

## Electric Recovery Winch

# Model: Rhino 8 Pro

PN: 850318 12V DC 850326 24V DC

### Introduction

#### ▶ Feature

Line pull: 3,630 kg / 8,000 lb single line (SAE J706 rating)

3,560 kg single line (EN 14492-1 rating)

Brake: Automatic, full load cone brake

Clutch: Turn the T-handle for rapid wire rope payout

Control: Handheld pendant switch powers the winch

Recommended \* 10 mm x 22.6 m, 1,960 N/mm2 grade with a minimum

wire rope: breaking strength of 69.8 KN required for EN 14492-1 rating

\* 3/8" x 100', EIPS grade with a minimum breaking strength

of 15,663 lbf required for SAE J706 rating

## **Installation**

Before using the winch, make sure all electrical components have no corrosion or damaged; the environment should be clear and dry.

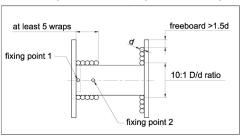
#### ▶ Mounting

- · Winch shall be mounted on a flat and hard surface.
- Winch should be mounted as closed to center and as horizontal as possible to the direction of the line pull.
- Wire rope shall be wound in an under-wound orientation only.
- Eight (8) M10 X 1.5 pitch 8.8 grade w/44 N-m torque setting (maximum) high tensile steel bolts must be used in order to sustain the loads imposed on the winch mounting.
- Two (2) M12 x 1.75 pitch 8.8 grade w/76 N-m torque setting (maximum) high tensile steel bolts must be used for fastening the roller fairlead into the mounting channel.
- $\cdot$  It is always preferred to use both tie bars in the final installed configuration.

## Compliance with EN 14492-1

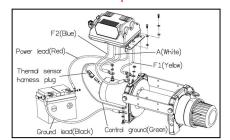
The winch complies with European Standard of EN-14492:2006 Power-Driven Winches, CE Machinery Directive 2006/42/EC and CE EMC Directive 2004/108/EC provided that the OWNER or END USER complies with all responsibilities described below.

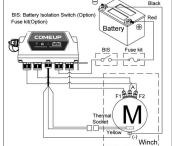
- 1. Refer to the Instruction Manual to install winch for safe winching operation.
- 2. Fit the recommended wire rope to comply with EN ratings:
  - \* Rope drives with steel wire rope shall be dimensioned
  - \* At least 2:1 wire rope working coefficient for the first rope layer.
  - \* At least 10:1 D/d ratio to the centre of the rope
  - \* Drum freeboard shall be at least 1.5 x rope diameter.
- 3. The wire rope must be painted red for 1.6 m on both ends and at least five (5) wraps of wire rope remained around the drum to comply with EN ratings;
  - \* At least two rope windings on the drum.
  - \* Rope attachment to withstand 2.5 x the remaining static force.
- 4. Fit an emergency stop switch to comply with emergency stop function.
- 5. Fit a hook with a safety latch to comply with a safety hook.



#### ► Wiring Diagram

- Connect thermal sensor harness plug, control ground, and cable A/F1/F2 to the motor
- Attach the ground lead firmly to the negative (–) battery terminal and power lead to the positive (+) battery terminal. The voltage drop for the winch motor must not exceed 10% of the nominal voltage of 12/24V DC.
- The over-load protector built in the control box shall be manually reset after reducing the load.
- Always cover the socket with waterproof cap when not in use to prevent ingress of water or foreign objects.
- Installing ICB control box, it is necessary to install a fuse or battery isolation switch as additional protection.





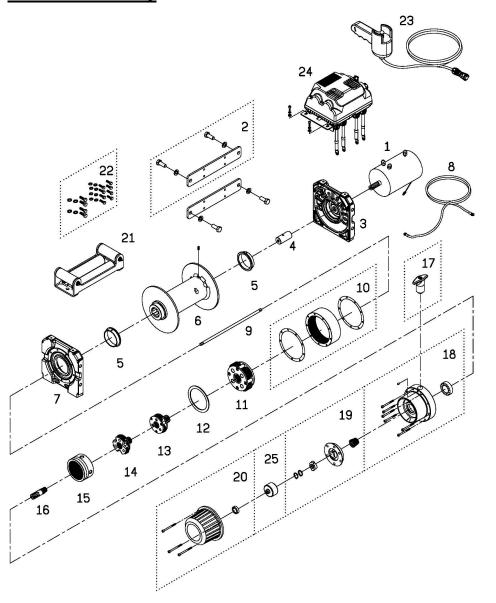
## **Warning**

- The winch is not intended to be used in any manner for the movement or lifting of personnel.
- The rated line pull shown is based on the first layer of rope on the drum for the winch only, consult the wire rope manufacturer for wire rope rating.
- The rope winding on the drum shall remain 5 wraps from the drum.

# **Parts List**

| Item No. | Description                                 | Part No. | Qty |
|----------|---|----------|-----|
| 1        | Motor 12V                                   | 882272   | 1   |
|          | Motor 24V                                   | 882429   |     |
| 2        | Tie bar kit                                 | 881583   | 2   |
| 3        | Motor support rack kit                      | 881584   | 1   |
| 4        | Motor coupling                              | 880005   | 1   |
| 5        | Drum bushing                                | 880006   | 2   |
| 6        | Drum kit                                    | 881585   | 1   |
| 7        | Gearbox support rack                        | 881586   | 1   |
| 8        | Grounding lead                              | 880009   | 1   |
| 9        | 1 <sup>st</sup> shaft                       | 881523   | 1   |
| 10       | 3 <sup>rd</sup> ring gear kit               | 882424   | 1   |
| 11       | 3 <sup>rd</sup> stage carrier kit           | 881525   | 1   |
| 12       | 3 <sup>rd</sup> bushing                     | 880014   | 1   |
| 13       | 2 <sup>nd</sup> stage carrier kit           | 881526   | 1   |
| 14       | 1 <sup>st</sup> stage carrier kit           | 881527   | 1   |
| 15       | 1 <sup>st</sup> & 2 <sup>nd</sup> ring gear | 881528   | 1   |
| 16       | 1 <sup>st</sup> pinion kit                  | 880018   | 1   |
| 17       | Clutch kit                                  | 881303   | 1   |
| 18       | Gear box kit                                | 882425   | 1   |
| 19       | Cone brake disc kit                         | 880021   | 1   |
| 20       | Brake cover kit                             | 882426   | 1   |
| 21       | Roller fairlead                             | 882481   | 1   |
| 22       | Mounting hardware                           | 881588   | 1   |
| 23       | Remote control                              | 883509   | 1   |
| 24       | Control box 12V                             | 883406   | 1   |
|          | Control box 24V                             | 883521   |     |
| 25       | Brake clutch base                           | 881100   | 1   |

# **Winch Assembly**



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