Two speed winches

Model 40

The Lewmar Range of two speed winches offer progressively sized winches with carefully optimised power ratios to fulfil any requirement as a sheet or halyard winch on yachts from 25' to 40' plus.

Their unique drum design, freewheel mechanism and balanced gear ratios ensure very rapid tailing and effortless final sheet trimming.

Two Speed Winch Range
Models 16 25 40 43

Material Specifications

Drum
High tensile chrome plated Marine Bronze.
High Tensile Aluminium alloy – hard anodised.
Stainless steel (Model 40 and 43).

Centre Stems
Marine Bronze

Centre Spindle
316 type stainless steel.

Bearings
Precision ground 316 type stainless steel roller bearings in moulded non corroding bearing cage.

Gears
Aluminium bronze or 316 type stainless steel.

Gear Shafts
316 type stainless steel.

Pawls
Sintered stainless steel.

Pawl Springs
316 type stainless steel.

Drum Retaining Circlip
Stainless steel.

Drum Top Cap
Chrome plated bronze or stainless steel.

Mounting
All winches **must** be mounted using the correct size and type of retaining bolts.

Having decided on the correct winch position the drum must be removed as detailed in the maintenance instructions for mounting. The winch must be mounted on a FLAT CLEAN surface.

The hole centres for the winch retaining bolts must be marked off and drilled separately. The winch should be bedded on a LIGHT coating of sealing compound to avoid leakage.

The winch retaining fastenings must be securely tightened (but not overtightened).

Operation
The winches are of the two speed type and have one HIGH GEAR (Direct Drive) and one LOW GEAR (Geared Drive).

The sheet or halyard is wrapped onto the drum in a clockwise direction starting with the lead-in turn low on the drum and adding sufficient turns to almost fill the roughened drum section. When tailing in loose sheet or halyard it is an advantage to use only one or two turns for high speed tailing and wrap additional turns as the load increases.

HIGH GEAR is engaged when the handle is rotated in a CLOCKWISE direction.

LOW GEAR is engaged when the handle is turned in an ANTI CLOCKWISE direction.

Handles
All winches accept any standard "International" handle (Lewmar red grip handle).

Maintenance
For satisfactory long term performance and product life these winches must be given the routine and full maintenance procedures described on the individual maintenance leaflets.

Service and Spares
Full service facilities for Lewmar winches are provided at our Factory, Subsidiary Companies, and by our Distributors and service centres world wide. A full listing is provided in this manual.

Spares kits for each winch are available and are listed on the individual maintenance leaflets.

Warranty
All products are fully guaranteed against defects of materials and workmanship. Full details are provided in this manual. Any warranty expressed or implied is ineffective unless the winch has been installed, used and regularly serviced in accordance with our instructions.

Mounting Details
5 x 5/16" c'sk head bolts on 4.125" P.C.D.
5 x 8 mm c'sk head bolts on 105 mm P.C.D.

Spare Parts Kits
Model 40
Part No 19740400
Contents
1 x Circlip B2075
4 x Spring Pt No 1260/7
4 x Pawl Pt No 1260/8
1 x Washer Pt No 1260/9
2 x Pawl Pt No 15001012
1 x Tab washer Pt No 1260/19

Pricing
Parts pricing is subject to change. Apply to your nearest Lewmar office or Distributor for current price lists.

Lewmar Marine Limited
Southmoor Lane,
Havant, Hants PO9 1JJ
tel Havant (070 12) 71841-5

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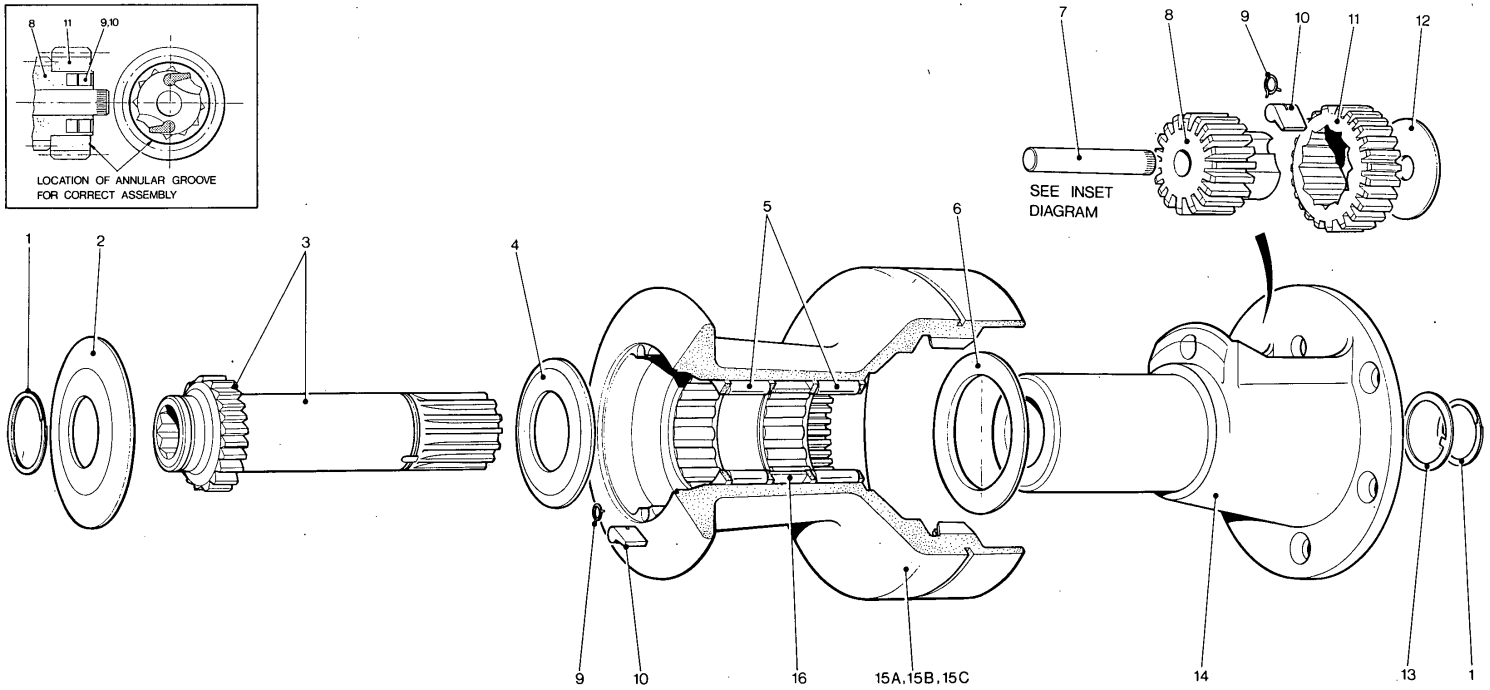

Parts list

Item Number	Part Number	Description	No. Off
1	B2075	Circlip, Spirolox	2
2	15010006	Cap	1
3	1260/SA1	Spindle Assembly	1
4	1300/19	Washer	1
5	1260/SA2	Cage Assembly	2
6	1260/10	Drum Washer	1
7	1260/6	Gear Spindle	1
8	1260/4	Pawl Gear	1
9	1260/7	Spring	4
10	1260/8	Pawl	4
11	1260/5	Ratchet Gear	1
12	1260/9	Gear Washer	1
13	1260/19	Tab Washer	1
14	1260/1	Centre Stem	1
15A	1260/2	Drum, Bronze	1
15B	1255/2	Drum, Alloy	1
15C	1360/2	Drum, Stainless Steel	1
16	1260/11	Tube Spacer	1

Maintenance.
A Remove circlip (1) using a small screwdriver or knife blade.
B Lift drum (15) and cover plate (2) from centre stem (14).
C Remove cover plate (2) from drum (15).

The winch is now ready for routine monthly maintenance.

D Clean off excess grease and salt deposits from bearing surface of drum (15) centre stem (14) and roller bearings (5).
E Check free operation of pawls (10) in upper part of drum.
F Check free operation of ratchet gear assembly (parts 7-12) by rotating large gear.
G Check free rotation of spindle (3) in centre stem (14).
H If satisfactory proceed with routine maintenance. If not continue to **Full Annual Service.**
I Lightly grease the bore of the drum (15) and roller bearings (5).
J Lightly oil ratchet gear assembly assembly (7-12) and centre spindle (3).
K Apply grease sparingly to gear teeth of ratchet assembly (7-12).
L Lightly oil pawls (10).
M Reassemble drum (15) to centre stem (14) by introducing drum over centre stem and holding top pawls in the open position to facilitate engagement with the spindle ratchet track.
N Rotate drum to check freedom of pawl movement and correct engagement.
O Replace top cap.
P Replace circlip (1) by entering one end into groove and winding circlip into place.
Q Using handle check free operation of winch and correct engagement of pawls.

Full Annual Service.
R To completely dismantle the winch the mounting bolts must be removed and the winch lifted from the deck.
S Dismantle as steps A - C.
T Remove two pawls (10) and two pawl springs (9) from drum.
U Support the centre stem assembly (14) on its base on a firm structure (work bench etc.). Ensure the lower exit of bearing spindle (7) is not covered.
V Using a flat ended drift tap out the bearing spindle DOWNWARDS.
W Remove the ratchet gear assembly (8-12).
X Separate the upper and lower gears (8) and (11) and cover plate (12).
Y Remove two pawls (10) and two springs (9) from ratchet gear (8).
Z Remove lower circlip (1) and tab washer (13) with a small screwdriver or knife blade.
A1 Withdraw spindle (3) from centre stem (14).
B1 Withdraw washer (6) roller bearings (5) spacer (16) and drum washer (4) from centre stem (14).
C1 Carefully wash drum, centre stem, spindle, roller bearings, gears, washers, pawls and pawl springs.
D1 Lightly grease drum bore, roller bearings, centre stem bearing area and spindle.
E1 Slide drum washer (6) roller bearings (5) spacer (16) and washer (4) onto centre stem (14). Ensure that roller bearings (5) are separated by spacer (16).
F1 Insert spindle (3) and replace tab washer (3) and lower circlip (1), making sure that Tab engages in slot in bottom of spindle.
G1 Replace two pawls (10) and springs (9) in ratchet gear (8) lightly oil.
H1 Reassemble the upper and lower ratchet gears (8-11) noting the location of the annular groove for correct assembly (see sketch). Put the washer (12) in place.
I1 Support the centre stem on the gear aperture shoulder and insert the ratchet assembly (8-12) into engagement with the spindle (3).
J1 Insert the gear spindle (7) into place and engage with the ratchet gear assembly (8-12). Ensure correct line up.
K1 With drift tap the gear spindle into place.
L1 Reassemble and check winch as per points I - Q.
M1 If winch fails to perform correctly recheck servicing technique or contact your nearest Lewmar Service point.

Notes
A When dismantling winch, parts removed should be placed carefully on a clean piece of non-fluffy cloth to avoid loss.
B Lubrication:
Grease - Use Lewmar Grease (7385) or equivalent. (Lubriplate Marine Lube 'A' etc.)
Oil — Use light machine oil (3 in 1 or equivalent).
C Washing - Use Kerosene (Paraffin)
D Cleaning — Use clean non-fluffy cloth.