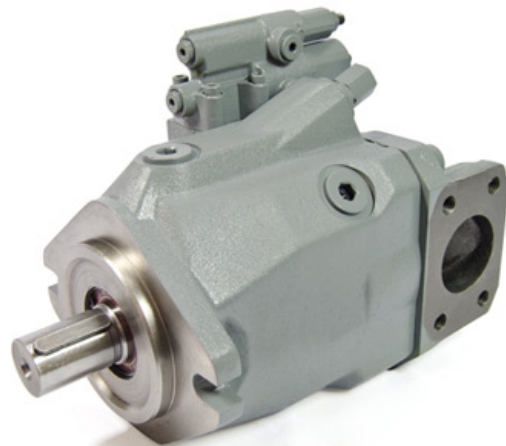




QHTM POMPES / PUMPS

PISTONS SÉRIE A10V 31 52/53 DESIGN

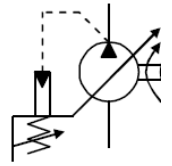
PISTON A10V SERIES 31 52/53 DESIGN





QHA10VO/VSO Series 31

SWASHPLATE AXIAL PISTON PUMPS



TECHNICAL SPECIFICATIONS

- SWASHPLATE AXIAL PISTON PUMP
- GOOD SUCTION CHARACTERISTICS
- COMPACT, LIGHTWEIGHT, LOW NOISE
- LONG SERVICE LIFE, HIGH PRECISION BEARINGS
- AXIAL AND RADIAL LOAD CAPACITY

MAXIMUM OPERATING PRESSURE

NOMINAL: 4060 PSI (280 BAR)

INTERMITTENT: 4560 PSI (315 BAR)

PEAK: 5075 PSI (350 BAR)

MAXIMUM CASE DRAIN PRESSURE: 29 PSI (2 BAR)

SUCTION PRESSURE RANGE: 11.6 - 435 PSI (0.8 - 30 BAR) ABSOLUTE



FEATURES

- PRESSURE COMPENSATOR WITH LOAD SENSE CONTROL (DFR)
- VOLUME STOP
- CLOCKWISE ROTATION
- SIDE PORTS WITH CODE 61 FLANGES
- BUNA SEALS

ALSO AVAILABLE

- MANY CONTROLS SUCH AS: REMOTE COMPENSATOR (DRG) AND COMPENSATOR WITH HORSEPOWER LIMITER (DFLR)
- COUNTERCLOCKWISE ROTATION
- END PORTS WITH CODE 61 OR 62 FLANGES
- VITON SEALS
- OTHER MOUNTING FLANGES AND SHAFTS

POMPES STANDARDS STANDARD PUMPS	DISPLACEMENT $\text{in}^3 (\text{cm}^3) / \text{rev.}$	GPM @ 1800 RPM	MAX RPM	MOUNTING FLANGE	PORTS CODE FLANGE 61	DRAIN PORT	SHAFT
QHA10VSO18DFR/31R-PKC62N00	1.1 (18)	8.5	3300	SAE-A 2 BOLT	INLET: 1" OUTLET: 3/4"	SAE-06	3/4" KEY
QHA10VSO18DFR/31R-PSC62N00							3/4-SPLINE
QHA10VSO28DFR/31R-PKC62N00	1.71 (28)	13	3000	SAE-B 2 BOLT	INLET: 1 1/4" OUTLET: 1"	SAE-08	7/8" KEY
QHA10VSO28DFR/31R-PSC62N00							7/8" SPLINE
QHA10VSO45DFR/31R-PKC62N00	2.75 (45)	21	2600	SAE-B 2 BOLT	INLET: 1 1/2" OUTLET: 1"	SAE-10	1" KEY
QHA10VSO45DFR/31R-PSC62N00							1" SPLINE
QHA10VSO71DFR/31R-PKC62N00	4.33 (71)	33.5	2200	SAE-C 2 BOLT	INLET: 2" OUTLET: 1"	SAE-10	1 1/4" KEY
QHA10VSO71DFR/31R-PSC62N00							1 1/4" SPLINE
QHA10VSO100DFR/31R-PKC62N00	6.10 (100)	47	2000	SAE-C 2 BOLT	INLET: 2 1/2"	SAE-12	1 1/2" KEY
QHA10VSO100DFR/31R-PSC62N00					OUTLET: 1 1/4"		1 1/2" SPLINE
QHA10VSO140DFR/31R-PKC62N00	8.54 (140)	66.5	1800	SAE-D 4 BOLT	INLET: 2 1/2"	SAE-12	1 3/4" KEY
QHA10VSO140DFR/31R-PSD62N00					OUTLET: 1 1/4"		1 3/4" SPLINE



CODE

Sample Code:

QHA10V(S)O 71 DR / 31 R P S C 62 NOO - S097

Size & Mounting

Displacement V g_{max} cm³/rev (in³/rev)

10	18	28	45
(0.61)	(1.10)	(1.71)	(2.75)

60	63	71	100	140
(3.66)	(3.84)	(4.33)	(6.10)	(8.54)

Control Devices

Pressure control	DR
Pressure remote control	DRG
Pressure and flow control	DFR
Pressure & flow (X-T port blocked)	DFR1
Pressure, Flow & HP	DFLR
Pressure, Flow & HP (53 SERIES)	LA*D

* Minimum Start of control
LA5D-10 TO 35 BAR (145 - 507 PSI)
LA6D-36 TO 70 BAR (522 - 1015 PSI)
LA7D-71 TO 105 BAR (1030 - 1523 PSI)
LA8D-106 TO 140 BAR (1537 - 2031 PSI)
LA9D-141 TO 230 BAR (2045 - 3336 PSI)

Series

Series	31	10, 28, 45, 60, 63 displacements avail
	52/53	

Direction of Rotation

Viewed from shaft end	clockwise	R
	counter-clockwise	L

Seals

Buna-N (NBR per DIN ISO 1629)	P
FPM (Fluorocarbon/Viton)	V

Shaft End

Type	10	18	28	45	60/63	71	100	140	
Keyed	3/4"	3/4"	7/8"	1"	1 1/4"	1 1/4"	1 1/2"	1 3/4"	K
Splined	3/4-11T	3/4-11T	7/8-13T	1-15T	1 1/4-14T	1 1/4-14T	1 1/2-17T	1 3/4-13T	S
Splined "S" -Reinforced	-	3/4-11T	7/8-13T	1-15T	1 1/4-14T	1 1/4-14T	1 1/2-17T	-	R
Splined Non-Thru Drive	5/8-9T	5/8-9T	3/4-11T	7/8-13T	1-15T	1-15T	1 1/4-14T	-	U
Splined "U" -Reinforced	-	5/8-9T	3/4-11T	7/8-13T	1-15T	1-15T	1 1/4-14T	-	W
Splined "Full Spline"	-	-	-	-	7/8-13T	-	-	-	Q
Keyed Metric	18mm	18mm	22mm	25mm	32mm	32mm	40mm	45mm	P

Mounting Flange

pilot diameter (in/mm)	10	18	28	45	60/63	71	100	140	CODE
SAE 2 Bolt	SAE "A" 3.25"/82.5	SAE "A" 3.25"/82.5	SAE "B" 4.0"/101.6	SAE "B" 4.0"/101.6	SAE "B" 4.0"/101.6	SAE "C" 5.0"/127.0	SAE "C" 5.0"/127.0	-	C
ISO 2 Bolt Metric	80 mm	80 mm	100 mm	100 mm	-	125 mm	125 mm	-	A
SAE 4 Bolt	-	-	-	-	SAE "C" 5.0"/127.0	-	-	SAE "D" 6.0"/152.4	D
ISO 4 Bolt Metric	-	-	-	-	-	-	-	180 mm	B

Special Suffix

Max volume stop adjust (std)	S097 ⁵⁾
Omit if none required	-

⁵⁾ Avail on all 52/53 design & side ported non-thru drive -31 design

Thru Drives

Without through drive (Non-Thru Drive)	NOO
With thru drive to accept a secondary pump	K**
Mtg Flg Hub Sealing To Mount	
82-2 (A) 3/4" keyed (A-B) axial A10V18 (K)	K40
101-2 (B) 7/8" keyed (B) axial A10V28 (K)	K03
101-2 (B-B) 1" keyed (B-B) axial A10V45 (K)	K05
127-2 (C) 1-1/4" keyed (C) axial A10V71 (K),	K08
127-2 (C) 1-1/2" keyed (C) radial A10V100 (K)	K38
152-4 (D) 1-3/4" keyed (D) axial A10V140 (K)	K21
82-2 (A) 5/8" 9T (A) axial A10V18(U,W), 10(U)	K01
82-2 (A) 3/4" 11T (A-B) axial A10V18(S,R), 10(S)	K52
101-2 (B) 7/8" 13T (B) axial A10V28(S,R), 45(U,W)	K68/K02
101-2 (B) 1" 15T (B-B) axial A10V45(S,R), 60(U,W)	K04
127-2 (C) 1-1/4" 14T (C) axial A10V71(S,R), 100 (U,W)	K07
127-2 (C) 1-1/2" 17T (C-C) axial A10V100(S,R), 85(S)	K24
152-4 (D) 1-3/4" 13 T (D) axial A10V140(S,R)	K17

Service Ports

Rear ports, Metric Thread	11 ²⁾	4-Bolt Flange ports (except where noted)
Rear ports, Metric Thread	41 ²⁾	
Rear ports, UNC Thread	61 ^{2,3)}	
Rear ports, UNC Thread	91 ²⁾	
Side ports, Metric Thread	12	Str.Thread O-ring ports (52/53 Series)
Side ports, Metric Thread	42	
Side ports, UNC Thread	62 ³⁾	
Side ports, UNC Thread	92	
Rear ports, Metric Threaded	14	Str.Thread O-ring ports (52/53 Series)
Rear ports, UNC Threaded	64	

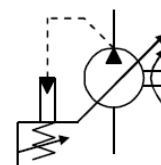
²⁾ All REAR porting, Non-thru drive only

³⁾ A10V71; 8-Threaded holes on Pressure port code 61 & 62



QHA10VO/VSO Series 31 52/53 DESIGN

SWASHPLATE AXIAL PISTON PUMPS



Performance Data

(A) A10V / VSO 18-140, Series 31

Frame Size	18	28	45	71	100	140
Size cm^3/rev (in^3/rev)	18 (1.1)	28 (1.71)	45 (2.75)	71 (4.33)	100 (6.10)	140 (8.54)
Flow @ 1800 rpm	8.6 gpm 32.4 lpm	13.2 gpm 50.4 lpm	21.5 gpm 81.6 lpm	33.7 gpm 128 lpm	47.5 gpm 180 lpm	66.5 gpm 252 lpm
Pressure	4000 PSI 280 BAR	4000 PSI 280 BAR	4000 PSI 280 BAR	4000 PSI 280 BAR	4000 PSI 280 BAR	4000 PSI 280 BAR
Peak Pressure	5100 PSI 350 BAR	5100 PSI 350 BAR	5100 PSI 350 BAR	5100 PSI 350 BAR	5100 PSI 350 BAR	5100 PSI 350 BAR
Maximum Flow	15.7 gpm 59.4 lpm	22 gpm 84 lpm	31 gpm 117 lpm	41 gpm 156 lpm	53 gpm 200 lpm	67 gpm 252 lpm
Maximum Speed	3300 RPM	3000 RPM	2600 RPM	2200 RPM	2000 RPM	1800 RPM

Performance Data

(A) A10V / V(S)O 10, 28, 45, 60, 63 Series 52/53

Frame Size	10	28	45	60	63
Size cm^3/rev (in^3/rev)	10.5 (0.64)	28 (1.71)	45 (2.75)	60 (3.66)	63 (3.84)
Flow @ 1800 rpm	4.99 gpm 18.5 lpm	13.2 gpm 50.4 lpm	21.5 gpm 81 lpm	28.4 gpm 107 lpm	29.8 gpm 112.8 lpm
Pressure	3600 PSI 250 BAR	3600 PSI 250 BAR	3600 PSI 250 BAR	3600 PSI 250 BAR	3600 PSI 250 BAR
Peak Pressure	4000 PSI 315 BAR	4000 PSI 315 BAR	4000 PSI 315 BAR	4000 PSI 315 BAR	4000 PSI 315 BAR
Maximum Flow	9.7 gpm 37 lpm	22 gpm 84 lpm	31 gpm 117 lpm	41 gpm 155 lpm	43 gpm 163 lpm
Maximum Speed	3600 RPM	3000 RPM	2600 RPM	2600 RPM	2600 RPM

IMPORTANT: Consultez notre Département Technique pour du Support ou Afin d'Obtenir les Manuels Techniques du Manufacturier.
Consult our Technical Department for Support or To Obtain the Manufacturer's Technical Manuals.

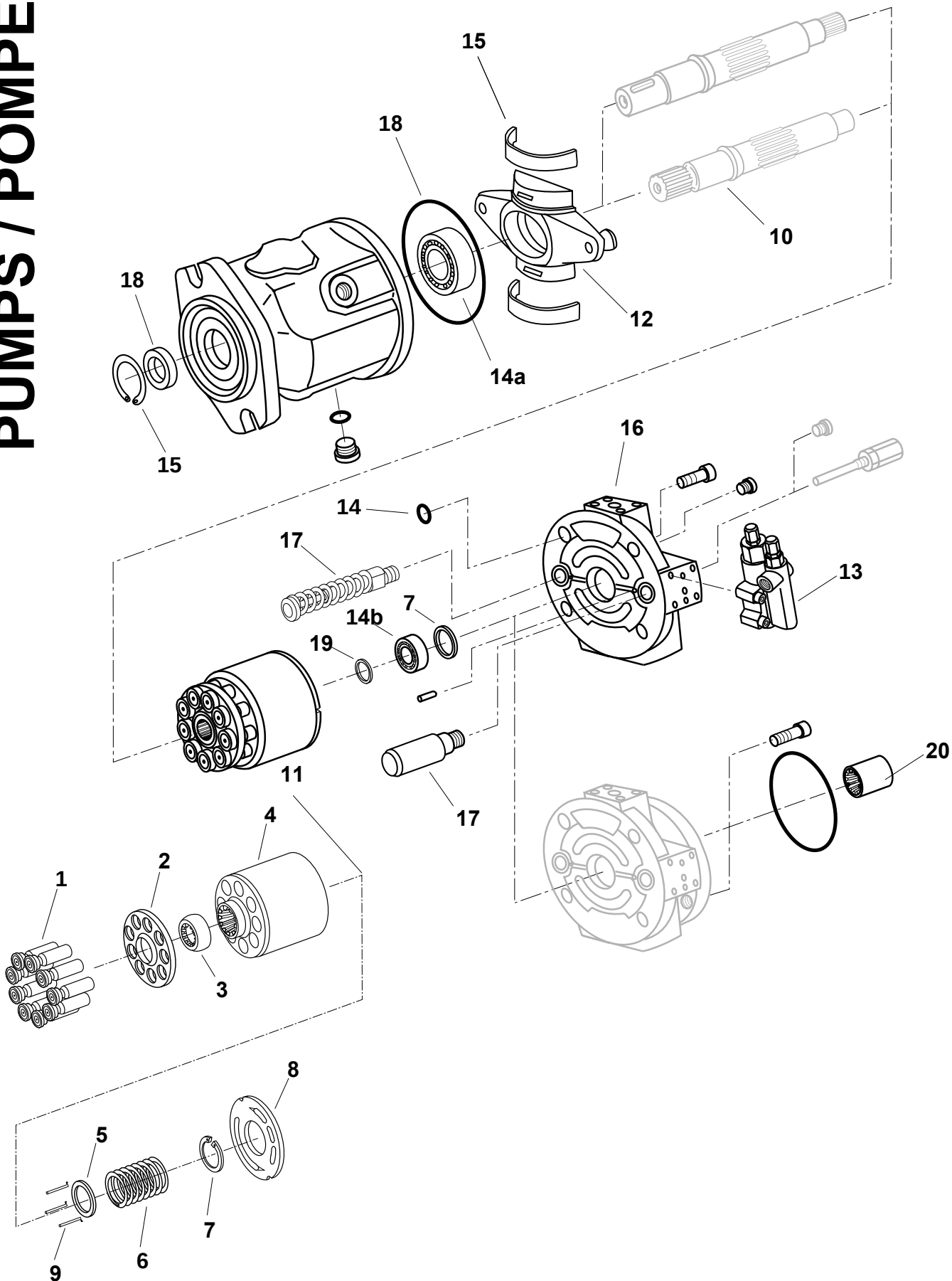


QHA10VO/VSO Series 31

PARTS BREAKDOWN



PUMPS / POMES





QHA10VO/VSO Series 31

PARTS LIST

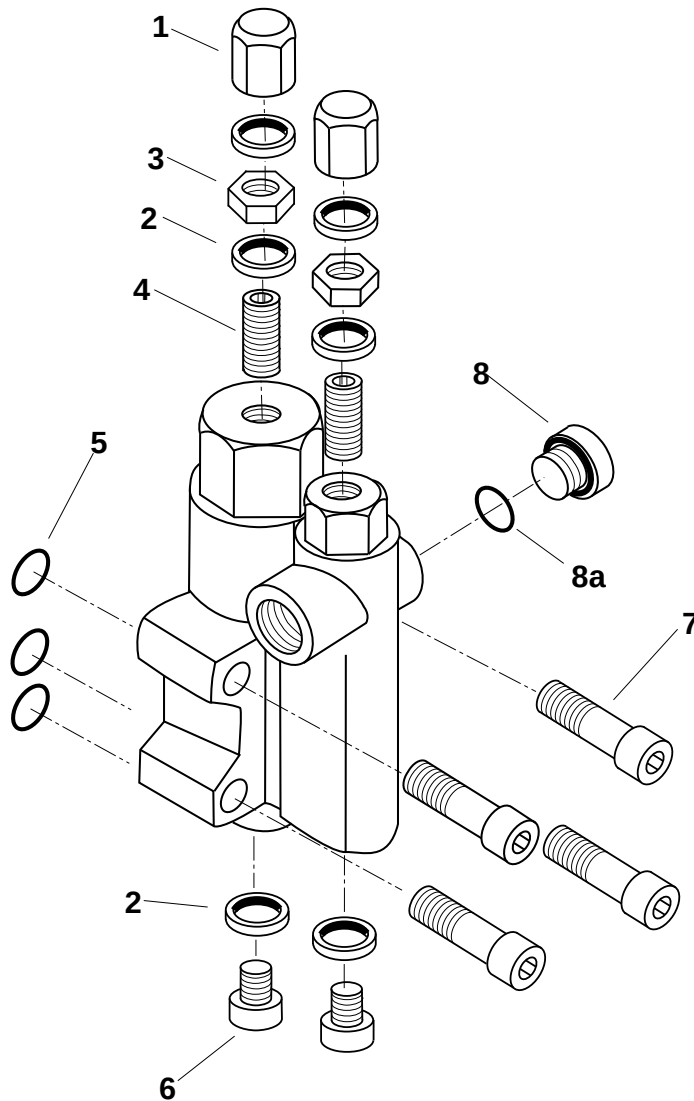
Item	Description	Qty
1	PISTON (EACH)	9 REQ.
2	RETAINER PLATE	1
3	BALL GUIDE	1
4	BARREL	1
5	SPRING - SEAT	1
6	SPRING	1
7	RETAINER	1
8a	VALVE PLATE - LEFT	1
8b	VALVE PLATE - RIGHT	1
9	PIN (EACH)	3 REQ.
10a	SHAFT (METRIC) - CODE P	1
10b	SHAFT (SPLINED) - CODE S	1
10c	SHAFT (KEYED) - CODE K	1
10d	SHAFT (SPLINED) - CODE U	1
10e	SHAFT SPLINED (THRU DRV-CODE S)	1
10f	SHAFT KEYED (THRU DRV-CODE P)	1
10g	SHAFT METRIC (THRU DRV-CODE K)	1
10h	SHAFT METRIC (THRU DRV-CODE R)	1
11a	ROTARY GROUP L.H.	1
11b	ROTARY GROUP R.H.	1
12a	YOKE L.H.	1
12b	YOKE R.H.	1
13a	CONTROLLER (DFR)***	1
13b	CONTROLLER (DFR1)***	
13c	CONTROLLER (DRG)***	
13d	CONTROLLER (DR)***	
13e	CONTROLLER (DG)***	
14a	SHAFT BEARING - CUP/CONE	1
14b	REAR BEARING - CUP/CONE	1
15	SADDLE BEARING (EACH)	2 REQ.
16a	THRU DRIVE COVER K01 (RH)	1
16b	THRU DRIVE COVER K01 (LH)	1
17	CONTROL PISTON ASSY	1
18a	SEAL KIT	1
18b	SEAL KIT - VITON	1
19	SHIM KIT	1
20	COUPLING K01	1





QHA10VO/VSO Series 31

PARTS BREAKDOWN



Item	Description	Qty	Part Number
1	Acorn Nut (M8 x 1)	2	BH00913805
2	Usit Ring Buna (9.3 x 13.3 x 10)	6	BH00114774
2	Usit Ring Viton (9.3 x 13.3 x 10)	6	BH00642827
3	Jam Nut (M8 x 1)	2	BH00913806
4	Adjusting Screw (M8 x 1)	2	BH00913807
5	O-Ring (90 Duro Buna PRP-011)	3	011 N90
5	O-Ring (85 Duro Viton PRP-011)	3	011 V
6	Plug (M8 x 1)	2	76118-009
7	Cap Screw (M6 x 30 DIN 912-10.9)	4	60119-058
8	Plug (SAE 7/16-20) (Buna)	1	7238-04
8	Plug (SAE 7/16-20) (Viton)	1	7238-04V
8a	O-Ring (90 Duro Buna, PRP-904)	1	904 N90
8a	O-Ring (75 Duro Viton, PRP-904)	1	904 V
9	Plug (DFR1) M4 x 4	1	60137-016