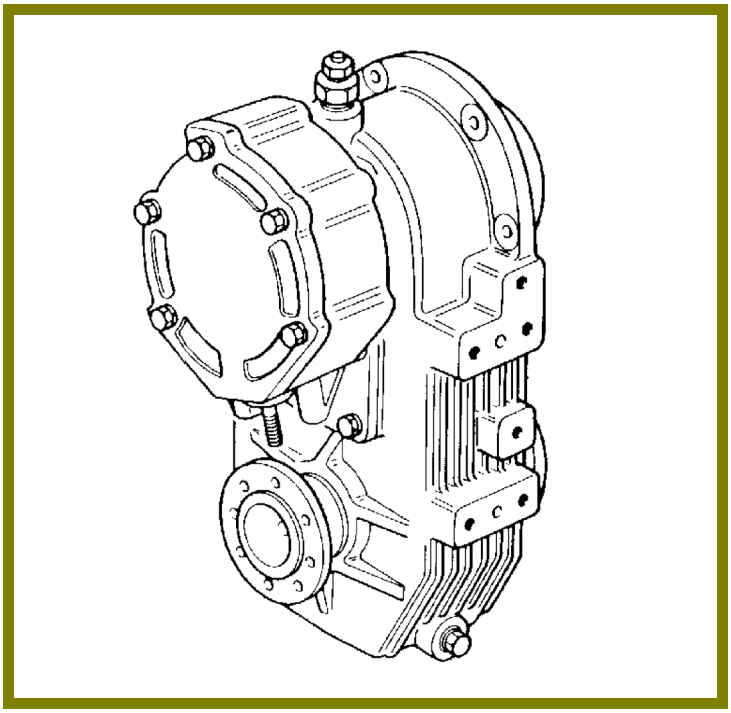
WINGET

SERVICE MANUAL



CARRARO

280 TRANSFER GEARBOX

TYPE 125982

WINGET LIMITED
PO BOX 41
EDGEFOLD INDUSTRIAL ESTATE
PLODDER LANE
BOLTON
LANCS
BL4 OLS
Tel: ++ 44 (0) 1204 854650
Fax:++ 44 (0) 1204 854663
service@winget.co.uk
parts@winget.co.uk
www.winget.co.uk

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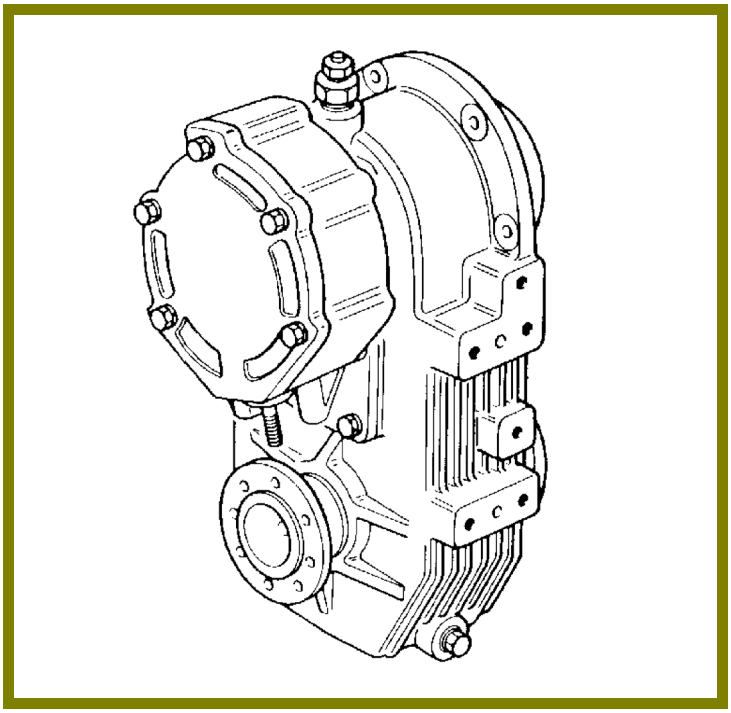
SERVICE MANUAL



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REPAIR MANUAL

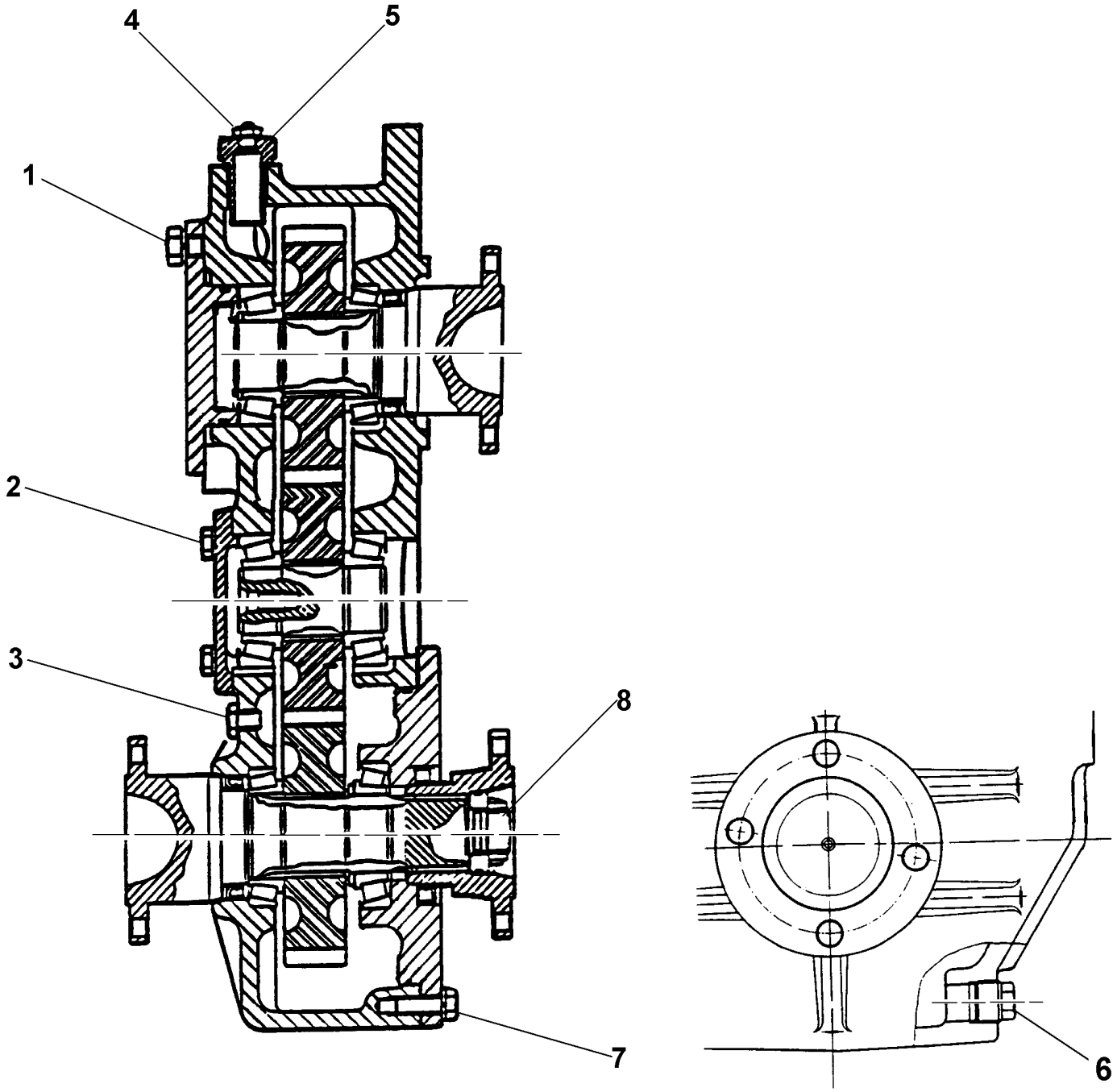
TRANSFER BOX 280

INDEX OF SECTIONS

SPECIFICATION & FEATURES

Ratio	T	1-1
Upper Shaft Bearing Pre-load	N	16 to 20
Intermediate Shaft Bearing Pre-load	N	34 to 39
Lower Shaft Bearing Pre-load	N	52 to 57
Shim Thickness for Upper & Intermediate Shaft Bearing Pre-load	mm	0.1-0.3-0.05
Shim Thickness for Lower Shaft Bearing Pre-load	mm	0.10-0.19-0.35

SECTION VIEW



TIGHTENING TORQUE- (refer to page B1 for identification)

(Note : all mating surfaces are to be sealed with SILASTIC 732 or equivalent)

DESCRIPTION	CODE	THREAD	Nm
1 Bolt-Upper Shaft Cover to Housing	020919	M12	87
2 Bolt-Intermediate Shaft Cover to Housing	020781	M8	25
3 Bolt-Oil Level	077462		24
4 Breather	030765	M10x1.0	10
5 Extension	122102		150
6 Plug- Oil Drain	099270	M22x1.5	40
7 Bolt-Lower Shaft Cover to Housing	020852	M10	51
8 Output Shaft Ring Nut	023308	M25X1.5	190

LUBRICATION

-Use oil with specification MIL- L- 2105C and API GL5
Example : ESSO GEAR OIL GX80W90

QUANTITY

Quantity	2.3litres

CHECKING

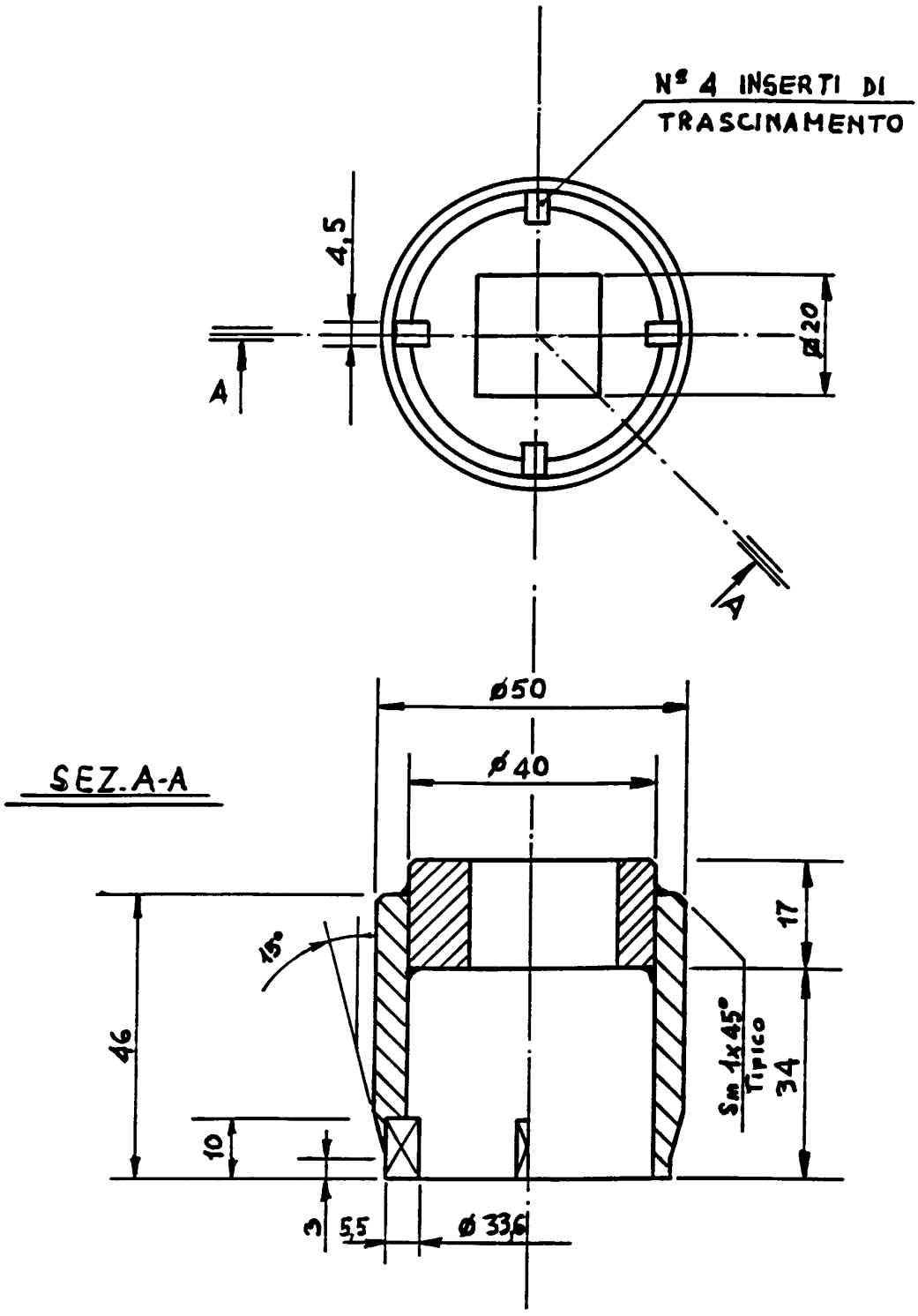
-Initial Change at 150 hours
(unless advised otherwise in Operators Manual)

-Subsequent Changes every 1000 hours
(unless advised more of frequent changes in Operators Manual)

-Inspection of Oil Levels every 150 Hours
(unless advised otherwise in Operators Manual)

SPECIAL TOOLS

DESCRIPTION	PART No.
-Wrench for Output Shaft Ring Nut, Ref 023308	119004
-Driver for Oil Seal Upper and Lower Shaft, Ref 025360	119005
-Driver for Oil Seal Output Shaft Cover, Ref 025261	119005

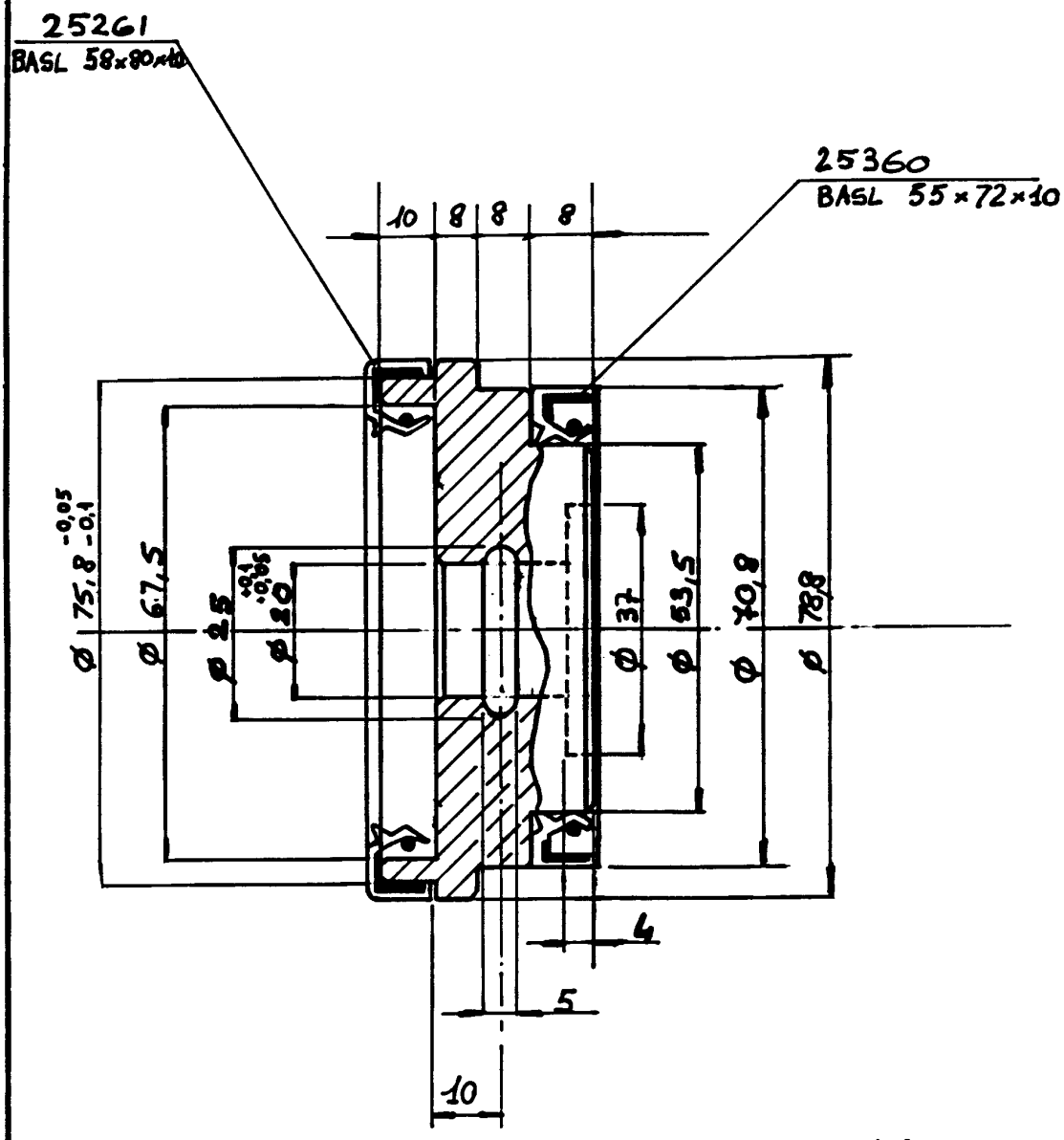


CARRARO

CARRARO S.P.A. - VIA OLMO, 29
CAMPODARSEGO (PD) - ITALY

Macchina	TRANSFER BOX
Sottogruppo	
Denominazione	Chiave per ghiera 23308

Classifica mater.		Sost. il	Sost. dal
Scala 1:1	Mat.	Peso grezzo	Posizione Archivio S.T.A.
Data 5-9-86	Tratt. termico	Peso Finito	N.DISEGNO 119004



DA USARSI CON IMPUGNATURA INTECAMBIABILE 119033

CARRARO

CARRARO S.P.A. - VIA OLMO, 29
CAMPODARSEGO (PD) - ITALY

Macchina TRANSFER BOX

Sottogruppo

Denominazione BATTITOIO PIANTAGGIO E POSIZIONAMENTO ANELLI DI TENUTA 25261 e 25360 - ASSE 1/4

Classifica mater.		Sost. il	Sost. dal
Scala	Mat.	Peso grezzo	Posizione Archivio S.T.A.
Data 5-9-86	Tratt. termico	Peso Finito	N. DISEGNO 119005
Firma F. Fioretti	Tratt. superf	Quantità	

DISASSEMBLING, SETTING AND REASSEMBLING

INDEX OF PAGES Page.

FOREWORD

OIL SEAL FOR ROTATING SHAFT

For installation of oil seal adhere to the following recommendation;

-Before installation, soak the seal for half hour in the same oil that will b used in the housing to be sealed.

-Clean the shaft and ensure the seal running area of the same is not damaged, pitted or grooved.

-Place the seal lips towards the oil side.

-Lubricate the seal lip (oil is better than grease) and fill with grease the space between oil lip and dust lip of dual lip seal.

-Install the seal using a suitable seal driver. Avoid hammering directly on the seal.

-To avoid damage to the seal lip caused by the shaft, adequately protect the same during shaft assembly procedure.

‘O’ RING

Ensure adequate lubrication of the seals before inserting them in their seats to avoid twisting during shaft assembly.

SHIMS

For each adjustment select the correct shim/s by individual measurement.
Do not trust pack measurement or the thickness indicated on the shim.

BEARINGS

For a correct assembly it is suggested:
-Warming from 80° to 90°C before installation in their respective seats.

ROLL PIN

When installing split cut roll pin ensure the cut is oriented towards the direction of the force acting on the roll pin.
Spiral type roll pins do not require any precaution.

SEALING COMPOUND

On area to be sealed use SILASTIC or LOCTITE 510, ensuring both sides to be sealed are clean, dry and totally free from grease and oil.

UPPER AND INTERMEDIATE SHAFT

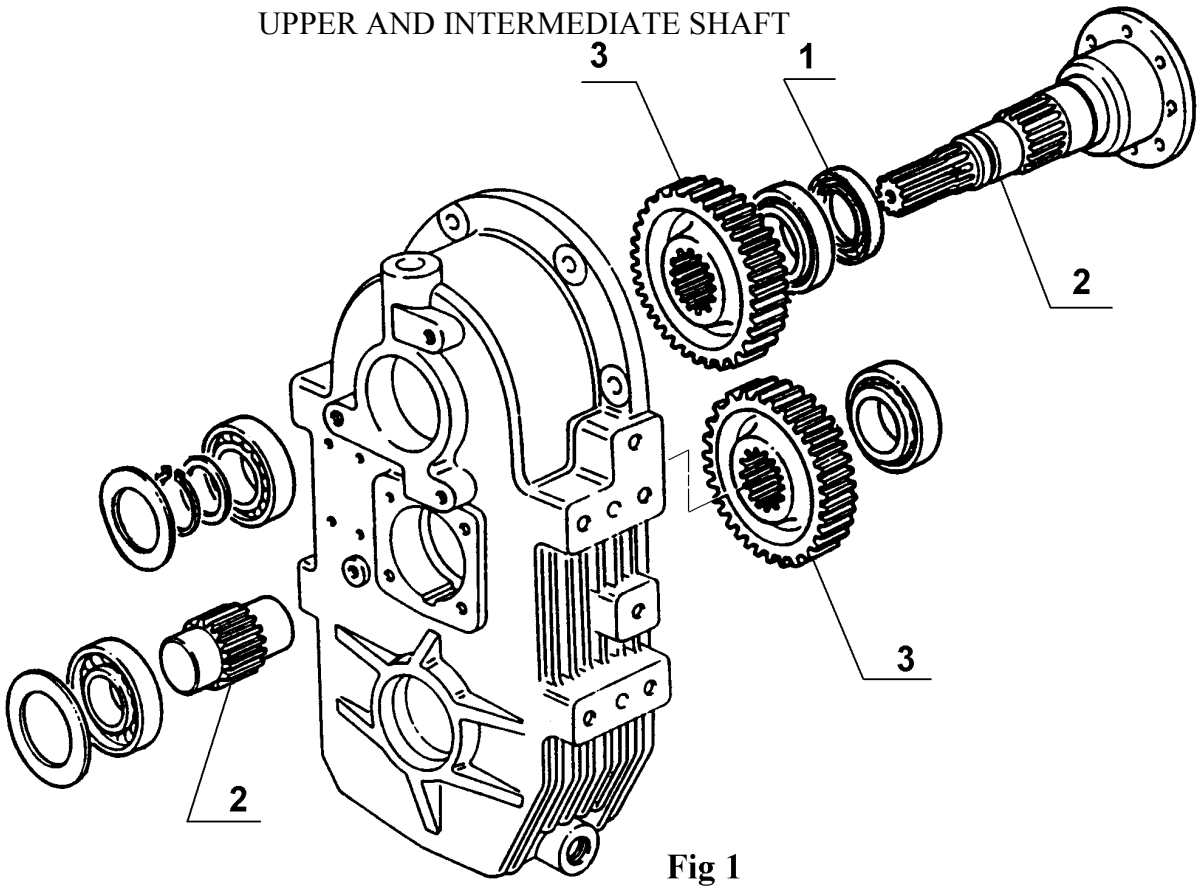


Fig 1

-Inspect the lip seal (1) and preferably replace it.

-Inspect the splines on the shafts (2) for wear or damage. Replace if necessary.

-Inspect the splines on gears (3) for wear or damage. Replace if necessary.

-On assembly operation be aware to:

Adjust the pre-load of the upper shaft adding or subtracting shims between bearing and cover, measured on the outer diameter of the shaft flange without seal.

Adjust the pre-load of the intermediate shaft adding or subtracting shims from cover and bearing, measured on the outer diameter of the upper shaft flange without seal.

SPECIAL TOOLS
Driver for seal (1): Ref 119005

LOWER SHAFT

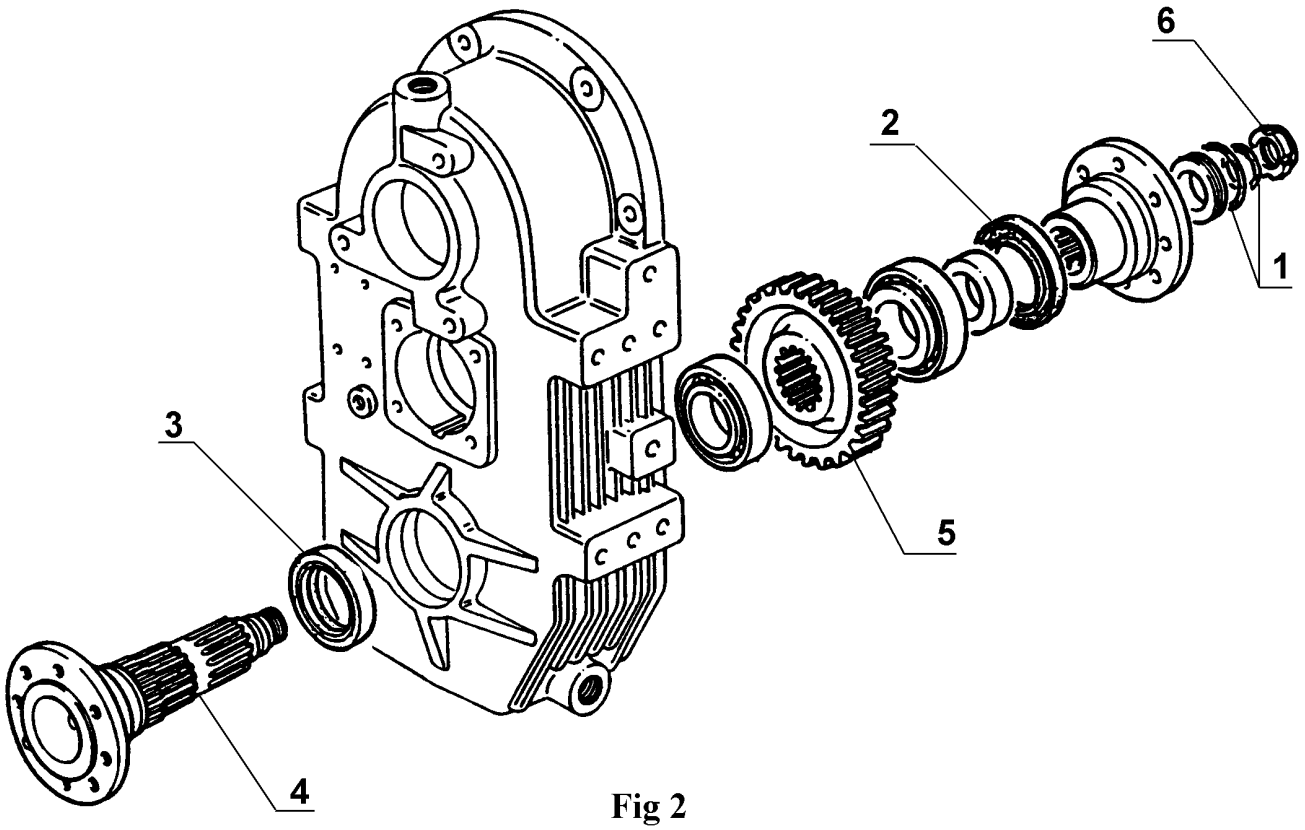


Fig 2

-Inspect the 'O' rings (1) and preferably replace them.

-Inspect the lip seals (2) and (3) if worn or damaged replacement is recommended.

-Inspect the splines on the shaft (4) and gear (5) for wear or damage. Replace if necessary.

-On assembly operation be aware to:

Adjust the pre-load of the lower shaft adding or subtracting shims between cover and housing, measured on the outer diameter of the shaft flange without seals on both shafts.

SPECIAL TOOLS

Driver for seal (1): Ref 119005

Driver for seal (2): Ref 119005

Driver for ring nut (6): Ref 119004

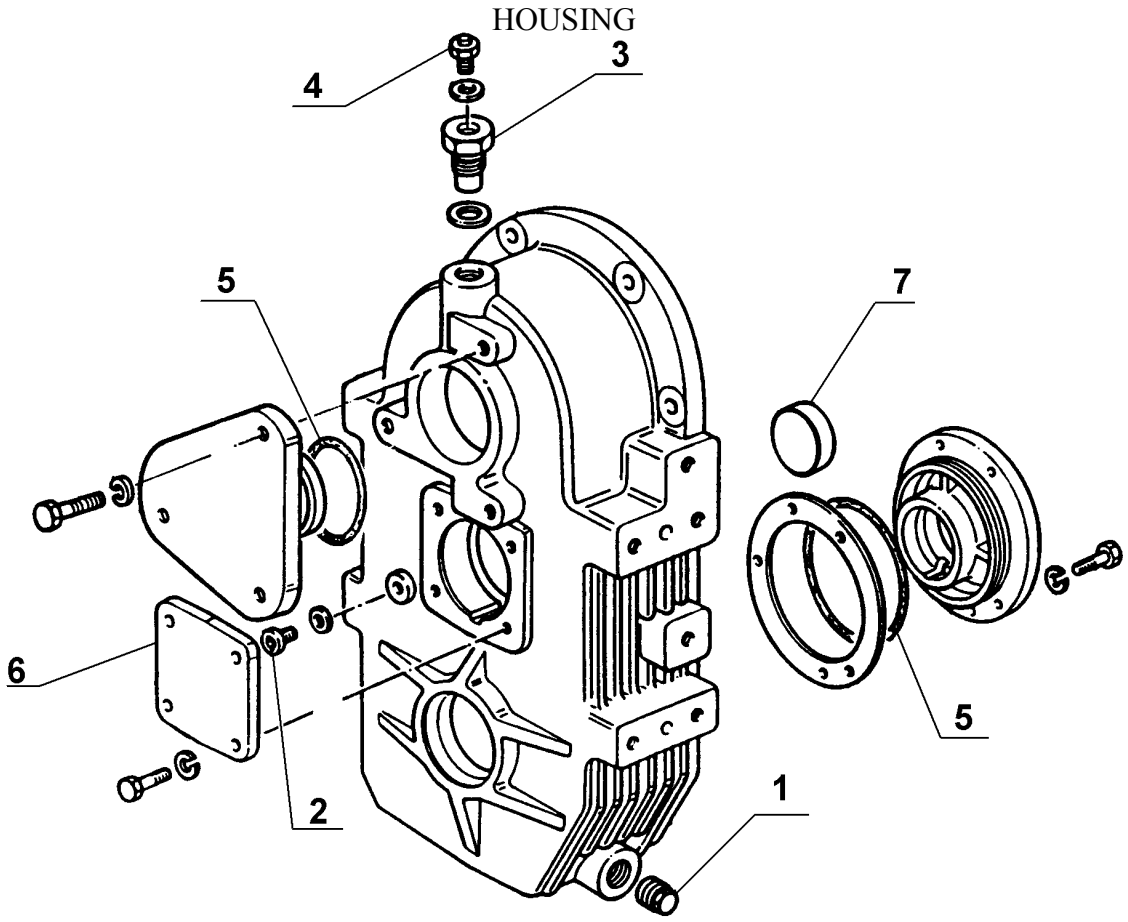


Fig 3

-Drain oil from plug (1).

-Check oil level removing bolt (2).

-Fill with correct oil type and quantity through hole on top of housing, removing breather support (3).

-Check the breather (4) for correct working valve and replace if necessary.

-Inspect the 'O' rings (5) and replace if worn or damaged.

On assembly operation be aware to :

Use LOCTITE 510 or LOCTITE 574 on intermediate shaft cover for sealing.

Use LOCTITE 638 on plug (7) to prevent leakage.