

## POULIBLOC 2000-3000

Shaft mount reducer

Maintenance

# POULIBLOC 2000-3000

## Shaft mount reducer

This document complements the general instructions ref. 2557 (recommendations), ref. 4114 (Pb 2000 backstop), ref. 3711 (ATEX specific recommendations) and the installation instructions Poulibloc 2000-3000 ref. 3097.

### NOTE

LEROY-SOMER reserves the right to modify the characteristics of its products at any time in order to incorporate the latest technological developments. The information contained in this document may therefore be changed without notice.

LEROY-SOMER gives no contractual guarantee whatsoever concerning the information published in this document and cannot be held responsible for any errors it may contain, nor for any damage resulting from its use.

### CAUTION

The specifications, instructions and descriptions are for standard operation. They do not take account of structural variants or special adaptations. Failure to comply with these recommendations may lead to premature deterioration of the gearbox and voiding of the manufacturer's guarantee.



Throughout the manual, this symbol warns of consequences which may arise from inappropriate use of the Poulibloc 2000-3000 since risks may lead to material or physical damage.

Despite all the care taken in the manufacture and checking of this equipment, LEROY-SOMER cannot guarantee that lubricant will not escape during the product's lifetime. If slight leaks could have serious consequences for the safety of people and property, the installer and user should take all necessary precautions to avoid such consequences.

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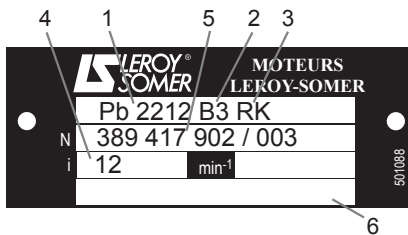
## Shaft mount reducer

### 1 - HOW TO ORDER

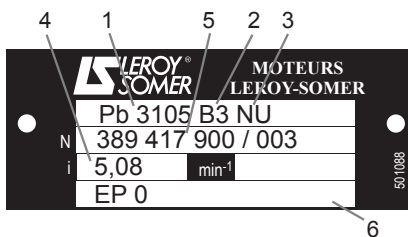
Necessary information

**a) from the gearbox nameplate:**

- 1- gearbox model and size ;
- 2- operating position ;
- 3- RK fixing type: torque arm ;
- possible options (AD) ;
- 4 - reduction ;
- 5- serial number ;
- 6- lubricant : delivered without oil: Pb 2000, Pbh 3000.



Pb 3000 is lubricated with grease for 10 000 hours running.



**b) tapered bushing (or shaft diameter)**

**c) from the appropriate part list:**

- part description and item number.

### 2 - MAINTENANCE

**Preventive maintenance visit**

- Check regularly that the recommendations concerning mechanical and electrical installation are still complied with.
- Lubrication : refer to corresponding documents.
- If the gearbox is fitted with a breather plug, make sure that the vent hole of the plug is not obstructed.
- Inspect the seals.
- It is nevertheless recommended to check proper oil level periodically.

**Maintenance: oil, seals, bearings.**

6 months	Adjust oil level. Inspect the seals.
3 years (or 5 000 h)	Drain and refill mineral oil. Change the seals. Change the grease of regreasable bearings.
5 years (or 25 000 h)	Drain and refill synthetic oil <sup>1</sup> . Change the seals. Change the grease of regreasable bearings.

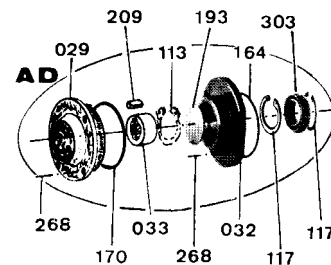
1. For a working temperature up to 70°C.

### 3 - EXPLODED VIEWS - PARTS LIST - MAINTENANCE PARTS

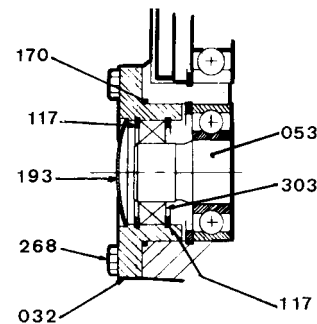
#### 3.1 - Poulibloc 2000

##### 3.1.1 - Backstop kit "AD"

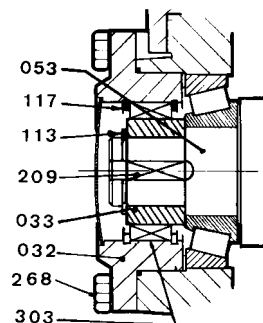
Ref.	Description	Qty
029	backstop cap	1
032	free wheel flange	1
033	inner race	1
113	external retaining ring	1
117	internal retaining ring	2
118	shims	3
164	"O" ring seal	1
170	"O" ring seal	1
193	cover cap	1
209	inner race key	1
268	fixing screws and washers	4
303	free wheel (32)	1



Pb 20 to 24



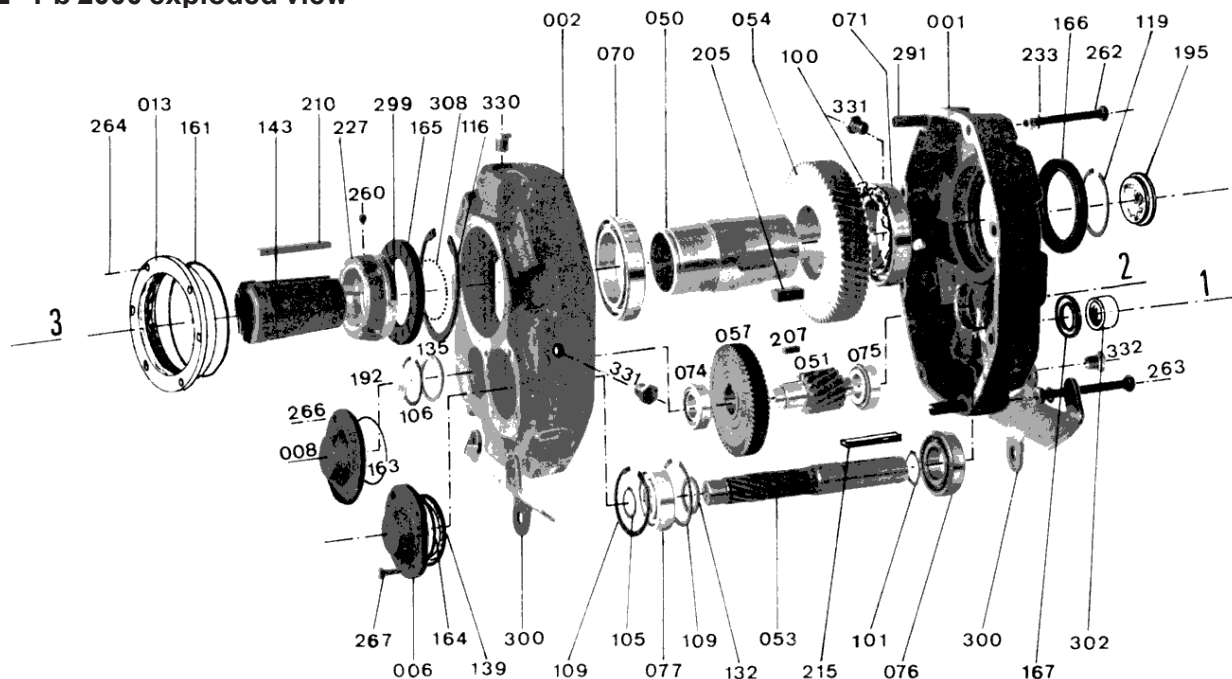
Pb 25, 26, 27



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### 3.1.2 - Pb 2000 exploded view



### 3.1.3 - Pb 2000 parts list

Ref.	Description	Qty	Ref.	Description	Qty	Ref.	Description	Qty
001	housing-rear	1	106	retaining ring axis 2	1	213	sealing joint ring	1
002	housing-front	1	109	retaining ring axis 1	2	215	input shaft key	1
006	input shaft cap axis 1	1	116	retaining ring axis 3	1	227	bushing collar	1
008	intermediate shaft cap axis 2	1	119	retaining ring axis 3	1	228	nuts	8/10
013	output shaft cap axis 3	1	132	input shaft spacer ring axis 1	1	233	assembly washer	8/10
050	output shaft axis 3	1	135	adjustment gages axis 3	1	260	bushing set screw	1
051	intermediate pinion shaft axis 2	1	139	adjustment gages axis 1	1	262	fixing screws	7/6
053	input shaft axis 1	1	143	tapered bushing	1	263	screws	2/3
054	output gear axis 3	1	161	"O" ring seal axis 3	1	264	input cap screws (013)	6
057	intermediate gear axis 2	1	163	"O" ring seal axis 2	1	266	input cap screws (008)	4
070	output shaft bearing axis 3	1	164	"O" ring seal axis 1	1	267	input cap screws (006)	4
071	output shaft bearing axis 3	1	165	output shaft seal axis 3	1	291	centering pins	2
074	intermediate shaft bearing axis 2	1	166	input shaft seal axis 3	1	299	screw and washers	1
075	intermediate shaft bearing axis 2	1	167	input shaft seal axis 1	1	300	torque arm housing bracket	2
076	input shaft bearing axis 1	1	192	intermediate shaft cap axis 2	1	302	spacer	1
077	input shaft bearing axis 1	1	195	output shaft cap	1	308	ball set	1
100	retaining ring axis 3	1	205	output gear key axis 3	1	330	filling plug	1
101	retaining ring axis 1	1	207	intermediate gear key axis 2	1	331	level plug	2
105	retaining ring axis 1	1	210	hub key	1	332	drain plug	1

### 3.1.4 - Pb 2000 1 stage maintenance parts

Pb type drawing	2605	2505	2405	2305	2205	2105	2005	
Description	Ref.	215028	215030	224186	224189	224191	224193	224195
Bearings	70	16030	6024	6020	6017	6015	6013	6011
	71	16030	6024	6020	6017	6015	6013	6011
	76	T2 ED 050	32308	30210	22207	30207	22206	22205
	77	T2 ED 050	32308	30308	6306	30306	6305	6205
Seals	163	88,6x1,78	69,6x1,78	-	-	-	-	-
	164	101,3x1,78	88,6x1,78	88,6x1,78	69,6x1,78	69,6x1,78	62x3	48x2
	165	150x180x15 AS	120x150x15 AS	100x150x13 AS	85x130x13 AS	75x115x10 AS	65x100x10 AS	55x90x10 AS
	166	150x180x15 AS	120x150x15 AS	100x120x12 AS	85x110x12 AS	75x100x10 AS	65x85x13 AS	55x72x10 AS
	167	60x85x13 AS	50x80x13 AS	55x68x8	40x55x8	40x52x7 AS	30x50x10 AS	25x40x8 AS

### 3.1.5 - Pb 2000 2 stage maintenance parts

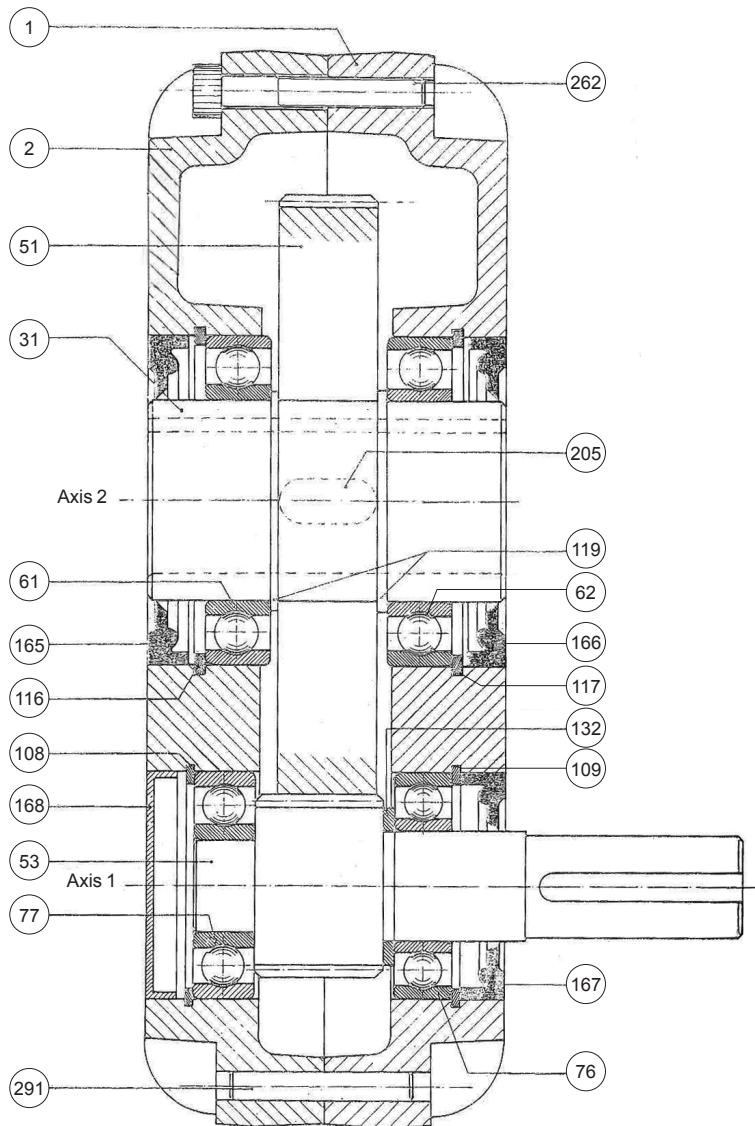
Pb type drawing	27--	26--	25--	24--	23--	22--	21--	20--	
Description	Ref.	215031	215027	215029	224187	224188	224190	224192	224194
Bearings	70	6038	16030	6024	6020	6017	6015	6013	6011
	71	6038	16030	6024	6020	6017	6015	6013	6011
	74	33214	33210	33207	33206	30306	30205	30204	6304
	75	33214	33210	33207	33206	30306	30205	30204	6304
	76	33114	33211	33210	NJ 210 ECP	NJ 207 ECP	NJ 207 ECP	NJ 206 ECP	6205
	77	30311	30309	30308	6308	21306 CC	6306	6305	6205
	161	280x3	-	-	-	-	-	-	-
Seals	163	125x3	88,6x1,78	69,6x1,78	-	-	-	-	
	164	160x3	101,3x1,78	88,6x1,78	88,6x1,78	69,6x1,78	69,6x1,78	62x3	48x2
	165	190x220x12 AS	150x180x15 AS	120x180x15 AS	100x150x13 AS	85x130x13 AS	75x115x10 AS	65x100x10 AS	55x90x10 AS
	166	190x220x12 AS	150x180x15 AS	120x150x15 AS	100x120x12 AS	85x110x12 AS	75x100x10 AS	65x85x13 AS	55x72x10 AS
	167	70x90x10 AS	60x85x13 AS	55x80x8 AS	55x68x8	40x55x8	35x52x10 AS	30x50x10 AS	25x40x8 AS

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### 3.2 - Poulibloc Pb 3000

#### 3.2.1 - Section view Pb 30nn to Pb 32nn



#### 3.2.2 - Pb 30nn to Pb 32nn parts list

Ref.	Description	Poulibloc Pb		
		30nn Qty	31nn Qty	32nn Qty
1	housing (input)	1	1	1
2	housing	1	1	1
31	hollow shaft	1	1	1
51	wheel	1	1	1
53	pinion axis 1	1	1	1
61	bearing axis 2	1	1	1
62	bearing axis 2	1	1	1
76	bearing axis 1	1	1	1
77	bearing axis 1	1	1	1
108	internal circlip axis 1	1	1	1
109	internal circlip axis 1	1	1	1
116	internal circlip axis 2	1	1	1
117	internal circlip axis 2	1	1	1
119	circlip axis 2	2	2	2
132	spacer axis 1 <sup>1</sup>	1	0	0
165	seal axis 2	1	1	1
166	seal axis 2	1	1	1
167	seal axis 1	1	1	1
168	cover	1	1	1
205	wheel key axis 2	1	1	1
262	fixing screws	6	6	6
291	pin	2	2	2

Ref n Maintenance parts Poulibloc

1. Pb i : 8 only

en

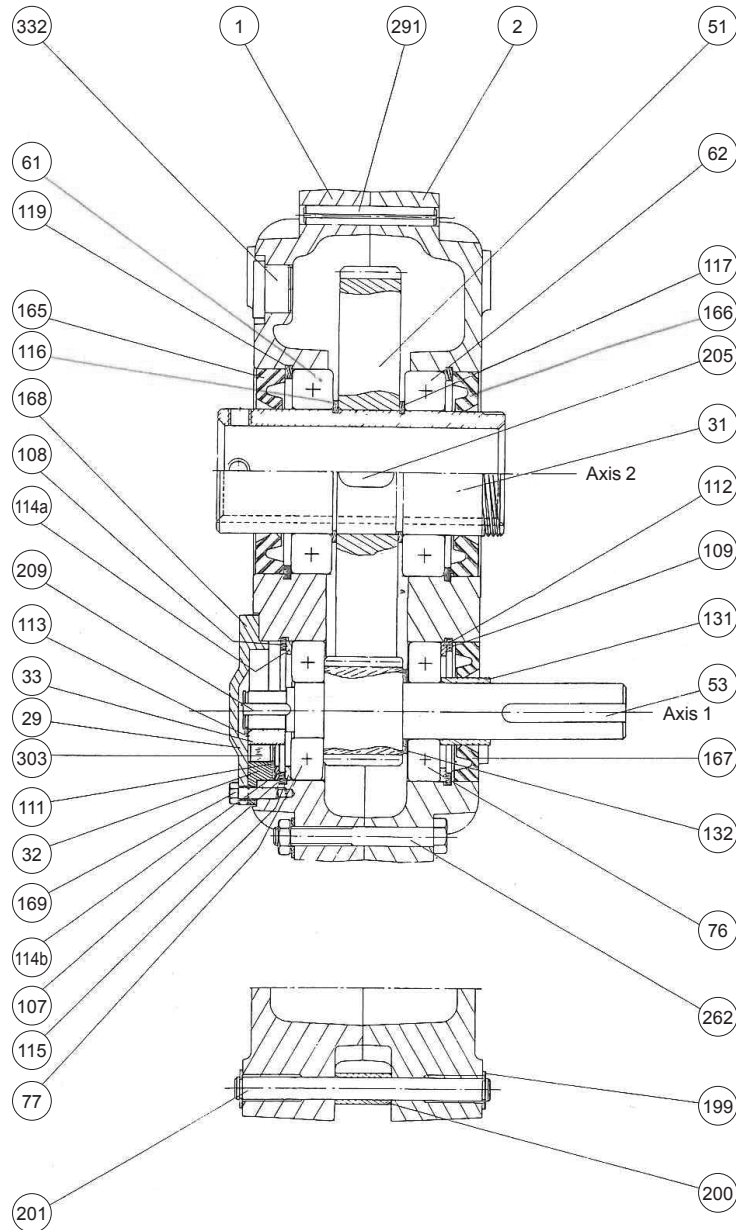


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### 3.3 - Poulibloc Pbh 3000

#### 3.3.1 - Section view Pbh 31nn to Pbh 33nn



#### 3.3.2 - Pbh 31nn to Pbh 33nn parts list

Ref.	Description	Poulibloc Pbh		
		31nn Qty	32nn Qty	33nn Qty
1	housing (input)	1	1	1
2	housing	1	1	1
29	backstop cover	1	1	1
31	hollow shaft	1	1	1
32	Backstop outer race	1	1	1
33	Backstop inner race	1	1	1
51	wheel	1	1	1
53	pinion axis 1	1	1	1
61	bearing axis 2	1	1	1
62	bearing axis 2	1	1	1
76	bearing axis 1	1	1	1
77	bearing axis 1	1	1	1
107	internal circlip axis 1	0	1	0
108	internal circlip axis 1	1	1	1
109	internal circlip axis 1	1	1	1
111	spacer	1	1	1
112	spacer axis 1	0	0	1
113	circlip axis 1	1	1	1
114a	spacer	1	0	1
114b	spacer	0	1	0
115	spacer axis 2 Front	1	0	1
116	internal circlip axis 2	1	1	1
117	internal circlip axis 2	1	1	1
119	circlip axis 2	2	2	2
131	spacer <sup>1</sup>	0	0	1
132	spacer axis 1 <sup>2</sup>	1	0	0
165	seal axis 2	1	1	1
166	seal axis 2	1	1	1
167	seal axis 1	1	1	1
168	cover	1	1	1
169	screw (ref 168)	4	4	4
199	external circlip	2	2	2
200	torque arm bushing	1	1	1
201	torque arm pin	1	1	1
205	wheel key axis 2	1	1	1
209	key	1	1	1
262	fixing screws	6	6	6
291	pin	2	2	2
303	free wheel	1	1	1
332	plug E-R/N/V*	5	5	5

\*E-R/N/V: "E"breather/"R"filling/"N"level/"V"draining plug

Ref n Maintenance parts Poulibloc

- 1. Pbh 33 i : 8 only
- 2. Pbh 31 i : 8 only

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### 4 - TROUBLESHOOTING GUIDE

Problem	Cause	Remedy
Noise and vibration	Insufficient oil	Check oil level. Fill to proper level.
	Overspeed occurring	Check rated maximum speed for unit. Reduce speed or replace with larger unit.
	Worn gears or pinions	Check for overload. If overload is occurring reduce load or replace with reducer of sufficient capacity.
	Improper torque arm support installation	Check for rigidity of support.
Bearing failure	Hollow shaft: incorrect mounting of torque arm	Replace bearings.
	Input shaft: excessive belt tension	Replace bearings. Check and reduce belt tension.
Overheating	Overload	Check rated capacity of drive and replace with the reducer of sufficient capacity.
	Improper oil level	Check oil level. Fill to proper level.
	Improper oil grade	Drain, rinse, and refill with proper grade oil (see Installation manual ref 3097).
Oil leakage	Excessive oil	Check oil level. Drain to proper level.
	Breather plug in incorrect position	Check for breather plug to be at top most position.

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