2ZE 02138
2ZE 05806

ENFIELD

Z-DRIVE TRANSOM UNIT

SERVICE MANUAL AND PARTS LIST

ENFIELD INDUSTRIAL ENGINES LIMITED
MARINE DIVISION
SOMERTON WORKS
COWES
ISLE OF WIGHT
ENGLAND

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Sales and Service Enquiries should be directed to:

ENFIELD INDUSTRIAL ENGINES LIMITED
MARINE DIVISION

CABLES: 'DIESELS' COWES

COWES 4711

0983

292167

DESCRIPTION

The ENFIELD "Z-DRIVE" transom unit is a transom mounted drive unit incorporating a reverse and reduction gear. It is suitable for adaption to either petrol or diesel engines within its power capacity.

Installation is easily accomplished, the standard mounting plate being arranged to suit a transom raked aft at 12° to the vertical. Where the transom is at a different angle an adaptor block is used.

Drive

Power from the engine is supplied through a flexible rubber-metal coupling to the drive unit input shaft. Two constant-velocity universal joints transmit the power to the top bevel gears and thence via the floating mainshaft to the gearshift bevels on the propeller shaft.

Propeller Rotation

The standard propeller rotation is left hand, i.e. anti-clockwise looking forward when in forward gear. Rotation can be in the oppsoite direction so that contra-rotating twin units may be used.

Engine Rotation

The "Z-DRIVE" transom unit is only to be used on engines which rotate anti-clockwise when viewed from aft.

Gear Change

An external lever, on the port side of the unit, controls the gear change by an internal linkage to the sliding dog clutch on the propeller shaft. A lock comes into operation automatically in the astern gear position to prevent the unit kicking up under reverse propeller thrust. The external gear change lever is arranged to suit a single lever control cable and quick release cable fittings are embodied. Gear positions are forward, neutral and reverse.

Lubrication

The unit is filled with oil, up to the centre line of the input shaft. The filler plug is situated on the upper housing top cover, and the level plug is on the port side of the upper housing.

Steering

Steering is by a tiller arm which is adaptable to either wire rope and pulleys or a proprietary push pull system.

DATA

Power Capacity:	
* Maximum Petrol Engine Input	130 bhp @ 5,000 rpm
Maximum Diesel Engine Input	78 bhp @ 4,500 rpm
Weight	90 lbs. (41 kg.)
Reduction Gear Ratio	1.65 : 1
Oil Capacity	8½ pints (4.8 l.)
Type of Lubricant	E.P. 90 Gear Oil
Propellers: See Accessories Section	
Articulation:	
Rearward lift to clear underwater obstructions	55°
Steering–port and starboard of mid-position	34° (This corresponds to 30° movement of the tiller arm)
Athwartships rotation to parked position . .	135°
Tilt of unit on transom plate	Adjustable to any one of three positions at 6° intervals

The Unit Serial Number, consisting of eight digits commencing 2ZE, is to be found stamped on the Port side of the Drive Housing, this number should be quoted with all Spares and Service queries.

* for pleasure use Max HP = 2.5 per 100 RPM

3000 RPM = 30 × 2.5 = 75 HP

∴ 4,500 RPM = 45 × 2.5 = 112 HP

5,000 " = 50 × 2.5 = 125 HP

5500 " = 55 × 2.5 = 138 HP

INSTALLATION DETAILS

Installation of Drive Unit

The assembly is bolted through the transom which should be prepared as shown in Figs. 1, 2 and 3. It will also be noted that suitable reinforcing must be introduced to the transom. The drive unit is arranged to suit a standard transom angle of 12° although it is possible to accommodate other angles by making up a suitable adaptor block.

Generally speaking, it is recommended that the cavitation plate should be located within 0–¾ inches (0 to 19 mm) below the keel (See Fig. 2).

The outboard unit should be installed initially with the locating tilt catch rod in the centre hole and the propeller shaft horizontal. A small angular adjustment of the propeller shaft with the rod in the other two holes is possible if it is found necessary to alter the trim. With fast single engine craft, where speeds over 30 mph (48 kph) are anticipated, it may be advisable to locate the engine and drive about 1¼ inches (31.75 mm) off centre towards the port side to minimise torque reaction.

Engine Drive Shaft

Depending upon the mounting distance between the engine and "Z-DRIVE" transom unit, a balanced tubular drive shaft, (See page 19 and refer) conforming to the following dimensions, may be used.

3 ins. dia. Minimum length 1 ft. 6 ins. (457.2 mm)

Maximum length 4 ft. 10 ins. (1473.2 mm)

Steering Gear

The tiller arm is adaptable to either a wire rope and pulley system. or a proprietary push pull cable system, with 9 ins. (228 mm) travel. The special steering linkage does not have to be disconnected from the drive before swivelling to the parked position or when unit is tilted.

Remote Control

Remote control of both engine throttle and gear change is by means of a "single lever" control which is available as an optional extra with cable lengths up to 30 feet (9.14 metres) and all necessary fittings. For full details of remote control cable kits available refer to Accessories Section.

Electrolytic Corrosion

As the unit is of aluminium alloy construction, and copper alloys are commonly used in wooden boat construction, some trouble due to galvanic action should be anticipated unless precautions are taken.

It is recommended that an anti-fouling paint as used with aluminium hulls and specifically free from copper be applied to the bottom of the boat. This can also be used on the underwater part of the "Z-DRIVE" transom unit. Paints based on red lead should not be used.

A zinc sacrificial block (81) is provided on the underside of the transom plate. The purpose of this block is to attract electrolytic erosion which would otherwise attack other "Z-DRIVE" components. This sacrificial block should never be painted. As it is the normal function of the sacrificial block to erode, it should be replaced periodically, as necessary. A zinc ring (138) is also fitted forward of the propeller.

A master switch should be fitted in the earthed lead between the battery and starter motor to isolate the engine when the boat is out of use. Care should be taken to avoid earthing the unit to the engine or other metal work with the mounting bolts, controls, steering gear, etc.

When connecting radio, echo sounding, equipment, etc., check polarity of engine earth.

Fig. 1

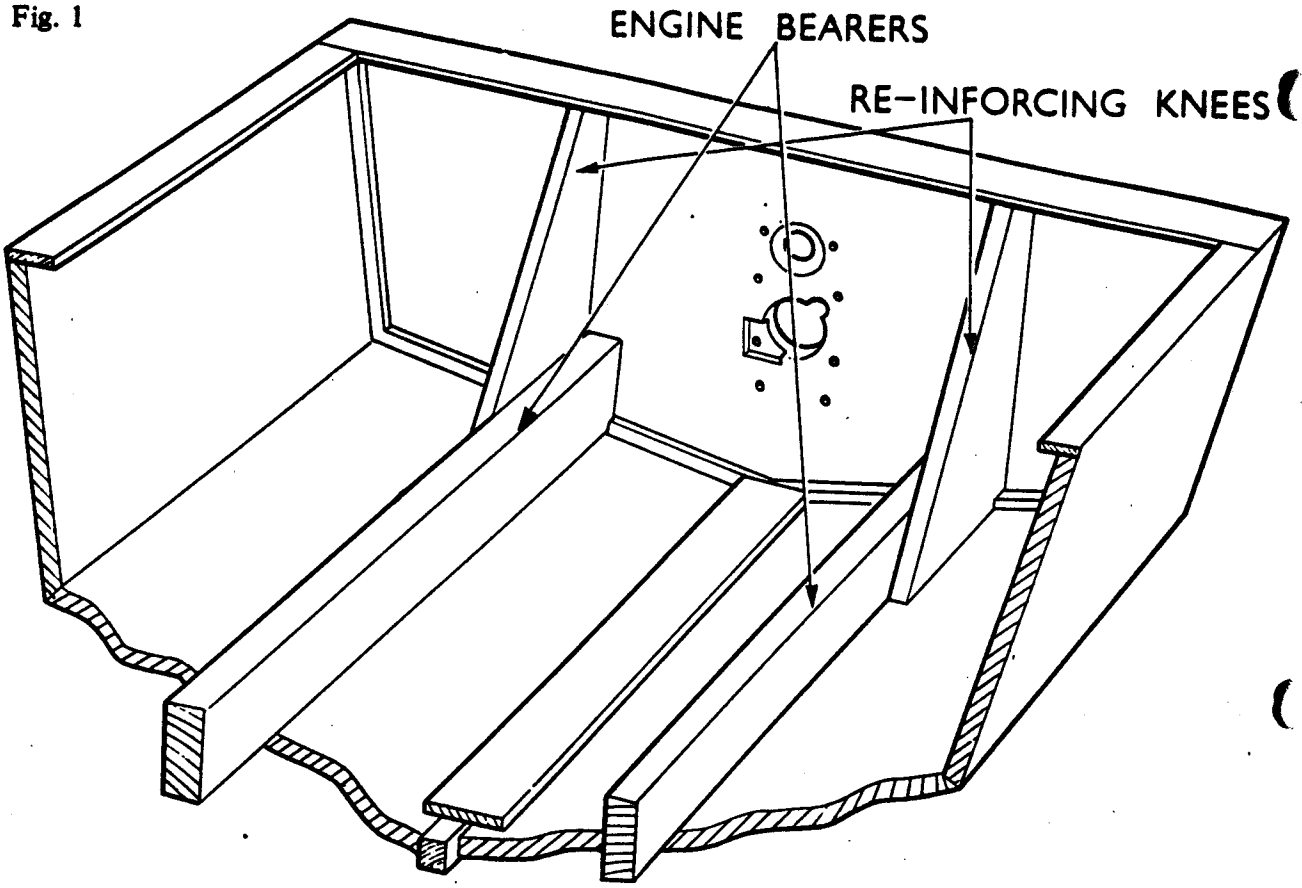
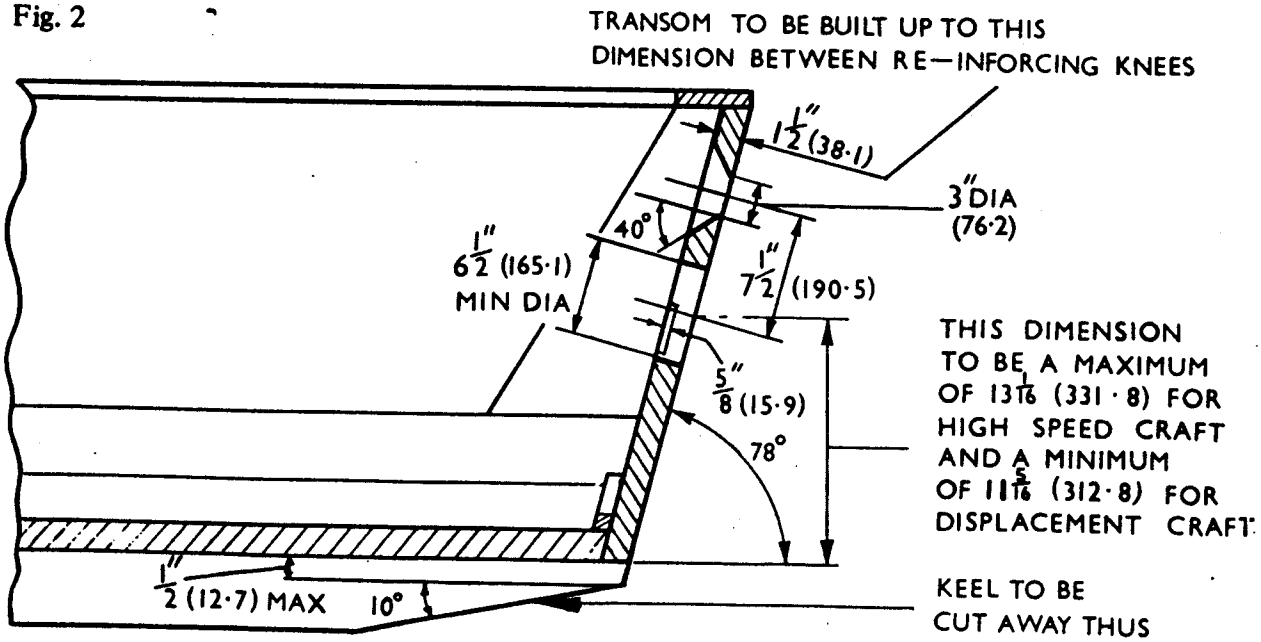
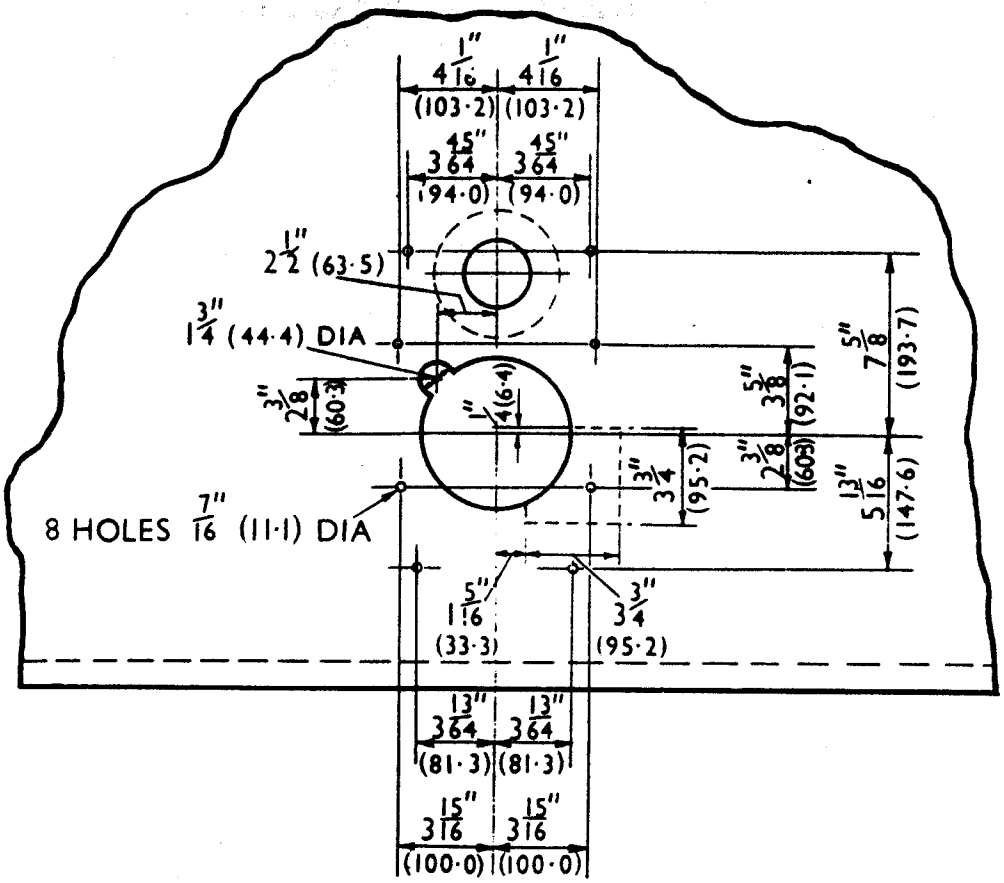


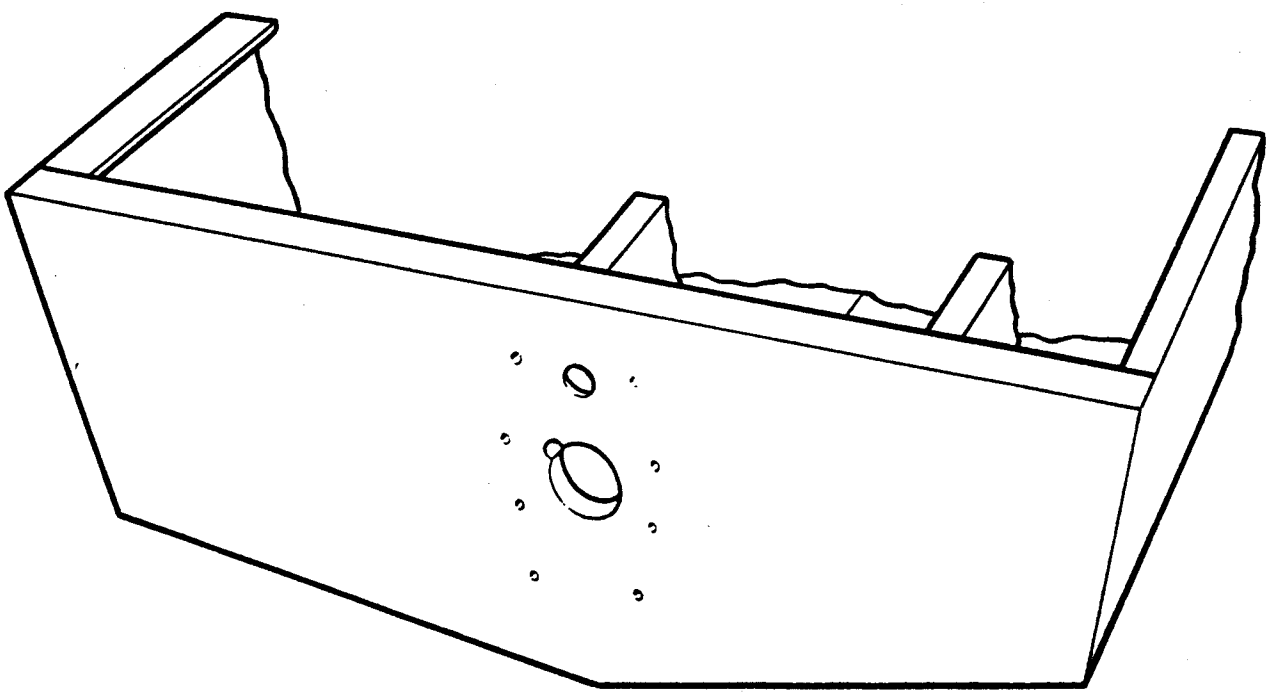
Fig. 2



IF TRANSOM DOES NOT FORM AN ANGLE OF BETWEEN 74° AND 78° A WEDGE SHAPED BLOCK MUST BE FITTED

Fig. 3





TRANSOM PLATE TO BE USED AS A TEMPLATE
TO DRILL MOUNTING AND STEERING HOLES

STEERING HOLE TO BE RECESSED AT SIDES ON INSIDE OF
TRANSOM TO ALLOW FOR MOVEMENT OF STEERING TUBE

OVERHAUL SECTION

Introduction

Disassembly of the "Z-DRIVE" transom unit for inspection may be accomplished by following the procedures outlined below: –

1. Drive Housing
   (a) Lower
   (b) Upper
2. Transom Plate and Swivel

When the disassembly procedure for any given section has been completed, any further disassembly indicated by inspection may then be carried out by following in detail the necessary additional procedures.

When removing or refirring ball and roller bearings, it is recommended that the housings, etc., should be heated in water to maintain manufacturing tolerances, and so avoid possible loosening of the bearings in the housings.

When reassembling the unit, all gaskets and 'O' rings must be removed. Dirt is a major cause of wear and failure: therefore, conduct all maintenance operations in an area which is as clear and clean as possible. Place the disassembled parts on a clean surface and if they are to remain for an extended period of time, cover all exposed surfaces, which can be contaminated by salt air, etc.

For parts identification numbers refer to the illustrations contained in the Parts List section.

The following instructions assume that the unit has been removed from the craft, for ease of dismantling the unit can be split into two parts, these are. (1) the Drive Housing and (2) the Transom Plate and Swivel. To accomplish this the following procedure should be adopted:-

(1) Completely drain the lubricating oil from the unit by removing the drain plug (136) situated in the bottom of the skeg.

(2) Loosen the socket screw (68), remove the steering arm link pin (67) and the two washers (69) this allows the steering link assembly to be removed. By removing the four screws (80) the steering arm ball joint and steering assembly can be removed.

(3) Loosen the socket screws (53), loosen the gaiter clips (116) and (117), remove the fork top pins (51). The drive housing can now be drawn away from the transom plate and swivel assembly.

Reassembly may be accomplished by the reversal of the dismantling procedure. With the unit in an upright position remove the lub. oil filler plug (98) and the oil level plug (93) and washer (98), then slowly refill with E.P. 90 lubricating oil, until oil emerges from the level hole. The capacity of the unit is 8½ pints (4.8 litre).

I.A. To Disassemble the Drive Housing (Lower)

1. Knock back the tabs on the locking washer (142) and turning anti-clockwise remove the propeller shaft spinner nut (143). Withdraw the propeller (140) and distance piece (141) from the propeller shaft (122).
2. Remove the clutch operating lever pivot pin (175) and sealing washer (176) from the skeg. Remove the two socket screws (139) and withdraw the zinc ring (138) from within the boss surrounding the propeller shaft.
3. Release and remove the ten socket screws (85) and sealing washers (86) which secure the skeg (84) to the housing (83) and remove the skeg complete with its seal (92) (where fitted).
4. Remove the split pin (177) from this gear change operating rod (172) (172A) in the case of R.H. rotation units – drawing section F – F refers Plate 'A') remove clutch operating level (174) together with the dog clutch operating fork (178).
5. Lift the propeller shaft (122) complete with bearings, bevel gears, thrust washers, seal and dog clutch from the housing.
6. Withdraw the seal circlip (135) and seal (131) complete with housing (132) from the rear end of the propeller shaft. Using a suitable extractor remove the ball bearing (130) from the rear end of the propeller shaft. It will now be possible to remove the rear thrust washer (128), rear bevel gear (127), rear bevel gear bush (123), dog clutch (129), front bevel gear (127) and front thrust washer (128) from the propeller shaft. Remove the front

bearing circlip (126) and bearing spacer (125). Press off the front bearing (124) and remove the second spacer (125). circlip (126) and front bevel gear bush from the propeller shaft.

7. Loosen clamp screw (155) and remove the gear change operating lever (154) and key (153) – See section C – C Plate 'B' illustrated.
8. Remove the plug (160), washer (161). spring (159) and gear change locking plunger (158), from the gear change lever shaft bearing (144) or in the case of R.H. rotation units (144A). Remove circlip (152) and thrust washer (151) from the gear change lever shaft.
9. Release and remove the six screws (146). sealing washers (147) and plain washers (148) securing the gear change lever shaft bearing (144) to the housing. Remove the bearing and joint (145) from its location.
10. Withdraw the pin (171) which connects the operating lever (156) to the astern lock operating fork (168). See section D – D Plate 'B'.
11. Disconnect the gear change operating rod (172) or (172A) on R.H. rotation units from the gear change lever (156) by removing the securing pin (173) and withdraw the operating rod and lever from the unit.
12. Remove the 'O' ring (150) and circlip (157) from the gear change lever shaft (149). The shaft can now be pressed out of the gear change lever and the woodruff key (153) removed. (Note – Position of lever reversed on R.H. rotation units).
13. Withdraw the astern lockpin (166) and fork (168) from the lockpin bush (162). Remove the split pin (170), washer (169) and fork (168) from the astern lockpin.
14. Release and remove the two setscrews (120), washers (121) and vertical drive shaft retainer (119) from the housing. Using a suitable extractor remove the bottom bevel gear (118) from the vertical drive shaft and bearings.
15. The vertical drive shaft (113) can now be removed care being taken to prevent the removable collar (114) from falling and becoming lodged in the housing.
16. With a suitable extractor remove the roller bearing (88) and ball bearing (89) from the bottom of the housing. Disassembly of the drive housing (lower) (comprising the sleg, bottom bevel gears and the lower housing) is now complete. Before inspection and reassembly all parts should be thoroughly washed in clean paraffin. Carefully inspect all components for wear, pitting and cracks, etc. Renew all parts considered unserviceable

I.A. To Reassemble the Drive Housing (Lower)

1. Using a suitable press, fit the bottom bevel drive gear ball bearing (89) and roller bearing (88) to the housing (83) ensuring that each bearing is fitted in to the full extent of its recess.
2. Refit the vertical drive shaft (113) with collar (114) into the drive housing and using a press, fit the bottom bevel drive gear (118) into the roller bearing (88) and ball bearing (89).
3. Fit the vertical drive shaft retainer (119) to the housing and secure with the two setscrews (120) and washers (121).
4. Fit the 'O' ring (164) into the astern lock pin bush (162) and refit the bush and sealing washer (163) into the housing (83). Refit the fork (168) and washer (169) to the astern lock pin (166) and secure with split pin (170). Assemble the lock pin into the bush.
5. Fit the woodruff key (153) to the inner end of the gear change shaft (149) and using a suitable press, assemble the gear change lever (156) to the shaft and secure with the circlip (157).
6. Place the gear change operating rod (172) (172A R.H. rotation unit), in position in the housing and connect the gear change lever (156) to the rod with the pin (173).

   N.B. As the assembly of this item varies according to direction of rotation it should be noted that the above instructions refer to the L.H. rotation unit and is illustrated in the main drawing whilst the assembly of the R.H. rotation unit is illustrated in Section F – F Plate 'B'.
7. Connect the gear change lever to the astern lock operating fork (168) with the pin (171).
8. Fit the 'O' ring (150) to the gear change

lever shaft and using a new joint (145) fit the gear change shaft bearing (144) (144A for R.H. rotation) to the housing and secure with the six screws (146), sealing washers (147) and plain washers (148).

N.B. Refer to illustration for correct method of fitment of the gear change shaft bearing (144) and (144A) as this varies with left or right hand rotation units.

9. Assemble the thrust washer (151), circlip (152) and woodruff key (153) to the gear change shaft.
10. Fit the locking plunger (158), spring (159), washer (161) and plug (160) to the rear change shaft bearing (144) or (144A) on R.H. rotation units.
11. Fit the key (153) and the gear change operating lever (154) to the shaft (149) and secure with the clamp screw (155).
    N.B. It should be noted that on L.H. rotation unit the lever will point aft, whereas on a R.H. one it will point forward; two key-ways are provided on the shaft for this purpose.
12. Onto the front end of the propeller shaft (122) assemble the front bevel gear bush (123), the rearmost of the two circlips (126) and bearing spacers (125) then press on the front bearing (124), fit the foremost spacer (125) and secure with the second circlip.
    Onto the rear end of the shaft assemble the front bevel gear (127), the dog clutch (129), the rear bevel gear (127) and the rear thrust washer (128), press on the rear bearing (130) and fit the propeller shaft seal (131), complete with housing (132) and 'O' ring (133).
13. To ensure that the bearing (130) is correctly positioned, place the assembled propeller shaft in its location in the housing ensuring that the seal housing locating pin (134) engages with the locating hole in the seal housing (132). Check that clearance exists between the front face of the bearing and the rear face of the rear bevel gear thrust washer (128), and also between the rear face of the bearing and the front face of the seal housing (132).
14. With the propeller shaft assembly correctly positioned, check the backlash between the bottom bevel drive gear (118) and both propeller shaft bevel gears (127). Clearance between these gears should be within the limit of .008 in to .012 in (.20/.30 mm). Should the backlash require adjustment, thrust washers (128) of the required thickness should be fitted to bring the backlash within the above limits.
15. When the dog clutch operating fork (178) in the groove of the dog clutch, place the clutch operating lever (174) in position. Connect it to the gear change operating rod (172) (172a) for R.H. rotation units and secure with the split-pin (177).
16. Fit a new rubber sealing strip (92) to the skeg (84) and ensure that it is correctly located in its groove. From unit no. 2Z200479 the sealing strip (92) has been deleted. The faces of the skeg and housing are machined flat. On these units when re-fitting the skeg a suitable jointing compound should be used. Place the skeg (84) in position on the housing ensuring that the tabs on the thrust washers (128) locate in their respective slots in the skeg. Secure the skeg with the ten socket screws (85) and sealing washers (86). Fit the rear seal housing retaining circlip (135).
17. Fit the clutch operating lever pivot pin (175) and washer (176) to the skeg ensuring that it is correctly located in the clutch operating lever (174).
18. Replace the zinc ring (138) in the boss surrounding the propeller shaft and secure with two socket screws (139).
19. Refit the distance piece (141), propeller (140), lock washer (142) and spinner nut (143). With the spinner effectively tightened, secure with the locking washer tabs,
20. Refill the unit to the correct level with oil. Oil capacity of the unit is 8½ pints (4.8 litres). E.P. 90 gear oil should be used.

1.B. To Disassemble the Drive Housing (Upper)

1. Remove the eight screws (97) securing the top cover (95) to the housing, and remove the top cover and joint (96).

2. Remove the six socket screws (110) and spring washers (111) which retain the bevel gear bearing housing (106) to the housing. Withdraw the bearing housing and joint (109) from the drive housing.
3. Using a suitable extractor, carefully remove the bevel gear (105), roller bearing (107) and ball bearing (108) from the bevel gear bearing housing (106).
4. Remove the circlip (104) from the universal joint and input shaft assembly (100). Using a suitable press, remove the universal joint from its bearing (90).
5. Remove the two circlips (91) from the housing and press the universal joint shaft bearing (90) from the housing.
6. Withdraw the vertical drive shaft bevel gear (112). Before the bearings (88 and 89) can be removed, the vertical drive shaft (113) and collar (114) must be withdrawn. This can be accomplished by dismantling the lower housing as described in the earlier section. The vertical drive shaft can be withdrawn and using a suitable extractor, remove the vertical drive shaft bevel gear (112), roller bearing (88), ball bearing (89) and collar (114) from the housing.
7. Loosen socket screws (53) from the swivel fork (50). Remove the fork centre pin (52) and thrust washers (54). The swivel fork can now be removed.
8. If renewal of the centre swivel pin bushes (87) is intended, press out in the normal manner.

Thoroughly clean and inspect all components for wear, pitting and cracks, etc. renew worn or defective parts.

1.B. To Reassemble the Drive Housing (Upper)

1. If the centre swivel bushes (87) have been removed for renewal, fit new bushes.
2. Refit the swivel fork (50) using new thrust washers (54) and secure centre pin (52) by the socket screws.
3. Fit the ball bearing (89) roller bearing (88) to the housing ensuring that the bearings are fitted to the full extent of their recesses. Replace the vertical drive shaft (113) and ensure that collar (114) is correctly positioned and reassemble the lower housings as described in the earlier section. Refit the vertical drive shaft bevel gear (112).
4. Fit the inner universal joint shaft bearing circlip (91) to the housing and fit in the universal joint shaft bearing (90). Fit the second of the circlips (91).
5. Press the universal joint and input shaft assembly (100) into its bearing (90) and secure with the circlip (104).
6. Fit the ball bearing (108), roller bearing (107) and bevel gear (105) to the bevel gear housing (106) ensuring that the races fit in to the full extent of their recesses.
7. Fit the bevel gear bearing housing (106) to the housing (83) using a new joint (109) and secure with the six socket screws (110) and spring washers (111). With the aid of a feeler gauge, check the backlash between the top bevel gear (105) and the vertical drive shaft bevel gear (112). Clearance between these two gears should be within the limit of .008 in to .012 in (.20/.30 mm). Adjustments to the clearances is obtained by the addition of extra joints (109) to the bevel gear housing (106).
8. Assemble the top cover (95), using a new joint (96) to the housing and secure with the eight screws (97).

2. Disassembly of the Transom Plate and Swivel

1. Dismantle the input coupling (42) from the input shaft (41) by removing the two setscrews (43), plain washers (45) and lock washers (44).
2. Remove the six socket screws (40) retaining the wormwheel (39) to the swivel plate hub (28) and withdraw the wormwheel from the hub over the input shaft (41).
3. Remove the worm drive housing (18) from the transom plate (1) by removing the seven socket screws (17) retaining the housing to the plate.
4. Drive out pin (23) to release the worm from the shaft (20). Withdraw the shaft, together with the tube assembly (24) and pin (25). Remove the worm and two thrust washers (22) from the housing.
5. Release the swivel plate locking plunger (7) and swivel the plate (10) until the bottom lug on the plate is clear of the corresponding lug on the bottom of the

transom plate (1). The swivel plate and hub assembly can now be drawn from the transom plate. Remove the nylon bearing strips (34) and thrust washer (35).

6. Remove the locking plunger (7) and spring (9) from the transom plate.
7. Remove the six nuts (37) and washers (38) which secure the swivel plate (10) to the swivel plate hub (28). Withdraw the swivel plate from the hub.
8. Remove the input shaft nut (48) and washer (49) from the internal bore of the input shaft (41). Using a soft drift, carefully drive out the universal joint (47) from the input shaft. Using a suitable press, remove the input shaft from its bearings (29) and (30). Remove the 'O' rings (32) and (33) from their grooves on the hub.
9. After removal of the circlip (31) press out the bearings (29) and (30) and seal (46) from the swivel plate hub (28).
10. Remove the four screws (62) and remove the steering arm ball joint cap (61) from the cup (59). This allows the steering arm (63) to be removed. Remove the four screws (60), the cup can now be removed from the transom plate.
11. The steering link assembly removed in the Introduction Section can be disassembled as follows:- loosen socket screw (75) and remove pin (74) and washers (76). This operation parts the upper link (70) from the lower link (73). Then unscrew the ball (77) from the lower link to release the outer ball joint cup (79).
12. If renewal of the swivel fork bushes (11) is intended, press out in the normal manner. Thoroughly clean and inspect all components for wear, pitting and cracks, etc. Renew worn or defective parts.

2. To Reassemble the Transom Plate and Swivel

1. If the swivel fork bushes (11) were removed from the swivel plate (10) during disassembly, new bushes should be fitted.
2. Assemble the swivel plate hub (28) by carefully pressing the ball bearing (30) into the rear end of the hub and secure with the circlip (31). Carefully press the roller bearing (29) into the front end of the hub and fit the input shaft seal (46) to the hub with the lip of the seal facing inwards. Fit new 'O' rings (32 and 33) to the grooves on the hub.
3. Carefully press the input shaft (41) into the hub bearings (29) and (30). Engage the splines of the universal joint (47) with the internal splines of the input shaft (41) and secure them together with the input shaft nut (48) and washer (49).
4. Smear the locking plunger (7) and spring (9) with grease and fit them to the transom plate (1).
5. Fit the swivel plate (10) to the swivel plate hub (28) and secure with the six nuts (37) and washers (38).
   Should the buffer (12) and catch rod (13) have been removed from the swivel plate, these should now be replaced. Replace the stop plate (15) if necessary, noting that this should be fitted on the starboard side on L.H. rotation and port side on R.H. rotation units.
6. Smear the swivel plate face and hub with an anti-scuffing compound and also the internal bore of the transom plate (1). Fit new thrust washer (35) and bearing strips (34) to the swivel hub. Insert the swivel plate and hub assembly into the transom plate and press fully home ensuring that the transom plate breather plug (3) is unobstructed. Turn the swivel plate to the drive position and ensure that the locking plunger (7) engages correctly with the swivel plate.
7. Refit the worm (21) and its two thrust washers (22) into the worm drive housing (18) and insert the worm shaft (20) with tube assembly (24) and pin (25). Secure the worm to the shaft using pin (23).
8. Fit the worm drive housing and shaft assembly (18) to the transom plate (1) and secure with the seven socket screws (17).
9. Assemble the worm wheel (39) to the swivel plate hub (28) and secure with the six socket screws (40).
10. Fit the input shaft coupling (42) to the input shaft (41) and secure with the two setscrews (43), plain washers (45) and tab washers (44).

11. Fit new bushes (71) to the upper steering link (70). Connect the upper and lower links (70) and (73) together, using pin (74) and two washers (76). Secure with socket screw (75). Refit the outer ball joint cup (79) to the ball (77) and screw the ball into the lower link.
12. Assemble the steering arm (63) by first fitting the ball joint cup (59) to the transom plate (1) using the four screws (60). Place the steering arm in position and fit the ball joint cap (61) and secure with the four screws (62).
13. Fit the drive unit to the transom plate assembly.

LUBRICATION AND GENERAL MAINTENANCE

Lubrication

The unit must be filled with oil up to the level plug hole situated on the port side of the unit. The oil filler plug is situated on the top cover.

The oil used should be E.P. 90 Gear Oil. This is the only approved type of lubricant and the use of other types should be avoided.

Oil capacity of the unit is 8½ pints (4.8 litres).

The oil level should be checked every 20 hours running or monthly (whichever is the shorter period).

A close check should be kept for contamination of the oil by water. If the contamination becomes excessive investigate to ascertain the cause.

Oil Changes

It is recommended that an oil change is carried out every 100 operating hours, or, at the end of every season if the unit is operated for less than 100 hours during the season.

Swivelling Gear

The worm and wormwheel should be kept liberally coated with a light grease.

Electrolytic Corrosion

The zinc block (81) fitted on the underside of the transom plate and the zinc ring (138) which is fitted forward of the propeller is to eliminate galvanic action. These will gradually be eaten away and may be easily replaced when necessary. Be sure that this is done when needed.

PARTS LIST

Method of Identifying and Ordering Spare Parts

The Parts List contains the Numbers and Descriptions of all parts comprising the Mark II Z-Drive Transom Unit, together with a Supplementary Section giving those of the Recommended Propellers and other Principal Accessories. (For further details of Accessories, see separate Leaflet).

Identification

Each part contained in the Unit is located in its section in columns headed as follows:-

REF. NO.

Relates the item concerned to its position on the drawing.

S or N.S.

'S' indicates that the item in question is available as a spare part.

'N.S.' indicates that the item is not available as a spare part by itself.

(For various reasons some sub-assemblies or component parts, can ONLY be supplied in the complete assembly. It is therefore necessary, before ordering, to determine whether or not the part required is in fact available separately).

QTY. REQ.

Indicates the total quantity of the particular item in the assembly, or group, in which it is contained.

PART NO. & DESCRIPTION

Is self-explanatory.

REMARKS

Contains supplementary notes and information.

As a guide for use of the parts list, the following examples are given:-

1. Locate the item required and its Ref. No. on the drawing.
2. Locate the Ref. No. in the list; so as to check whether 'S' or 'N.S.' determine quantity, and ascertain part number and description.
   (a) If the part is indicated 'S', then it can be ordered separately.
   e.g. Ref. No. 5 in the Transom Plate and Swivel Section on page 17 is read as: 33432309 Sleeve, Swivel Plate Locking Plunger.
   This is indicated 'S' and, therefore, is available as a spare part.
   (b) If the part is indicated 'N.S.' then it can only be supplied inside its containing assembly.
   e.g. Ref. No. 63 in the Transom Plate and Swivel Section on page 18 is read as: 34161108 Arm, Steering.
   This is indicated 'N.S.' and can ONLY be supplied inside the assembly of which it is part. This assembly is covered by the first number in the next left hand column reading upwards which is: 38636111 Steering Arm Assembly and is the one that should be ordered.

Ordering

When ordering parts it is imperative to quote the Serial Number of the Unit and to specify the Part Number, Description and Quantity of the items required. If in doubt, then the Reference Numbers should also be given to facilitate identification by your Dealer.

The Unit Serial Number will be found stamped on the Port Side of the Drive Housing; it consists of eight digits, commencing 2ZE, and we would again stress the importance of always quoting the number and giving complete information if parts orders are to be promptly expedited.

All enquiries relating to parts and accessories should be addressed to:-

ENFIELD INDUSTRIAL ENGINES LIMITED
MARINE DIVISION
SOMERTON WORKS
COWES
ISLE OF WIGHT
ENGLAND
PHONE: COWES 4711
CABLES: 'DIESELS' COWES

Ref. No.	S or NS	Quantity Required	Part Number and Description	Remarks
			TRANSOM PLATE AND SWIVEL	
-	S	1	37814125 Transom plate and pin assembly, comprising :-	
1	NS	1	37527182 Plate, transom	
2	S	10	32815117 Pin, swivel plate stop	
3	S	1	32114126 Plug, transom plate breather	
4	S	1	36863116 Gasket, transom plate to transom	
5	S	1	33432309 Sleeve, swivel plate locking plunger	
6	S	1	2725499 Circlip, locking plunger sleeve locating	
-	S	1	37811111 Swivel plate locking plunger assembly, comprising :-	
7	NS	1	32723109 Plunger, swivel plate locking	
8	S	1	32815117 Pin, swivel plate plunger stop	
9	S	1	31744128 Spring, swivel plate locking plunger	
-	S	1	710938 Swivel plate assembly, comprising :-	
10	S	1	38167553 Plate, swivel	
11	S	2	2513911 Bush, swivel plate swivel fork top pin	
12	S	1	2634018 Buffer, swivel plate	
13	S	1	32524137 Rod, swivel fork locating catch	
14	S	2	2211284 Nut, swivel fork locating catch rod retaining	
15	S	1	36113133 Plate, swivel plate stop	
16	S	2	2224281 Screw, stop plate to swivel plate	
17	S	7	2222255 Socket screw, worm drive housing to transom plate	
-	S	1	710914 Worm drive housing, worm and shaft assembly, comprising :-	
-	S	1	710951 Worm drive housing and bush assembly, comprising :-	
18	S	1	37522441 Housing, worm drive	
19	S	2	2513089 Bush, worm drive housing	
20	S	1	32456408 Shaft, worm drive	
21	S	1	31173109 Worm	
22	S	2	2513970 Thrust washer, worm drive	
23	S	1	2115261 Pin, worm to shaft	
24	S	1	37442415 Tube assembly, worm driveshaft, comprising :-	
-	NS	1	33281115 Tube, worm driveshaft	
-	NS	1	37442416 Cone, worm driveshaft tube	
25	S	1	2115261 Pin, worm driveshaft tube to driving shaft	
-	S	1	710915 Worm driveshaft cranking handle assembly, comprising :-	
26	NS	1	- Handle, worm driveshaft cranking	
27	S	1	2115442 Pin, worm driveshaft cranking handle	
-	S	1	710947 Transom swivel plate hub and input shaft bearing assembly, comprising :-	
28	S	1	33426381 Hub, swivel plate	
29	S	1	2546106 Bearing, roller, input shaft	
30	S	1	0040020 Bearing, ball, input shaft	
31	S	1	2721790 Circlip, input shaft ball bearing retaining	
32	S	1	2415821 'O' ring, swivel plate hub sealing – Rear	
33	S	1	33824117 'O' ring, swivel plate hub sealing – Front	
34	S	2	36841412 Strip, swivel hub bearing	
35	S	1	33822406 Thrust washer, swivel hub to transom plate	
36	S	6	32532113 Stud, swivel plate hub to swivel plate	
37	S	6	0576064 Nut, swivel plate retaining	
38	S	6	2131041 Washer, plain	
39	S	1	3117?201 Wormwheel	
40	S	6	2222712 Socket screw, wormwheel to transom swivel plate hub	
41	S	1	37466511 Shaft, drive input	
42	S	1	2581215 Coupling, input shaft	
43	S	2	0096635 Setscrew, coupling to input shaft	
44	S	2	36478311 Tabwasher, coupling to input shaft setscrew	
45	S	2	2131043 Washer, plain	
46	S	1	2415507 Oil seal, input shaft	
47	S	1	2584601 Universal joint, input shaft	
48	S	1	33531116 Nut, universal joint to input shaft	
49	S	1	33121412 Washer, universal joint retaining nut	
50	S	1	37378571 Fork, transom drive swivel	
51	S	2	32716119 Pin, swivel fork – Top	
52	S	1	32716121 Pin, swivel fork – Centre	
53	S	4	2221285 Socket screw, swivel fork top and centre pin retaining	

Ref. No.	S or NS	Quantity Required	Part Number and Description	Remarks
54	S	2	33813312 Thrust washer, swivel fork to drive housing	
55	S	1	36671134 Catch, swivel fork locating	
56	S	2	32716123 Pin, locating catch pivot	
57	S	2	2221281 Socket screw, locating catch pivot pin retaining	
58	S	1	31751111 Spring, swivel fork locating catch	
59	S	1	41476002 Cup, steering arm ball joint	
60	S	4	2224931 Screw, steering arm ball cup to transom plate	
61	S	1	33823113 Cap, steering arm ball joint	
62	S	4	2224933 Screw, steering arm ball joint cap to ball joint cup	
-	S	1	38636111 Steering arm assembly, comprising :-	
63	NS	1	34161108 Arm, steering	
64	NS	1	33151311 Ball, steering arm end	
65	NS	1	37374611 Link, steering arm	
66	NS	2	32455124 Pin, steering arm swivel	
67	S	1	32716125 Pin, steering arm to upper steering link	
68	S	1	2221511 Socket screw, steering link pin retaining	
69	S	2	33117417 Washer, steering link pin	
-	S	1	41425716 Steering upper link and bush assembly, comprising :-	
70	NS	1	37378581 Link, steering – Upper	
71	S	4	2513906 Bush, upper steering link	
72	S	1	31812535 Transfer, gear change instruction	
73	S	1	37374601 Link, steering – Lower	
74	S	1	32716125 Pin, lower steering link to upper steering link	
75	S	1	2221511 Socket screw, steering link pin retaining	
76	S	2	33117417 Washer, steering link pin	
77	S	1	32762115 Ball, lower steering link end	
78	S	1	32813107 Cup, steering link ball joint – Inner	
79	S	1	33825111 Cup, steering link ball joint – Outer	
80	S	4	2224282 Screw, outer cup to top bevel gear bearing housing	
81	S	1	36131314 Block (Zinc), transom plate	
82	S	1	2224568 Screw, zinc block to transom plate	
Not shown	S	1	36285105 Fork end, plunger release cable	These attach to the swivel plate locking plunger. Ref. No. 7.
Not shown	S	1	2221281 Grubscrew, plunger release cable clamping	
Not shown	S	1	32713113 Shackle pin, fork end to locking plunger securing	
Not shown	S	1	2131037 Washer, locking plunger shackle pin	
Not shown	S	1	2117269 Split pin, locking plunger shackle pin securing	
			HOUSING, DRIVE GEARS AND SKEG	
-	S	1	710954 Drive housing and bearings assembly, comprising :-	
-	S	1	0999999 Drive housing assembly, comprising :-	
83	NS	1	37522491 Housing, drive	
84	NS	1	37171751 Skeg	
85	S	10	2222256 Socket screw, skeg to housing	
86	S	10	2415924 Washer, socket screw sealing	
87	S	2	2513911 Bush, swivel fork centre pin	
88	S	2	2544684 Bearing, roller, vertical shaft upper and lower bevel gear	
89	S	2	0040005 Bearing, ball, vertical shaft upper and lower bevel gear	
90	S	1	0040020 Bearing, ball, universal joint shaft	
91	S	2	2721790 Circlip, universal joint shaft bearing retaining	
92	S	1	32811409 Seal, skeg to drive housing	
93	S	1	32168104 Plug, oil level	
94	S	1	33812113 Washer, oil level plug	
95	S	1	37532891 Cover, housing top	
96	S	1	36857407 Gasket, top cover to housing	
97	S	8	2224283 Screw, top cover to housing	
98	S	1	32168105 Plug, housing top cover oil filler	
99	S	1	0920351 Washer, oil filler plug	
-	S	1	710911 Universal joint, shaft and circlip assembly, comprising :-	
100	S	1	2584604 Universal joint and input shaft assembly, comprising:-	
-	S	1	2584603 Joint, rear	
-	S	1	33472103 Shaft, universal joint input	

Ref. No.	S or NS	Quantity Required	Part Number and Description	Remarks
101	S	1	33451522 Shaft, universal joint connecting	
102	S	1	2724459 Circlip, connecting shaft to universal joint – Outer	
103	S	1	2725191 Circlip, connecting shaft to universal joint – Inner	
104	S	1	2724410 Circlip, universal joint shaft bearing to shaft	
105	S	1	31174141 Bevel gear, top	
–	S	1	710948 Top bevel gear housing and bearing assembly, comprising :-	
106	S	1	37446221 Housing, top bevel gear bearing	
107	S	1	2544684 Bearing, roller, top bevel gear	
108	S	1	0040005 Bearing, ball, top bevel gear	
109	S	2	36861724 Gasket, top bevel gear housing to drive housing	
110	S	6	2222255 Socket screw, top bevel gear housing to drive housing	
111	S	6	2134155 Washer, spring	
112	S	1	31174141 Bevel gear, vertical driveshaft - Upper	
113	S	1	32462114 Shaft, vertical drive	
114	S	1	33177512 Collar, vertical shaft locating	
115	S	1	33884112 Gaiter, universal joint cover	
116	S	1	2481857 Clip, universal joint gaiter to swivel plate hub	
117	S	1	2481859 Clip, universal joint gaiter to drive housing	
118	S	1	31174132 Bevel gear, vertical driveshaft - Lower	
119	S	1	36612118 Retainer, vertical driveshaft	
120	S	2	0748352 Screw, vertical driveshaft retainer to housing	
121	S	2	0920052 Washer, spring	
122	S	1	32767422 Shaft, propeller	
123	S	2	33431405 Bush, propeller shaft	
124	S	1	2532677 Bearing, ball, propeller shaft thrust	
125	S	2	33123118 Spacer, propeller shaft thrust bearing	
126	S	2	2724322 Circlip, propeller shaft thrust bearing	
127	S	2	31174152 Bevel gear, propeller shaft driving	
128	S	As required	31138101 Thrust washer, propeller shaft bevel gear – 0.279" 0.282"	
128	S	As required	31138102 Thrust washer, propeller shaft bevel gear – 0.292" 0.295"	
129	S	1	33571122 Dog, propeller shaft clutch	
130	S	1	0040005 Bearing, ball, propeller shaft – Rear	
131	S	1	2415520 Oil seal, propeller shaft	
132	S	1	33411503 Housing, propeller shaft oil seal	
133	S	1	2415817 'O' ring, propeller shaft oil seal housing	
134	S	1	2116024 Pin, propeller shaft oil seal housing locating	
135	S	1	31736114 Circlip, propeller shaft oil seal housing retaining	
136	S	1	32158105 Plug, oil drain	
137	S	1	33812112 Washer, oil drain plug	
138	S	1	33151507 Ring (Zinc)	
139	S	2	2171711 Socket screw, zinc ring to drive housing and skeg	
–	See Note	1	– Propeller assembly, comprising :	Not included with Z-Drive transom unit. Select size of propeller assembly required from the range shown in the Accessories Section and then order accordingly from from Perkins Engines Marine Distributors.
140	NS	1	– Propeller	
141	S	1	33144114 Distance piece, propeller shaft	
142	S	1	33177511 Washer, propeller spinner nut locking	
143	S	1	32724151 Spinner nut, propeller securing	
			GEAR CHANGE LINKAGE	
144	S	1	37421511 Bearing, gear change lever shaft L.H. rotation	
144A	S	1	37421512 Bearing, gear change lever shaft R.H. rotation	
145	S	1	36822517 Gasket, gear change shaft bearing to drive housing	
146	S	6	2222255 Socket screw, gear change shaft bearing to drive housing	
147	S	6	2415924 Washer, socket screw sealing	
148	S	6	2131040 Washer, plain	
149	S	1	32732113 Shaft, gear change lever	
150	S	1	0730135 'O' ring, gear change shaft sealing	
151	S	1	33812114 Thrust washer, gear change shaft	
152	S	1	2727177 Circlip, gear change shaft thrust washer retaining	
153	S	2	0500003 Key, gear change shaft	
154	S	1	37366641 Lever, gear change operating	

Ref. No.	S or NS	Quantity Required	Part Number and Description	Remarks
155	S	1	2222712 Socket screw, gear change operating lever clamping	
156	S	1	37376481 Lever, gear change and astern lock operating	
157	S	1	2727177 Circlip, gear change and astern lock lever retaining	
158	S	1	32455506 Plunger, gear change locking	
159	S	1	31742126 Spring, gear change locking plunger	
160	S	1	32161212 Plug, gear change locking spring retaining	
161	S	1	33812113 Washer, gear change locking spring plug	
162	S	1	33533114 Bush, astern lock pin	
163	S	1	2415943 Washer, astern lock pin bush sealing	
164	S	1	2415710 'O' ring, astern lock pin sealing	
165	S	1	32148311 Screw, astern lock pin adjusting	
166	S	1	32724105 Pin, astern lock	
167	S	As required	33111411 Washer, astern lock pin screw	
168	S	1	36512111 Fork, astern lock pin operating	
169	S	1	33114411 Washer, astern lock pin	
170	S	1	0610016 Split pin, astern lock pin to operating fork	
171	S	1	32711408 Pin, astern lock operating fork to lever	
172	S	1	34161109 Rod, gear change operating - L.H. rotation	
172A	S	1	34161111 Rod, gear change operating - R.H. rotation	
173	S	1	32114125 Pin, gear change lever to operating rod	
174	S	1	37376119 Lever, clutch operating bell crank	
175	S	1	32182112 Pin, clutch operating bell crank lever pivot	
176	S	1	33811111 Washer, clutch lever pivot pin sealing	
177	S	1	0610002 Split pin, gear change operating rod to bell crank lever	
178	S	1	37378551 Fork, propeller shaft clutch dog operating	
			MISCELLANEOUS SERVICE PARTS AND ASSEMBLIES	
	S	–	8089 GASKET SET, comprising :-	
		10	2415924 Washer, skeg to housing screw sealing	
		1	33812113 Washer, oil level plug	
		1	36857407 Gasket, top cover to housing	
		1	0920351 Washer, oil filler plug	
		2	36861724 Gasket, bearing housing to drive housing	
		1	33812112 Washer, oil drain plug	
		1	32811409 Seal, skeg to housing	
		1	36822517 Gasket, gear change shaft bearing to drive housing	
		6	2415924 Washer, gear change shaft bearing to drive housing screw sealing	
		1	33812113 Washer, gear change locking spring plug	
		9	33811111 Washer, clutch bell crank pivot pin sealing	
	S	–	8090 SEAL SET, comprising :-	
		1	2415821 'O' ring, swivel plate hub sealing – Rear	
		1	33824117 'O' ring, swivel plate hub sealing – Front	
		1	2415507 Oil seal, input shaft	
		1	2415520 Oil seal, propeller shaft	
		1	2415817 'O' ring, propeller shaft oil seal housing	
		1	0730135 'O' ring, gear change shaft sealing	
		1	2415710 'O' ring, astern lock pin sealing	
		1	2415943 Washer, astern lock pin bush sealing	Added as a group, these parts adapt most engines for connecting to the Z-Drive unit through close coupling kit 8009 shown in the accessories section
	S	1	8101 Stub shaft (flange undrilled)	
	S	1	37463734 Coupling, half	
	S	1	2581215 Coupling, flexible	
	S	1	0096637 Bolt, flexible coupling to half coupling	
	S	2	0576101 Nut, flexible coupling securing	

Z-DRIVE TRANSOM UNIT ACCESSORIES.

1. ATTACHMENT OF Z-DRIVE TRANSOM UNIT TO BOAT TRANSOM

To facilitate this operation, the following Stainless Steel Bolting Kit is available :-

Part Number	Description	Remarks
8093	Z-Drive transom bolting kit, comprising :-	Provides set of eight stainless steel bolts, nuts and washers for securing Z-Drive transom unit to boat transom, plus two extra of each as spares.
2185830	Bolt, transom plate to transom (10 off)	
2188293	Nut, transom plate securing (10 off)	
2131627	Washer, plain (10 off)	

2. COUPLING Z-DRIVE TRANSOM UNIT TO ENGINE

To suit varying installation requirements, close and distance coupling arrangements are available as follows :-

A. Close Coupling.

Part Number	Description	Remarks
8009	Close coupling kit, comprising :-	To aid in connecting the Z-Drive transom unit to an engine, the flexible coupling shown in the table must be used with the close coupling kit, in addition to the one already provided with the Z-Drive transom unit. Order 8009 and 2581215.
36133118	Distance piece	
0096642	Bolt (2 off)	
0576101	Nut (2 off)	
2581215	Coupling, flexible	

B. Distance Coupling.

Balanced Tubular Shaft and Flexible Couplings Assemblies can be had only from B.R.D. Co. Ltd., Aldridge, Nr. Walsall, Staffordshire, England, to whom all enquiries should be addressed. Measured along the shaft from the centre of one coupling to the centre of the other, these assemblies are available in lengths from 18" (457 mm) to 58" (1.473 mm). When fitting, the following procedure should be observed:-

Discard the Flexible Coupling from the Z-Drive transom unit only and then fit a Tubular Shaft and Flexible Couplings Assembly of appropriate length.

3. SPLASH PLATE ASSEMBLY

Part Number	Description	Remarks
8097	Splash plate assembly, comprising :	The splash plate bolts to the main housing, lugs downward, by means of the four tapped holes, two on either side, above the cavitation plate, the distance pieces being placed against the rear holes.
37584125	Plate, splash	
3313442B	Distance piece, splash plate to housing (2 off)	
2227285	Setscrew, splash plate to housing - Rear (2 off)	
2227283	Setscrew, splash plate to housing - Front (2 off)	
2134156	Washer, spring (4 off)	

4. SWIVELLING GEAR REMOTE LOCKING ARRANGEMENT

The undermentioned Plunger Release Cable Assemblies, fitted within the craft, allow remote operation of the swivel plate locking plunger for cranking the unit into or out of its port and starboard 'parking' positions. Select length required.

Part Number	Description	Remarks
8095	Plunger release cable assembly – 6′ (1.83 m), comprising :–	
41718421	Cable assembly, swivel plate locking plunger release	
36562118	Bracket, plunger release cable support	
8096	Plunger release cable assembly – 10′ (3.05m), comprising :–	
41718422	Cable assembly, swivel plate locking plunger release	
36562118	Bracket, plunger release cable support	

5. PROPELLERS

The Z-Drive transom unit is supplied without a propeller, as it is considered impractical to standardise on any given size ; it is therefore necessary to select a propeller that will meet the performance desired.

To facilitate selection, the following range of splined cushion hub aluminium Propeller Assemblies is normally available; most can be had from stock, but others, marked by an asterisk, may have to be obtained against request. Each assembly contains a distance piece, locking washer and spinner nut (Ref. Nos. 141, 142 and 143 in the Housing, Drive Gears and Skeg Section of the parts list), which are all packed together with the propeller and despatched in one carton.

•Order as required :– From PERKINS ENGINES MARINE Distributors—

LEFT HAND ROTATION Part Number	Description	RIGHT HAND ROTATION Part Number
8005	Propeller assembly – 11½″ (292 mm) dia x 11″ (279 mm) pitch x 3 blade	8004
8003	,, ,, – 11½″ (292 mm) dia x 12″ (305 mm) pitch x 3 ,,	8002
8006	,, ,, – 12½″ (318 mm) dia x 11″ (279 mm) pitch x 3 ,,	*8055
8056	,, ,, – 12½″ (318 mm) dia x 12″ (305 mm) pitch x 3 ,,	8057
8058	,, ,, – 12½″ (318 mm) dia x 13″ (330 mm) pitch x 3 ,,	8059
8060	,, ,, – 12½″ (318 mm) dia x 14″ (356 mm) pitch x 3 ,,	8061
*8062	,, ,, – 12½″ (318 mm) dia x 15″ (381 mm) pitch x 3 ,,	*8063
*8064	,, ,, – 13″ (330 mm) dia x 8″ (203 mm) pitch x 3 ,,	*8065
~~8007~~	~~,, ,, – 13″ (330 mm) dia x 9″ (229 mm) pitch x 3 ,,~~	
8100	,, ,, – 13″ (330 mm) dia x 9″ (229 mm) pitch x 3 ,,	8066
*8067	,, ,, – 13″ (330 mm) dia x 10″ (254 mm) pitch x 3 ,,	*8068
8069	,, ,, – 13″ (330 mm) dia x 13″ (330 mm) pitch x 3 ,,	*8070
*8071	,, ,, – 13″ (330 mm) dia x 15″ (381 mm) pitch x 3 ,,	*8072
8073	,, ,, – 14″ (356 mm) dia x 9″ (229 mm) pitch x 3 ,,	8074
8075	,, ,, – 14″ (356 mm) dia x 10″ (245 mm) pitch x 3 ,,	8076
8077	,, ,, – 14″ (356 mm) dia x 11″ (279 mm) pitch x 3 ,,	8078
8079	,, ,, – 14″ (356 mm) dia x 12″ (305 mm) pitch x 3 ,,	8080
8081	,, ,, – 14″ (356 mm) dia x 13″ (330 mm) pitch x 3 ,,	8082
8083	,, ,, – 14″ (356 mm) dia x 14″ (356 mm) pitch x 3 ,,	8084
8085	,, ,, – 14″ (356 mm) dia x 16″ (406 mm) pitch x 3 ,,	8086

* Not regularly stocked and available against request only

•8100 and 8066 used on diesel and petrol engines (twin installation).—
• 8100 used on petrol engines (single installation).
• 8007 used on diesel engines (single installation).

6. REMOTE CONTROLS–SINGLE LEVER (MORSE):-To be ordered from MORSE CONTROL LIMITED Distributors

Each unit will require a Single Lever Remote Control Box, a Pair of Cables of predetermined lengths, a Gear Change Connection Kit to match the direction of propeller rotation and a Throttle Connection Kit to suit the type of engine employed.

7. STUB SHAFT

Part Number	Description	Remarks
8101	Stub Shaft (Flange undrilled)	For use when coupling unit to an engine

For further details of Accessories, see separate Leaflet

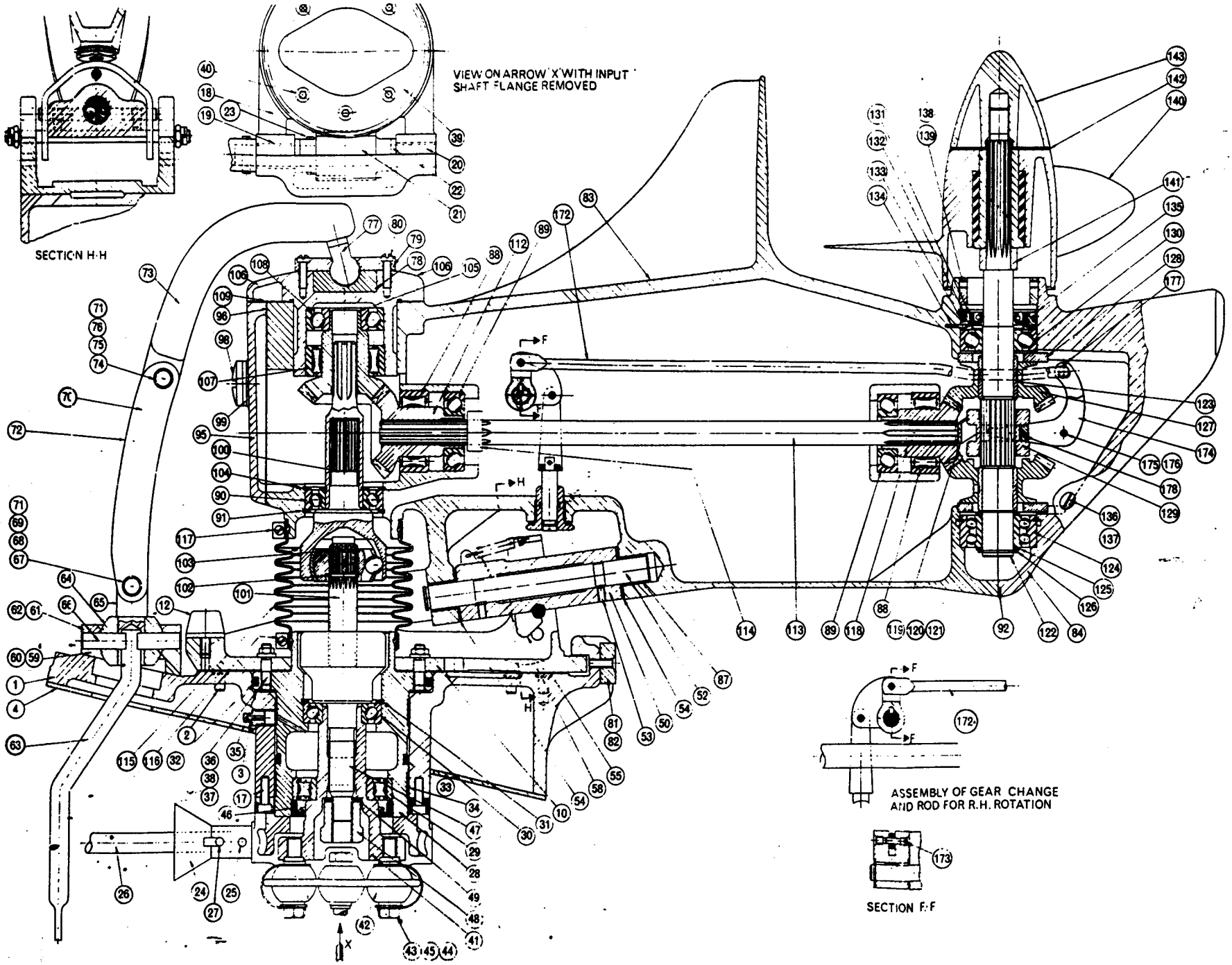

VIEW ON ARROW 'X' WITH INPUT SHAFT FLANGE REMOVED
SECTION H-H
ASSEMBLY OF GEAR CHANGE AND ROD FOR R.H. ROTATION
SECTION F-F

PLATE "A"

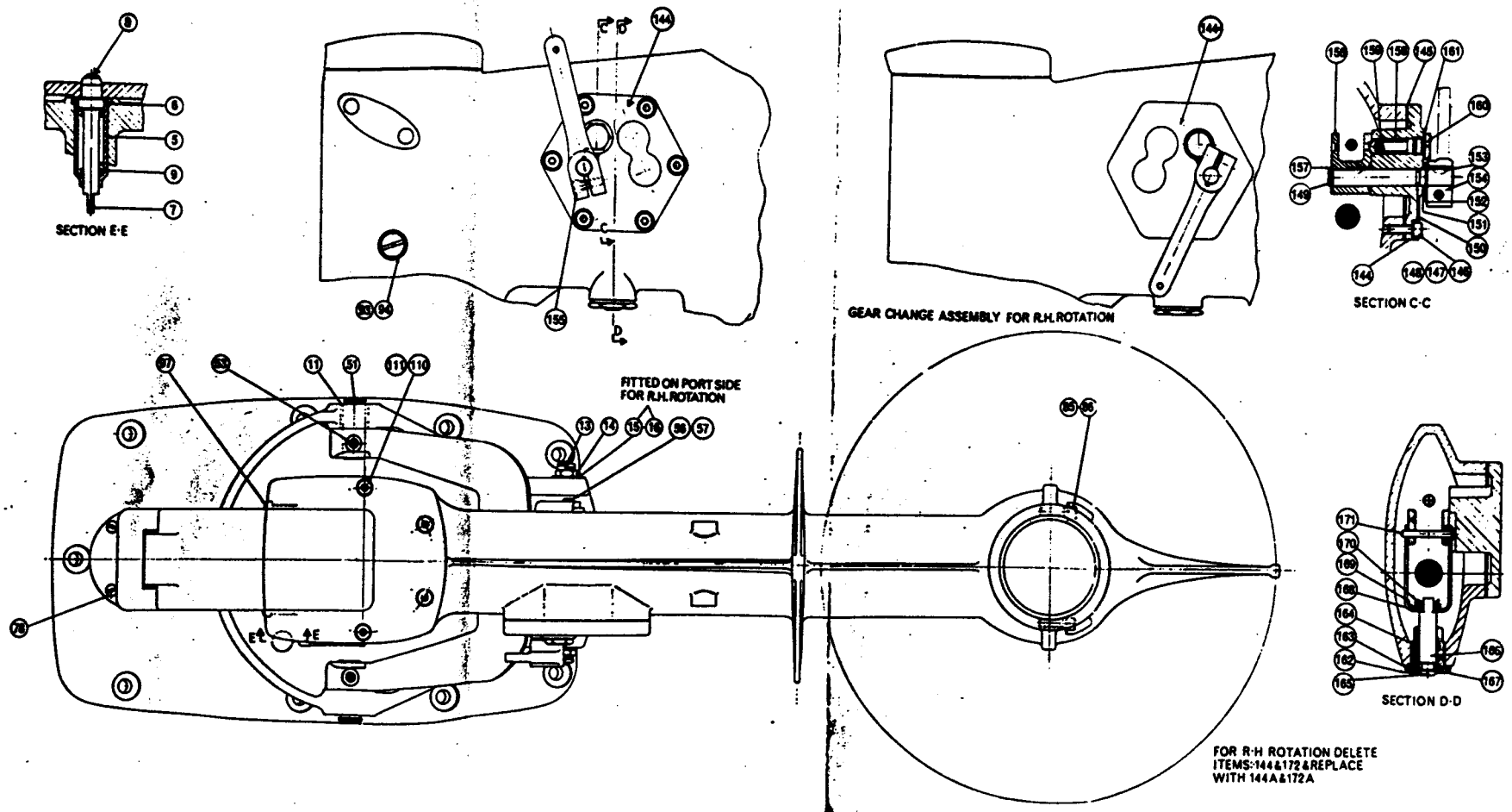

SECTION E-E
FITTED ON PORT SIDE FOR R.H. ROTATION
GEAR CHANGE ASSEMBLY FOR R.H. ROTATION
SECTION C-C
SECTION D-D
FOR R.H ROTATION DELETE ITEMS:144&172 & REPLACE WITH 144A&172A

PLATE "B"

JAN 2002

Sillette-Sonic Ltd

182 Church Hill Road
North Cheam
Sutton
Surrey
SM3 8NF UK

tel: +44 (0)20 8715 0100
fax: +44 (0)20 8288 0742
mobile: +44 (0)77 1027 0107
e-mail: sales@sillette.co.uk
website: http://www.sillette.co.uk

MANUFACTURING FACILITY
Poole
Dorset

SPARE PARTS - PRICE LIST - JAN 2002

ENFIELD - PERKINS STERN DRIVES

NB: Please note all prices are exclusive of VAT and expressed in pounds sterling. (Carriage extra)

PART NO	DESCRIPTION	LIST PRICE
7002	Gaiter Clip	2.33
7010	Washer Steering	0.40
7046	200 Gaiter	27.65
7055	Oil Nipple	0.69
7067	(now 7225)	
7084	200 Tabwasher	4.35
7112	Spinner Nut	30.00
7114	Transfer	0.73
7125	130 Motif	2.35
7126	130 Motif	2.35
7130	Not available	
7146	Spacer	6.90
7147	Bearing	45.00
7222	Roller Bearing	45.00
7225	Link & Bushes	66.00
7238	(now 7301)	
7242	Arm & Link	50.00
7280	Bell Crank	17.86
7282	Steering Arm Ass	85.00
7299	Steering Arm	250.00
7301	Hsg & Bushes	29.90
7304	Bevel Gear 2:1	96.47
7305	Bevel Gear 2:1	96.47
7349	Screw	0.72
7353	Morse Control Kit	29.10
7362	Trans Plate N/S	420.00
7380	Bump Stop	6.47
7397	Pin	6.83
7398	Top Cover	80.00
7399	Nylon Cup	4.10
7400	Nylon Cup	8.22
7401	Arm Assembly	36.00
7403	Tube Assembly	50.90
7407	Locating Pin	10.87
7408	Pin	12.50
7409	Pin	11.38
7411	Pin	19.57
7412	Dipstick	21.69
7413	Pin	8.28
7414	Starlock Washer	0.30
7415	Nylon Cup/Cap	12.50
7416	Skt, Screw	0.72
7417	Breather	1.32
7479	Screw	2.22
7533	Transom Gasket	4.26
7539	Skt Cap Screw	1.63
7567	Retaining Plate	21.37
7568	Cylinder Cup	10.60
7569	Input Housing	73.59
7579	Eye Plate Ass	39.67
7592	Pin	6.73
7606	Pin	7.16
7607	O' Ring	0.66
7608	O' Ring	0.66
7611	Screw	1.26
7614	Lock Washer	0.39
7621	Washer 8mm	0.44
8009	Close Coupling	24.00
8089	Gasket Set	6.96
8090	Seal Set	16.39
8093	Transom Bolting Kit	31.15
8096	Not available	
8101	Stub Shaft Undrilled	85.76
8102	Prop Ret Kit	38.50
710900	Swivel Fork Ass inc Rev Catch	210.9
710901	Swivel Fork Ass	175.37
710911	CV Joint Ass	164.50
710914	Worm Housing Ass	175.00

PART NO	DESCRIPTION	LIST PRICE
710915	Turning Handle	21.60
710938	Sw. Plate Ass	185.00
710947	Swivel Hub Ass	195.00
710948	Rear Housing Ass	160.00
710951	Worm Housing & Bushes	100.00
710954	Body & Bearing	850.00
0040005	Bearing	13.75
0040020	Bearing	13.00
0096635	Bolt	0.80
0096637	Bolt	1.05
0096642	Bolt	1.60
0999999	Body & Skeg	715.00
0500003	Key Gear Lever	0.73
0576064	now 7349	
0576101	now 2211284	
0610002	Split Pin	0.14
0610016	Split Pin	0.14
0730135	O' Ring	0.31
0748352	Screw	0.14
0920052	Spring Washer	0.14
0920351	Sealing Washer	0.28
0999999	Body and Skeg	662.07
2115261	Pin	0.14
2115442	Mills Peg	0.14
2116024	Pin	0.14
2117269	Split Pin	0.14
2131037	Washer	0.14
2131040	(now 33111411)	
2131041	Washer	0.15
2131043	Washer	0.15
2131627	Washer	0.99
2134155	(now 3311411)	
2171711	Screw (now 2221281)	
2185830	Bolt	3.01
2188923	Nut	0.51
2211284	Nut	1.64
2221281	Skt Screw	0.50
2221285	Skt Screw	0.50
2221511	(now 2221281)	
2222255	(now 2222712)	
2222256	Skt Screw	0.50
2222712	Screw	0.50
2224281	Screw (now 7479)	
2224282	Screw (now 2222712)	
2224283	(now 2222712)	
2224568	Screw	0.50
2224931	(now 2222256)	
2224933	(now 2222256)	
2415507	Oilseal	5.08
2415520	Oilseal	3.08
2415702	O' Ring	0.50
2415710	O' Ring	0.31
2415817	O' Ring	0.52
2415821	O' Ring	1.46
2415943	Washer	1.33
2513089	Bearing Oilite	0.88
2513906	Bush	1.65
2513911	Bush	2.65
2513970	Thrust Washer	3.50
2546106	Bearing	47.50
2581215	Flexi Coupling	75.00
2584601	Universal Joint	70.80
2584601	U-Joint-Recon	38.00
2584602	Universal Joint	135.00
2634018	Buffer	1.52
2721790	Circlip	1.39
2724322	Circlip	0.52
2724410	Circlip	0.55
2724459	Circlip	0.66
2725191	Circlip	0.51

PART NO	DESCRIPTION	PRICE LIST
2725499	Circlip	0.23
2727177	Circlip	0.36
31138101	Thrust Washer	10.01
31138102	Thrust Washer	10.01
31138103	Thrust Washer	10.01
31173109	Worm	80.00
31173201	Worm Wheel	110.00
31174132	Bevel Gear	86.50
31174141	Bevel Gear	90.00
31174152	Bevel Gear	115.00
31736114	Circlip	1.46
31742126	Spring	2.11
31744128	Spring	2.11
31751111	Catch Spring	2.11
31774124	(now 710915)	
32114125	Pin	6.00
32114126	Breather Plug	4.68
32148311	Screw	5.25
32158105	Plug	6.57
32161212	Cap	8.47
32168104	(now 32161212)	
32168105	Filler Plug	15.00
32182112	Pin	12.00
32455506	Plunger	9.50
32456408	Wormshaft	8.00
32462114	Shaft	40.23
32524137	Pin	9.06
32532113	Stud (now 7349)	
32711408	Pin	7.08
32713113	Pin	4.27
32716119	Pin	6.96
32716121	Pin	14.40
32716123	Pin	5.80
32716125	Pin	4.00
32723109	(now 37811111)	
32724105	(now 7409)	
32732113	Shaft	21.80
32738521	Stub Shaft	100.76
32762115	Ball End	24.00
32767422	Prop Shaft	125.00
32813107	Nylon Bearing	11.01
32815117	Nylon Pin	0.73
33111411	Washer	0.15
33114411	Distance Piece	0.15
3117417	(now 7010)	
33121412	Washer	0.51
33123118	Spacer	6.90
33144114	Distance Piece	6.74
33151507	Zinc Ring	9.00
33177511	Tab Washer	3.00
33175512	Location Collar	21.50
33411503	Oilseal Housing	25.88
33426381	Swivel Hub	135.00
33431405	Bearing	10.49
33432309	Plunger Sleeve	16.50
33451522	Int Shaft	30.00
33531116	Nut	12.58
33533114	Bush	27.92
33571122	Dog Clutch	65.73

PART NO	DESCRIPTION	LIST PRICE
33811111	Washer	0.17
33812112	Washer	0.22
33812113	Washer	0.36
33812114	Washer	0.60
33813312	Nylon Washer	0.80
33822406	Washer Thrust	8.43
33823113	Steering Arm Cap	32.00
33824117	O' Ring	0.73
33825111	Nylon Cap	11.50
33825112	(now 41476002)	
33825423	St Gaiter	12.34
33884112	CVJ Gaiter	20.00
34161109	Rod l/h	31.46
34161111	Rod r/h	31.46
36113133	Stop Plate	3.50
36131314	Zinc Block	5.00
36133118	Distance Piece	18.50
36285105	Fork End	12.00
36478311	Tab Washer	1.66
36512111	Fork	2.29
36562118	Bracket	7.97
36612118	Retainer	3.70
36671134	Reverse Catch	35.62
36822517	Joint	0.62
36851412	Bearing Strip	1.60
36857407	Joint	0.50
36861724	Joint	0.50
36863113	Gasket	8.43
37366641	Gear Lever	21.50
37374601	Lower Link	50.00
37376119	(now 7280)	
37376481	Lever	50.00
37378551/A	Clutch Yoke	18.00
37378571	(now 710901)	
37421511	Bearing l/h	65.00
37421512	Bearing r/h	65.00
37442415	Tube Ass	15.98
37446221	Bearing Housing	110.00
37463734	1/2 Coupling	55.00
37466511	Input Shaft	70.00
37522441	(now 710951)	
37532891	Top Cover	55.00
37537182	(now 37814125)	
37584125	Not available	
37811111	Plunger Pin	26.44
37814125	Transom Plate	209.20
38167553	(now 710938)	
41476002	Cup Ass	39.50
Owner Service & Handbook		9.00
Morse Cable Retaining Kit		34.00
Double Metalastic Coupling Ass		160.00
Nose Cone Kit (cone, tab & spacer)		35.00
Propellers Ø 13" Left or Right Hand		90.00 BB
(pitches 8", 8", 10", 11", 12", 13", 14")		
Propellers Ø 14" Left or Right Hand		90.00 BB
(pitches 9", 10", 11", 12", 13", 14", 16", 17")		
Add on Rudder		70.00
Add a Rudder		95.00
Ruddersafe		140.00
Replacement Leg only		1750.00 BB

Sillette reserve the right to change specifications and/or prices without notice.