



# Pro-Puller Deployment Winch



## Pro-Puller Operator's Manual

Model Number: S-WINCH-TC

Revision: A

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### Scope of Manual:

This manual contains procedures for safety, general unpacking, set-up, and operation of your DEMTECH Services, Inc. Pro-Puller Sheet Deployment Winch.

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The material in the manual is for informational purposes only and is subject to change without notice.

DEMTECH Services, Inc. assumes no responsibility for any errors that may appear in this manual.

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# 1 Safety Precautions

Safety precautions for operating personnel and equipment:

**WARNING 1:** Operating personnel should perform only the procedures described and recommended in this manual. This manual covers procedures pertaining to the use of the Pro-Puller deployment winch and does not provide the user with instruction of any Skid Steer or third party hydraulic attachments, only certified personnel should operate the auxiliary hydraulic machinery.

**WARNING 2:** To avoid serious injury always operate with the safety guard in the upward position.

**WARNING 3:** The locations of potentially dangerous voltages and other hazards are identified and labeled on the equipment. Be careful to observe these warnings when installing, operating, maintaining or servicing the equipment. Observe all warnings in this manual.

**WARNING 4:** Make sure to disconnect all hydraulic inputs before attempting to service the equipment. Do not perform service unless you are qualified and trained to do so.

**WARNING 5:** This product is intended for operator attended operation only. This product should never be left unattended at any time while the hydraulic quick connects are plugged in. Incorrect use of the product such as overloading, shock loading, or dragging while under load will cause damage to the Pro-Puller and/or the operator.

**WARNING 6:** Ensure all operating personnel are clear of the rotating assembly during operation, all personnel should remain behind the safety guard during operation.

**CAUTION 1:** Observe the precautions given on the equipment and within this manual to prevent damage to the equipment.

**CAUTION 2:** Unauthorized personnel should not remove from the equipment those panels or covers that are provided for protection and/or require a tool to remove.

## 2 General Safety & Maintenance Information

The DEMTECH Services, Inc. Pro-Puller Winch, hereinafter referred to as the Pro-Puller or Winch is a high torque piece of equipment. Always disconnect the hydraulic quick-connects before performing any service and/or maintenance procedures on the Winch. Always maintain slack in any hydraulic lines connected to the Winch while in operation to avoid damage to the quick-connects. At all times while operating the Winch keep hands, fingers, and other body parts well clear of the rotating assembly and tensioned cable.

### 2.1 *Intended Use*

The Pro-Puller is intended as professional use equipment and is not intended for sale to the general public.

The Pro-Puller has been manufactured utilizing the latest technology and current safety standards and regulations. However, improper use or abuse may lead to hazardous conditions for the user or other personnel or cause damage to the Winch. The Pro-Puller is designed to be paired with the Demtech Spreader-Bar (*P/N SB-0101/A*). This combination allows for efficient maneuverability and deployment of Geosynthetic sheets.

Always keep this manual with the Pro-Puller at or near the location where the Winch is being used so that it can be referred to quickly and easily.

The technician assigned to operate this Winch must have read through and become familiar with this manual, particularly all safety information, before operating the Pro-Puller.

No changes and/or modifications shall be made to the Pro-Puller especially as it relates to safety.

### 2.2 *Maintenance*

Maintenance, inspection and adjustment of the Pro-Puller shall only be carried out by qualified personnel. Before removing or installing spare parts or performing other repair operations to the Winch, consult DEMTECH Services, Inc. or your authorized DEMTECH service center for advice on proper procedures. This will help insure a safe and successful outcome. Always make sure all screw connections are tight before attempting to operate the winch after maintenance and/or repair procedures. Also make sure all covers, guards, and other safety devices have been fully reinstalled before use.

### 3 General Product Data

The DEMTECH Services, Inc. Pro-Puller Winch, hereinafter referred to as the Winch, dramatically speeds up the on-site sheet deployment process. This arrangement allows for efficient quick-connect to an on-site Skid Steer and quick and easy deployment of Geosynthetic sheets. The provided torque and high maneuverability of the Pro-Puller Winch allows one operator to efficiently pull sheets of liner at a fast pace. This process eliminates cumbersome setup and speeds up process time while providing a very rugged and reliable system. You can be assured the Pro-Puller has been built using the highest quality materials available which include Billet Aluminum and ground and hardened steel. DEMTECH Services, Inc. strives to make our systems easy to use and built to last. Just like all other DEMTECH Services, Inc. products, a qualified Skid-Steer operator will be productive in minutes.

### 4 Site Preparation

Before proceeding with the unpacking and installation instructions in the following section(s) make sure the work site is prepared and ready to use the Pro-Puller. ***The Pro-Puller Winch is a Skid Steer attachment, a certified operator and an operating Skid-Steer are needed for efficient and safe operation.*** The Winch should be utilized on a solid level surface, failure to do so may cause damage to the Winch and/or injure the operator.

Carefully follow the detailed unpacking and installation instructions provided in this manual.

### 5 Unpacking & Installation Instructions

This section contains instructions for the unpacking, placement, and installation of the Pro-Puller. Carefully review the following information, sub-sections, and each procedure before beginning unpacking and installation of the system.

The Pro-Puller comes complete packaged on a 48" X 48" pallet. Ensure all packaging is removed from the Winch prior to use, rope and roll grips not included.

**Note: The system illustrated in this manual shows ALL available features for the Pro-Puller, therefore, your system may vary slightly in appearance from that depicted.**

## ***5.1 Unpacking and Preparation***

- a. Before opening the shipping/transport container and unpacking the system, inspect the outside of the container thoroughly for any signs of mishandling or damage during shipping. Report any damage to the shipping carrier immediately and do not proceed with unpacking. Since the shipment is made FOB factory, you should consult your administration concerning claims for shipping damage. Please notify DEMTECH Services, Inc. immediately in writing of any shipping damage.
- b. Unlatch and open the shipping/transport container lid and inspect inside the container and equipment thoroughly for any signs of mishandling or damage during shipping. Report any damage to the shipping carrier immediately and do not proceed with unpacking. Since the shipment is made FOB factory, you should consult your administration concerning claims for shipping damage. Please notify DEMTECH Services, Inc. immediately in writing of any shipping damage.

## ***5.2 Hydraulic Plug Connections***

- a. Verify proper operation of the Pro-Puller before proceeding with the remainder of the installation. Simply use the on-site skid steer and pick up the winch using a pin on mount adapter (*See Figure 5.1*) prior to lifting ensure the lock pins on the Skid-Steers mount adapter are in the locked position. Once the Winch is securely attached to the skid steer now attach both hydraulic quick-connects provided with the Winch to the proper hydraulic ports on the Skid-Steer (*See Figure 5.2*). If you need more information on this connection visit your Skid-Steer manufacturers website and locate the operator's manual to ensure your Winch is connected correctly. Failure to do so could damage the equipment and/or injure the operator.
- b. Once both hydraulic quick-connects are connected properly to the on-site Skid Steer, a qualified Skid-Steer operator can ensure that the winch is working properly upon arrival. When the operator provides hydraulic input via the Skid-Steer the metal drum should rotate, if the system does not perform any of the functions described above please contact DEMTECH Services, Inc.





**Figure 5.1**



**Figure 5.2**



### 5.3 Winch Parameters

<i>Winch Parameters</i>	
<b>Displacement</b> in <sup>3</sup> /rev (cm <sup>3</sup> /rev)	45.45 (745)
<b>Max Speed</b> RPM	120
<b>Max Torque</b> in-lbf (N-m)	10443 (1180)
<b>Max Differential</b> PSI (Kpa)	1740 (6.9)
<b>Max Flow</b> GPM (m <sup>3</sup> /hr )	23.77 (6.5)

### 5.4 Safety Guard

Prior to connecting to a sheet and pulling, the user must make sure that the safety guard is pinned in the upward direction, failure to do so may cause damage to the Winch and/or injure the user (*See Figure 5.3*). While maneuvering the Winch around the safety guard can be set in the downward position using the two wire-lock pins provided.



**Figure 5.3**

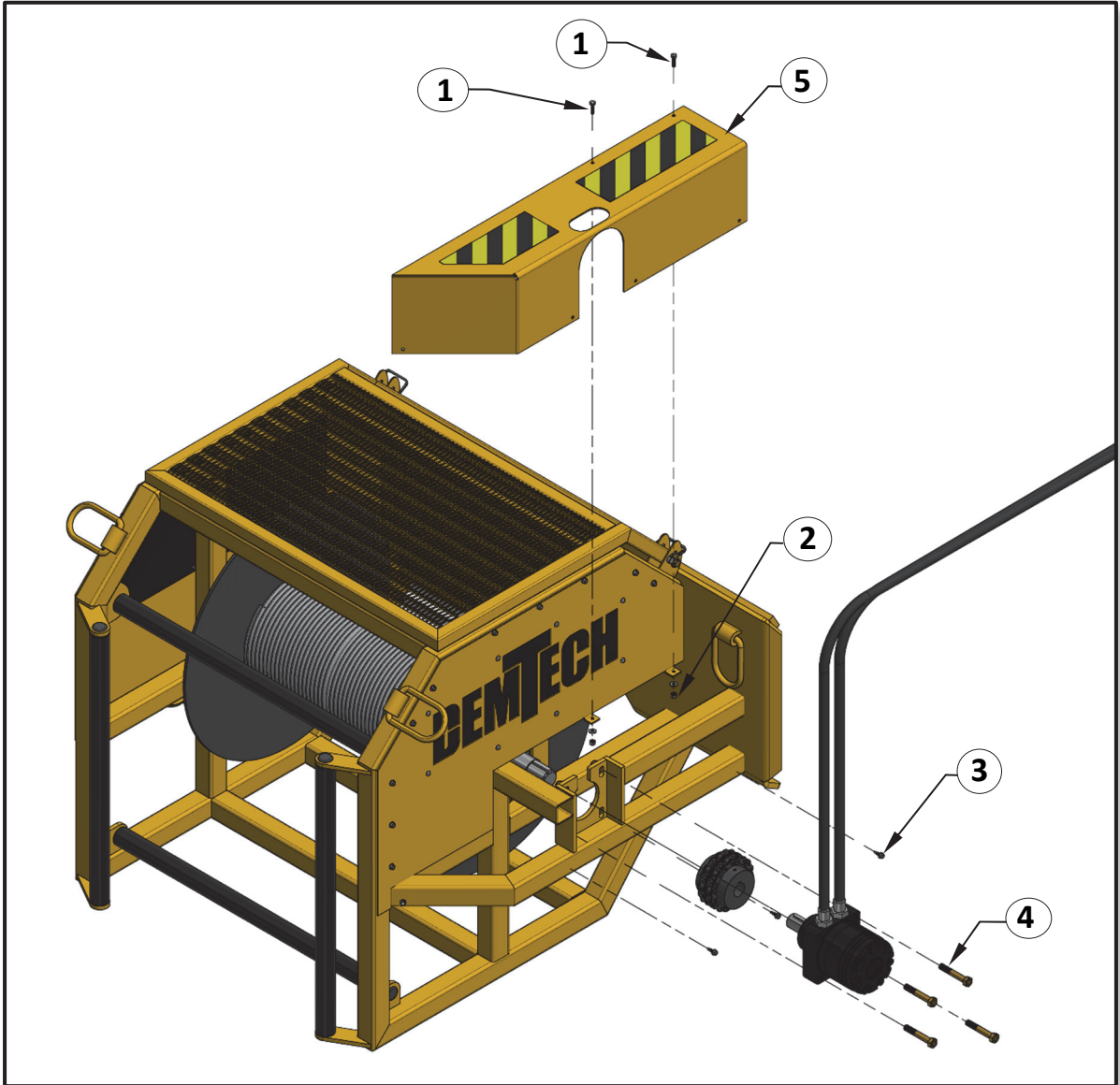
## **5.5 Pulling Speed and Shock Loading**

***Ensure the Skid-Steer is in the lowest hydraulic setting prior to pulling any load.*** Once the rope is attached to the roll that will be pulled, the operator must be careful to not shock-load the Winch spool. *This is done by accelerating the spool too fast which causes a jolt throughout the system once the rope is pulled taught.* The operator must steadily increase the speed of the spool prior to accelerating to higher speeds, this will increase both the life of the motor and the life of the shaft coupler used on the Pro-Puller Winch. While under load ensure that the Skid-Steer is stationary, failure to do so may cause damage to the Winch and/or the operator.

# **6 Maintenance & Repair**

## **6.1 Replacing Motor Shaft Keys**

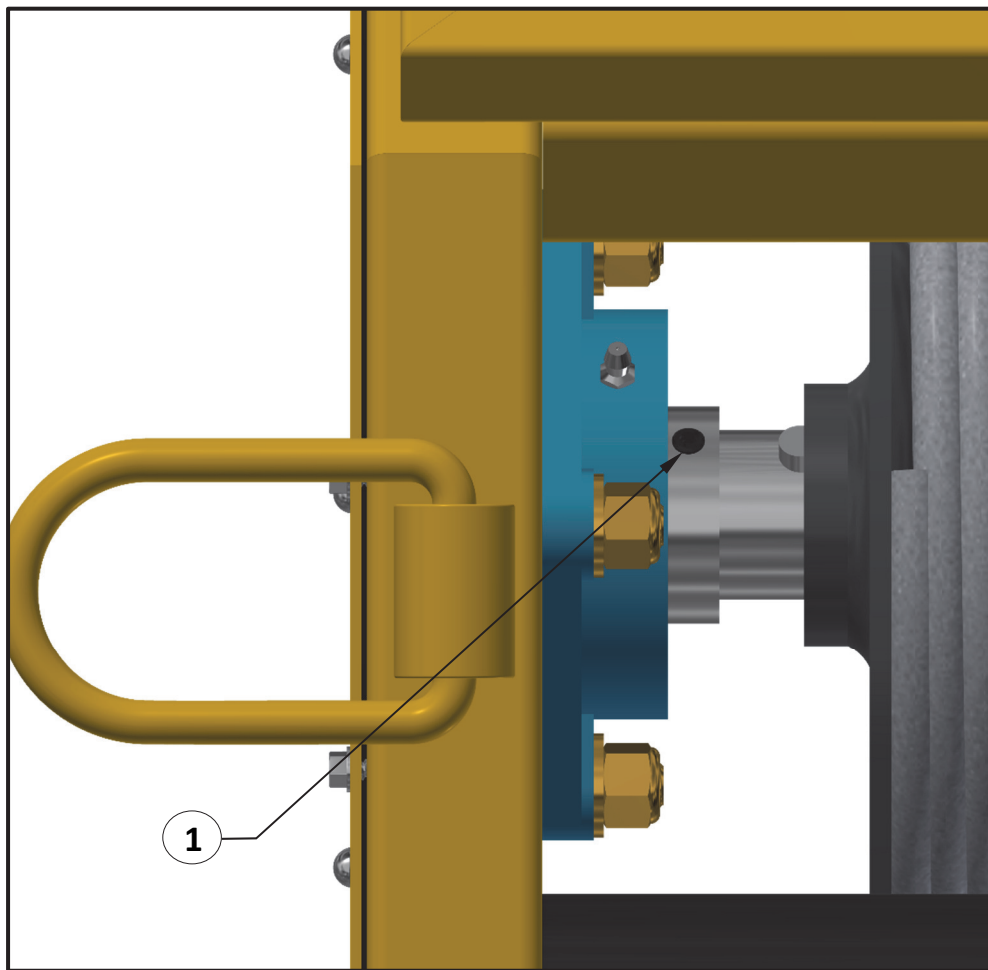
In case of the shaft coupler wearing or the keyway shearing, the Pro-Puller Winch has been designed for quick and easy access to the driveline. To access the coupler, first remove the two nutted bolts with a 7/16" drive socket wrench, (Items 1 & 2, *Figure 5.3*). Second, remove the four 1/4" X 3/4" self-tapped screws (*Item 3, Figure 5.3*). Third, remove the step cover (*Item 5, Figure 5.2*). Once the Step Cover is removed, use a 3/4" Socket and a 3/4" open ended wrench to remove the two 1/2"-13 bolts, (*Item 4, Figure 5.3*). Once all mentioned fasteners are removed, the motor, keys, and shaft coupler can be removed.



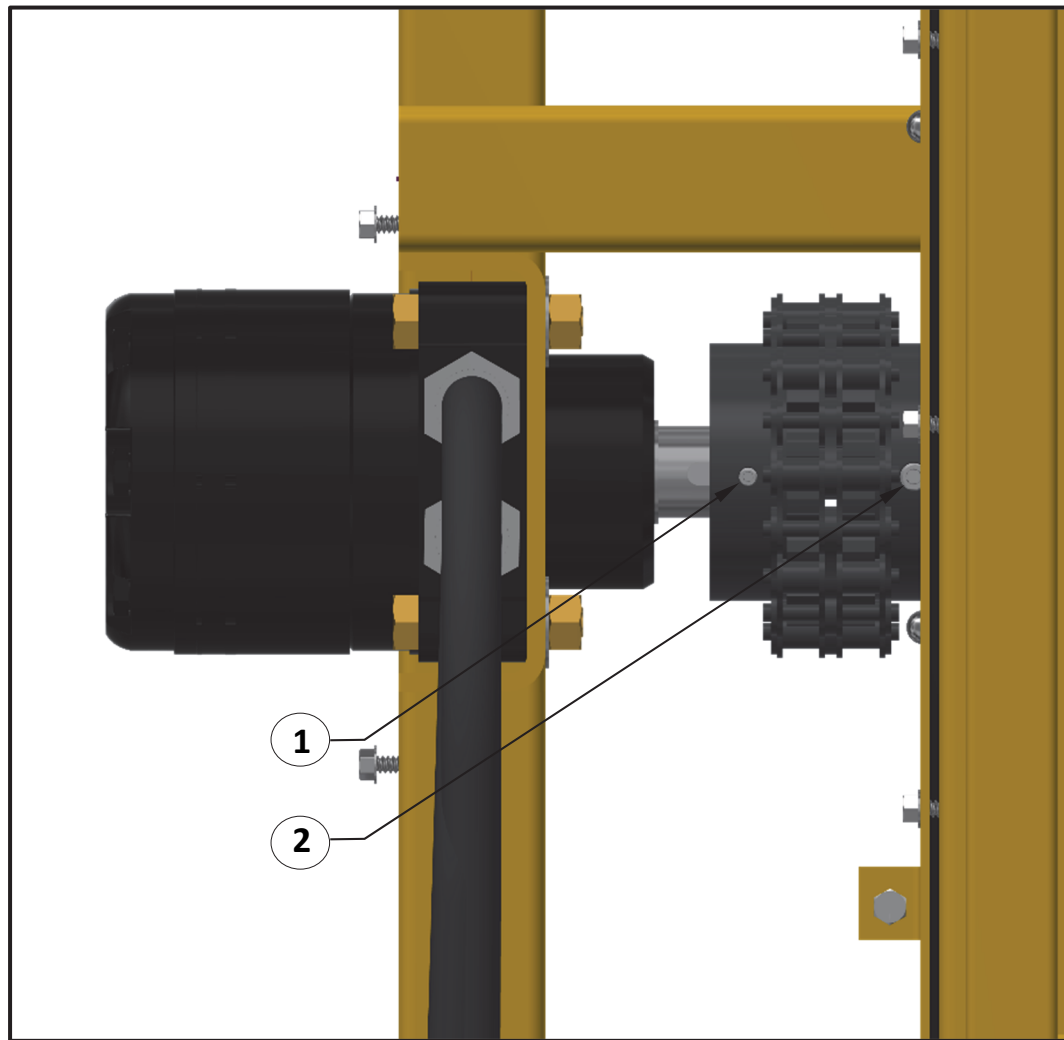
**Figure 6.1**

## 6.2 Main Shaft Removal/Adjustment

- a. To remove and/or adjust the shafts position, first remove the step (See Section 6.1), then loosen all set screws along the driveline. There are a total of 4 set screws, 1 on each of the Flange Bearings (Item 1, Figure 6.2), and 2 on the chain coupler (Items 1&2, Figure 6.3).



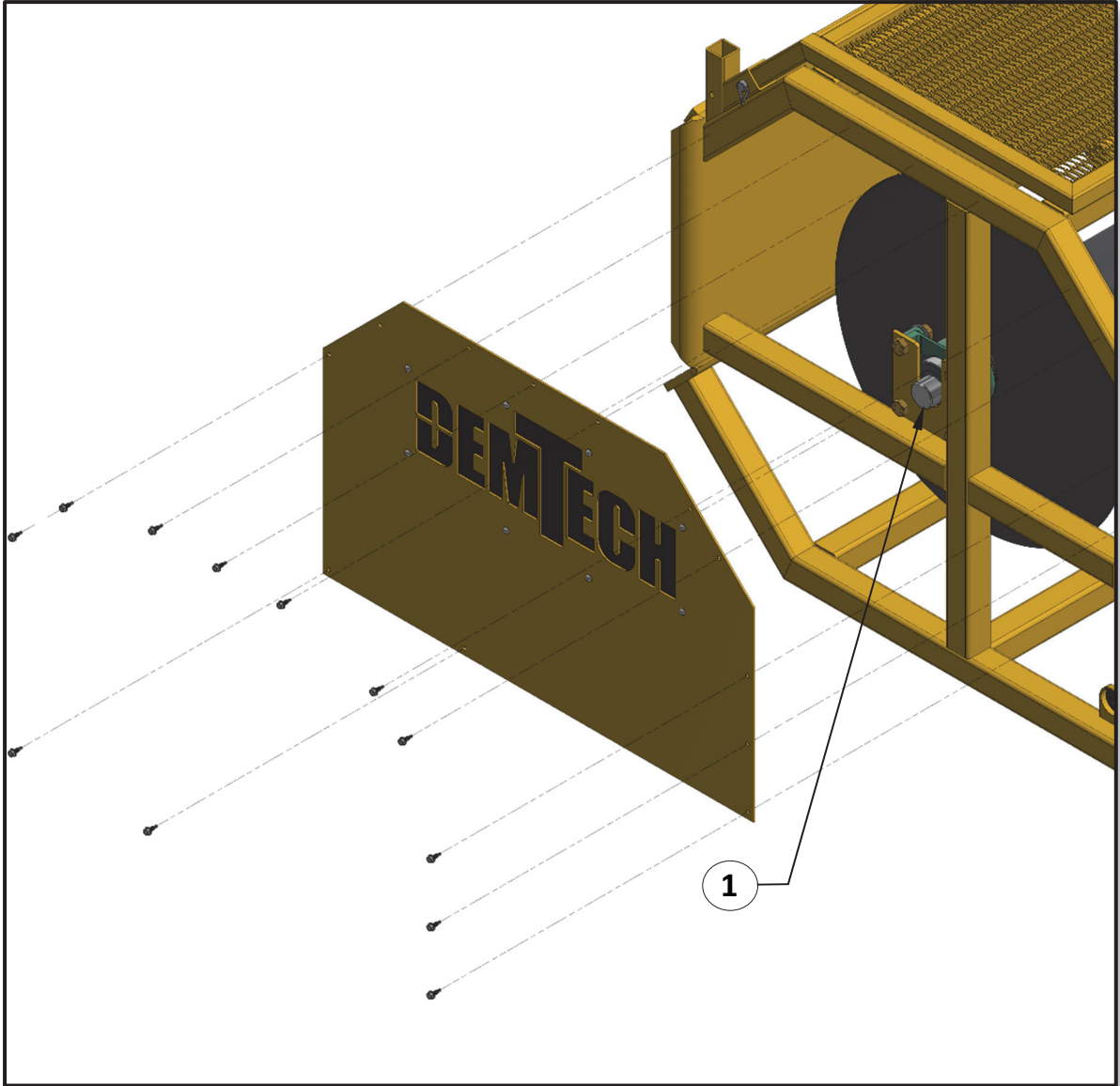
**Figure 6.2**



**Figure 6.3**

- b. Next, remove the left side panel to access the end of the shaft that will need to be hammered to remove and/or adjust (*Item 1, Figure 6.3*).
- c. Follow above instructions in reverse order to re-assemble with replacement parts.
- d. To locate and order replacement parts see the Pro-Puller Parts ID Manual located on the Demtech website under products. (<https://www.demtech.com/>)





**Figure 6.4**

## 7 Factory Servicing

In the event your Pro-Puller should require factory service, the entire Winch needs to be returned to the factory. Refer to the following step for preparing the Pro-Puller for return. Unless previous arrangements are made, shipping charges and insurance are the responsibility of the customer. Ship the packaged Pro-Puller to DEMTECH Services, Inc. at:

**DemTech Services, Inc**  
**Ship to address: 6414 Capitol Avenue**  
**Diamond Springs, CA 95619**  
**U.S.A.**

## Warranty

DEMTECH Services, Inc. warrants all equipment of its manufacture to be free from defects in materials, workmanship, mechanical parts, and labor for a period of one year from the date of shipment to the original buyer and ninety days for electrical. This warranty excludes normal wear items such as gears, bearings and chains. The liability under this warranty is limited to replacement parts and labor on equipment when the equipment is returned prepaid to the factory or its authorized service center with prior authorization from DEMTECH Services, Inc., and upon examination by DEMTECH Services, Inc., is determined to be defective. At DEMTECH Services, Inc.'s option, a service representative may be dispatched to the equipment location.

As an additional protection, DEMTECH Services, Inc. warrants that for a period of 90 days from the date of shipment to the original buyer, pending prior authorization from DEMTECH Services, Inc., there will be no charge for service related shipping of parts and/or equipment or for authorized travel of a service representative to the equipment location. After 90 days, all costs incurred for shipping the equipment or parts thereof or for travel are the responsibility of the buyer. Our warranty for this equipment is rendered void if the unit has been repaired, taken apart or modified, or attempted to be, unless such actions have been taken in accordance with written instructions received from DEMTECH Services, Inc. The warranty is also void if the equipment has been subjected to abuse, accident or other abnormal conditions.

### IF ANY FAULT DEVELOPS, THE FOLLOWING STEPS SHOULD BE TAKEN:

1. Notify DEMTECH Services, Inc. by calling 1-888-324-9353. Overseas customers should contact the local DEMTECH authorized service center. Please be prepared with the model number, serial number and full details of the difficulty. Upon receipt of this information, service data or shipping instructions will be provided by DEMTECH Services, Inc. Do not return the unit for repair without first contacting the factory or its representative for instructions.
2. After the initial 90 day period, on receipt of shipping instructions, forward the equipment prepaid to the factory or its authorized service center as instructed. If requested, an estimate of the charges will be made before work begins, especially with those cases where the DEMTECH Services, Inc. product is not covered by the warranty.
3. If the original carton and packing are not available, the product should be packed in a container with a strong exterior and surrounded by a protective layer of shock-absorbing material. DEMTECH Services, Inc. advises returning the equipment at full value to the carrier.

DEMTECH Services, Inc. reserves the right to make changes in design at any time without incurring any obligation to install the same changes on units previously purchased.

This warranty states the essence of the obligations or liabilities on the part of DEMTECH Services, Inc. THE FORMAL, COMPLETE AND EXCLUSIVE STATEMENT OF DEMTECH SERVICES, INC.'S WARRANTY IS CONTAINED IN ITS QUOTATIONS, ACKNOWLEDGEMENTS AND INVOICES. DEMTECH Services, Inc. neither assumes, nor authorizes any person to assume for it, any liability in connection with the sale of its equipment other than those set forth herein