

TO LOWER LOAD: Rotate winch crank handle in the lower direction (counter-clockwise). When lowering line without a load, maintain slight tension on the line to aid payout.

FREE-WHEEL MODE: Remove crank handle from raise/lower input shaft. Reverse the crank handle and install it onto the square drive marked "freewheel

shaft" by aligning the handle hub with the shaft. See Figure 6. To engage free-wheel mode, rotate crank handle counter-clockwise until it stops and hold. The line can now be freely pulled off of the winch drum. To avoid build-up of slack line on the drum, pull line off drum smoothly, remove slack on the drum by releasing crank handle and pulling on the line. If the line pays out too rapidly, an overspeed brake will activate and lock, stopping the line. If this happens, you will need to return to winch mode and rotate the crank handle clockwise two turns to unlock the overspeed brake. Do not engage free-wheel mode with load on the lifting line, remove load on the line before engaging free-wheel mode. When using the Salalift II for climbing protection applications, free-wheel mode is not recommended. The operator must be attentive to slack line; paying out and reeling in line as needed.

Figure 6



- D. IMPACT INDICATOR AND CABLE RESERVE:** The Salalift II winch is supplied with a connecting swiveling hook that incorporates a load indicator. This indicator functions if the winch is severely impact loaded or if the lifting capacity is exceeded by a preset amount. See section 5.0 for inspection of load indicator. The Salalift II incorporates a reserve cable retention feature on the cable drum. With the drum near empty (single layer of cable remaining), the reserve pin is visible. See Figure 2. The reserve cable ensures that the shock absorbing feature is available throughout the working range of the winch. If the winch is shock loaded at the reserve point of cable payout, the reserve pin will shear, allowing the shock absorber to function normally. If the reserve pin has been sheared, the unit must be returned for inspection and repair. See section 5.0 for inspection details.

IMPORTANT: Do not use winch for lifting or lowering of more than one person, except for emergency situations. In this case, if using the LI850 series, the low speed shaft must be used to prevent handle slippage. Maximum lifting force is approximately 500 lbs.

WARNING: *If cranking tension eases during lowering, the person or material being lowered has reached a work level or obstruction. Do not continue cranking without communicating with the person or checking the material being lowered. Always keep cable tension firm. Slack cable could cause a free fall.*

WARNING: *A minimum of four wraps of line must remain on the drum at all times on the L1850 series. One complete layer of line must remain on the L7400 series. Do not attempt to reverse wind line onto drum. Line must wind onto the drum by turning the crank handle in the "up" or "raise" direction only. Check periodically to see that the line is winding evenly on the drum. Use gloves when handling line.*

4.0 TRAINING

- 4.1** It is the responsibility of the user and the purchaser of this equipment to assure that they are familiar with these instructions, trained in the correct care and use of and are aware of the operating characteristics, application limits, and the consequences of improper use of this equipment.

IMPORTANT: *Training must be conducted without exposing the trainee to a fall hazard. Training should be repeated on a periodic basis.*

5.0 INSPECTION

5.1 FREQUENCY:

- **Before Each Use:** Visually inspect per steps listed in sections 5.2 and 5.3.
- **Monthly:** A formal inspection of the winch should be done by a competent person other than the user. See sections 5.2 and 5.3 for guidelines. Record results in the inspection and maintenance log in section 9.0.
- **Annual:** It is recommended that the winch be serviced by a factory authorized service center or the manufacturer. Extreme working conditions may require increasing the frequency of inspections. Annual servicing shall include, but not be limited to, an intensive inspection and cleaning of all internal and external components. Failure to provide proper service may shorten product life and could endanger performance.
- **After An Impact:** Inspect entire winch according to section 5.2.

WARNING: *If the winch has been subjected to impact forces, it must be immediately removed from service and inspected. If the winch fails to pass the inspection, do not use. The equipment must be sent to an authorized service center for repair.*

IMPORTANT: *Extreme working conditions (harsh environment, prolonged use, etc.) may require increasing the frequency of inspections.*

5.2 GENERAL INSPECTION STEPS FOR ALL WINCH MODELS:

- Step 1.** Inspect all screws, bolts and nuts. Ensure they are securely attached and tight. Check to see if any bolts, nuts or other parts are missing, or have been substituted or altered in any way. Inspect covers, housings, guards, etc. Ensure they are free of cracks, dents, or other damage.

- Step 2.** Crank handle must lock positively onto the shaft and be free of cracks, bends, or other damage.
- Step 3.** Connecting hook must not be damaged, broken, distorted, or have any sharp edges, burrs, cracks, worn parts, or corrosion. Ensure the connecting hook works properly. Hook gate must move freely and lock upon closing. Hook must swivel freely.
- Step 4. Wire Rope:** Inspect entire length of wire rope assembly starting at the hook. Always wear protective gloves when inspecting wire rope.
- A.** Inspect for broken wires by passing the cable through gloved hands, flexing it every few inches to expose breaks. Broken wires can be removed by bending the wire back and forth parallel to the rope length. Do not attempt to pull wires out of rope. Inspect for kinks, cuts, crushed burned areas, or other damage. Wire rope with serious damage must be removed from service.
 - B.** The wire rope assembly must be replaced by an authorized service center if there are six or more randomly distributed broken wires in one lay, or three or more broken wires in one strand in one lay. Note: A "lay" of wire rope is the length of wire rope that it takes for a strand (the larger groups of wires) to complete one revolution or twist along the rope.
 - C.** The wire rope assembly must be replaced by an authorized service center if there are any broken wires within one inch of the metal compression sleeves at either end of the assembly. Note: To inspect wire rope area near compression sleeves on hook end, remove counterweight (L1850 series) or slide rubber hook bumper up on wire rope (L7400 series)
 - D.** Inspect entire length of wire rope for signs of corrosion. Severely corroded wire rope must be replaced.

Synthetic Rope: Inspect for the following if winch uses synthetic rope:

- A.** Inspect for concentrated wear, frayed strands, broken yarns, cuts, and abrasions. The line must be free of knots, excessive soiling, heavy paint buildup, and rust staining throughout its length.
- B.** The line must be free of chemical or heat damage, indicated by brown, discolored, or brittle areas.
- C.** The line must be free of ultraviolet damage, indicated by discoloration and the presence of splinters and slivers on the rope surface.
- D.** All of the above factors are known to reduce rope strength. As a rule of thumb, rope strength is reduced proportional to the cross sectional area of the rope damaged. Damaged or questionable rope should be replaced by an authorized service center.

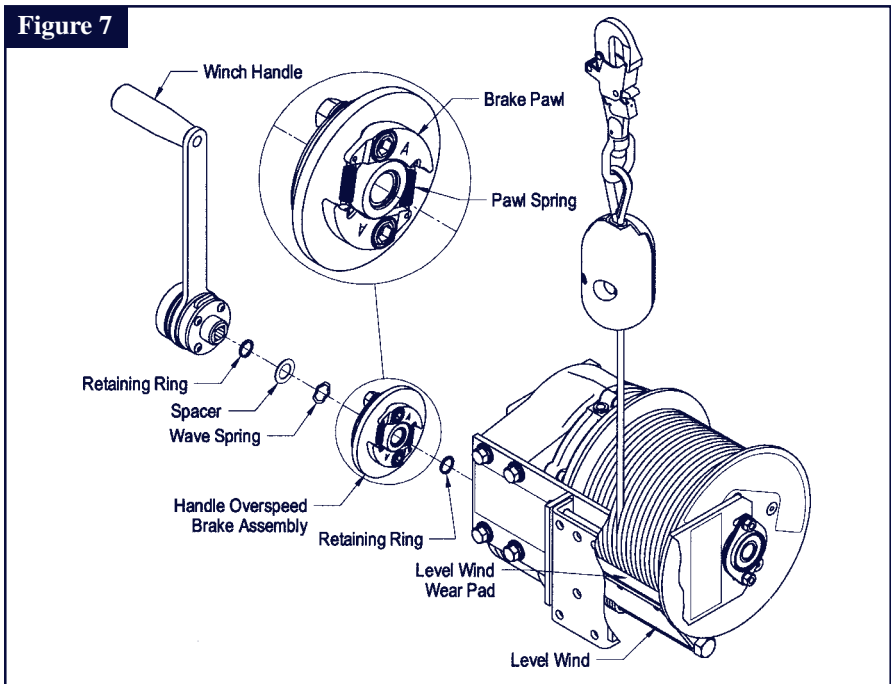
- Step 5.** Inspect all identification and warning labels, ensuring that they are legible and securely attached. See Figure 1 (L1850 series), Figure 2 (L7400 series) and section 8.0.
- Step 6.** Inspect each system component (support structure, back-up fall arrest system, body support, connectors, etc.) according to manufacturer's instructions.
- Step 7.** See additional inspection steps for the winch in sections 5.3, 5.4, and 5.5.

5.3 INSPECTION OF SALALIFT WINCH (L1850 SERIES): The following steps are additional inspection procedures to those in section 5.2 that must be performed on the L1850 series winch. See Figure 1.

- Step 1.** Check operation of winch in high and low speed positions; it must crank up and down freely. Stiff or rough operation may indicate a worn gear or bearing.
- Step 2.** Inspect ratchet brake. With brake engaged, drum should be prevented from paying off cable. Spring must be in place and undamaged. The ratchet brake lever must fully engage the teeth on the drum, the drum teeth must be in good condition.
- Step 3.** Inspect for oil in the gearbox by removing plug on top and tilting unit so oil can be seen through hole. Inspect for oil leaks.
- Step 4.** Check operation of handle overspeed brake as follows:
 - A.** Over level ground set up support structure and winch as it will be used.
 - B.** By raising or lowering the winch cable, position the lifting hook to approximately chest height.
 - C.** Remove the winch crank handle and have someone hold the ratchet brake lever in its disengaged position, such as when lowering a load.
 - D.** Pull down sharply on the lifting hook to engage the overspeed brake.
 - E.** If the brake fails to engage or noticeable brake slippage occurs, remove winch from service and return to an authorized service center for repair.
- Step 5.** Check operation of drum overspeed brake as follows, see Figure 7:
 - A.** To test the drum overspeed brake, remove the handle overspeed brake assembly. Using a snap ring pliers, remove the ring that retains the handle overspeed brake assembly on the low speed shaft. Remove the brake assembly, taking care not to damage the pawl springs on the back side of the brake. Note: If damage exists on the shaft such as a nick or corrosion, repair the damaged area using a file or emery cloth before removing the brake assembly.
 - B.** With the handle overspeed brake removed, on level ground, set up the support structure and winch as it will be used. To test the drum overspeed brake, remove the crank handle and disengage the ratchet brake,

then pull down sharply on the winch cable to engage brake.

- C. If the brake fails to engage or slippage of more than one inch occurs (a small amount of brake slippage is normal), remove the winch from service immediately and return to an authorized service center for repair.
- D. If brake functions properly, reassemble handle overspeed brake. Ensure the pawls are in place and the "A" side is showing on each pawl. Re-install the retaining ring onto the shaft. Test the handle overspeed brake for proper operation using method given in step 4.



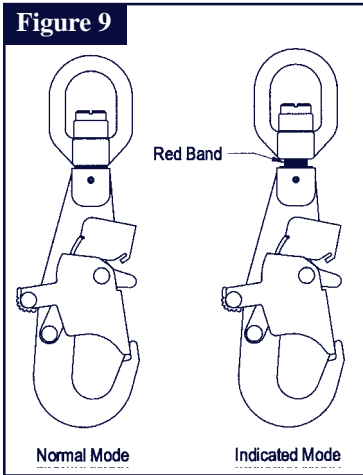
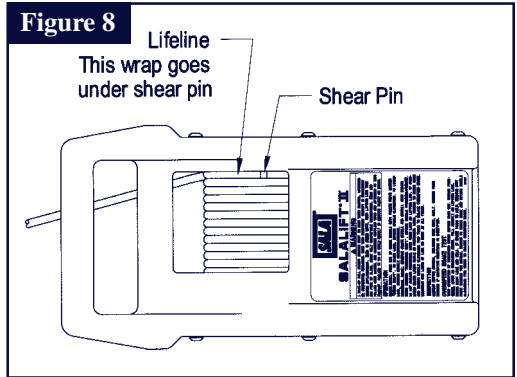
Step 6. See Figure 7. Inspect level wind assuring that it moves freely and applies pressure against the line. If the plastic wear pad needs to be replaced, return the winch to an authorized service center.

5.4 INSPECTION OF SALALIFT II WINCH (L7400 SERIES): The following steps are additional inspection procedures to those in section 5.2 that must be performed on the L7400 series winch. See Figure 2.

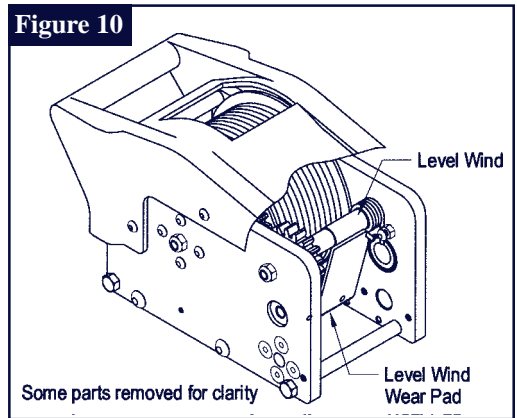
- Step 1.** Check operation of free-wheel mode and drum overspeed brake as follows:
- A. Engage free-wheel mode by connecting crank handle to free-wheel shaft and rotating handle counter-clockwise. The winch line should pay out freely. Pull down sharply on the winch line with the winch in the free-wheel mode to engage the brake.
 - B. Brake must lock and hold. If the brake fails to engage or slippage of more than one inch occurs (a small amount of brake slippage is nor-

mal), remove the winch from service immediately and return to an authorized service center for repair.

Step 2. See Figure 8. Inspect shear pin. The shear pin should retain one complete wrap of line on the drum. If the shear pin is broken or missing the unit must be returned to an authorized service center for repair.



Step 3. See Figure 9. Inspect impact indicator on snap hook. If hook is in the indicated mode, return winch to an authorized service center for repair.



Step 4. See Figure 10. Inspect level wind assuring that it moves freely and applies pressure against the line. If the plastic wear pad needs to be replaced return the winch to an authorized service center.

5.5 If inspection or operation reveals a defective condition, remove the winch from service immediately and contact an authorized service center for repair.

NOTE: Only DBI/SALA or parties authorized in writing may make repairs to this equipment.

6.0 MAINTENANCE, SERVICING, STORAGE

6.1 Periodically clean the exterior of the winch using water and a mild detergent solution. Clean labels as required. At least twice a year, clean and lubricate the wire rope. Do not use solvents to clean the wire rope as they will remove internal lubrication. Lubricate wire rope using a cloth (wearing gloves) and a light machine oil.

6.2 LUBRICATION OF SALALIFT WINCH;

- For the L1850 series Salalift winch, the gear box contains eight ounces of high quality gear oil, SAE 80 or 90. The oil does not require changing unless there is evidence of contaminants in the oil. See section 5.3, step 3. If oil is contaminated or leaking contact DBI/SALA for repair.
- For the L7400 series Salalift winch, lubrication should be applied periodically to the winch drum gear. Maintain a light film of grease on the drum gear teeth at all times. Apply grease to the drum gear teeth as required. Do not over lubricate.

6.3 Replacement parts, as well as additional maintenance and servicing procedures, must be completed by a factory authorized service center. An authorization and a return number must be issued by DBI/SALA.

6.4 Store this equipment in cool, dry, clean environment out of direct sunlight. Avoid areas where chemical vapors exist. Inspect after any period of extended storage.

6.5 Clean and store body support, support structure, and associated system components according to separate instructions provided with that equipment.

7.0 SPECIFICATIONS

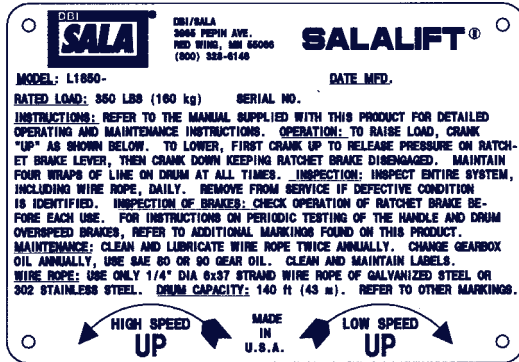
Rated Working Load	350 lbs.
Wire Rope Type	1/4 inch diameter, 6x37 galvanized or stainless steel, 3/16 inch diameter, 7x19 galvanized or stainless steel
Synthetic Rope Type	3/8 inch diameter synthetic rope braid on braid polyester
Drum Capacity	L1850 Series: 1/4 inch cable: 140 feet L7400 Series: 1/4 inch cable: 85 feet 3/16 inch cable: 150 feet
Weight	L1850-60: 62 lbs. L1850-120: 71 lbs. L7400-60: 36 lbs. L7401-90: 35 lbs. L7401-120: 37 lbs.
*Lifting or Lowering Speed / Gear Ratio	L1850 Series Low Speed: 13.2 ft/min. average / 6.6:1 ratio L1850 Series High Speed: 26.8 ft/min. average / 3.3:1 ratio L7400 Series: 12.5 ft/min. average / 6:1 ratio
Material	Predominantly aluminum, and zinc plated steel, Polyethylene (L7400 Series only)

* Note: Speeds given assume 60 rpm cranking rate. Actual rates may vary depending on cranking speed and the amount of rope on the drum.

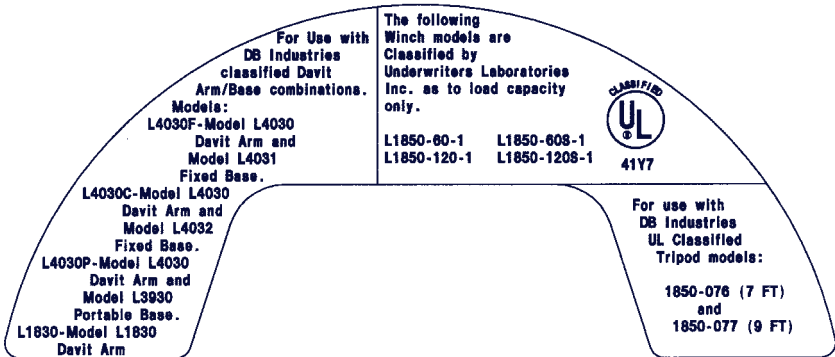
- The L1850-60, L1850-60S, L1850-120, and L1850-120S manually operated winches are classified by Underwriters Laboratories, Inc. as to the 350 lbs. load capacity only.

8.0 LABELING

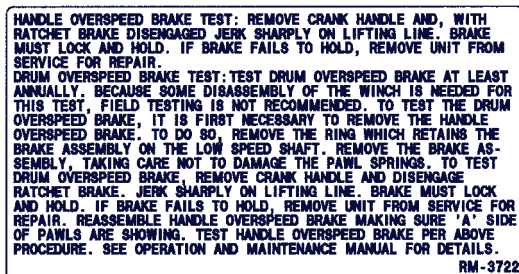
8.1 The following labels must be present and fully legible:



L1850 Series ID Label



L1850 Series UL Label



L1850 Series Brake Testing Label

8.1 Labeling, continued:

▲ WARNING

•USE OF THIS EQUIPMENT FOR SUSPENSION OF, RAISING, OR LOWERING A PERSON, REQUIRES THE USE OF A BACK-UP FALL ARREST SYSTEM BY THAT PERSON. •IF CRANKING EFFORT EABES DURING LOWERING, THE PERSON BEING LOWERED HAS REACHED A WORK LEVEL OR OBSTRUCTION, DO NOT CONTINUE CRANKING WITH- OUT COMMUNICATING WITH THE PERSON BEING LOWERED. ALWAYS KEEP LIFTING LINE TAUT, DO NOT ALLOW SLACK LINE. •READ AND FOLLOW INSTRUCTIONS AND MARKINGS SUPPLIED WITH AND AT- TACHED TO THIS PRODUCT. FAILURE TO DO SO COULD RESULT IN SERIOUS INJURY OR DEATH. •MAKE ONLY COMPATIBLE CONNECTIONS. RM-1040

L1850 Series Warning Label

THIS
PRODUCT IS
DESIGNED TO MEET
RETRIEVAL EQUIPMENT
REQUIREMENTS OF
ANSI Z 117.1-1989

DBI/SALA
2048 PEPPI AVE
RED WING, MN 55068
(800) 328-6143

L1850 Series Standards Label

DBI
SALA

▲ WARNING

THIS HANDLE INCORPORATES A TORQUE LIMITER TO PREVENT OVERLOADING. RAISING OR LOWERING LOADS IN EXCESS OF THE RATED CAPACITY (350 LBS) WILL RESULT IN SLIPPAGE OF THE HANDLE.

L1850 Series Winch Handle Label

DBI
SALA[®]

SALALIFT[®] II

▲ WARNING

A BACK-UP FALL ARREST SYSTEM MUST BE USED WHEN RAISING, LOWERING OR SUSPENDING PERSONNEL WITH THIS EQUIPMENT (EXCEPT IN EMERGENCY RESCUE APPLICATIONS). WHEN IN WINCH MODE, KEEP LIFTING LINE TAUT AND FREE OF SLACK. MAKE ONLY COMPATIBLE CONNECTIONS. READ AND FOLLOW USER MANUAL AND MARKINGS SUPPLIED WITH AND ATTACHED TO THIS PRODUCT. FAILURE TO DO SO COULD RESULT IN SERIOUS INJURY OR DEATH.

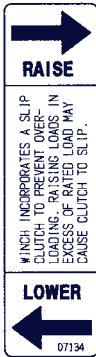
OPERATION
WINCH MODE: PUSH HUB OF CRANK HANDLE ONTO SQUARE DRIVE MARKED 'WINCH SHAFT'. TO RAISE LOAD, ROTATE HANDLE CLOCKWISE. TO LOWER LOAD, ROTATE HANDLE COUNTERCLOCKWISE.
FREEWHEEL MODE: REVERSE CRANK HANDLE AND INSTALL ONTO SQUARE DRIVE MARKED 'FREEWHEEL SHAFT'. ROTATE HANDLE COUNTERCLOCKWISE. DO NOT ENGAGE FREEWHEEL MODE WITH LOAD ON LIFTING LINE. IF OVER- SPEED BRAKE LOCKS WHILE IN FREEWHEEL MODE, RETURN TO WINCH MODE AND ROTATE HANDLE CLOCKWISE TWO TURNS TO UNLOCK OVERSPEED BRAKE. MAINTAIN ONE LAYER OF LINE ON DRUM AT ALL TIMES.

INSPECTION
INSPECT ENTIRE SYSTEM, INCLUDING WIRE ROPE, DAILY. REMOVE FROM SERVICE IF DEFECTIVE CONDITION IS IDENTIFIED.

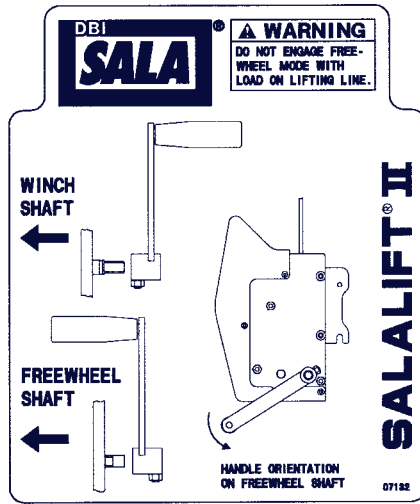
OVERSPEED BRAKE TEST
TEST OPERATION OF OVERSPEED BRAKE BEFORE EACH USE. ENGAGE FREE- WHEEL MODE AS DESCRIBED ABOVE. PULL SHARPLY ON LIFTING LINE. BRAKE MUST LOCK AND HOLD. IF BRAKE FAILS TO HOLD, REMOVE UNIT FROM SERVICE FOR REPAIR. RETURN TO WINCH MODE AND ROTATE HANDLE CLOCKWISE TWO TURNS TO UNLOCK OVERSPEED BRAKE. 07181

L7400 Series Warning Label

8.1 Labeling, continued:



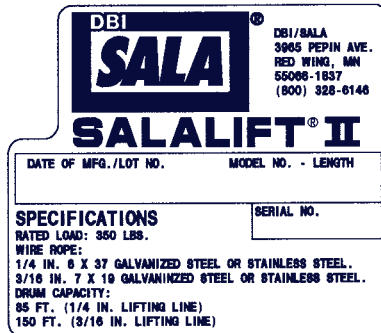
L7400 Series
Raise/Lower Label



L7400 Series Shaft Identification Label



L7400 Series
Freewheel
Engagement Label



L7400 Series ID Label

9.0 INSPECTION AND MAINTENANCE LOG

SERIAL NUMBER: _____

MODEL NUMBER: _____

DATE PURCHASED: _____

INSPECTION DATE	INSPECTION ITEMS NOTED	CORRECTIVE ACTION TAKEN	MAINTENANCE PERFORMED
Approved By:			
Approved By:			
Approved By:			
Approved By:			
Approved By:			
Approved By:			
Approved By:			
Approved By:			
Approved By:			
Approved By:			

WARRANTY

Equipment offered by DBI/SALA is warranted against factory defects in workmanship and materials for a period of one year from the date of installation or use by the owner, provided that this period shall not exceed two years from the date of shipment. Upon notice in writing, DBI/SALA will promptly repair or replace all defective items. DBI/SALA reserves the right to elect to have any defective item returned to its plant for inspection before making a repair or replacement. Warranty does not cover equipment damages resulting from abuse, damage in transit or other damage beyond the control of DBI/SALA. This warranty applies only to original purchaser and is the only one applicable to our products and is in lieu of all other warranties expressed or implied.



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Toll Free: 800-387-7484
Phone: (905) 795-9333
Fax: (905) 795-8777



Certificate No. FM 39709

Form: 02139
Rev: B