SERVICE MANUAL

G.Winch

Issue: **005**
Date: **10/08/22**

Contents

Covered Models: 070 G.Winch

The correct PPE must be worn before attempting to service Globestock equipment, including:

- Safety shoes
- Safety glasses
- Gloves
- Overalls
- Ear defenders
- Valved dust mask

NOTE: This manual is only a basic reference for fully trained and approved personnel. It cannot replace training.
Before carrying out any work, first identify the unit, then refer to the relevant sub-assembly and final assembly drawings.

Manual Overview

Hand Operated Winch

Overview

The G.Winch requires detailed annual inspections and testing. The inspection and service must be carried out by certified Globestock trained service agents only.

G.Winch models are divided into 4 separate max working loads with varying wire rope materials and lengths:

	Max Working Load (kg)	Wire Rope Material	Rope Lengths (m)
GSE070-136-XX*	136	Stainless Steel	15 - 50
GSE070-150-XX*	150	Galvanised Steel	15 - 50
GSE070-200-XX*	200	Stainless Steel	15 - 40
GSE070-250-XX*	250	Galvanised Steel	15 - 40

*XX is replaced with rope length, e.g. 50 metre model = GSE070-136-50

Each G.Winch model has the same physical construction and brake settings, the only significant difference between the 4 models is the construction of the wire rope.

Using This Manual

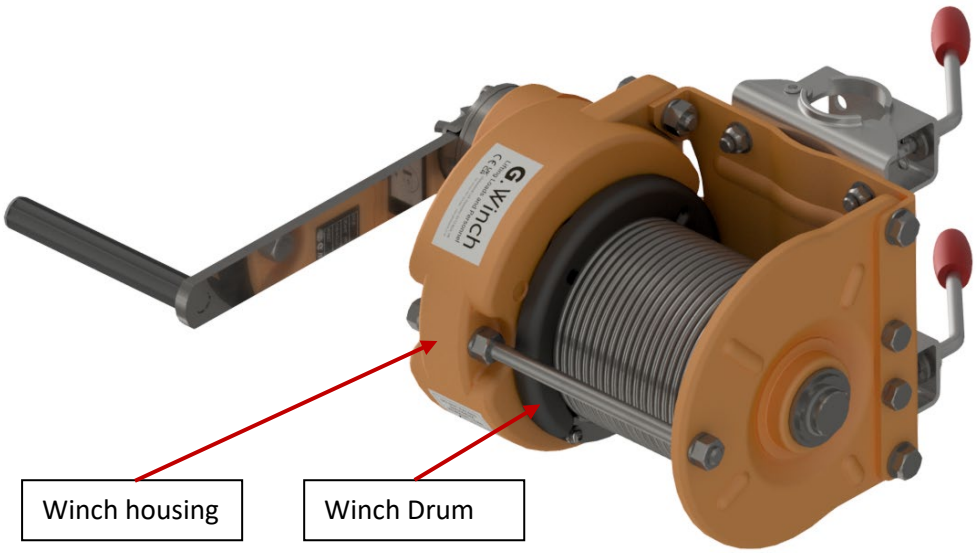
This manual is separated into the 3 different model types for quick reference.

Disassembly and assessment
This will guide the service agent on how to safely disassemble a unit and how to inspect and evaluate each critical component.

Reassembly
This will guide the service agent on how to correctly rebuild the unit in a safe and efficient manner.

Testing
This will guide the service agent on how to inspect and test all units using the correct equipment to gain a 12-month certification.

Disassembly & Assessment



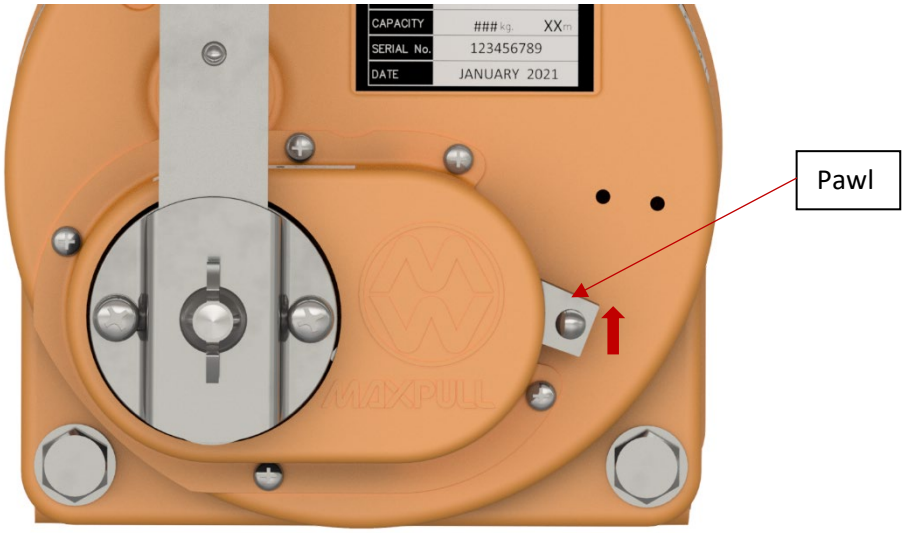
1. **General condition:** It is important to ensure the winch is safe to handle before work commences. Firstly, inspect the condition of the housing and the drum ensuring all fasteners are present and secure.

   Any G.Winch units that:

   - Do not pass basic function test.
   - The winch body / frame is out of alignment, bent or damaged.
   - Require stripping down of the winch body.

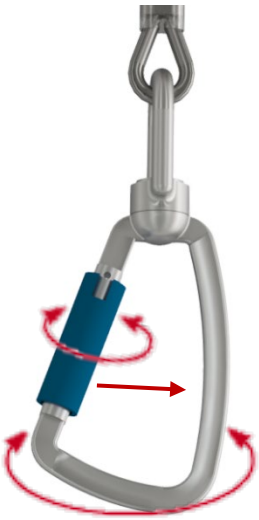
   Are beyond the scope of this manual. These units should be returned to Globestock for repair work to be assessed and completed. The body alignment is difficult and incorrect alignment may cause a release of the lifted load during use.

2. **Inspect identity label:** This can be found on the side of the housing. Take note of the wire rope length, material, and maximum working load. Make sure the label is legible and fully attached. If there is any damage the label must be replaced.

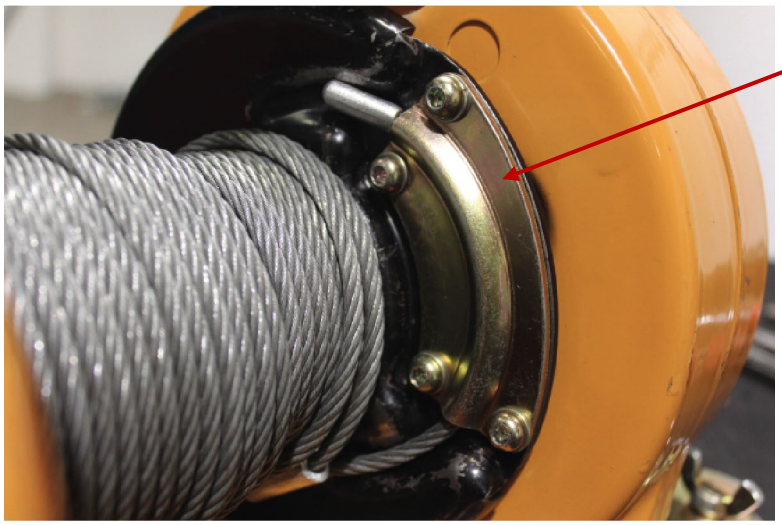


3. **Extract the rope:** To extract the rope, the pawl mechanism must be disengaged and held to allow the drum to free spool. This can be clamped into place, or the pawl stop can be removed, and the pawl lever pushed beyond the return point. **If the Pawl stop is removed it must be re-fitted before completion.**

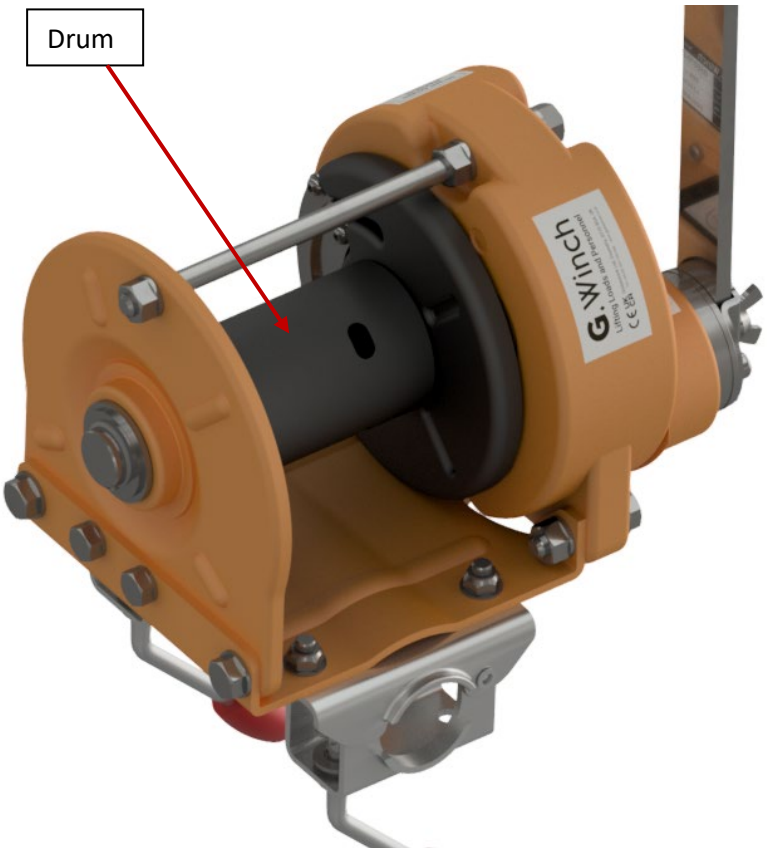
4. **Inspect the rope:** Once the rope is extracted, check for the damages shown above.



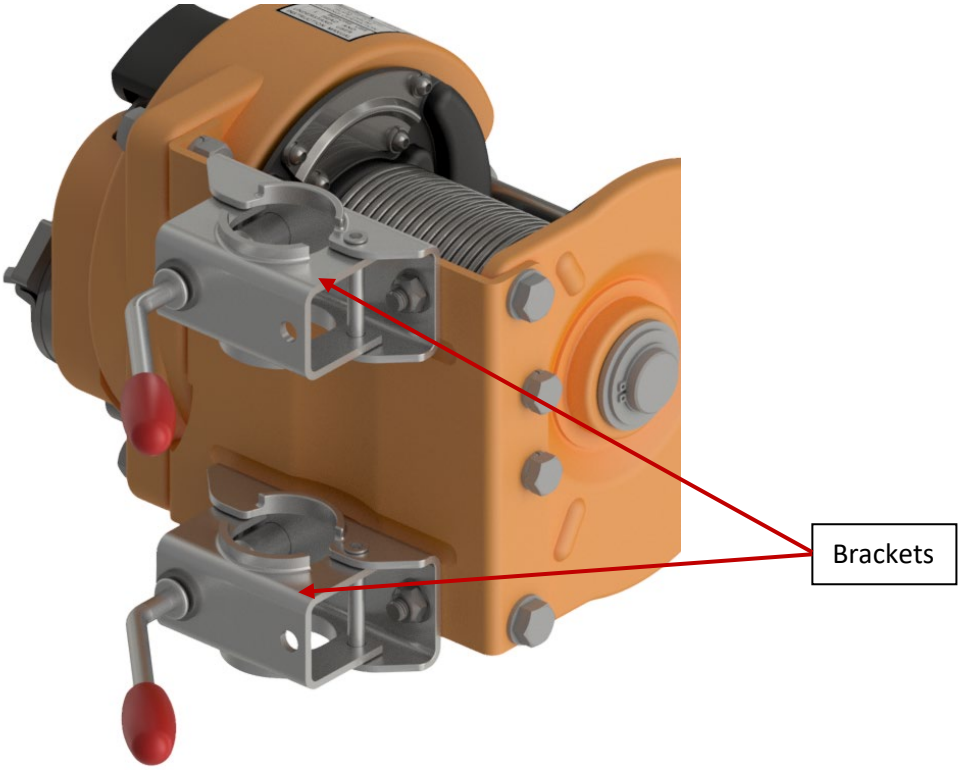
5. **Inspect Karabiner:** inspect the karabiner making sure there are no signs of damage or corrosion. The swivel function must rotate smoothly, and the gate opens and closes without interference



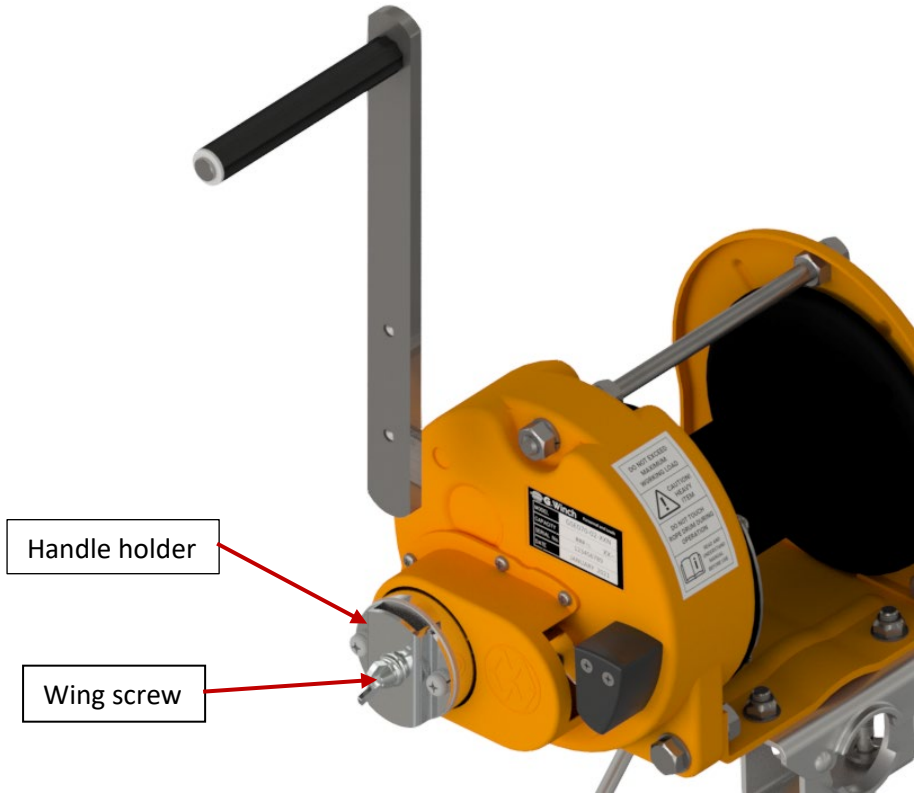
6. **Replacing the rope:** if the rope is to be replaced, remove the 4 screws from the rope retaining plate and uncoil the rope from the drum. A new rope can be fitted at reassembly.



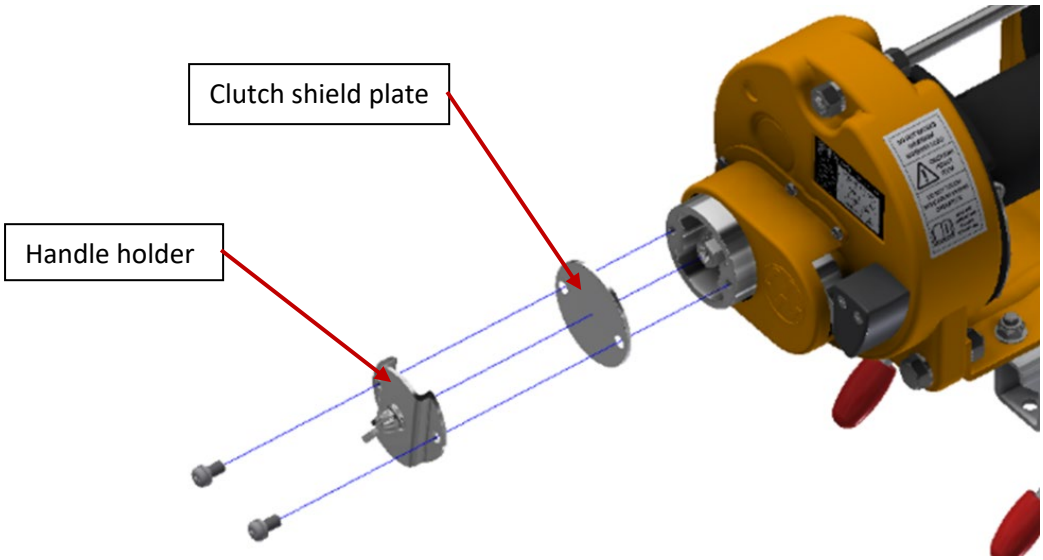
7. **Inspect drum condition:** The drum must rotate freely, causing no interference with the winding action of the rope. If the drum is difficult to rotate or has tight spots when rotating pleas refer to step 1 of reassembly



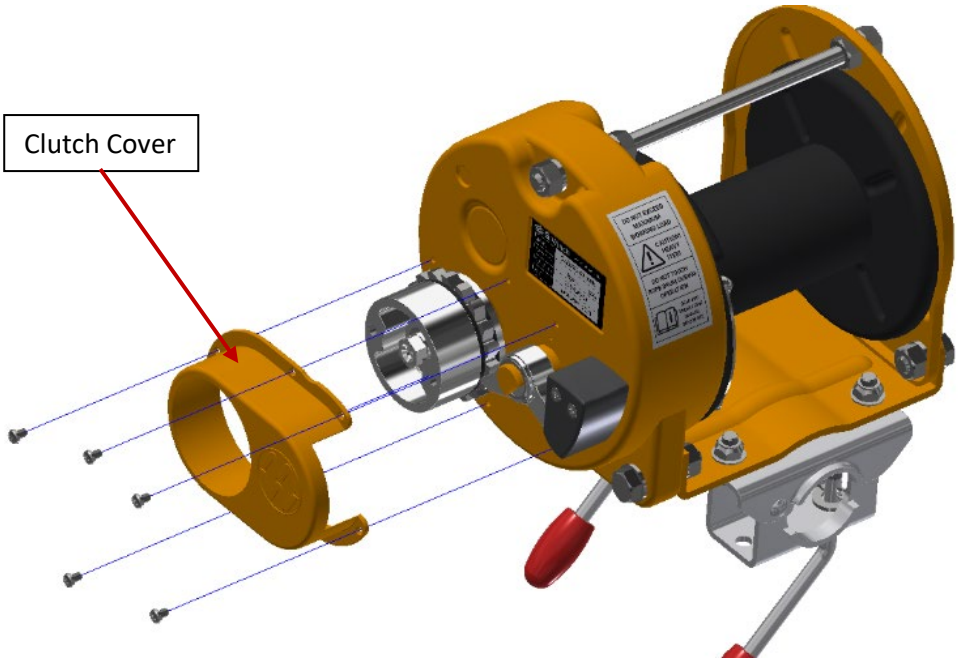
8. **Inspect brackets (if present):** Check brackets to ensure all items are present and fitted correctly. Check all items are free from damage, corrosion, they are in good working condition and function correctly. (Pay particular attention to the clamp body lever thread location into the clamp body).



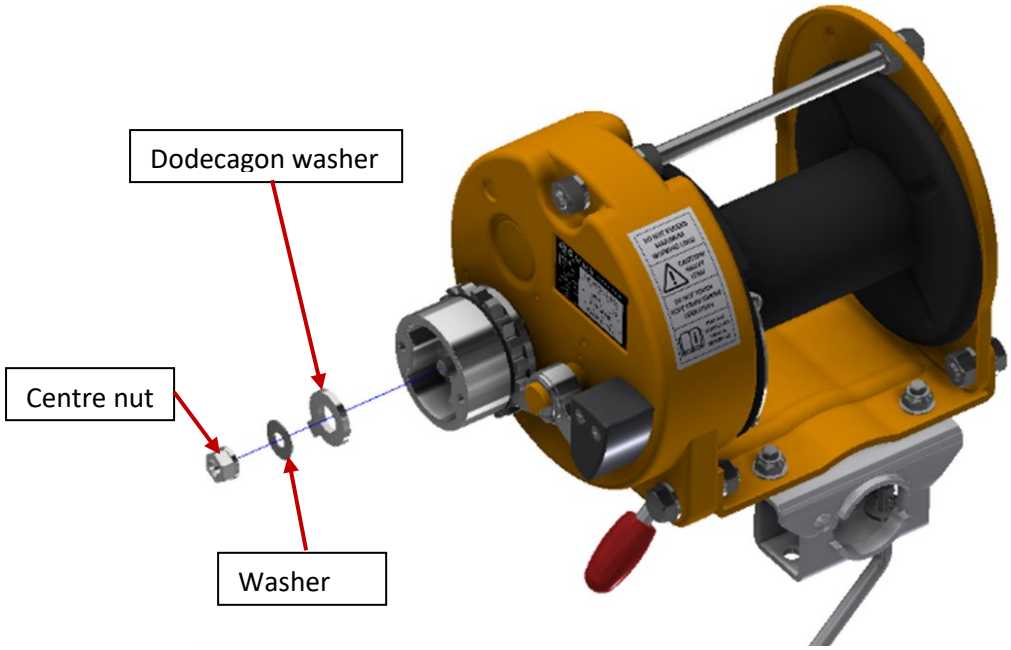
9. **Remove and check winch arm:** Remove the winch winding arm and check for damage and good location into the handle holder. Ensure the wing screw is not damaged and locks the winch arm in place when tightened.



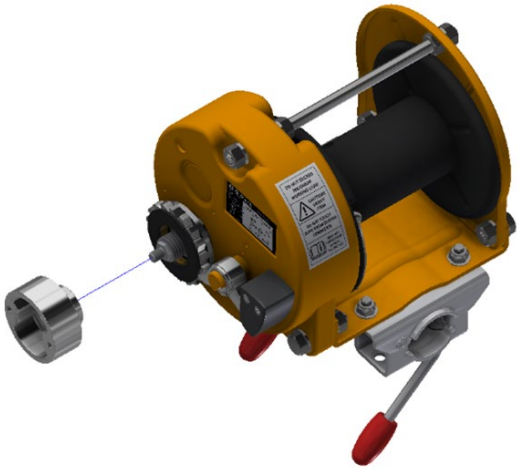
10. **Handle holder removal:** Remove the 2 screws, handle holder and clutch shield plate.



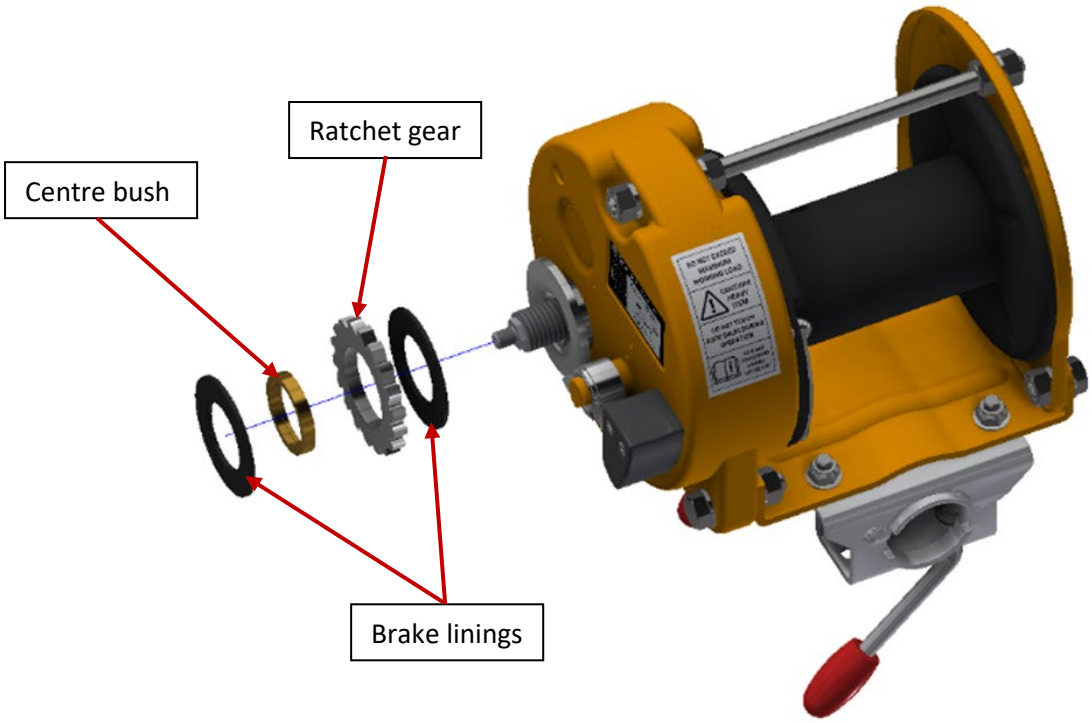
11. **Remove clutch cover:** Remove the 5 clutch cover screws and clutch cover. Inspect for damage.



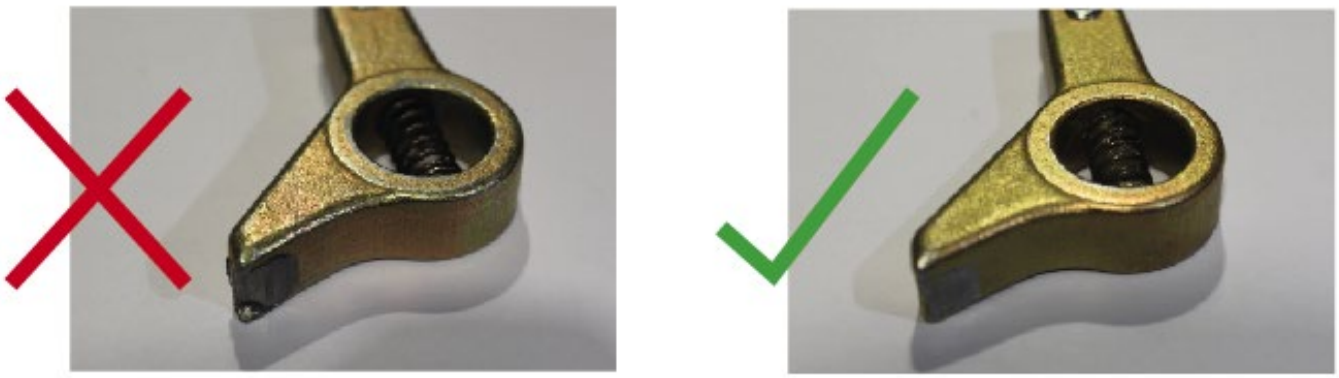
12. **Remove nuts and washers:** Remove the centre nut, washers, and dodecagon washer.



13. **Remove the clutch body:** Unscrew the clutch body. (If this is excessively tight and cannot be done by hand, refit the handle holder screws and apply leverage between the two points to rotate as shown)



14. **Remove brake components:** remove the ratchet gear, centre bush and brake linings.



15. **Pawl inspection:** Inspect pawl tip for excessive wear and replace if necessary.

DUE TO A CHANGE IN SIZE OF THE BRAKE PADS PLEASE CONSIDER THE DIMENSIONS UPON REPLACEMENT

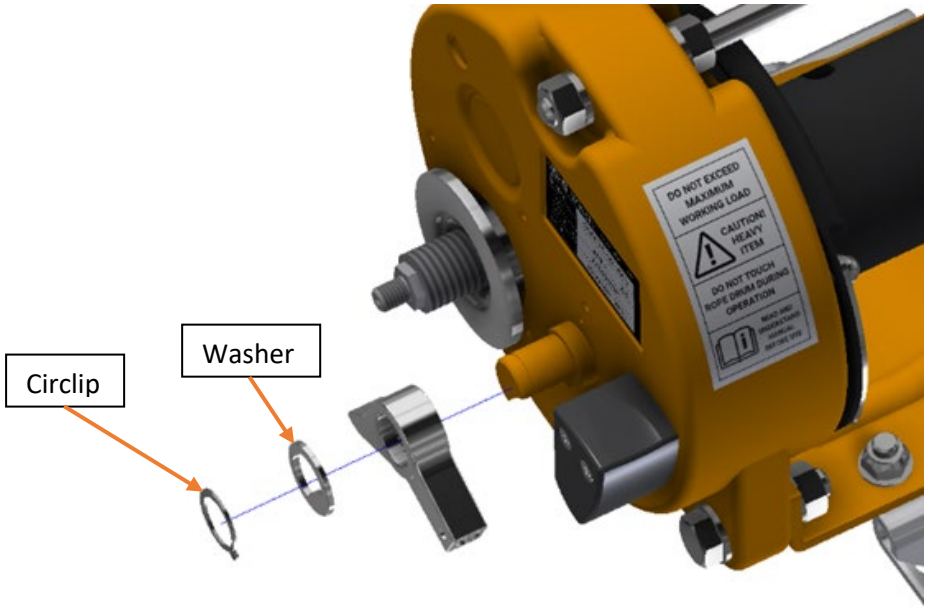
CONCERNING SERIAL NUMBER 467500	BRAKE PAD DETAILS	
	PART No	MINIMUM THICKNESS BEFORE REPLACEMENT
BUILT BEFORE 467500 (circa 2006)	070-21	2.3 mm
BUILT AFTER 467500 (circa 2006)	070-21A	2.45 mm

16. **Brake thickness:** Inspect the brake lining thickness using a set of digital calipers. Refer to table above for minimum tolerance.

The disassembly of the winch is now complete you can now move on to the re-assembly

Reassembly

Ensure all damaged / failed components are replaced at reassembly.



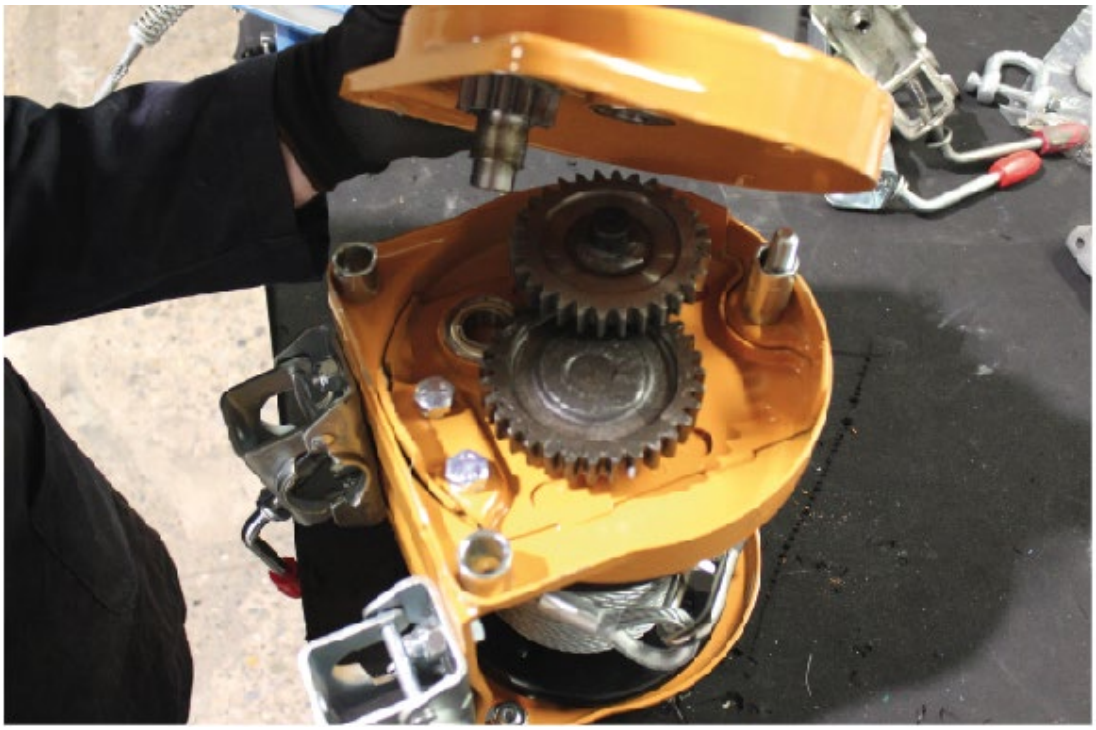
17. **Pawl removal:** **(only if pawl needs replacing if not skip to step 19.)** Using a set of circlip pliers, remove the pawl retaining circlip and washer. The pawl can then be lifted off the dowel pin. (Keep the centre hole of the pawl covered to prevent the spring-loaded ball bearing from firing off)

18. To fit the new pawl, push the ball bearing into the cavity of the lever arm and hold in place whilst positioning onto the dowel. Refit the washer and circlip.

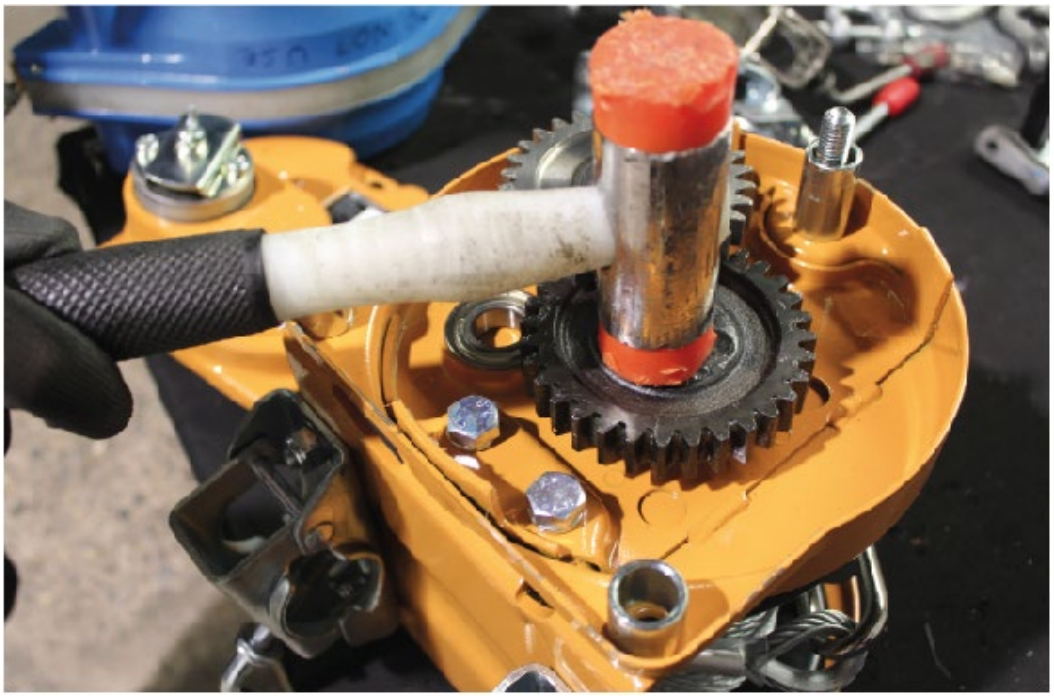
Rope Drum alignment repair

Only proceed with these steps if the rope drum needs re-aligning. If unnecessary then skip to step 23.

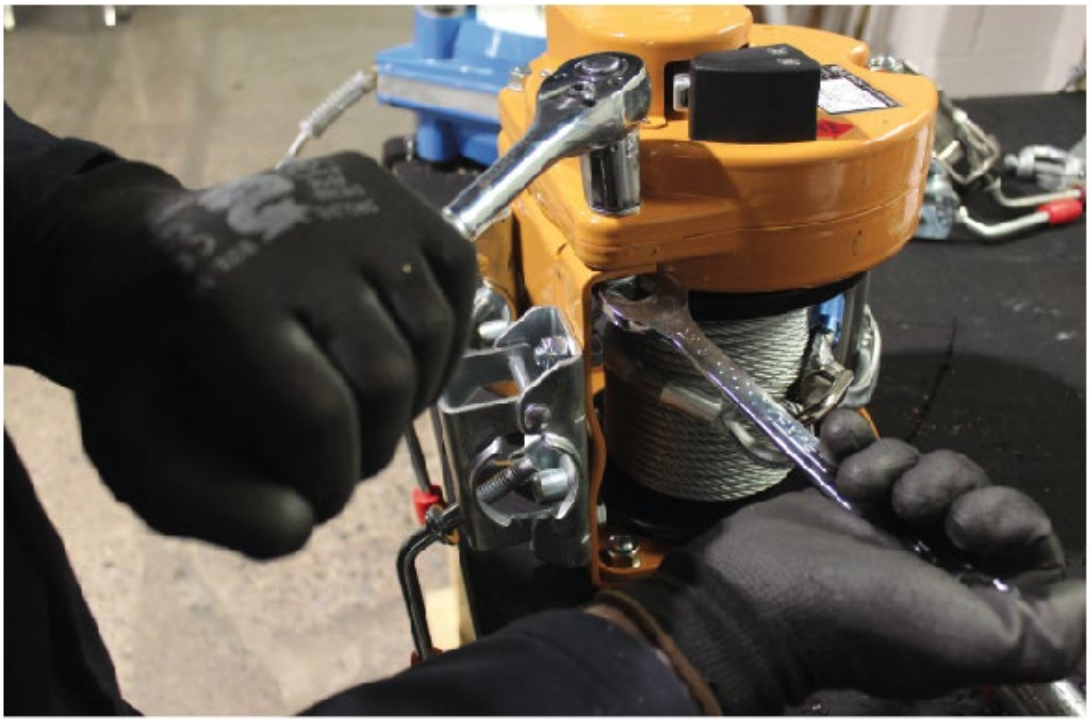
19. Remove the 2 case retaining screws and the external nut of the stay bolt. (Do not adjust any other nuts on the stay bolt as this will affect the case alignment)



20. Lift the case off the body of the G.Winch, exposing the internal components.

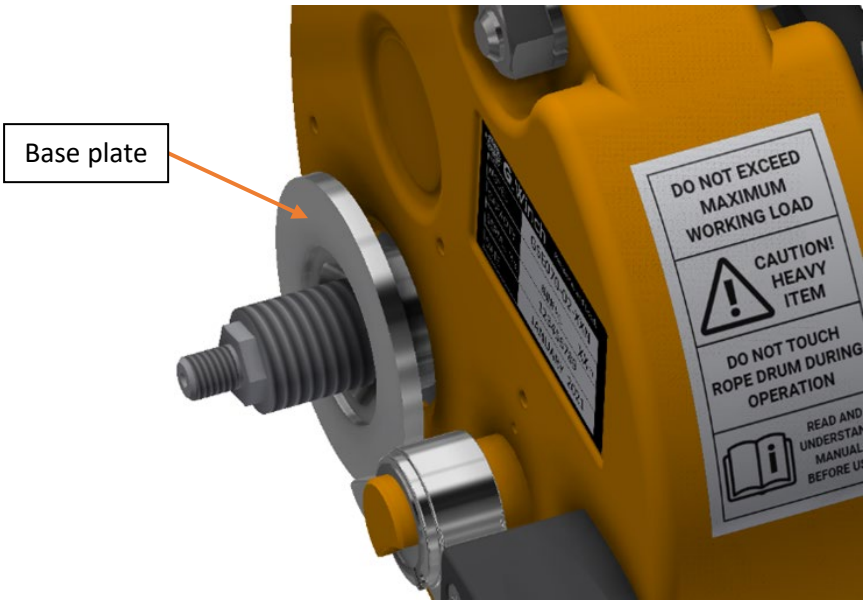


21. Using a soft mallet, tap the welded gear down back into position so that the drum can rotate freely.

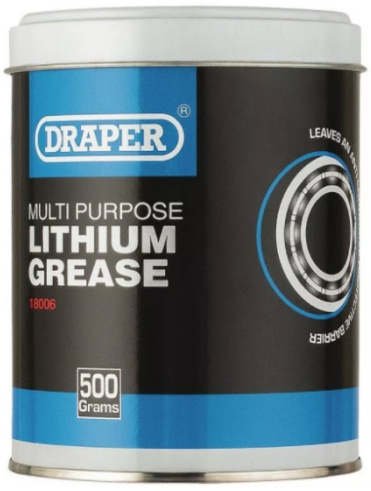


22. Refit the case, ensuring to align all 3 sleeves back into position. Then fasten down the case screws and the stay bolt nut securely.

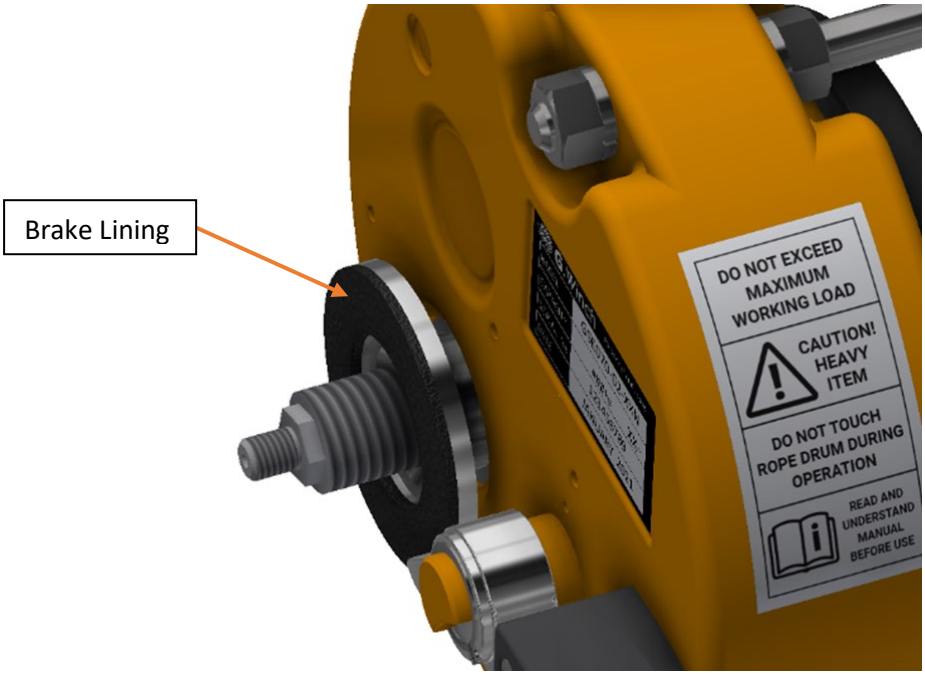
Refit clutch assembly



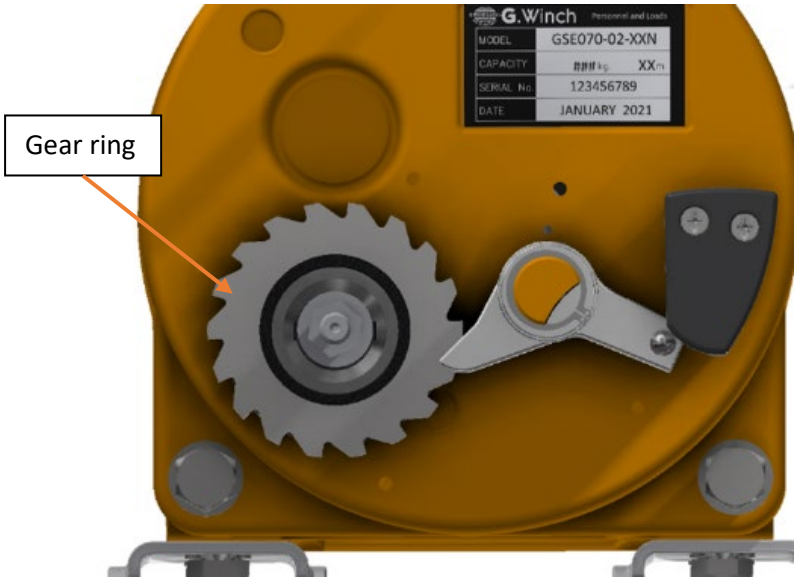
23. Ensure the base plate is correctly seated.



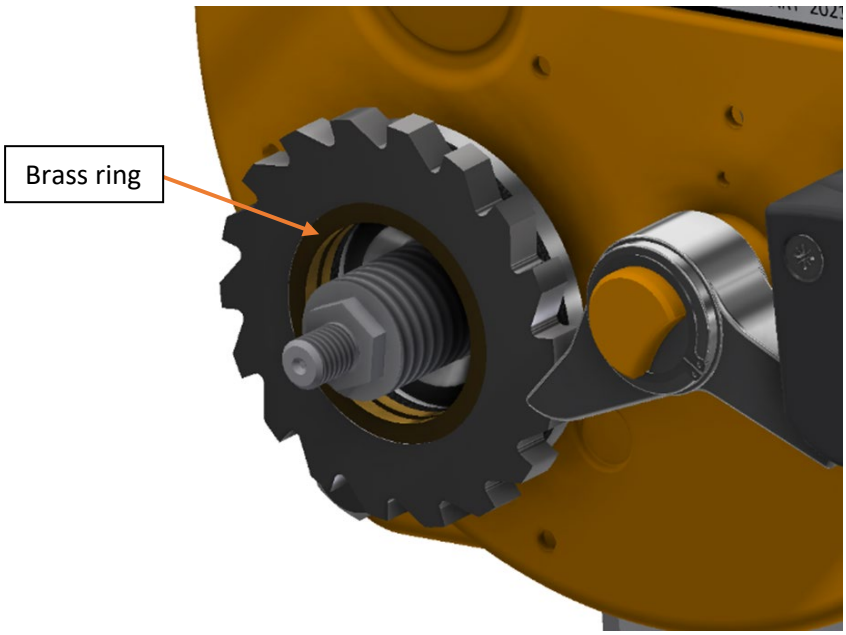
24. Clean down both brake linings with a dry cloth and apply a very small amount of lithium-based grease to both surfaces. (Ensure not to apply too much grease as this will cause the brake to slip when under load.)



25. Place the first lining onto the base plate.

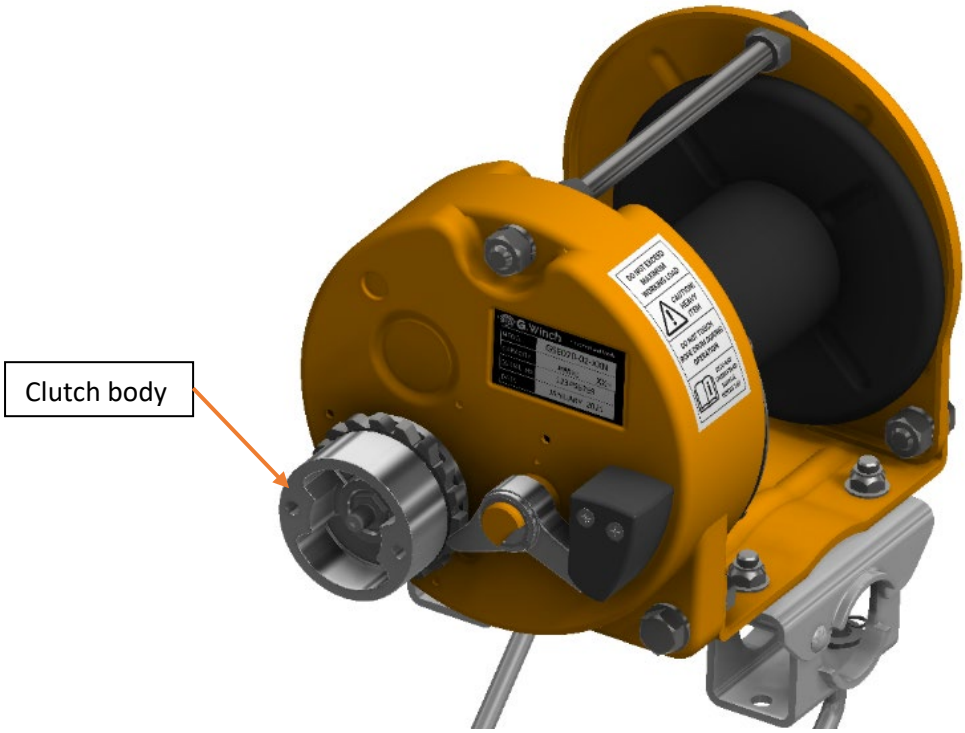


26. Place the gear ring onto the lining, ensuring the correct orientation as shown.

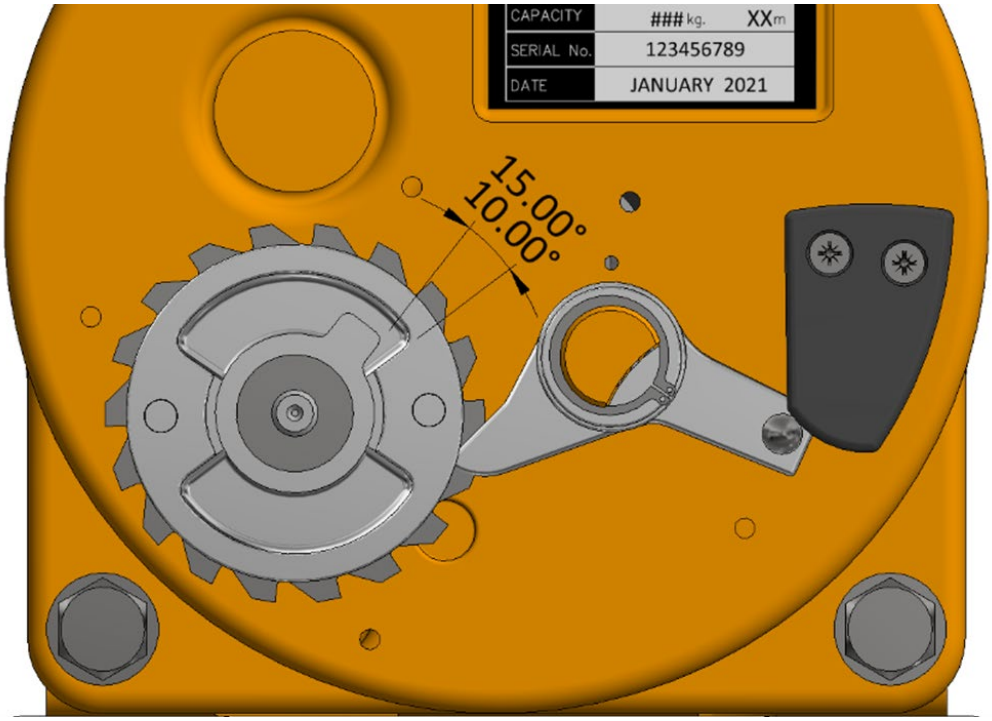


27. Fit the brass ring into the centre of the gear ring.

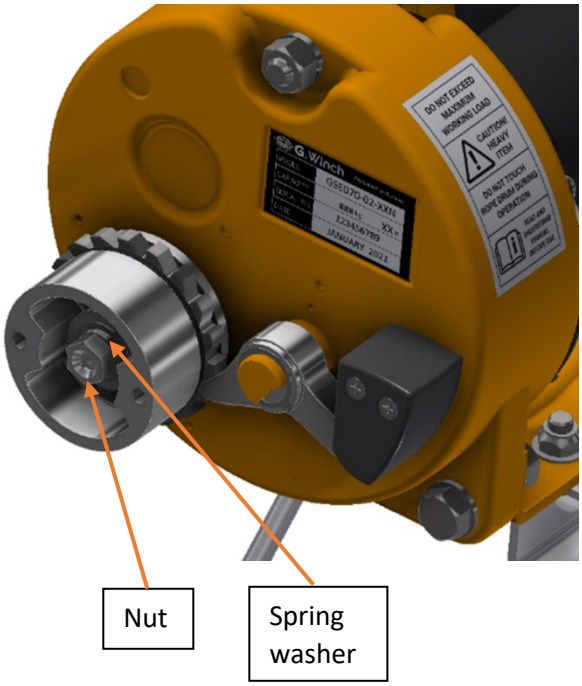
28. Place the second lining onto the gear ring.



29. Apply a small amount of lithium-based grease to the thread of the clutch body and screw down onto the brake lining. (Ensure all components are lined up and the clutch body does not pinch any of the brake linings)



30. Refit the dodecagon washer and standard washer ensuring the correct position of the washer tongue as shown.



31. Refit the spring washer and nut and fasten down tight. (To achieve this, the handle holder screws can be inserted into the clutch body and used as leverage, as shown)

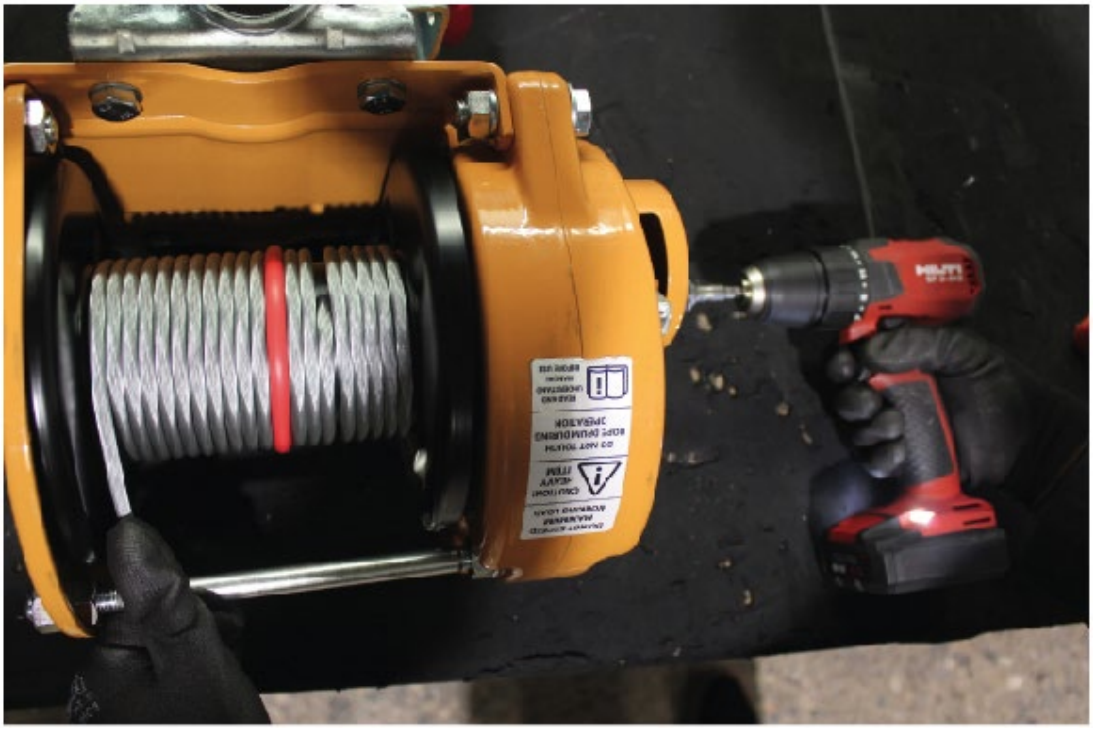
With the reassembly of the brake mechanism complete you can now move on to fitting the rope kit

Fit Rope Kit

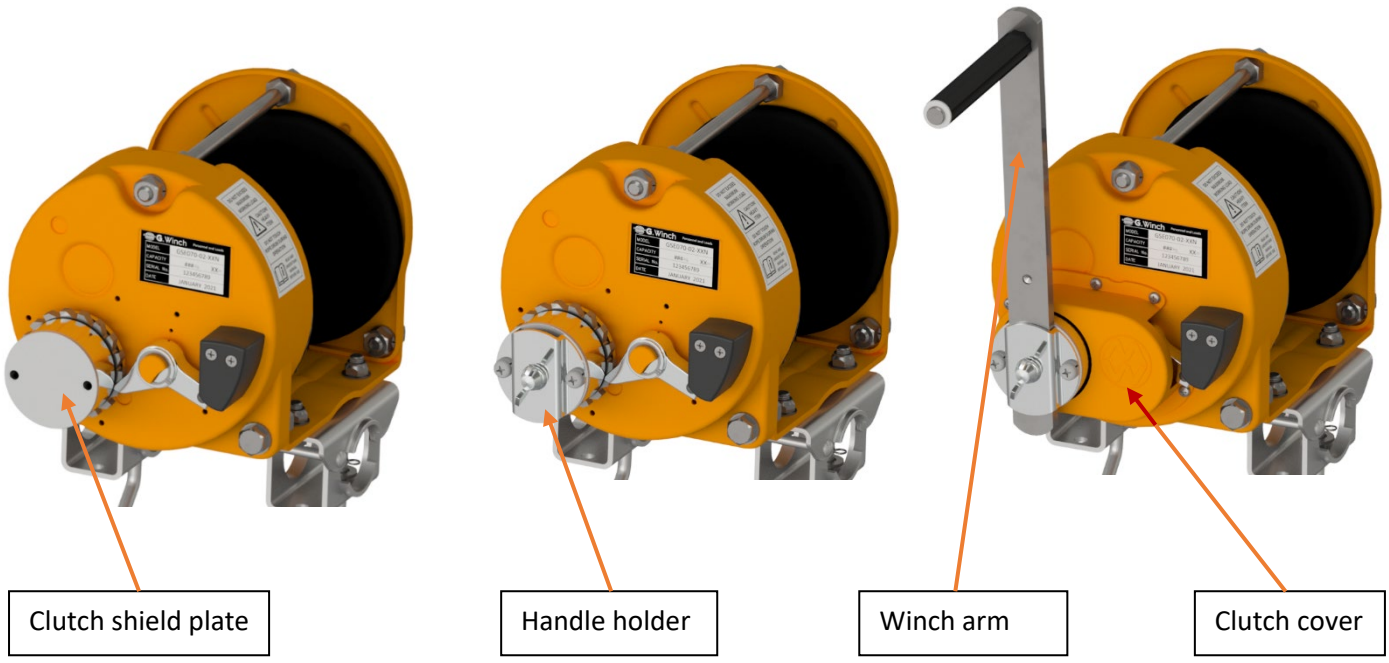
If the rope kit is not being replaced, then skip to step 34

32. Feed the rope through the 2 holes in the rope drum and neatly wrap around the drum towards the locking plate. **Make sure to keep the rope tight for 5 rotations for 6 mm rope and 6 rotations for 5 mm rope.**

33. Secure the rope using the plate ensuring the end stop is seated inside the groove of the rope drum and does not protrude into the path of the rope.



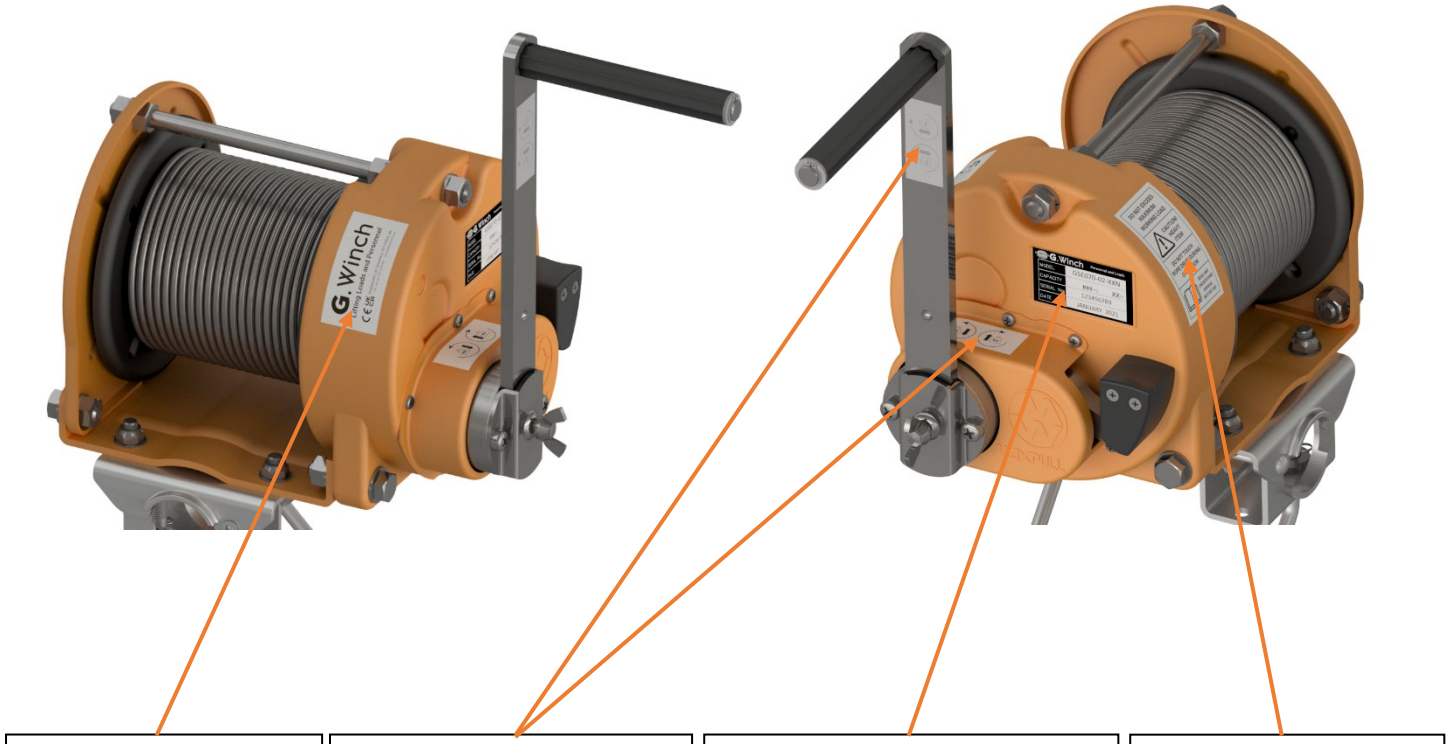
34. Using a 17 mm socket and drill adapter, wind the drum via the nut in the clutch body. Keep the pawl stop in free spool position to prevent excessive wear on the tip and neatly lay the rope until fully wound. Retain the rope in position by clipping the safety hook to the stay bolt.



35. Refit the clutch shield plate, handle holder, winch arm and clutch cover.

Label Positions

Make sure the labels are applied in the positions shown.



G.Winch label (070-12)	Raise- lower label (070-08)	G.Winch identity label (070-11)	Warning label (070-09)

Testing

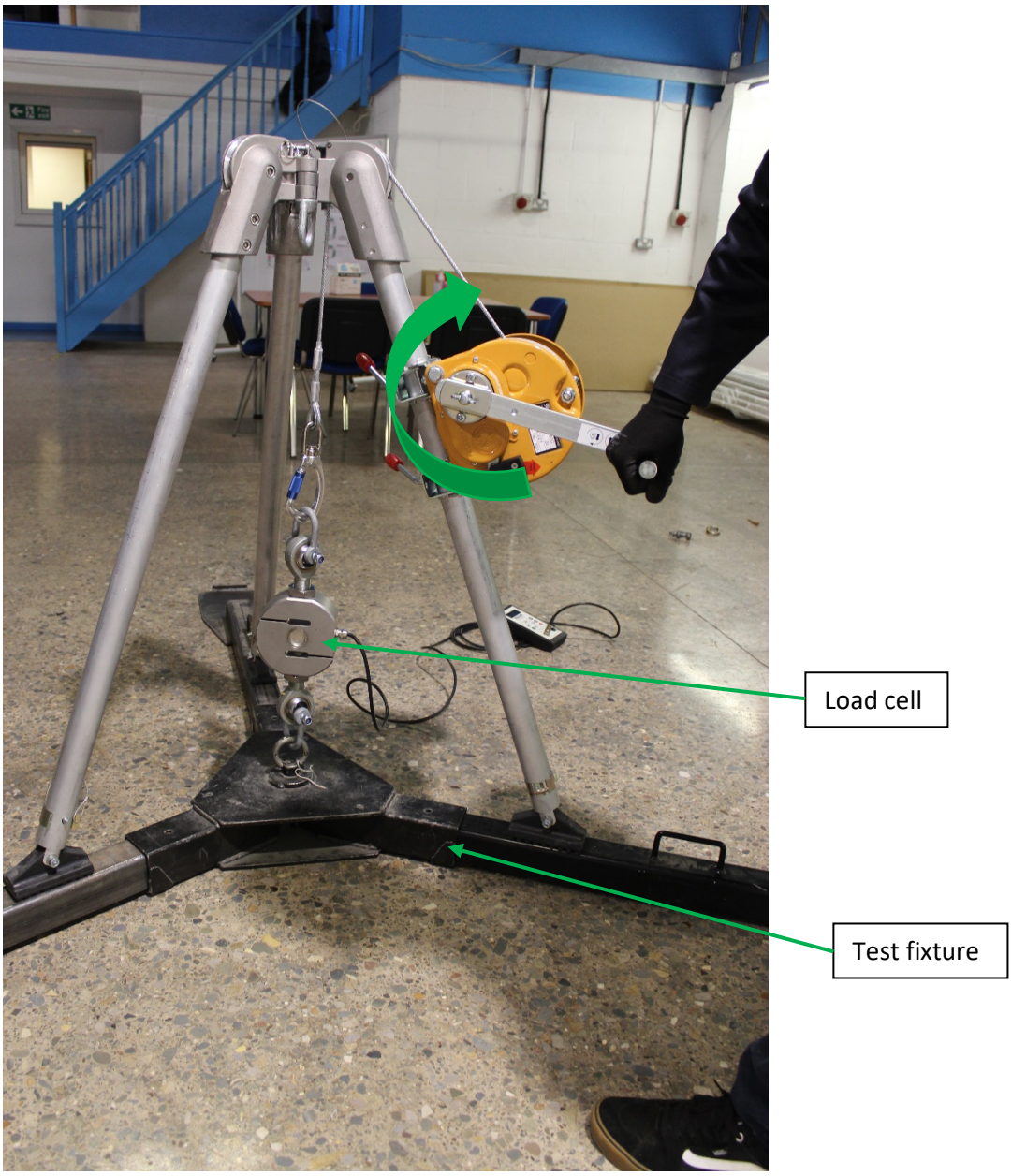
Static load testing

The G.Winch must be subjected to a static load test every 12 months. Each model must be tested to 1.5 times the maximum working load for 15 seconds.

Model	Test Load (kg)
GSE070-136	204
GSE070-150	225
GSE070-200	300
GSE070-250	375

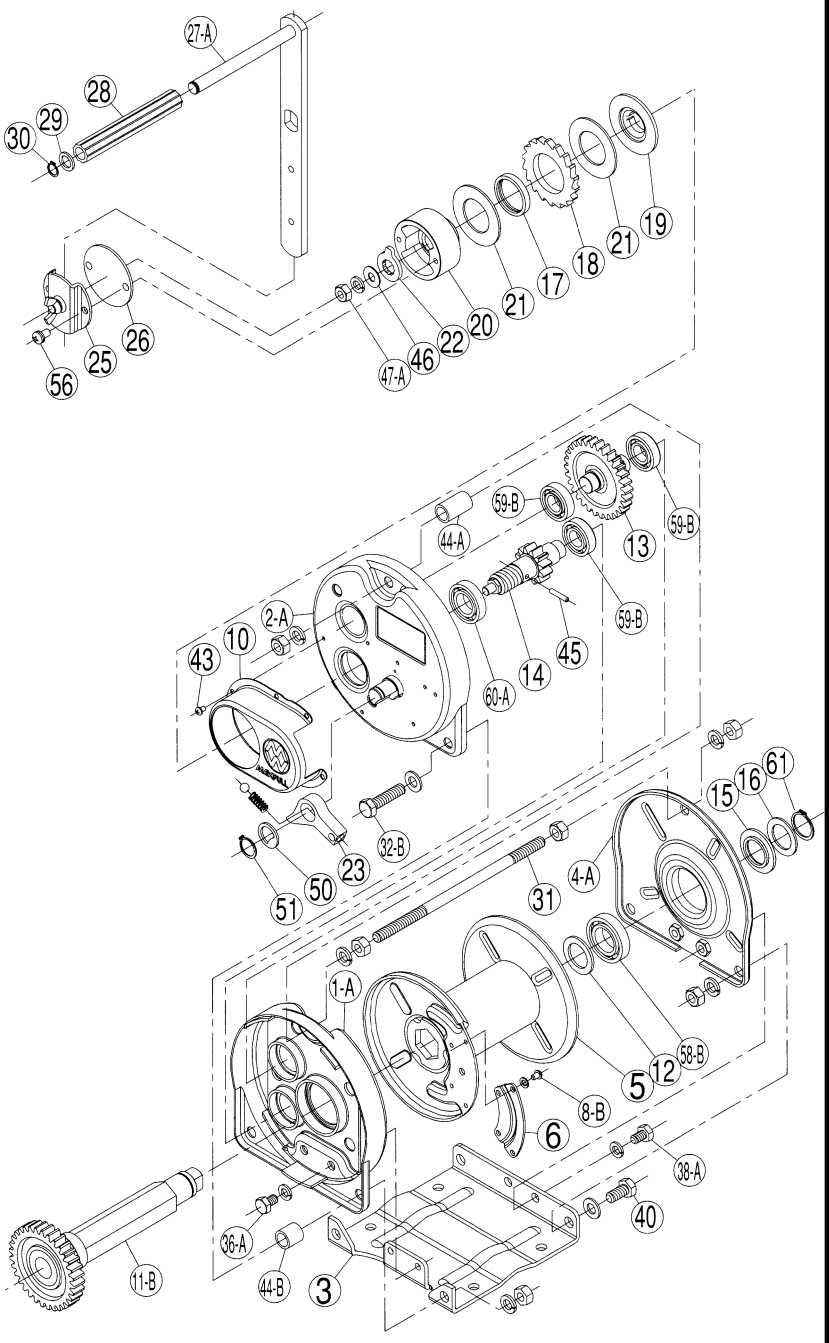
1. Mount the G.Winch to a G.Tripod on the testing fixture and feed the rope over the pulley and clip to the load cell.

2. Lay the rope across the drum to prevent the rope from crushing and bedding in during the test.



3. Turn the winding arm clockwise, tightening the rope and applying load to the G.Winch. Once the correct load has been achieved this must be held for 15 seconds with no signs of slippage and then released.

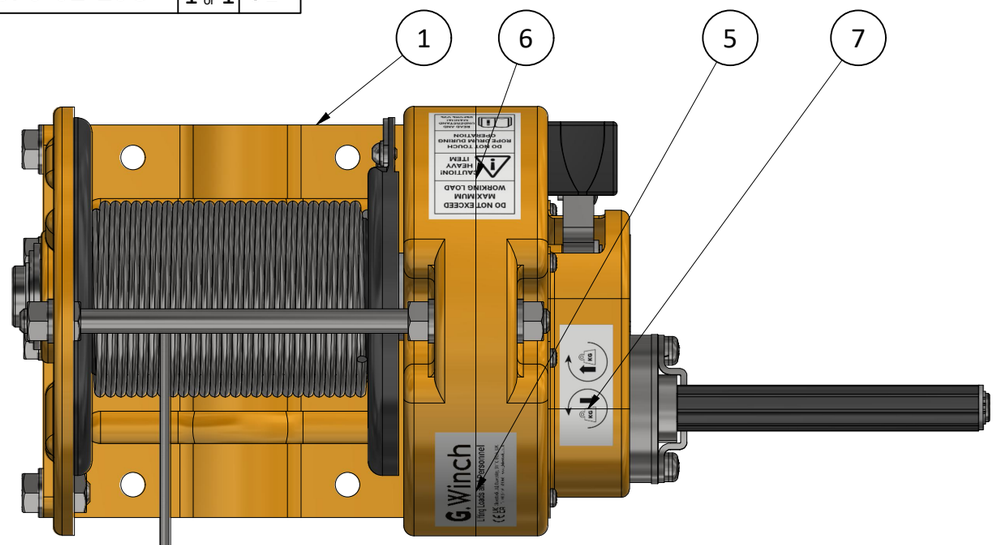
4. Neatly wind the rope back onto the drum ensuring the winch functions correctly.

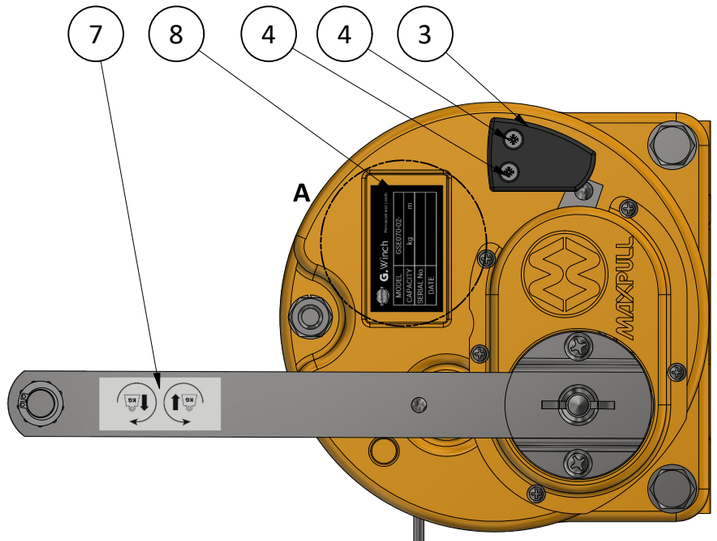


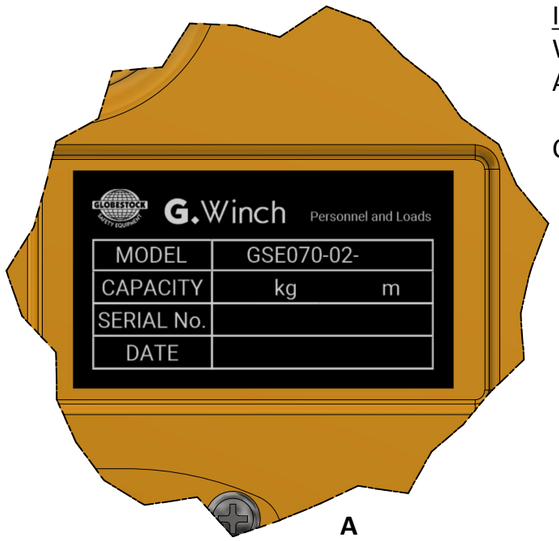
No	Description	Qty
1-A	Gear Case	1
2-A	Gear Case Cover	1
3	Bed Plate	1
4-A	Side Frame	1
5	Drum	1
6	070-006 Rope Grip	1
8-B	Hex Button Head Screw	4
10	Clutch Cover	1
11-B	Drum Shaft Main Gear	1
12	Shaft Distance Piece	1
13	Spur Gear Pinion	1
14	Clutch Pinion	1
15	Shaft Washer A	1
16	Shaft Washer B	1
17	070-17W Brass Ring	1
18	Ratchet Gear	1
19	070-19BP Base Plate	1
20	Clutch	1
21	070-21A Brake Lining	2
22	070-22 Dodecagon Washer	1
23	070-23-24-54 Stopper	1
25	070-25 Handle Holder	1
26	070-26 Clutch Shield Plate	1
27-A	070-06 Handle Assembly	1
28	070-06 Handle Assembly	1
29	070-06 Handle Assembly	1
30	070-06 Handle Assembly	1
31	070-31 Stay Bolt	1
32-B	Bolt M12 x 50	2
36-A	Bolt M10 x 16	2
38-A	Bolt M10 x 16	2
40	Bolt M12 x 25	2
43	070-43 Cover Screw	7
44-A	Spacer	1
44-B	Spacer	2
45	Parallel Pin	1
46	Washer	1
47-A	Hexagon Nut	1
50	070-50 Washer for Pin	1
51	070-51 Circlip	1
56	070-56 Washer and Screw	2
58-B	Bearing	1
59-B	Bearing	3
60-A	Bearing	1
61	Circlip	1

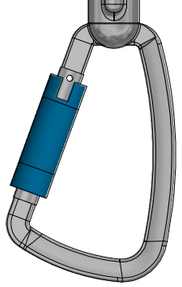
Parts listed in blue available as spares

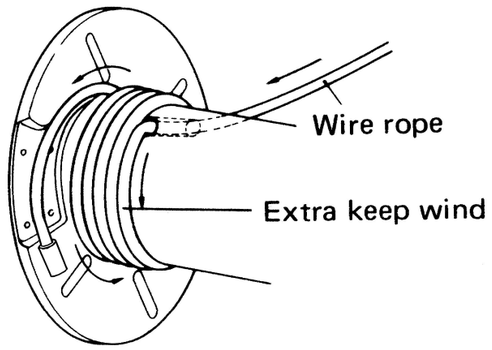
GSE070-02-20G	SHEET 1 of 1	01

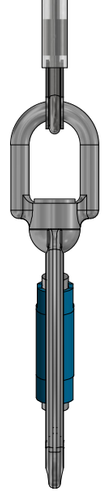












IDENTITY LABEL DETAILS

WORKING ROPE LENGTH AND ROPE MATERIAL ADDED AT THE END OF MODEL NUMBER

CAPACITY TO STATE MWL AND ROPE LENGTH

SECURING THE ROPE KIT

THREAD THE ROPE END THROUGH THE DRUM AS SHOWN.
WRAP 5 COILS AROUND THE DRUM BEFORE SECURING PAST THE ROPE LOCKING PLATE.

Item	Description	Part Number	Qty
1	MAXPULL GM5	GM5	1
2	20 M GALV ROPE KIT	RKG070-6-20	1
3	PAWL STOP	070-02	1
4	M5 x 40 CSK SCREW, SS	070-04	2
5	G.WINCH LABEL	070-12	1
6	WARNING LABEL	070-09	1
7	RAISE-LOWER LABEL	070-08	2
8	G.WINCH IDENTITY LABEL	070-11	1

REV	DATE	CHANGES TO DRAWING	CHECKED	DESIGNER
01	19-04-21	FIRST ISSUE	SPL	JAM

UNLESS OTHERWISE STATED ALL DIMENSIONS IN mm
3rd ANGLE PROJECTION

DO NOT SCALE

DESCRIPTION
G.Winch 20 m Galv

PRINTED COPIES OF THIS DRAWING ARE UNCONTROLLED

PART NUMBER
GSE070-02-20G

UNSPECIFIED TOLERANCES: ± N/A
UNSPECIFIED ANGLES: ± N/A

MATERIAL

DRAWN BY
James.Marshall

Mile Oak
Industrial Estate,
Maesbury Road,
Shropshire,
SY10 8GA
☎: +44 1691 654 966
✉: info@globestock.co.uk
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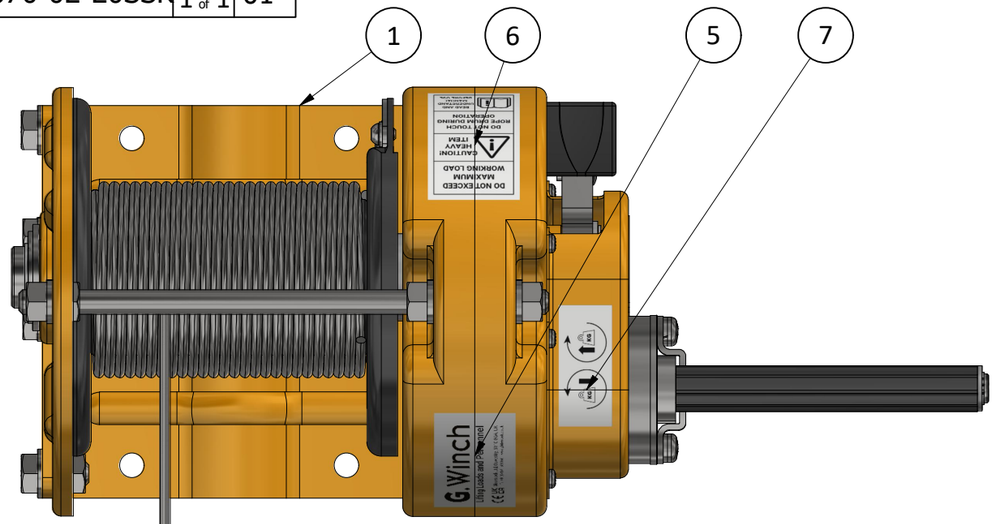
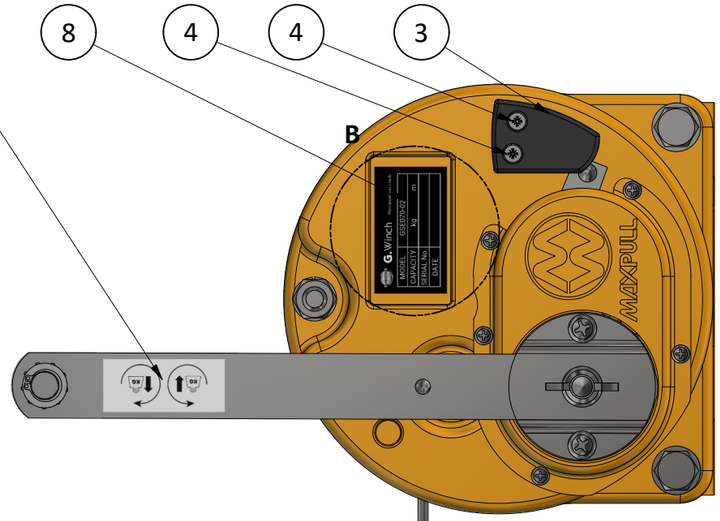
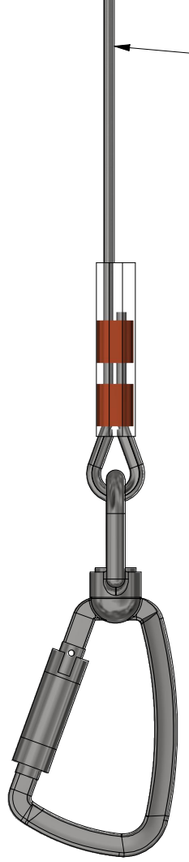
GLOBESTOCK SAFETY EQUIPMENT

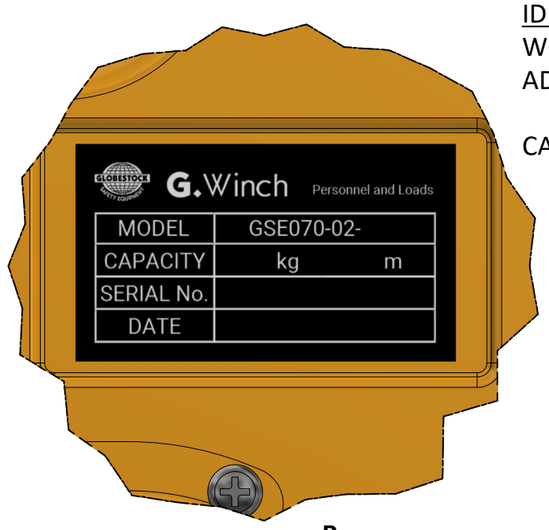
REVISION: 01

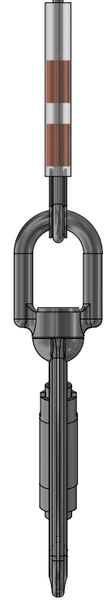
GSE070-02-20SSK | SHEET 1 of 1 | 01

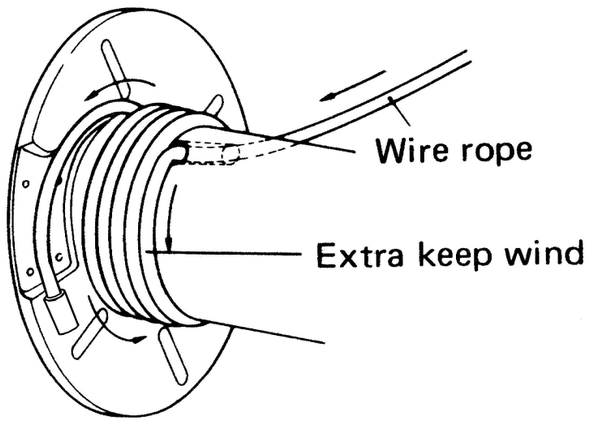












IDENTITY LABEL DETAILS
WORKING ROPE LENGTH AND ROPE MATERIAL
ADDED AT THE END OF MODEL NUMBER

CAPACITY TO STATE MWL AND ROPE LENGTH

SECURING THE ROPE KIT

THREAD THE ROPE END THROUGH THE DRUM AS SHOWN.
WRAP 5 COILS AROUND THE DRUM BEFORE SECURING PAST THE ROPE LOCKING PLATE.

Item	Description	Part Number	Qty
1	MAXPULL GM5	GM5	1
2	20 M STAINLESS ROPE KIT	RKS070-6-20	1
3	PAWL STOP	070-02	1
4	M5 x 40 CSK SCREW, SS	070-04	2
5	G.WINCH LABEL	070-12	1
6	WARNING LABEL	070-09	1
7	RAISE-LOWER LABEL	070-08	2
8	G.WINCH IDENTITY LABEL	070-11	1

REV	DATE	CHANGES TO DRAWING	CHECKED	DESIGNER
01	19-04-21	FIRST ISSUE	SPL	JAM

UNLESS OTHERWISE STATED ALL DIMENSIONS IN mm 3rd ANGLE PROJECTION

DO NOT SCALE

DESCRIPTION: G.Winch 20 m Stainless

PRINTED COPIES OF THIS DRAWING ARE UNCONTROLLED

PART NUMBER: GSE070-02-20SSK

UNSPECIFIED TOLERANCES: ± N/A
UNSPECIFIED ANGLES: ± N/A

MATERIAL

DRAWN BY: James.Marshall

Mile Oak
Industrial Estate,
Maesbury Road,
Shropshire,
SY10 8GA
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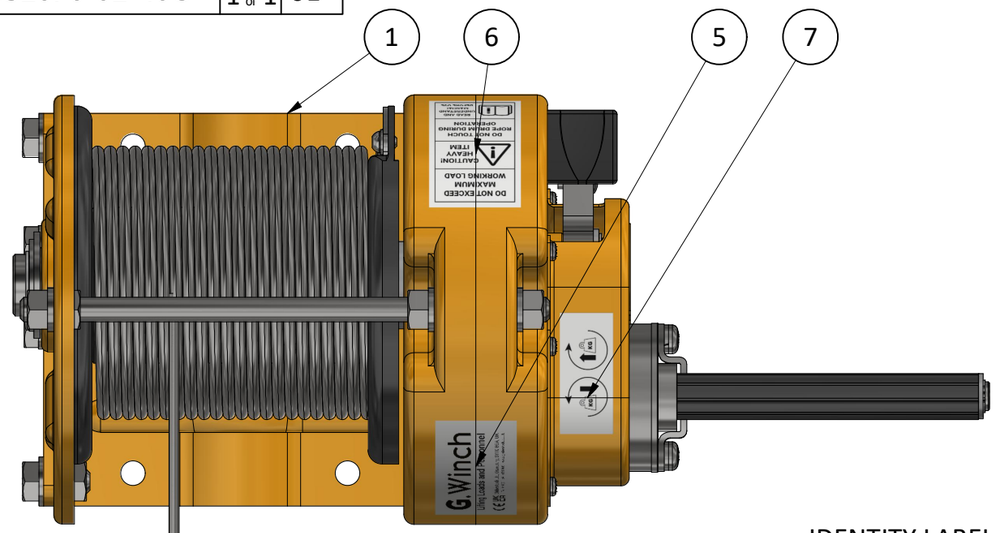
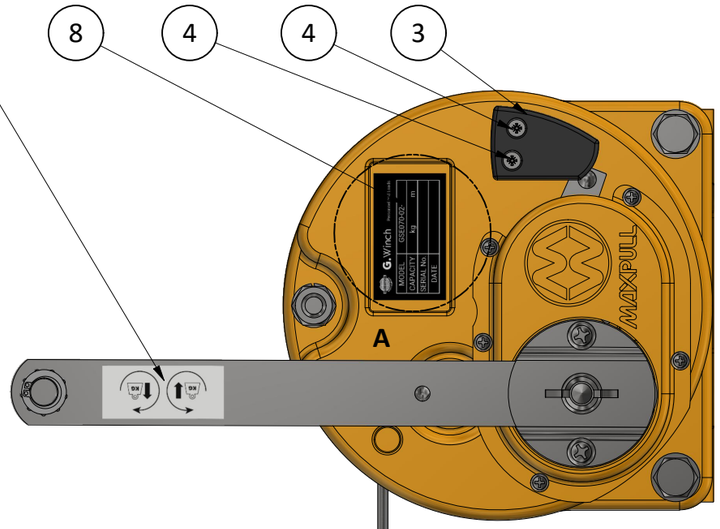
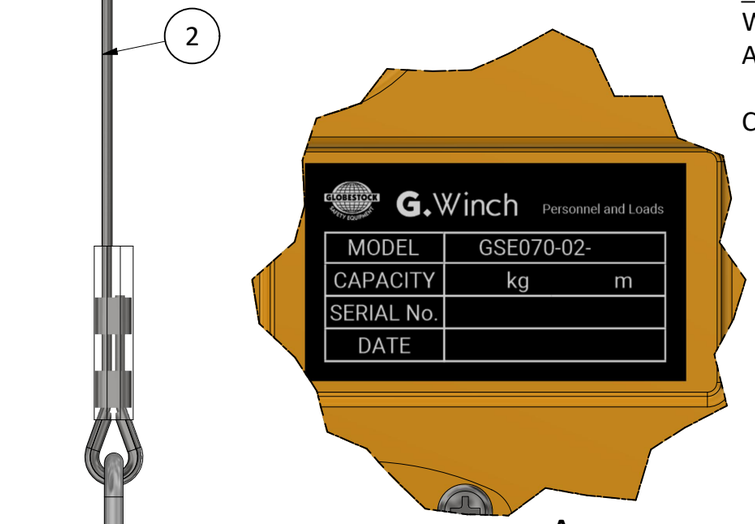
GLOBESTOCK SAFETY EQUIPMENT

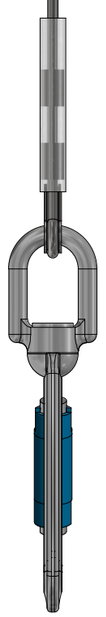
REVISION: 01

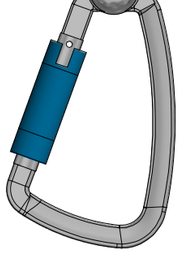
GSE070-02-40G	SHEET 1 of 1	01

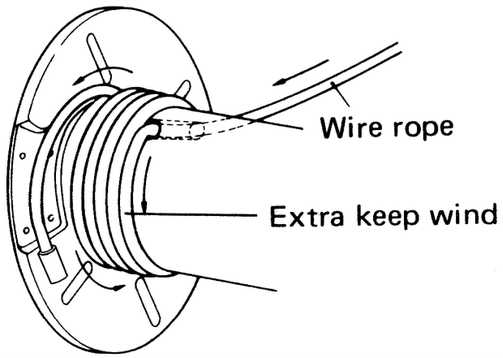












IDENTITY LABEL DETAILS
WORKING ROPE LENGTH AND ROPE MATERIAL
ADDED AT THE END OF MODEL NUMBER

CAPACITY TO STATE MWL AND ROPE LENGTH

SECURING THE ROPE KIT

THREAD THE ROPE END THROUGH THE DRUM AS SHOWN.
WRAP 5 COILS AROUND THE DRUM BEFORE SECURING PAST THE ROPE LOCKING PLATE.

Item	Description	Part Number	Qty
1	MAXPULL GM5	GM5	1
2	40 m GALV ROPE KIT	RKG070-6-40	1
3	PAWL STOP	070-02	1
4	M5 x 40 CSK SCREW, SS	070-04	2
5	G.WINCH LABEL	070-12	1
6	WARNING LABEL	070-09	1
7	RAISE-LOWER LABEL	070-08	2
8	G.WINCH IDENTITY LABEL	070-11	1

REV	DATE	CHANGES TO DRAWING	CHECKED	DESIGNER
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UNLESS OTHERWISE STATED ALL DIMENSIONS IN mm
3rd ANGLE PROJECTION

DO NOT SCALE

DESCRIPTION
G.Winch 40 m Galv

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PART NUMBER
GSE070-02-40G

UNSPECIFIED TOLERANCES: ± N/A
UNSPECIFIED ANGLES: ± N/A

MATERIAL

DRAWN BY
James.Marshall

Mile Oak
Industrial Estate,
Maesbury Road,
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GLOBESTOCK SAFETY EQUIPMENT

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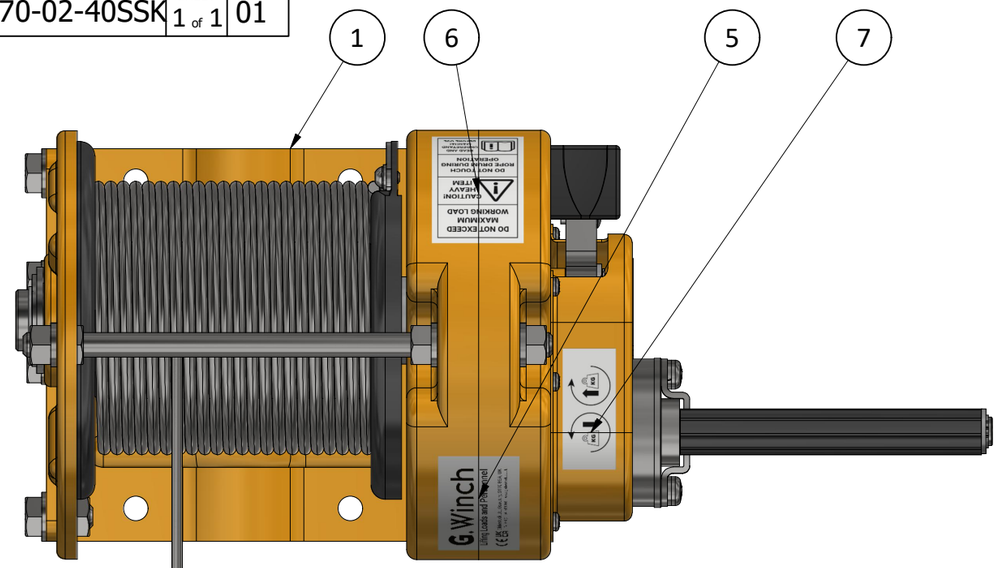
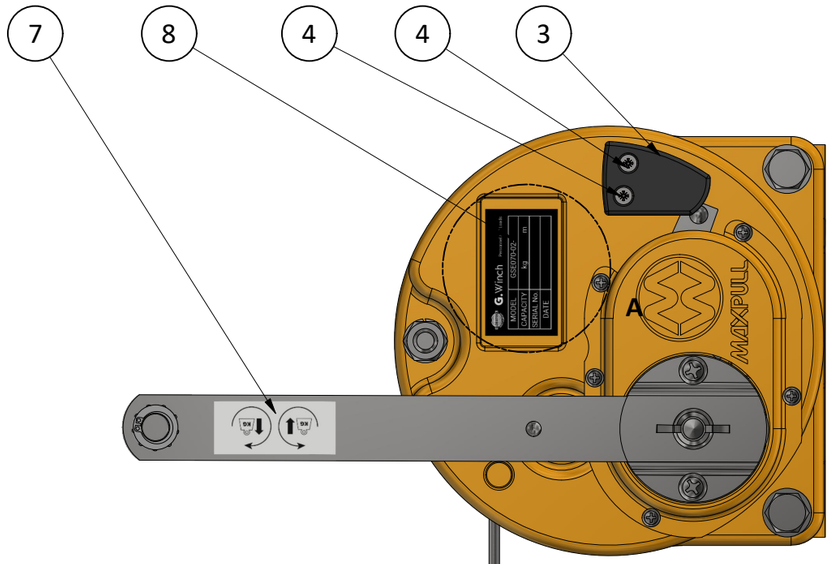
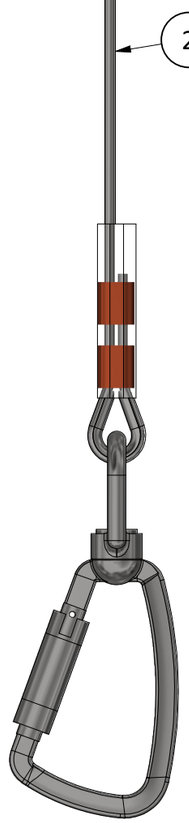
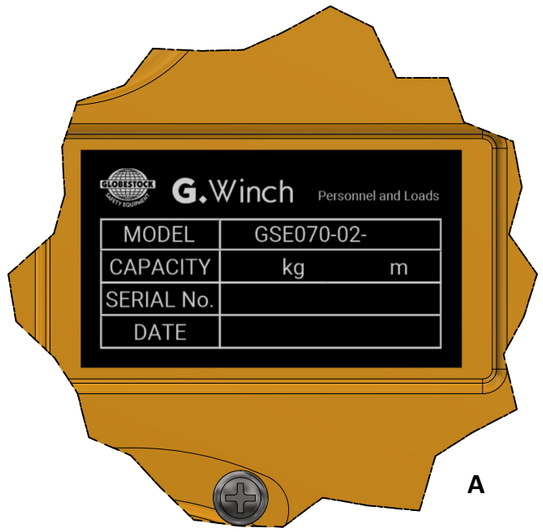
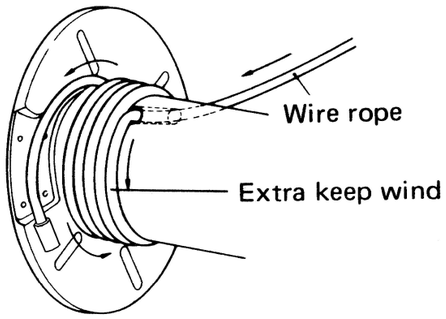
GSE070-02-40SSK | SHEET 1 of 1 | 01











IDENTITY LABEL DETAILS

WORKING ROPE LENGTH AND ROPE MATERIAL ADDED AT THE END OF MODEL NUMBER

CAPACITY TO STATE MWL AND ROPE LENGTH

SECURING THE ROPE KIT

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Item	Description	Part Number	Qty
1	MAXPULL GM5	GM5	1
2	40 M STAINLESS ROPE KIT	RKS070-6-40	1
3	PAWL STOP	070-02	1
4	M5 x 40 CSK SCREW, SS	070-04	2
5	G.WINCH LABEL	070-12	1
6	WARNING LABEL	070-09	1
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3rd ANGLE PROJECTION

DO NOT SCALE

DESCRIPTION: G.Winch 40 m Stainless

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PART NUMBER: GSE070-02-40SSK

UNSPECIFIED TOLERANCES: ± N/A
UNSPECIFIED ANGLES: ± N/A

MATERIAL

DRAWN BY: James.Marshall

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