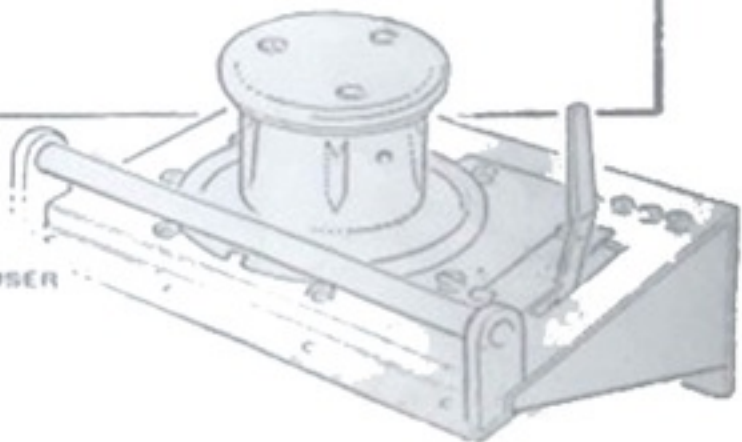




# RANGE ROVER

# CAPSTAN WINCH

KIT No 5360



## FITTING INSTRUCTIONS

PLEASE PASS ON THESE INSTRUCTIONS TO VEHICLE USER

CONTENTS	PAGE
Illustrated Parts list	1
Fitting Instructions	5
Operating Instructions	9
Maintenance	11

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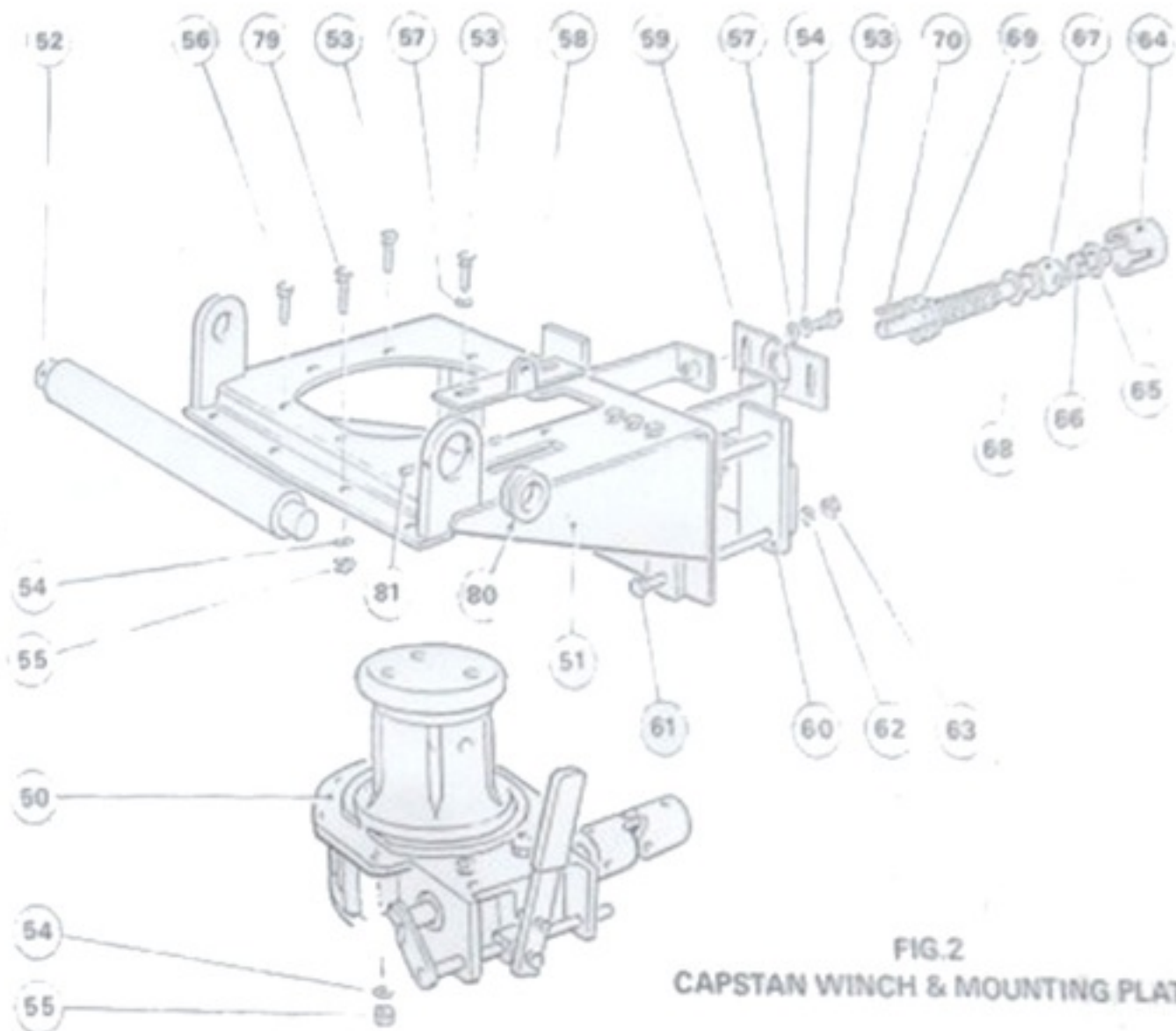


FIG.2  
CAPSTAN WINCH & MOUNTING PLATE

## PARTS LIST - RANGE ROVER CAPSTAN WINCH &amp; MOUNTING PLATE

ITEM NUMBER	NAME	PVE PART NO	NUMBER PER UNIT
50	Winch Unit	5244	1
51	Mounting Plate	188-A0	1
52	Rope Roller	1033-A3	1
53	Hex. Head Bolt M8 x 25 mm	4-33-0802522	8
54	Spring Washer 8 mm	4-51-0823	14
55	Full Nut M8	4-47-0823	12
56	C'sk Screw M8 x 25 mm	4-35-0802522	2
57	Plain Washer 8 mm	4-50-0823	4
58	Lock Plate	106-A2	1
59	Spring Plate	1047-A3	1
60	Winch Clamping Assembly	1046-A2	1
61	Hex. Head Bolt $\frac{1}{2}$ " BSF x $5\frac{1}{2}$ "	447-A4	4
62	Spring Washer $\frac{1}{2}$ "	165-A4	4
63	Full Nut $\frac{1}{2}$ " BSF	375-A4	4
64	Driving Dog	184-A3	1
65	Washer	195-A4	1
66	Crankshaft Setscrew	185-A3	1
67	Drive Shaft	445-A3	1
68	Thrust Washer	116-A4	1
69	Actuating Spring	129-A4	1
70	Key	128-A4	1
71	Apron Support	190-A1	1
72	C'sk Screw M6 x 20 mm	4-35-0602022	2
73	Nyloc Nut M6	4-48-0623	2
74	Grille Guide Pin	193-A4	4
75	Spring Washer $\frac{1}{2}$ "	197-A4	4
76	Locknut $\frac{1}{2}$ " BSF	155-A4	4
77	Grill Screw	194-A4	2
78	Starting Handle (Not Illustrated)	170-A2	1
79	Dome Headed Bolt	4-38-082525	4
80	Roller Bush	1042-A4	1
81	Grub Screw, Dog Point	1043-A4	2
NOTE	ITEMS 71 AND 77		TEXT.

ALWAYS QUOTE SERIAL NO. WHEN ORDERING SPARES

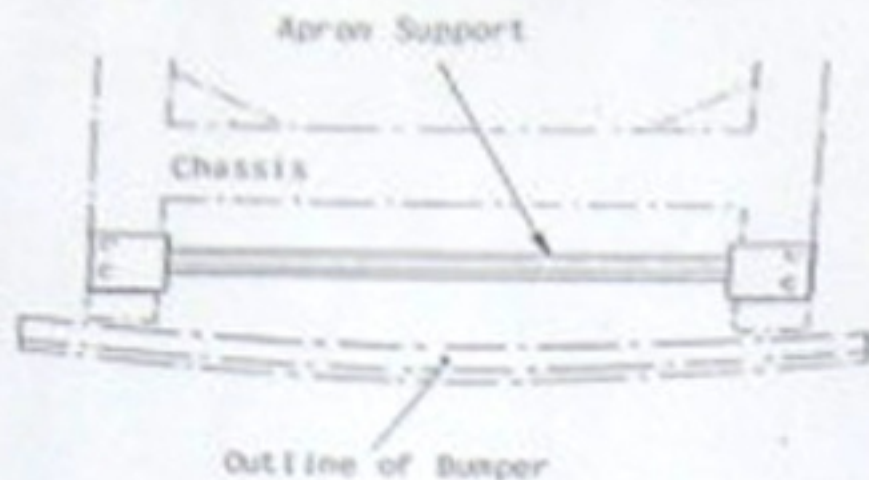
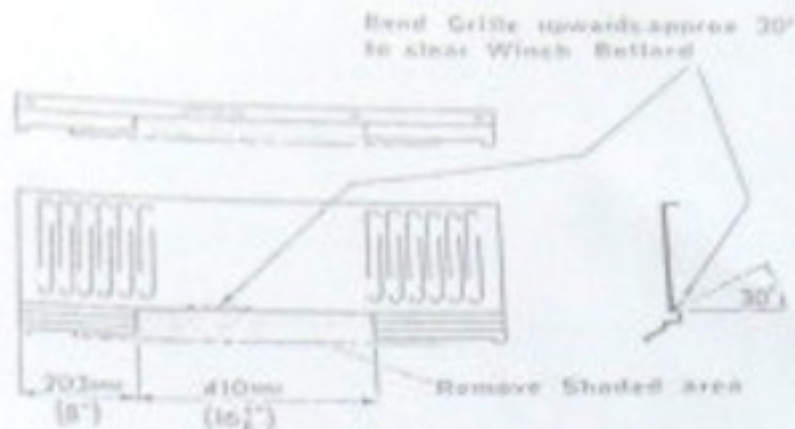


FIG. 6

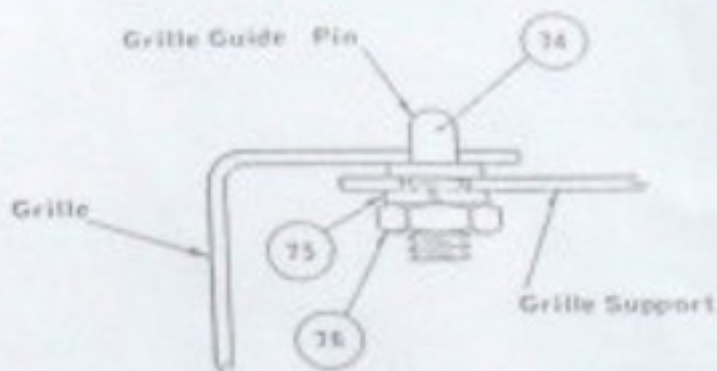
9. Replace the bumper and secure with the existing bolts, nuts, washers and tighten.
10. Engage winch into drive position ensuring that the drive shaft has engaged into the driving dog (64). Move winch horizontally so that the centre of the starting dog (11) on the front of the winch is in line with the cut out for the starting handle in the bumper. When this position is obtained, tighten the 4 nuts and bolts (61, 63) holding the winch in position. It is important that when tightening these 4 nuts and bolts, that the winch clamping plate is flat against the back of the first crossmember and that tightening is done evenly but not excessively. Excessive tightening will result in damage to the chassis and must be avoided at all costs.
11. With the winch in position it is now necessary to actuate the winch from drive to disengage position, to determine the position of the spring plate (59). When the end of the drive is centred to driving dog (64) tighten the 2 bolts (53).
12. Using the winch mounting plate (51) as a template, drill through the bumper with 8.7mm (11/32") dia drill, securing with four bolts, M8 x 25, nuts and spring washers (53, 54, 55).
13. If power assisted steering is fitted the 2 screws in the winch clamping assembly should be removed and used to secure the pipe clips already on the pipes.
14. Make sure all nuts and bolts are securely tightened.
15. Cut away and bend grille as shown in Fig. 7.



Details of Grille Modification

FIG. 7

16. Remove 4 speed nuts which secured top of grille and insert 4 grille guide pins (74) and tighten with nuts and spring washers (76, 75). Fit grille over guide pins and secure 2 knurled screws (77) into existing speed nuts on vehicle.



Details of Mounting Grille Guide Pin

FIG. 8

17. Remove the dipstick and fill winch with SAE 90 gear oil to dipstick mark (approximately 0.6 litres, 1 pint).
18. Grease drive shaft, actuating mechanism and other moving parts to ensure the winch is ready for use.
19. Stick self adhesive instruction label supplied in cab.

## OPERATING INSTRUCTIONS

PLEASE PASS THESE INSTRUCTIONS ONTO VEHICLE USER

### IMPORTANT NOTE

The worm and wheel set used in this winch is a strong and reliable unit but must be run-in as follows:-

Run the winch lightly loaded (or no-load) for approximately one hour, after which the load should be increased gradually, preferably over one or two hours, to full load.

## **Use Shear Pin 5095 -A4 Only**

### WINCHING IS POTENTIALLY DANGEROUS

#### OBSERVE THE FOLLOWING

#### SAFETY IN WINCHING

1. Always use a well maintained recommended rope.
2. Always use a brass shear pin in the drive line as specified on mounting plate.
3. If the engine is to be cranked with the starting handle, the steel pin supplied with the winch kit should be fitted. Remove this pin after this operation.
4. Always stand at least 3 metres (10 ft) from the winch. If the vehicle is being moved ensure that this distance is maintained.
5. DO NOT stand on or wrap rope around hand or body. When the rope is under tension do not step over the rope from the capstan to the anchor or load.
6. If single handed winching is to be attempted, an emergency engine stop button fitted to the front of the vehicle is recommended.

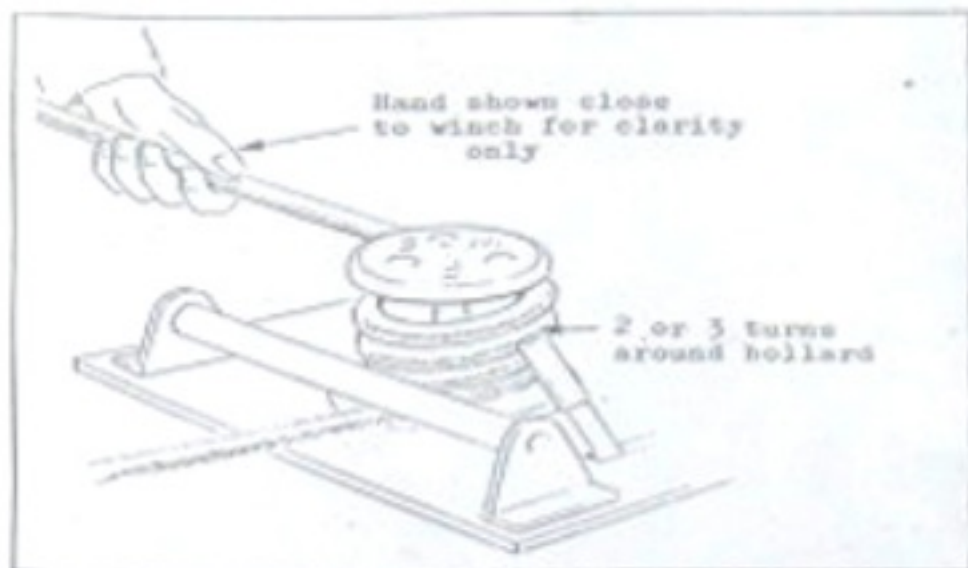
FWE Capstan Winches are built using good quality materials and have been fully tested to give many years of useful work.

The winch is driven directly from the engine crankshaft, and designed for a maximum pull of 4000 lbf (1815 kgf). The maximum pull being governed by a brass shear pin in the winch drive.

The most suitable rope to use is Polyester/Terylene 20mm dia 16 plait with a breaking strain of 7500 kgf (16530 lbf).

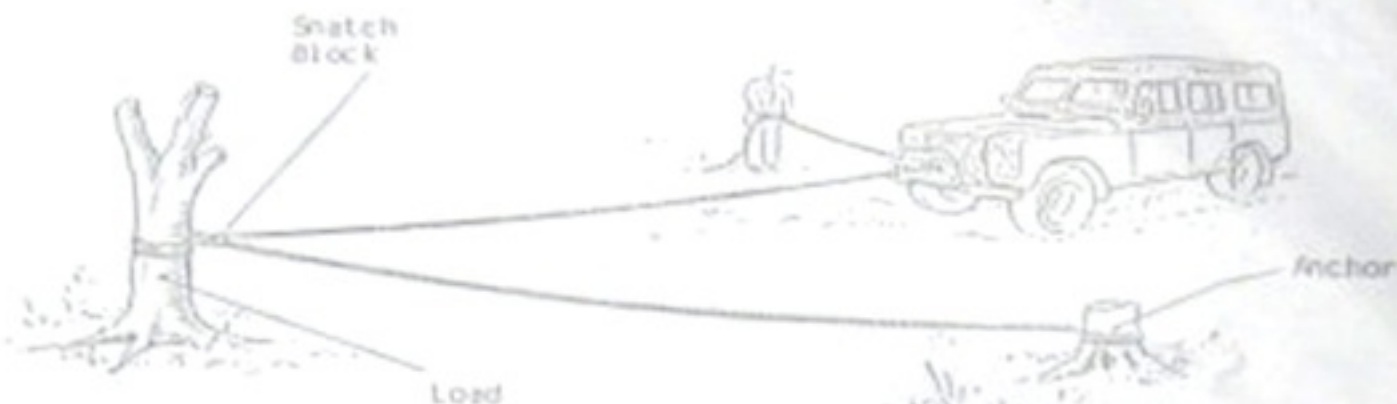
WINCHING PROCEDURE - It is recommended that winching operations should be carried out by two or more people.

1. Secure one end of the rope to the object being pulled or a suitable anchor if the vehicle is being moved.
2. Pass the other end of the rope UNDER the front roller. The roller can be partly removed to assist this operating by removing the roller retaining pin and sliding the roller sideways to the right, replace roller and ensure that the retaining pin is in position before commencing winching. Take two or three turns around the bollard (barrel) (depending on line pull required) in an anticlockwise direction when looking down on the winch. See Sketch below. Two turns are sufficient for light loads, but three turns are required for heavier pulls up to the capacity of the winch.



3. Start engine, engage the winch by pulling the operating lever forward with a firm action and then adjust engine speed to 800-1200 RPM. The maximum recommended for the winch is 1500 RPM.
4. Pick up the free end of the rope at least 3 metres (10 ft) from the winch and pull the rope this will cause the winch to start pulling.
5. When the winching operation is complete, relax the load on the free end of the rope, and if the rope between the capstan and load or anchor is still under tension, drive the vehicle forward to release the tension.
6. Switch off engine and remove the rope from the capstan.
7. OVERLOAD PROTECTION - If the winch is overloaded the shear pin will shear. To replace shear pin, move vehicle forward to release tension in rope. If this is not possible, secure load if necessary, switch off engine. Then standing at least 3 metres (10 ft) from winch, flick rope over the top of the bollard (barrel) to release the tension. Move operating lever to the disengaged position. Unscrew broken shear pin through the aperture in the mounting plate. Replace shear pin with spare carried on the mounting plate.

8. Should you require greater pulling than the winch rating, this can be obtained with the use of a snatch block. Fix the snatch block to the load, pass the winch rope through the snatch block pulley and preferably fix the end of the rope to a tree or some similar good anchor. See sketch below.



9. **NOTE**  
If the engine is to be cranked with the starting handle, the steel pin supplied with the winch kit should be fitted. Remove this pin after this operation.

#### MAINTENANCE

1. Check the oil level before winching and top up if necessary.
2. Keep the shaft and operating mechanism clean and lightly greased.
3. Change oil annually or every 100 hours winching, whichever is the shorter.
4. Occasionally check bolts for tightness.
5. Check rope for fraying or damage.

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