

## SMSR Gearboxes : Installation

### GEARBOX INSTALLATION

Satisfactory performance depends on proper installation, lubrication and maintenance. Therefore it is important that the instructions in the Installation and Maintenance leaflet, supplied with each gearbox, are followed carefully. Some of the important aspects of belt and torque-arm installation are listed below.

1: Install pulley on gearbox input shaft as close to the reducer as possible. See fig. 1. Failure to do this will cause excess loads in the input shaft bearings and could cause their premature failure.

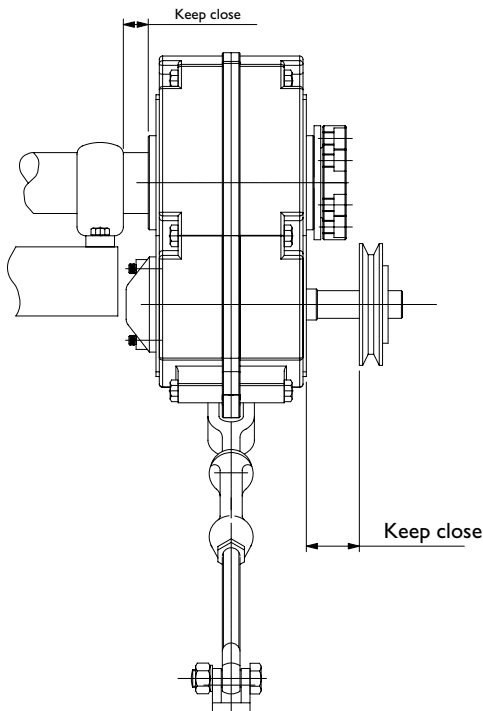


FIG 1

2: Install motor and wedge belt drive with the belt pull at approximately 90° to the centre line between driven and input shafts. See fig. 2. This will permit tensioning of the wedge belt drive with the torque-arm which should preferably be in tension. If output hub runs anti-clockwise the torque arm should be positioned to the right. See fig. 3.

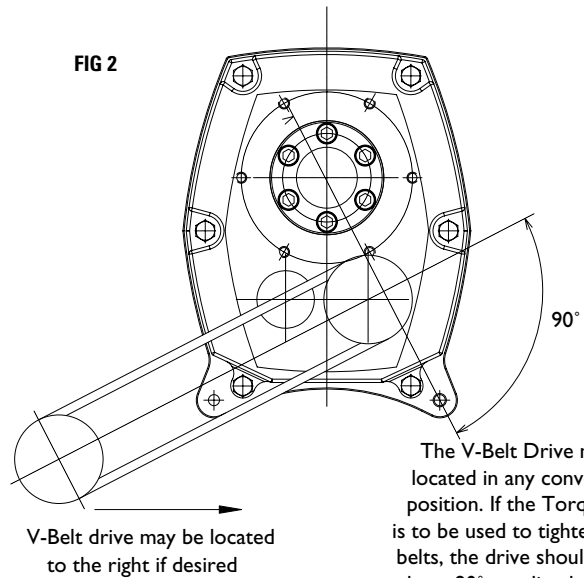


FIG 2

3: Install torque-arm fulcrum on a rigid support so that the torque-arm will be at approximately right angles to the centre line through the driven shaft and the torque arm case bolt. See fig. 4. Make sure there is sufficient take up in the turn-buckle for belt tension adjustment.

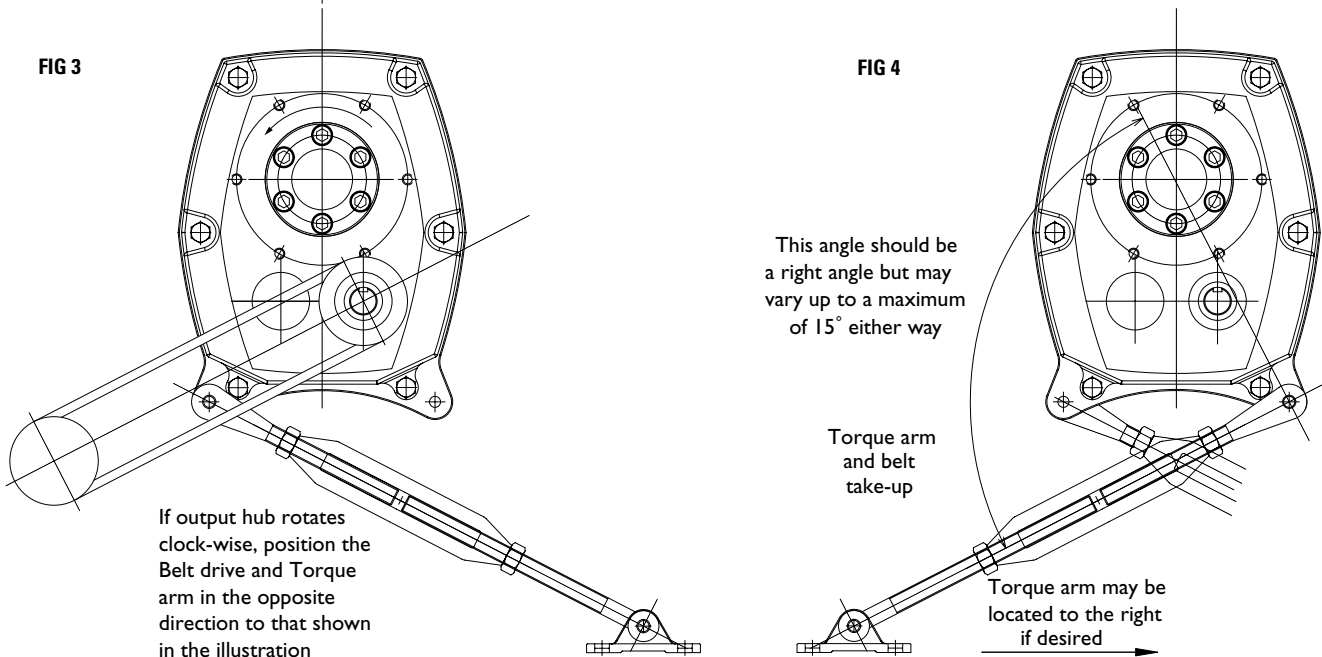
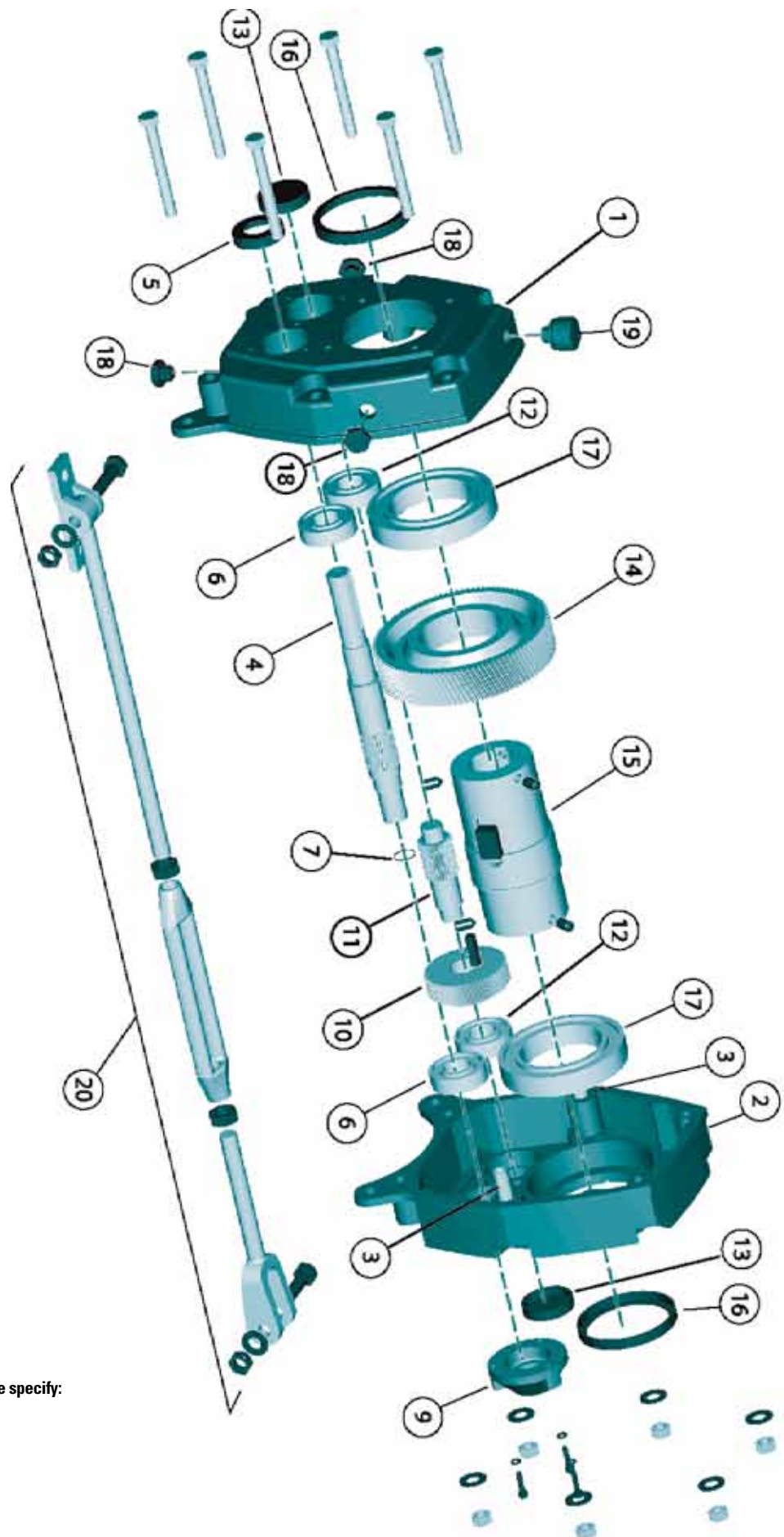


FIG 3

FIG 4

SMSR Gearboxes : Parts identification



**When ordering parts for reducer, please specify:**

- Reducer Size
- Reducer Serial No.
- Part Name
- Code number
- Quantity required

## SMSR Gearboxes : Spare parts - Code numbers

## REPLACEMENT PARTS CODE LIST

Part No.	Description	No. Req'd	Unit Size									
			B	C	D	E	F	G	H	J	S	T
1	Case IPS	1	116B6001	116C6001	116D6001	116E6001	116F6001	116G6001	116H6001	116J6001	116S6001	116T6001
2	Case BSS	1	116B6002	116C6002	116D6002	116E6002	116F6002	116G6002	116H6002	116J6002	116S6002	116T6002
3	Hollow dowel	2	016A7004	016A7004	016C7004	016C7004	016E7004	016F7004	016F7004	016H7004	016H7004	016K7004
4	Input shaft 5:1	1	116B6005	116C6005	116D6005	116E6005	116F6005	116G6005	116H6005	116J6005	116S6005	116T6005
	Input shaft 13:1		116B6013	116C6013	116D6013	116E6013	116F6013	116G6013	116H6013	116J6013	116S6013	116T6013
	Input shaft 20:1		116B6020	116C6020	116D6020	116E6020	116F6020	116G6020	116H6020	116J6020	116S6020	116T6020
	Input shaft 25:1		116B6025	116C6025	116D6025	116E6025	116F6025	116G6025	116H6025	116J6025	116S6025	116T6025
5	Input shaft oilseal	1	G946040	G946030	G946031	G946032	G946033	G946034	G946035	G946036	G946037	G946038
6	Input shaft bearing	2	G941000	G941801	G941802	G941803	G941804	G941805	G941806	G941807	G941808	G941809
7	Input shaft retaining ring (20:1)	1	116X4180	116X4180	116X4181	116X4196	-	-	116X4184	116X4185	116X4186	-
	Input shaft retaining ring (25:1)	1	-	116X4180	-	-	116X4196	116X4182	116H6004	116J6004	116S6004	116X4188
9	Backstop cover	1	116B6600	116C6600	116D6600	116E6600	116F6600	116G6600	116H6600	116J6600	116S6600	116T6600
10	1st. Reduction 13:1	1	116B6113	116C6113	116D6113	116E6113	116F6113	116G6113	116H6113	116J6113	116S6113	116T6113
	1st. Reduction Gear 20:1	1	116B6120	116C6120	116D6120	116E6120	116F6120	116G6120	116H6120	116J6120	116S6120	116T6120
	1st. Reduction Gear 25:1	1	116B6125	116C6125	116D6125	116E6125	116F6125	116G6125	116H6125	116J6125	116S6125	116T6125
11	Intermediate pinion	1	116B6205	116C6205	116D6205	116E6205	116F6205	116G6205	116H6205	116J6205	116S6205	116T6205
12	Intermediate bearing	2	G941000	G941801	G941802	G941803	G941804	G941805	G941806	G941807	G941808	G941809
13	Intermediate cover	2	016A7025	016B7025	016C7025	016E7025	016E7025	016F7025	116H6285	116J6285	016J7025	016T7025
14	2nd. Reduction gear	1	116B6305	116C6305	116D6305	116E6305	116F6305	116G6305	116H6305	116J6305	116S6305	116T6305
15	Output hub (Standard Bore)	1	116B6030	116C6040	116D6050	116E6055	116F6065	116G6075	116H6085	116J6100	116S7120	116T6225
	Output hub (Upper Alt Bore)		116B6040	116C6050	116D6055	116E6065	116F6075	116G6085	116H6100	116J7120	116S6225	116T6135
	Output hub (Lower Alt Bore)		-	116C6030	116D6040	116E6050	116F6055	116G6065	116H6075	116J6085	116S6100	116T7120
	Output hub (Taper Grip)		116B6000	116C6000	116D6000	116E6000	116F6000	116G6000	116H6000	116J6000	116S6000	116T6000
16	Output hub oilseal	2	G946041	G946023	G946024	G946025	G946026	G946016	G946027	G946028	G946029	G946315
17	Output hub Bearing	2	G941350	G941351	G941352	G941353	G941354	G941355	G941356	G941357	G941358	G941050
18	Pipe plug	3	016X2395	016X2395	016X2395	016X2395	016X2392	016X2392	016X2392	016X2392	016X2392	016X2392
19	Breather plug	1	016X6097	016X6097	016X6097	016X6097	016X6098	016X6098	016X6098	016X6098	016X6098	016X6098
20	Torque arm assembly	1	116C0101	116C0101	116E0101	116E0101	116G0101	116G0101	116T0101	116T0101	116T0101	116T0101

# SMSR Gearboxes : Lubrication

## LUBRICATION – QUANTITIES & RECOMMENDED GRADES

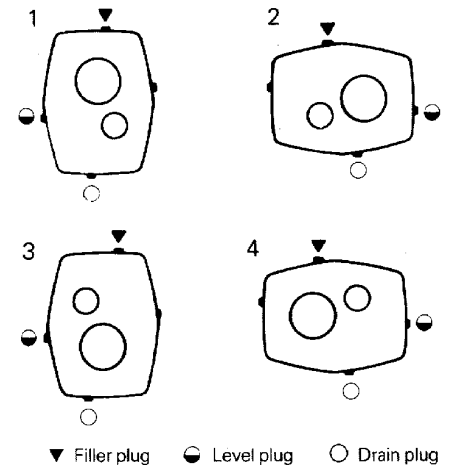
Fenner Power Plus Shaft Mounted Speed Reducers are dispatched without oil. Before running they should be filled with an appropriate amount of lubricant as shown in the tables, dependent on the mounting position. Fill to level plug when reducer is not running. Drain, flush and refill as directed in the installation leaflet supplied with every gearbox, check oil level regularly.

Positions of filler, breather and drain plug for different mounting positions are shown in fig. 1.

**CAUTION.** Too much oil will cause over-heating. Too little oil will cause gear and bearing failure.

Normal operating positions are shown in fig 1. Note that the reducer is supplied with four plugs. After the reducer has been mounted in its running position the plugs must be located as shown in fig 1 for the appropriate mounting position.

If the reducer is not within 20 degrees of one of the positions shown, the oil level plug cannot be safely used to check the oil level. This can be overcome by disconnecting the torque-arm and swinging the reducer around to one of the positions shown. Because of the many positions of fitting the reducer it may be necessary or desirable to make special adaptations using the plug holes in the reducer with standard pipe fittings standpipes or oil level gauges, consult your local Authorised Distributor.



Units are supplied with filler, level and drain plugs for fitting in the position shown.

## MOTOR OPTIONS AVAILABLE (using 4 pole motors)

Unit Size	Approximate Capacity - Litres							
	5:1				13:1, 20:1 and 25:1			
Mounting Position	1	2	3	4	5	6	7	8
B	0.3	0.3	0.3	0.4	0.25	0.4	0.3	0.4
C	0.5	0.5	0.5	0.6	0.4	0.6	0.5	0.6
D	0.8	0.9	0.8	1.0	0.7	0.9	0.8	0.9
E	1.2	1.7	1.4	1.8	1.0	1.8	1.4	1.6
F	2.5	2.6	2.4	2.5	2.3	2.6	2.4	2.2
G	3.3	3.2	3.2	3.3	3.0	3.2	3.2	3.2
H	4.1	5.3	4.1	5.8	3.8	5.5	4.2	5.1
J	5.7	8.6	5.9	8.6	5.4	8.5	5.9	8.3
S	10.9	18.4	13.6	18.4	9.1	16.4	12.6	15.4
T	15.2	21.7	25.2	20.7	12.7	21.7	15.7	19.2
K					12.5	13.5	24.0	11.5
L					22.5	34.0	52.0	27.0
M					36.0	50.0	79.0	45.0

## MINERAL OIL

	Ambient Temp °C	5:1 Ratio Gearbox				13:1 and 20 and 25:1 Ratio Gearboxes						
		0-100 rev/min	101-200 rev/min	201-400 rev/min		0-20 rev/min	21-50 rev/min	51-120 rev/min		0 to 50 rev/min	51 to 80 rev/min	
		BCDEFGHJST	BCDEFGHJST	BCD	EFGHJST	BCDEFGHJST	BCDE	FGHJST	BCDE	FGHJST	KLM	
ISO Viscosity Grade	-10 to +5	100	100	100	68	150	150	150	100	100	100	100
	6 to 25	460	320	320	220	680	680	460	460	320	320	220
	26 to 40	800	680	680	460	800	800	800	680	460	460	320

## MANUFACTURERS AND TYPES

B.P. ENERGOL GR-XP	CASTROL ALPHA ZN OR SP	MOBIL MOBILGEAR & SHC	SHELL OMALA	TEXACO MEROPA
--------------------------	------------------------------	-----------------------------	----------------	------------------

NOTE: Do not use E.P. mineral oils other than those recommended when using a backstop.