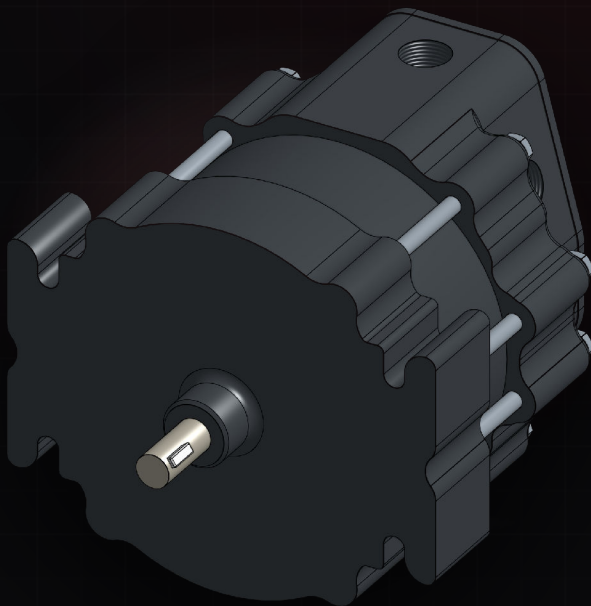




INSTALLATION & MAINTENANCE MANUAL • FIRST EDITION

REFLEX SMART

HOSE REEL MOTOR - HRMA-56S

Extreme-service, explosion-proof smart electric motor for industrial hose reels operating in hazardous locations.

2/3 HP

500 RPM

IP68 • NEMA 6P

EX DB IIA T3 GB

NEMA 56S FRAME

SUPPORT

Technical product support is available by phone, or through the request form at victorymotor.ca/contact.

▲ CONTACT TECHNICAL SUPPORT

BUSINESS HOURS

1-888-653-7380 Mon–Fri · 8:00 AM–4:00 PM EST

24 / 7 LINE

1-506-608-8136 any hour, any day

ONLINE

victorymotor.ca/contact submit a support request

PRODUCT WARNINGS

▲ READ BEFORE INSTALLATION & SERVICE

- ▲ Do **not** open equipment when energized.
- ▲ After de-energizing, delay **5 minutes** before opening — or do not open when an explosive atmosphere may be present.
- ▲ Cable entry devices must be suitable for **Ex db IIA T3 Gb** use, and the conditions of their safe use must be followed.
- ▲ Do not wear loose clothing when working on or near the motor.
- ▲ Motor must be powered by a suitable **interlock device** that disables the system when the vehicle is in motion and prevents unintentional use.
- ▲ Do not service the motor when energized. Unintentional operation while servicing may result in **serious injury or death**.

LIMITED WARRANTY

Victory Advanced Technologies smart electric motor system.

WARRANTY TERM

4 YEARS

free from defects in material and workmanship, **from the date of manufacture.**

If a motor fails within the limited warranty period, please call us with your motor's **serial number**. We will generate an **RMA number**, provide return shipping information, and issue a **full replacement motor** — no questions asked.

START A WARRANTY CLAIM

Call **1-888-653-7380** (Mon–Fri, 8:00 AM–4:00 PM EST) or **1-506-608-8136** any hour, any day. Have the motor's **serial number** ready.

▲ WARRANTY BECOMES VOID IF

- ▲ The product is improperly **installed, modified, damaged, or abused.**
- ▲ The product is used for applications **other than its intended use.**

Victory Advanced Technologies is not liable for material, labour, or contingent liabilities arising out of the improper use or function of any product.

03 TECHNICAL DATA

PRODUCT SPECIFICATIONS

HRMA-56S-12V-SMT — smart inverter hose reel motor.

POWER	2/3 HP
SPEED	500 RPM
DUTY	5 Minutes
INGRESS PROTECTION	IP68 & NEMA 6P
FRAME SIZE	NEMA 56S
COMMUTATION	Smart Inverter

PART NUMBER BREAKDOWN

HRMA HOSE REEL MOTOR	56S FRAME SIZE	12V NOMINAL VOLTAGE	SMT SMART INVERTER
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Each segment of the part number identifies a core attribute of the motor, from the product family through to the smart-inverter commutation package.

DIRECT REPLACEMENT

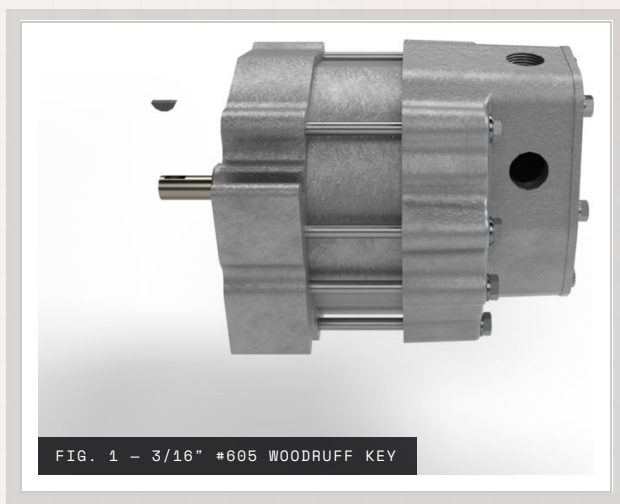
The HRMA-56S-12V-SMT is a **plug & play** replacement for traditional brushed DC utility motors — replacing the brushes with a smart inverter so the motor lasts longer and runs an internal computer for smart functionality.

INSTALLATION

Mounting the motor & drive coupling. Steps 1–2 of 8.

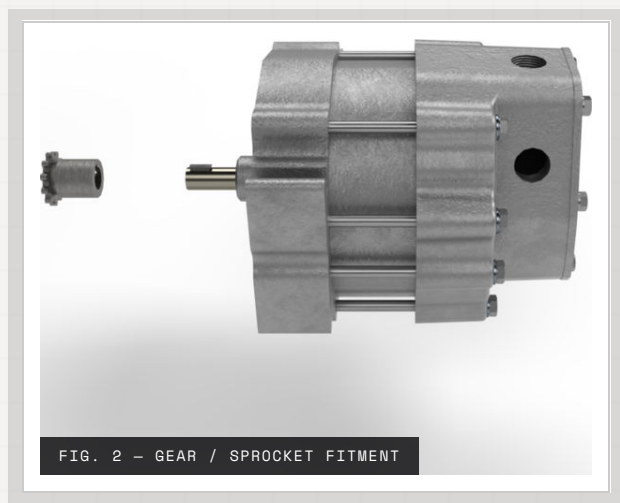
STEP

1 Use a stainless steel **3/16" wide #605 Woodruff key** to secure the gear or sprocket to the end of the shaft.



STEP

2 Slide the **spur gear or chain drive sprocket** over the shaft and lock it in place.



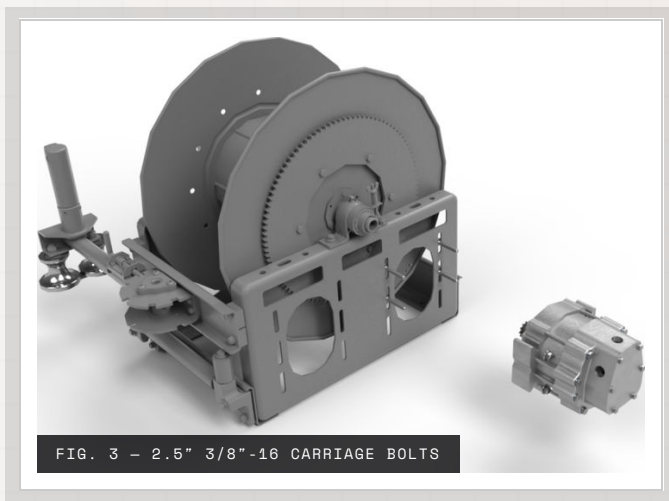
MOUNTING

Fixing the motor to the reel frame. Steps 3–4 of 8.

STEP

3

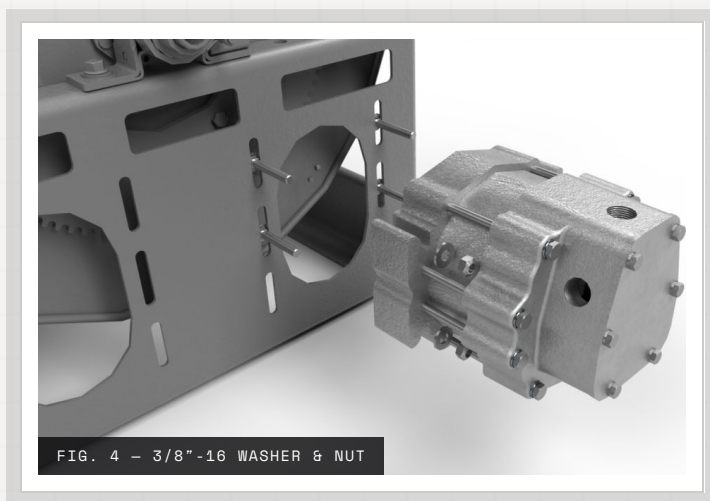
Place four **2.5" long 3/8"-16 carriage bolts** on the mounting plate. Slide the motor onto the mounting bolts.



STEP

4

Secure the motor with four **3/8" stainless steel washers** and four **3/8"-16 stainless steel nuts**. Nylon lock-nuts may be used.



WIRING

Accessing the junction box & power connections. Steps 5–6 of 8.

STEP

5

Remove the six $1/4''$ -20 screws from the lid to access the integrated junction box.

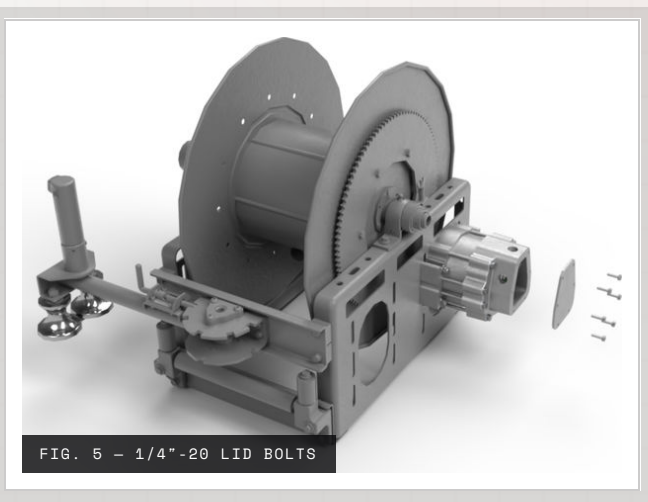


FIG. 5 – $1/4''$ -20 LID BOLTS

STEP

6

Connect a **red wire** from a **70 A breaker or fuse** to the **+12V** terminal. Connect a **black wire** with a high-current connection to chassis ground at the **GND** terminal. Ensure the cable entry uses an appropriately rated gland.

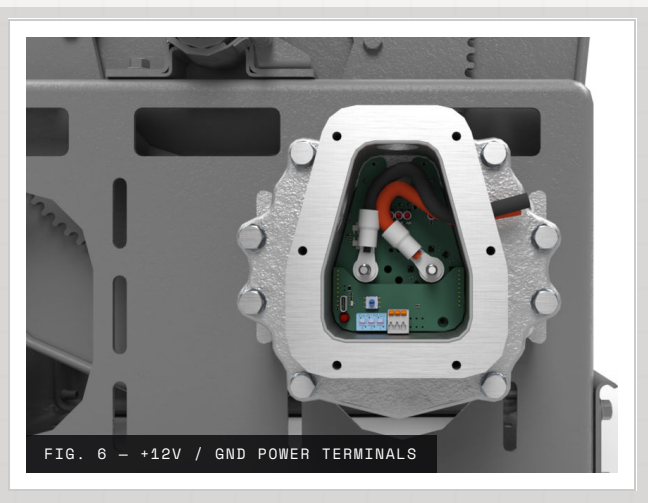


FIG. 6 – +12V / GND POWER TERMINALS

CONFIGURATION

Signal wiring & junction box map. Steps 7–8 of 8.

STEP

7

Configure the desired reel-in speed and direction of rotation using the configuration switches. **12V sourcing inputs** between 16 and 24 AWG connect to the lever-lock terminals in the lower-middle of the junction box. The three LED indicators illuminate when the corresponding input signal is active. The **test mode switch** suppresses motor operation so input wiring can be verified.

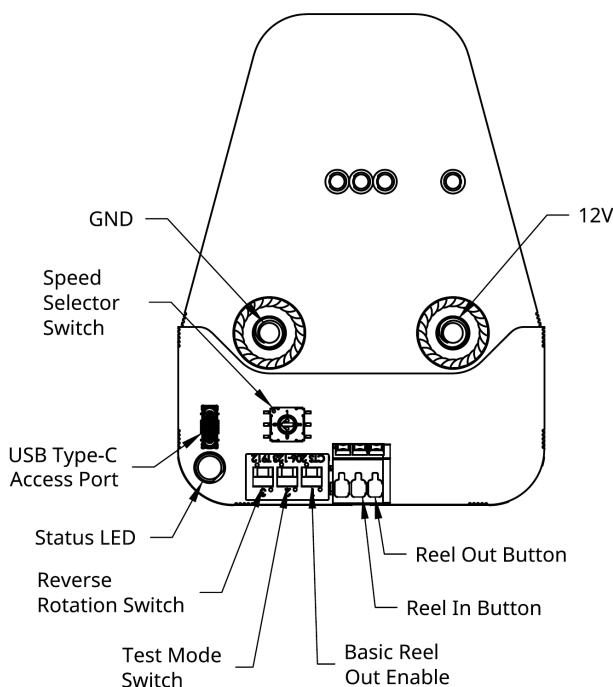


FIG. 7 – JUNCTION BOX LAYOUT

TERMINALS · SWITCHES · INPUTS

STEP

8

Replace the lid and all six **1/4"–20 stainless steel bolts** with washers.

15

N·m

Torque all six lid bolts to a **minimum of 15 N·m** to maintain the enclosure's ingress and explosion-proof rating.

USAGE

A brushless replacement for traditional brushed DC utility motors.

On power-up the motor boots for approximately **10 seconds** when 12V is applied to the power terminals. On boot it treats the starting position as “all the way in.” When reeling in, the motor applies a speed limit set by the rotary switch. If the hose is close to the starting position, the speed limit is reduced further to gently return to a fully stowed position.

STATUS LED REFERENCE

	RED SOLID	Booting — approximately 10 seconds after 12V is applied.
	GREEN BLINKING	Ready for operation.
	RED BLINKING	A fault has been detected.
	GREEN SOLID	Motor is actively applying torque.

BASIC REEL-OUT

Pressing the reel-out button applies maximum torque in the reel-out direction.

SMART REEL-OUT

The controller applies short bursts of torque to assist the user when acceleration is detected.

USB TYPE-C ACCESS PORT

Use the USB port to apply **software updates** in the field and to access more in-depth features or configuration settings.

MAINTENANCE

Keeping the drive-train healthy in the field.

The drive-train should be regularly inspected for debris that could damage components. Failure to do so can result in **broken gears, sprockets, chains, or other critical drive-train components**.

Squeaking or significant variation in drum speed indicates that the reel or motor are rubbing. If no obstructions or obvious signs of wear are present, apply a lubricant to the shaft of the motor.

ROUTINE INSPECTION CHECKLIST

- ☒ Inspect the **drive-train** for debris, obstructions, and buildup.
- ☒ Check gears, sprockets, and chains for **wear or damage**.
- ☒ Listen for **squeaking** or variation in drum speed — a sign of rubbing.
- ☒ With no obstructions or wear present, apply **lubricant to the motor shaft**.
- ☒ Confirm all six lid bolts remain torqued to a **minimum of 15 N-m**.

BEFORE ANY SERVICE

De-energize the motor and wait **5 minutes** before opening. Never service the motor while energized.

Installation date, serial number, and service records.



VICTORY ADVANCED TECHNOLOGIES

INDUSTRIAL MOTORS

Drawing on **38 years** of experience in Oil & Gas electronic design and manufacturing — a new line of Extreme-Service, Explosion-Proof (Ex) electric motors for hose reels, pumps, and actuators used in hazardous locations.

- ▶ Plug & Play direct replacement
- ▶ Custom OEM designs available
- ▶ Light weight
- ▶ International OEM support
- ▶ Fully potted, water & vapour proof
- ▶ Easy remote-control interface
- ▶ Four-year no-hassle warranty
- ▶ Distributor support

www.VICTORYmotor.ca

Victory Advanced Technologies Inc.

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