

MAINTENANCE MANUAL

YAMADA AIR-OPERATED DIAPHRAGM PUMPS NDP-40 NDP-50 NDP-80



WARNING



- For your own safety, be sure to read these procedures carefully before performing maintenance on this product. After reading this document, be sure to keep it handy for future reference

This maintenance manual covers what you should know about maintenance of the Yamada NDP-40 series, NDP-50 series, NDP-80 series Diaphragm Pumps series.

This edition is based on the standards for the March 1999 production run. Remember the specifications are always subject to change; therefore, some of the information in this edition may not apply to new specifications

• Warnings and Cautions

For safe use of this product, be sure to note the following: In this document, warnings and cautions are indicated by symbols. These symbols are for those who will operate this product and for those who will be nearby, for safe operation and for prevention of personal injury and property damage. The following warning and caution symbols have the meanings described below. Be sure to remember their meanings.



WARNING:

If you ignore the warning described and operate the product in an improper manner, there is danger of serious bodily injury or death.



CAUTION:

If you ignore the caution described and operate the product in an improper manner, there is danger of personal injury or property damage.

Furthermore, to indicate the type of danger and damage, the following symbols are also used along with those mentioned above:



This symbol indicates a DON'T, and will be accompanied by an explanation on something you must not do.



This symbol indicates a DO, and will be accompanied by instructions on something you must do in a certain situation.



WARNING



- Before starting maintenance work, cut off the feed air and clean the pump. If air pressure or residue remain in the pump, there is danger of explosion, or possible poisoning resulting in serious injury or death if chemicals adhere to the skin or are accidentally swallowed. (For details on cleaning the pump, refer to Chapter 6 of the operating manual)



- When replacing parts, be sure to use the recommended genuine parts or equivalents. Use of other parts may cause a malfunction of the product.



CAUTION



- When it is instructed that special tools must be used, be sure to use the specified tools. Otherwise, the pump may be damaged.



- Refer to 101 "Specifications" in the Operating Manual also, remember that the pump is heavy, and extreme care must be taken when lifting it.

Table of Contents

· Warnings and Cautions	1
· Table of Contents.....	2
1. Principles of operation	4
2. Tools, etc.....	
2.1 General tools.....	4
2.2 Special tools	4
2.3 Misc	4
3. Ordering Replacement Parts	4
4. Balls and Valve Seats	
4.1 Removal.....	5
■ BA□, BS□, BF□ types	5
■ NDP-40 BP□ type	6
■ NDP-50 BP□ 50 BV□, NDP-80 BP□ types.....	7
4.2 Checking.....	8
4.3 Installation.....	8
5. Diaphragm and Centre Rod	
5.1 Removal.....	9
■ BA□, BS□, BF□ types	9
■ BP□, BV□ types.....	9
5.2 Checking.....	10
5.3 Installation.....	10
■ B□C, B□N, B□E, B□V, B□H, B□S types	10
■ B□T types.....	11
6. Throat bearing and Pilot valve	
6.1 Removal.....	12
6.2 Checking.....	12
6.3 Installation.....	12
7. Seal ring and Spool	
7.1 Removal.....	13
7.2 Checking.....	14
7.3 Installation.....	14
8. Exploded View and Parts List	
NDP-40-BA□	15
NDP-40-BF□, BS□	17
NDP-40-BP□, BV□.....	20
NDP-50-BA□	25
NDP-50-BF□, BS□	27
NDP-50- BP□, BV□.....	30
NDP-80-BA□	35
NDP-80-BF□, BS□	37
NDP-80-BP□.....	40

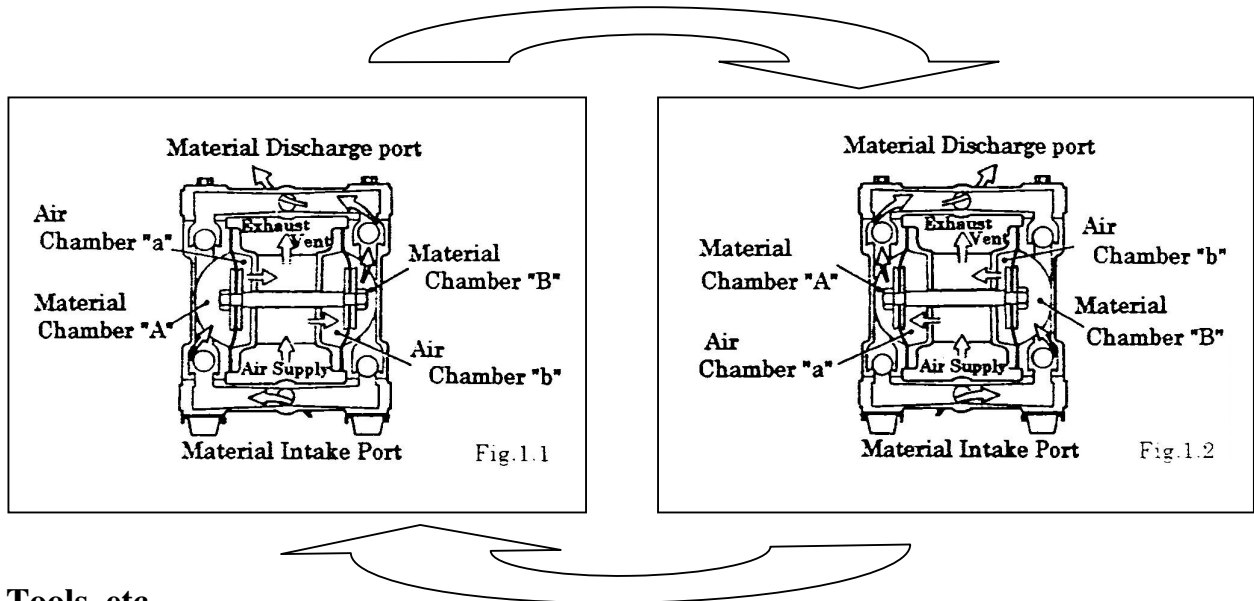
9	Diaphragm kit, valve kit, Air motor kit, Air motor seal kit.....	
	NDP-40.....	23
	NDP-50.....	33
	NDP-80.....	42
10	Body assembly 40/50/80.....	44
11	Valve assembly 40/50/80.....	45

1. Principles of operation

There are two diaphragms fixed to the centre rod, one at each end. When compressed air is supplied to air chamber B (right side, see Fig. 1.1.), the centre rod moves to the right, the material in material chamber B is pushed out, and at the same time material is sucked into material chamber A.

When the centre rod is moved full-stroke to the right, the air switch valve is switched, compressed air is sent to air chamber A (left side, see Fig. 1.2.), and the centre rod moves to the left. The material in material chamber A is pushed out, and at the same time material is sucked into material chamber B.

Through repetition of this operation, material is repeatedly taken in and discharged out.



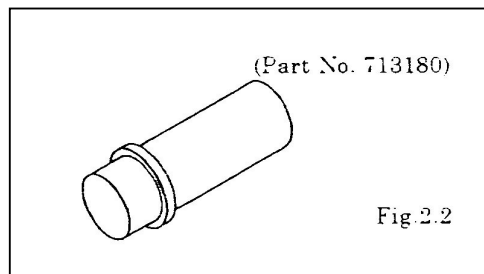
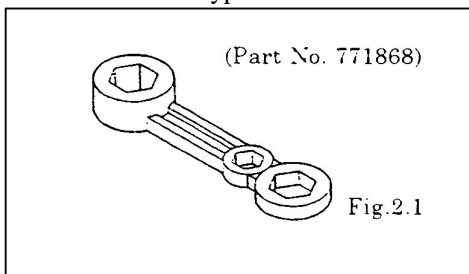
2. Tools, etc.

2.1 General tools

- Socket wrenches 13 mm, 17 mm, 19 mm (except with the NDP-40 BP□)
24 mm (BA□, BS□, BF□)
- Hexagonal box wrenches 5 mm, 6 mm
- Small crowbars 2 (B□C, B□N, B□E, B□V)
- Open-end wrenches 17 mm (NDP-40 BP□), 19 mm (BA□, BS□, BF□)
24 mm (BA□, BS□, BF□)
- Plastic hammer

2.2 Special tools

- PP wrench (sold separately) Purpose: Removing the centre disk of BP□ and BV□ types
- Sleeve remover (sold separately) Purpose: for removing sleeves



2.3 Misc.

- Lubricating oil Turbine oil equivalent to #32
- Nuts M16x1.5
- Lock tight (adhesive)

3. Ordering replacement parts

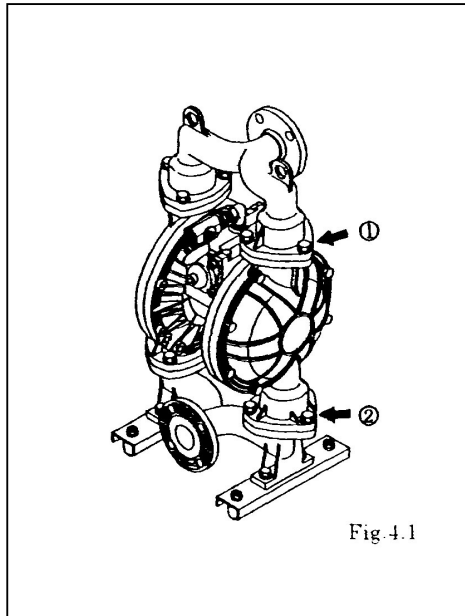
For accurate and speedy shipment of parts, be sure to order the right parts for your model to your dealer or one of our regional offices. Indicate the part number, descriptions, quantities and reasons for replacement, in as much detail as possible.

4. Balls and Valve seats

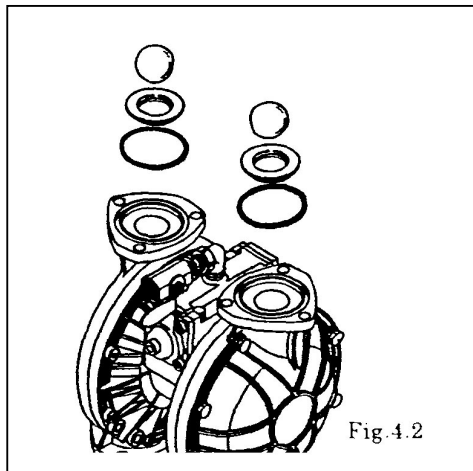
4.1 Removal

■ BA□, BS□, BF□ types

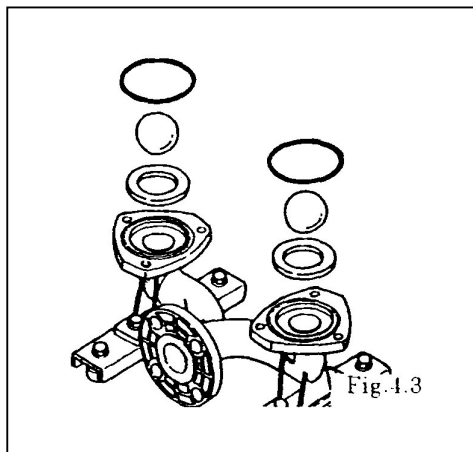
See [Exploded View] on and after p. 15. (Fig. 4.1, 4.2 and 4.3 show the NDP-50 BS□.)



- Remove the 6 (8 on the NDP-80) retainer bolts ① from the “out” manifold, and remove the “out” manifold. [Fig. 4.1.]



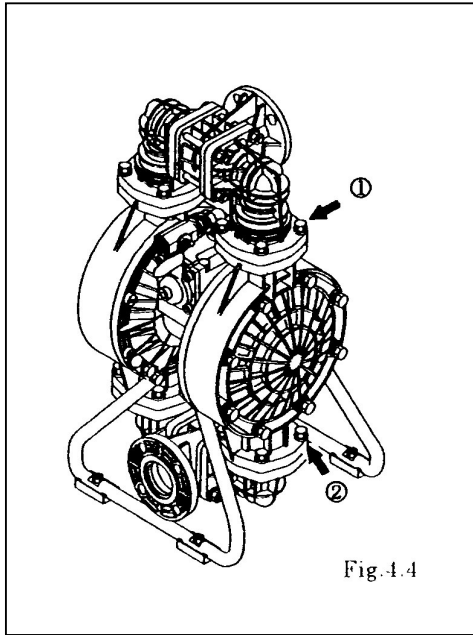
- Remove the ball, valve seat and O-ring. [Fig. 4.2]



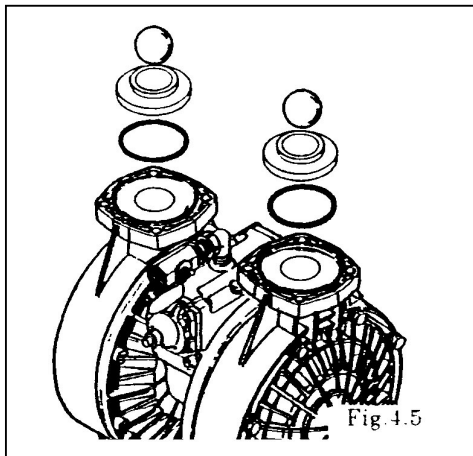
- Remove the 6 (8 on the NDP-80) retainer bolts ② from the “in” manifold, and remove the “in” manifold.
- Remove the ball, valve seat and O-ring. [Fig. 4.3]

■ NDP-40 BP□ type

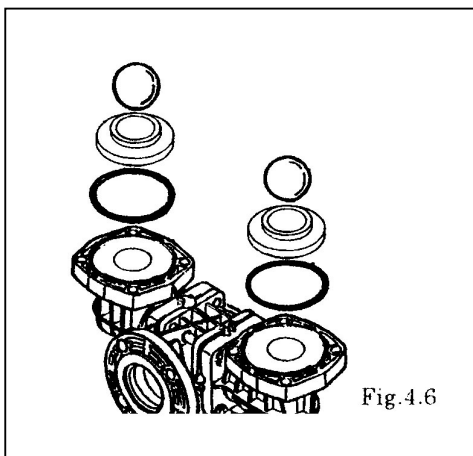
See [8. Exploded View] on and after p. 15.



- Remove the 8 retainer bolts ① from the “out” manifold, and remove the “out” manifold. [Fig. 4.4]



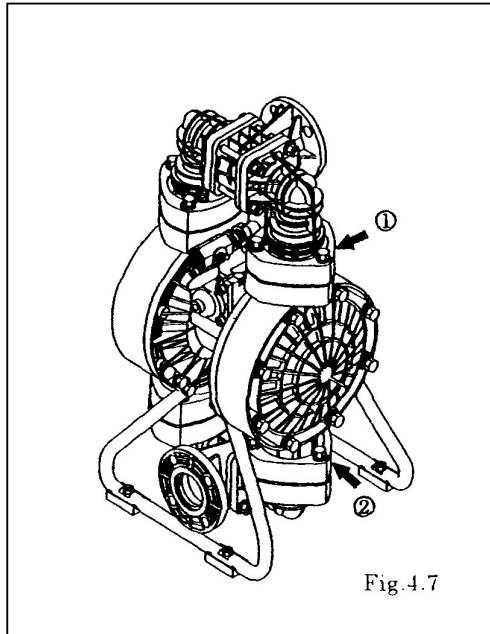
- Remove the ball, valve seat and O-ring. [Fig. 4.5]



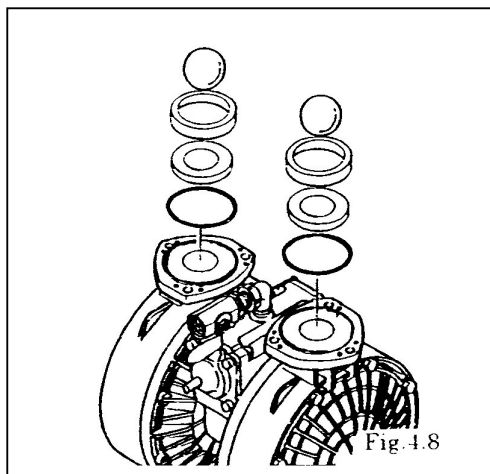
- Remove the 8 retainer bolts ② from the “in” manifold, and remove the “in” manifold.
- Remove the ball, valve seat and O-ring. [Fig. 4.6]

■ NDP-50 BP□·BV□, NDP-80 BP□ types

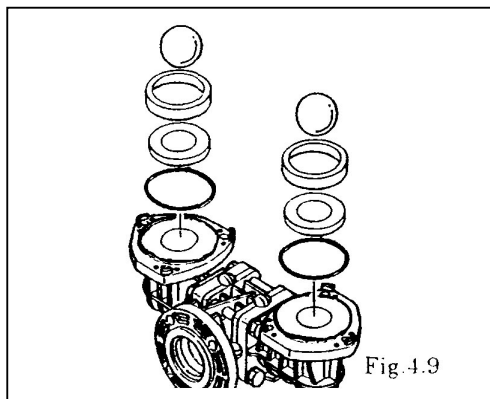
See [Exploded View] on and after p. 15. (Fig. 4.7, 4.8 and 4.9 show the NDP-50BP□.)



- Remove the 6 (8 on the NDP-80) retainer bolts ① from the “out” manifold, and remove the “out” manifold. [Fig. 4.7]

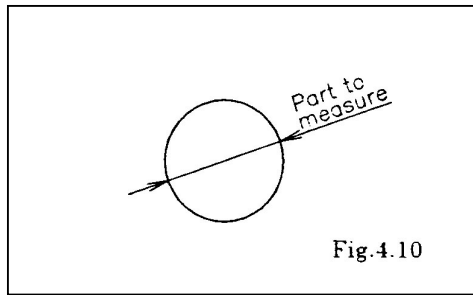


- Remove the ball, valve guide (only NDP-80), valve seat and O-ring. [Fig. 4.8]



- Remove the 6 (8 on the NDP-80) retainer bolts ② from the “in” manifold, and remove the “in” manifold. [Fig. 4.7]
- Remove the ball, valve guide (only NDP-80), valve seat and O-ring. [Fig. 4.9]

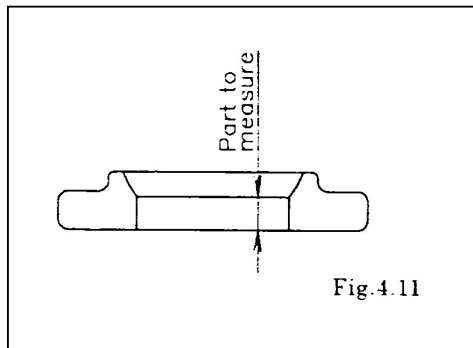
4.2 Checking



- Ball [Fig. 4.10]
Measure the outside diameter, and if it is outside the usable range, replace the ball.

Usable range of ball

NDP-40	S ϕ 45.0 ~ S ϕ 51.5 mm
NDP-50	S ϕ 56.7 ~ S ϕ 64.9 mm
NDP-80	S ϕ 81.0 ~ S ϕ 92.7 mm



- Valve seat [Fig. 4.11]
Measure the dimension shown at left, and if it is outside the usable range, replace the seat.

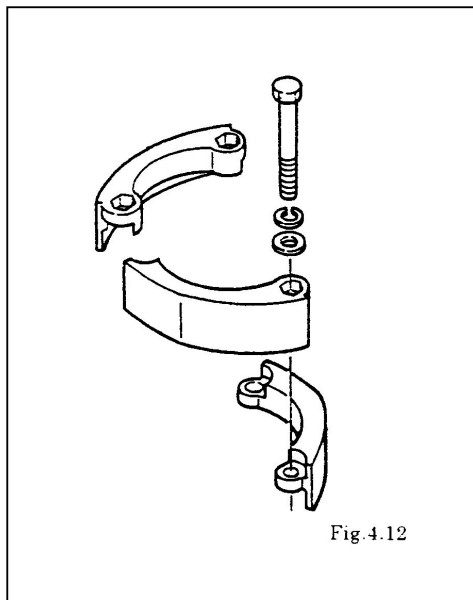
Usable range of valve seat

	B□C, B□N, B□E, B□V, B□H, B□S	B□T
NDP-40	4.6 ~ 11.5 mm	1.7 ~ 4.1 mm
NDP-50	5.0 ~ 12.5 mm	
NDP-80		

- O-ring (other than PTFE)
If O-rings are worn out or cracked, replace them.

4.3 Installation

For installation, see [Exploded View] on and after p. 15, and install in the reverse order of disassembly.



Tightening torque for manifold retainer bolts

20 N·m {200 kgf·cm}

<NOTE>

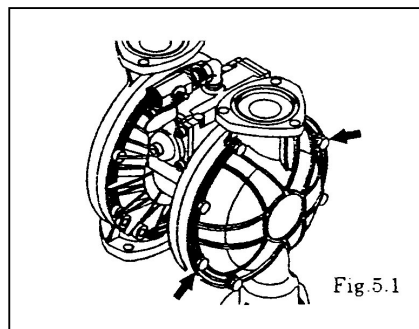
- Make sure there is no dust on the seal surface and the seal is not damaged.
- Replace the PTFE O-ring regardless of its condition.
- Match the convex and concave parts of the protector. [Fig. 4.12] (NDP-50 BP□·BV□, NDP-80 BP□)

5. Diaphragm and Centre rod

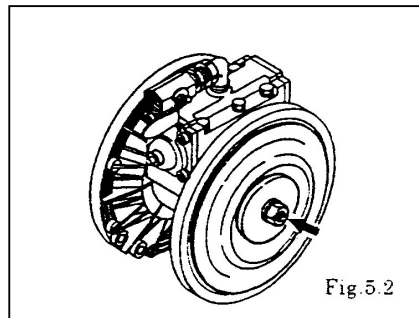
5.1 Removal

■ BA□, BS□, BF□ types

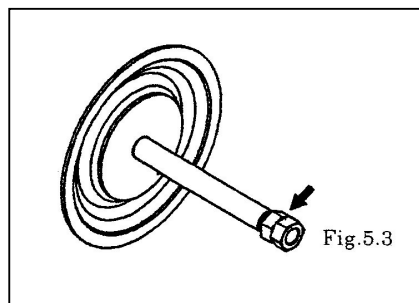
See [Exploded View] on and after p.15. (Fig. 5.1 shows the NDP-50 BS□.)



- Remove the ball and valve seat etc. (see [4.1 Removal BA□, BS□, BF□ types] on p.5)
- Remove the 16 (20 on the NDP-80) retainer bolts from the “out” chamber, and remove the “out” chamber. [Fig. 5.1]



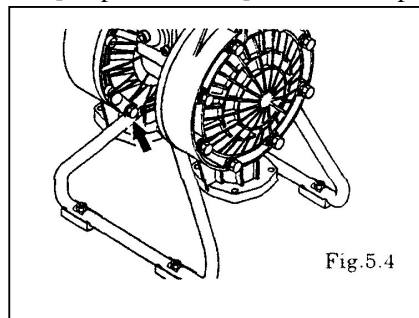
- Remove the nuts on both sides of the centre rod. [Fig. 5.2]
- After the nuts on one side have been removed, remove the centre disk and diaphragm. Remove the diaphragm, centre disk and centre rod from the opposite side of the main body.



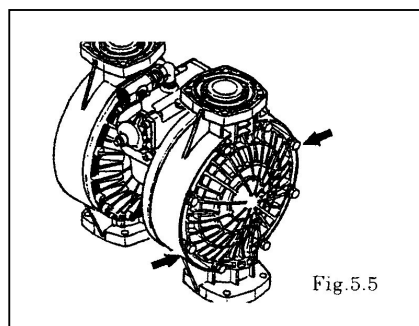
- Remove the nuts on the opposite side using the double nut. [Fig. 5.3]
- Remove the coned disk spring, centre disk and diaphragm.

■ BP□, BV□ types

See [Exploded View] on and after p.15. (Fig. 5.4 shows the NDP-40 BP□.)



- Remove the ball etc. (see [4.1 Removal BP□, BV□ types] on p.5-6)
- Remove the 8 (4 on the NDP-40) retainer bolts from the stand body, and remove the stand body. [Fig. 5.4]



- Remove the 16 (20 on the NDP-80) retainer bolts from the “out” chamber, and remove the “out” chamber. [Fig. 5.5]

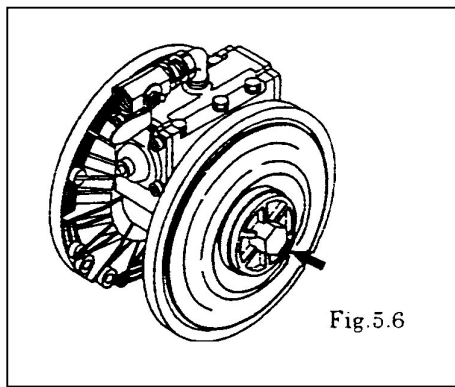


Fig.5.6

- Remove the centre disk from one side using the PP wrench (special tool: Part No. 771868). [Fig. 5.6]
- After the centre disk (outside) has been removed, remove the diaphragm and the centre disk (inside).
- Remove the centre disk and centre rod from the opposite side of the main body.

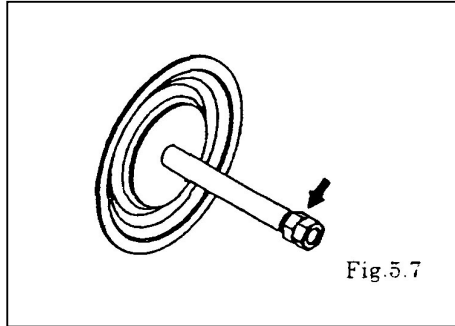


Fig.5.7

- Remove the centre disk and diaphragm from the opposite side using the double nut. [Fig. 5.7]

5.2 Checking

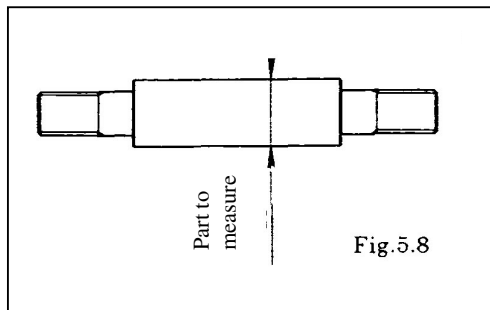


Fig.5.8

- Diaphragm
If the diaphragm is worn out or damaged, replace it.

Guideline of diaphragm life

CR, NBR, EPDM	10,000,000 strokes
FPM	2,500,000 strokes
PTFE	3,000,000 strokes
TPEE, TPO	15,000,000 strokes

(When used with clean water at room temperature)

- Centre rod [Fig. 5.8]
Measure the diameter, and if it is outside the usable range, replace the rod.

Usable range of centre rod

ϕ 24.93 ~ ϕ 25.00mm

5.3 Installation

■ B□C, B□N, B□E, B□V, B□H, B□S types

For installation, see [Exploded View] on and after p.15, and install in the reverse order of disassembly.

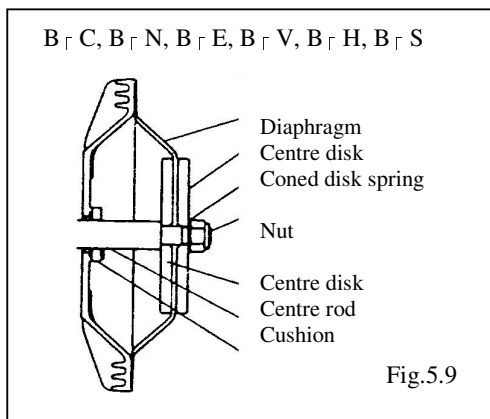


Fig.5.9

- Apply lubricating oil to the centre rod, and insert it into the main body.
- Insert the cushion (except with the NDP-80). (Fig. 5.9)
- Keep the marking “OUTSIDE” to liquid end for CR, NBR, EPDM, FPM diaphragms.
- Keep the convex side to the outside for TPEE, TPO diaphragms.
- Tighten the centre disk using the PP wrench (special tool: Part No. 771868) for the BP□ types. (No coned disk springs and nuts are needed.)

Tightening torque for centre rod

BA□, BS□, BF□	60 N·m {600 kgf·cm}
BP□	50 N·m {500 kgf·cm}

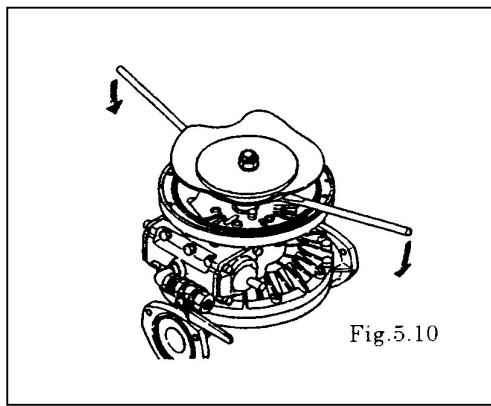


Fig. 5.10

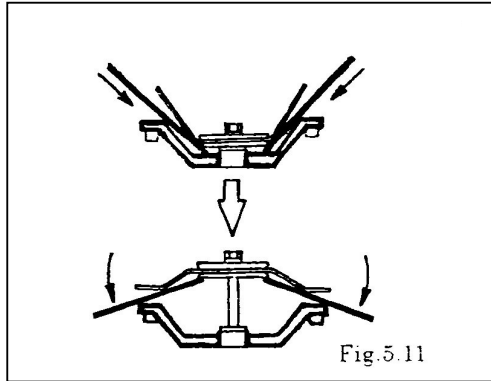


Fig. 5.11

- Draw the centre disk to one side (exclude B□H, B□S type Fig. 5.9).
- And install the “out” chamber. Tighten the bolts temporarily.
- Grip the inside centre disk using crowbars and draw it to the opposite side, then turn the diaphragm over (exclude B□H, B□S type. [Fig.5.10, 5.11]).
- And install the “out” chamber. Tighten the bolts temporarily.
- After installation of the “out” chambers on both sides, place the pump on a flat surface and stand the pump upright for further assembly.

Tightening torque for out chamber

BA□, BS□, BF□	CR, NBR, EPDM, FPM	35 N·m {350 kgf·cm}
	TPEE, TPO	40 N·m {400 kgf·cm}
BP□	CR, NBR, EPDM, FPM	30 N·m {300 kgf·cm}
	TPEE, TPO	35 N·m {350 kgf·cm}

<NOTE>

- Make sure there is no dust on the seal surface in order to prevent seal damage.
- Be careful not to damage the R portion of the air chamber using a crowbar, etc.
- Tighten the bolts so that the balance is equal from both sides on diagonal line with even torque.

■ B□T type

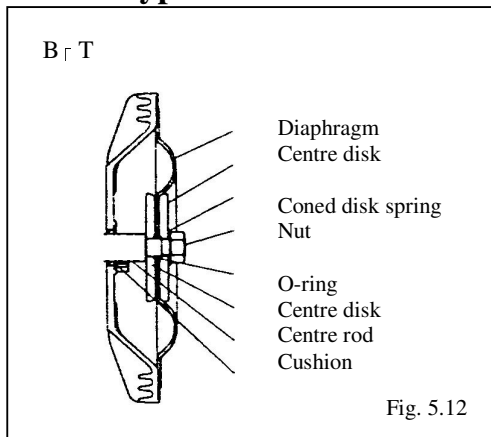


Fig. 5.12

For installation, see [Exploded View] on and after p.15, and install in the reverse order of disassembly.

- Apply lubricating oil to the centre rod, and insert it. Keep the convex side to the outside (Fig. 5.12).
- Put the O-rings to both sides of the diaphragm. (Fig. 5.12)
- Tighten the centre disk using the PP wrench (special tool: Part No. 771868) for the BPT type. (No coned disk springs and nuts are needed.)

Tightening torque for centre rod

BAT, BST, BFT	60 N·m {600 kgf·cm}
BPT	50 N·m {500 kgf·cm}

- Tighten the “out” chamber temporarily at first.
- After installation of the “out” chambers on both sides, place the pump on a flat surface and stand the pump upright for further assembly.

Tightening torque for “out” chamber

BAT, BST, BFT	40 N·m {400 kgf·cm}
BPT	35 N·m {350 kgf·cm}

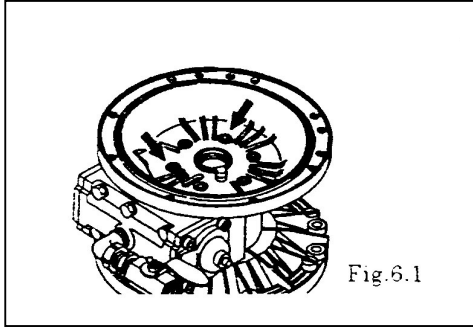
<NOTE>

- Make sure there is no dust on the seal surface in order to prevent seal damage.
- Replace the PTFE O-ring by new one.
- Tighten the bolts so that the balance is equal from both sides on diagonal line with even torque.

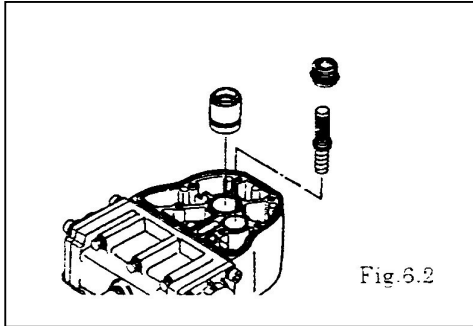
6. Throat bearing and Pilot valve

6.1 Removal

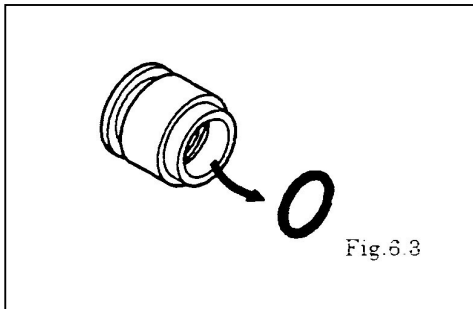
See [Exploded View] on and after p. 15.



- Remove the diaphragm and centre rod (see [5.1 Removal] on pp. 8-9).
- Remove the 12 retainer bolts from the air chamber, and remove the air chamber. [Fig. 6.1]

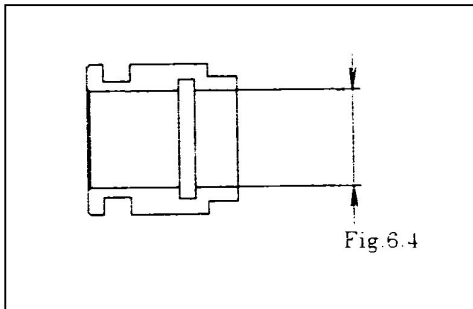


- Draw out the pilot valve and valve seat. [Fig. 6.2]
- Draw out the throat bearing.



- Remove the O-ring from the throat bearing. [Fig. 6.3]

6.2 Checking



- Throat bearing [Fig. 6.4]
Measure the inside diameter, and if it is outside the usable range, replace the throat bearing.

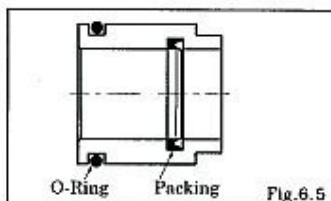
Usable range of throat bearing

$\varnothing 25.04 \sim \varnothing 25.13\text{mm}$

- O-rings
If the O-ring is worn out or cracked, replace it.
- Pilot valve assembly
If the pilot valve is worn out or cracked, replace it.

6.3 Installation

For installation, see [Exploded View] on and after p. 15, and install in the reverse order of disassembly.



Tightening torque for air chamber retainer bolts

$20 \text{ N}\cdot\text{m} \{200 \text{ kgf}\cdot\text{cm}\}$

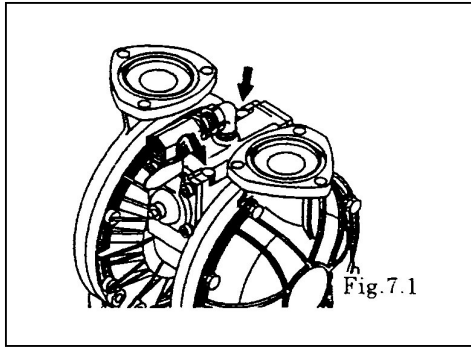
<NOTE>

- Make sure there is no dust on the seal surface and the seal is not damaged.

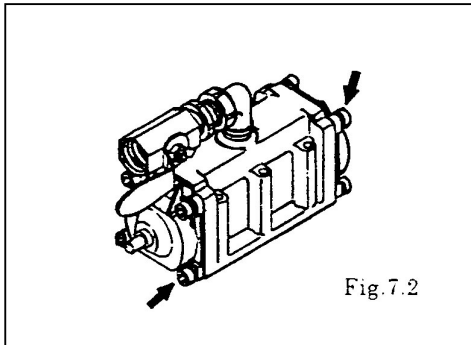
7. Seal ring and sleeve

7.1 Removal

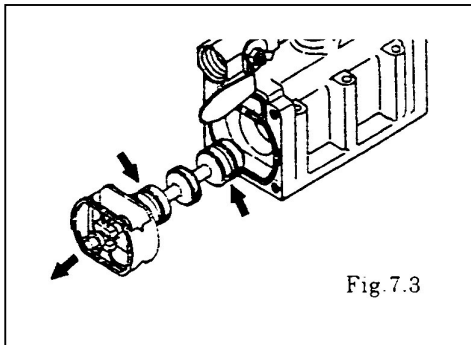
See [Exploded View] on and after p. 15.



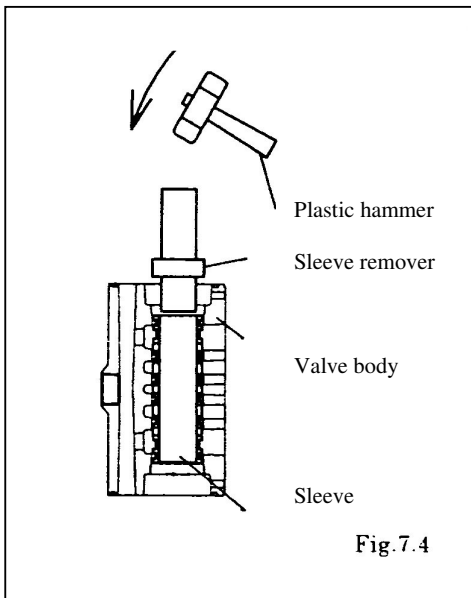
- Remove the “out” manifold (see 4.1 Removal on pp. 3-4-5).
- Remove the 6 retainer bolts from the valve body, and remove the valve body. [Fig. 7.1]



- Remove the 8 cap A and cap B retainer bolts, and remove cap A, cap B. [Fig. 7.2]

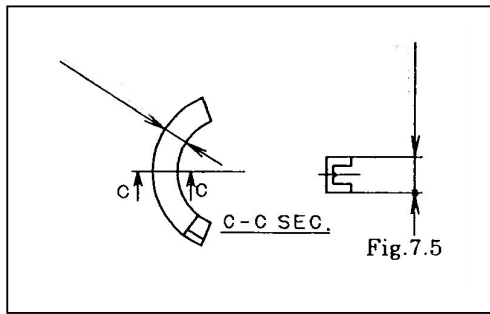


- Draw out the C spool valve assembly, and remove the seal ring from the C spool valve assembly.
- Remove the spring stopper. [Fig. 7.3]



- Remove the sleeve using the sleeve remover (special tool: part number 713180). [Fig. 7.4]

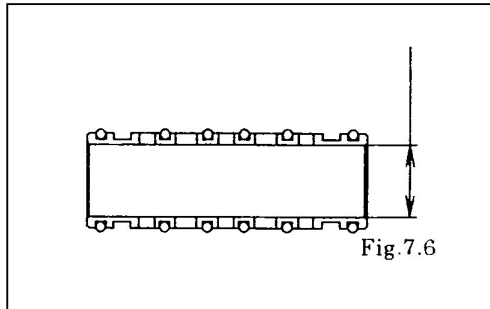
7.2 Checking



- Seal ring [Fig. 7.5]
Measure dimensions A and B, and if there is sufficient wear to require replacement, replace the seal ring.
If the seal ring is worn out or cracked, replace it.

Usable range of seal ring

Dimension A	More than 5.05 mm
Dimension B	More than 7.30 mm



- Sleeve [Fig. 7.6]
Measure the inside diameter, and if it is outside the usable range, replace the sleeve.

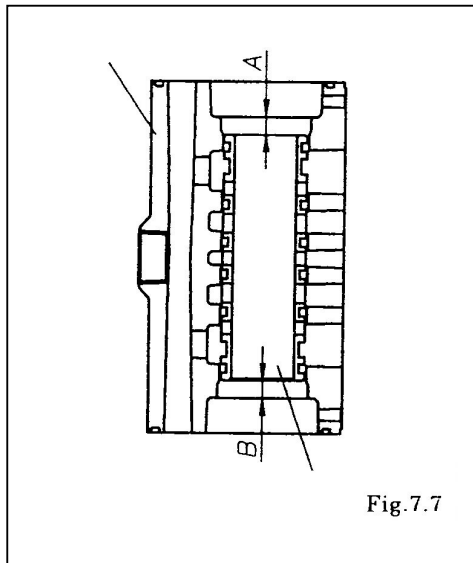
Usable range of sleeve

ϕ 33.15 ~ ϕ 33.35 mm

- O-ring
If the O-ring is worn out or cracked, replace it.

7.3 Installation

For installation see [Exploded View] on and after p.15, and install in the reverse order of disassembly.



- Install the sleeve using the sleeve remover (special tool: part no. 713180).
At this point, apply lubricating oil around the sleeve and O-ring.
- Install the sleeve at the centre of the valve body. (A=B)

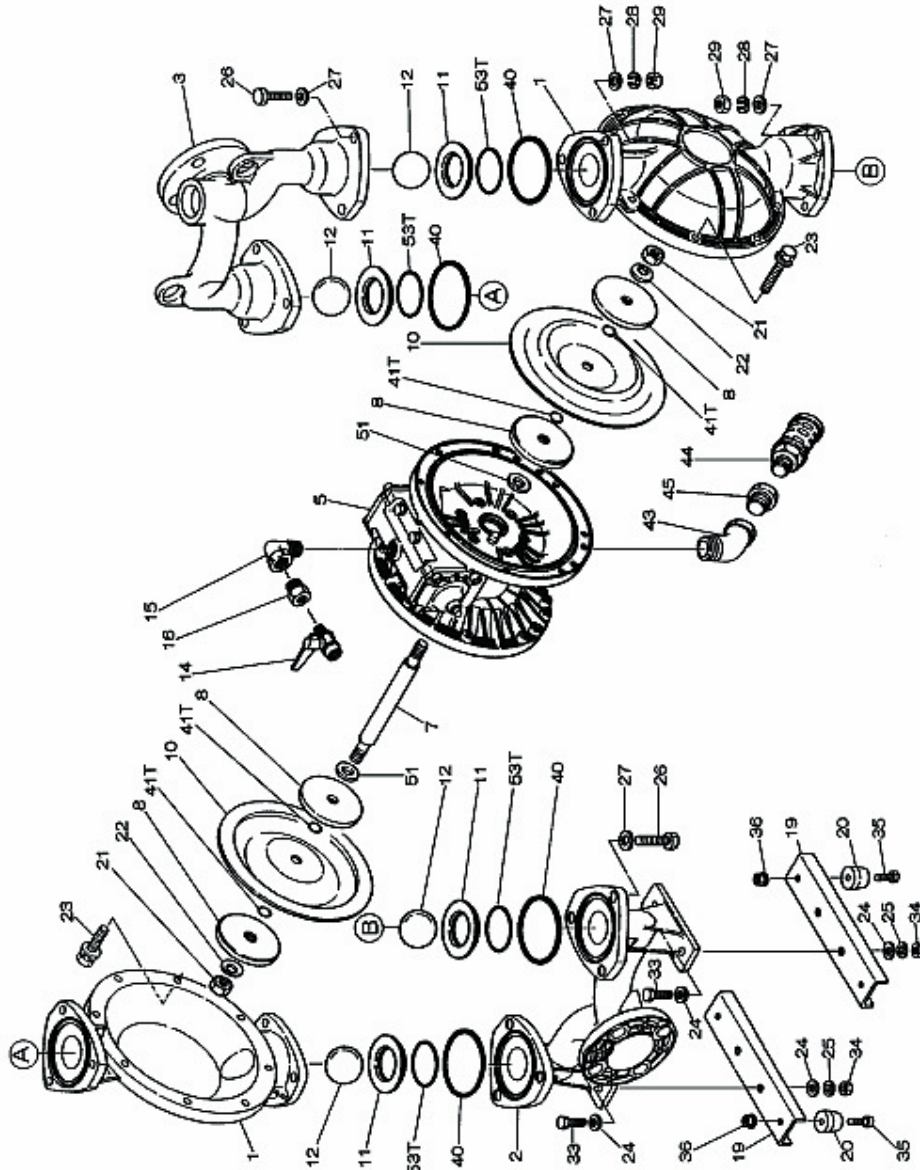
Tightening torque for installation cap A, Cap B
10 N·m { 100 kgf·cm }

Tightening torque for valve body installation bolts
17 N·m { 170 kgf·cm }

<NOTE>

- Make sure there is no dust on the seal surface and it is not damaged.

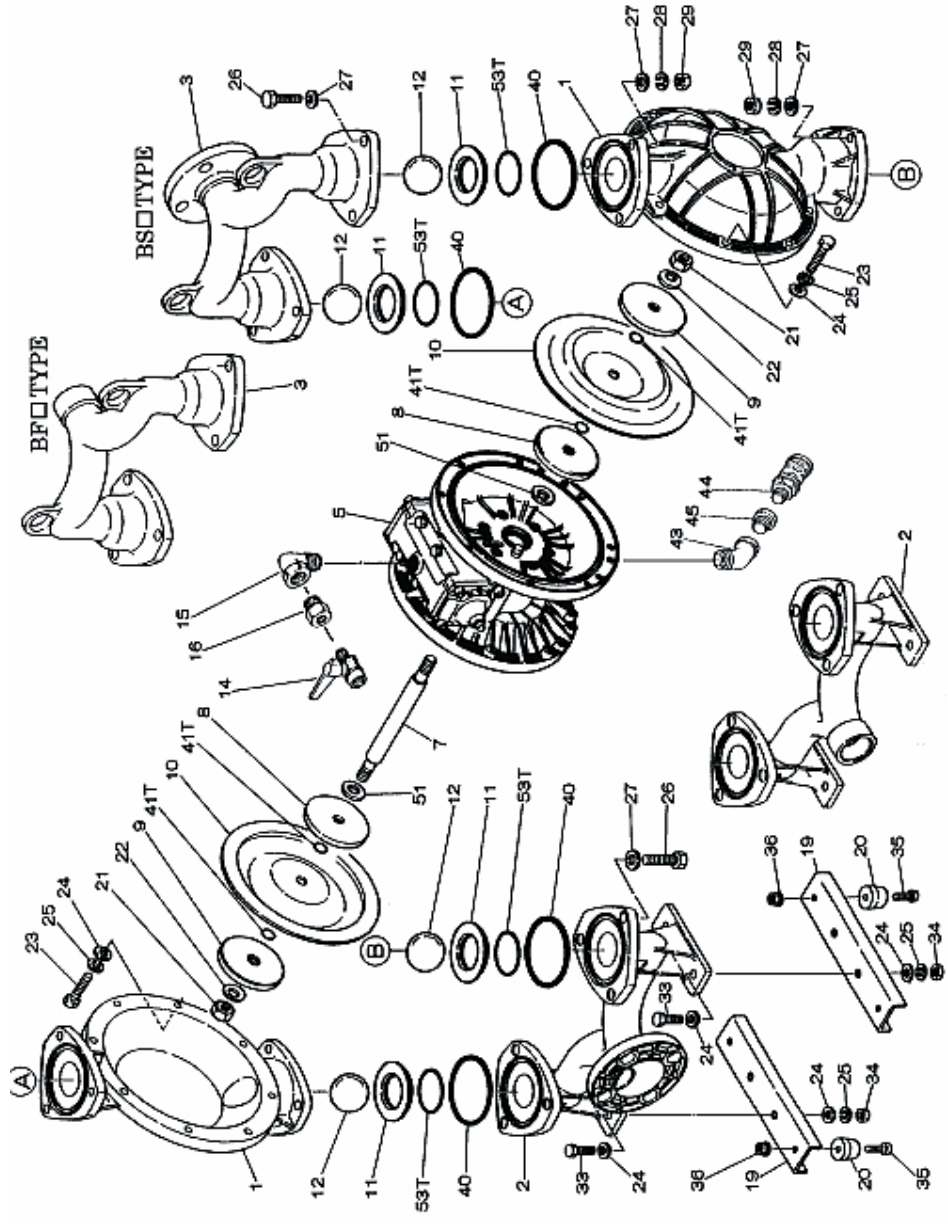
EXPLODED VIEW ■ NDP-40-BA



PARTS LIST							
NDP-40-BA..							
No.	B A C B A E B A H	No.	B A N B A V B A S	No.	B A T	DESCRIPTION	Q T Y
1	580-960	1	580-960	1	580-960	PUMP CHAMBER	2
2	714-366	2	714-366	2	714-366	INLET MANIFOLD	1
3	714-360	3	714-360	3	714-360	OUTLET MANIFOLD	1
5	803-125	5	803-125	5	803-125	BODY ASSY	1
7	711-900	7	711-900	7	711-939	CENTRE ROD	1
8	711-902	8	711-902	8	707-817	CENTRE DISC	4
10C	771-853	10N	771-700	10T	770-814	DIAPHRAGM	2
E	771-854	V	771-799			DIAPHRAGM	2
H	771-701	S	771-975			DIAPHRAGM	2
11C	771-956	11N	771-994	11T	712-382	VALVE SEAT	4
E	771-921	V	771-997			VALVE SEAT	4
H	771-793	S	772-003			VALVE SEAT	4
12C	770-550	12N	770-584	12T	770-692	BALL	4
E	770-593	V	770-602			BALL	4
H	770-692	S	770-593			BALL	4
14	684-323	14	684-323	14	684-323	BALL VALVE	1
15	634-034	15	634-034	15	634-034	ELBOW	1
16	634-601	16	634-601	16	634-601	BUSHING	1
19	711-911	19	711-911	19	711-911	BASE	2
20	771-402	20	771-402	20	771-402	CUSHION	4
21C	683-408	21N	683-408	21T	706-128	NUT	2
E	683-408	V	706-128			NUT	2
H	683-408	S	683-408			NUT	2
22	682-740	22	682-740	22	682-740	CONED SPRING WASHER	2
23	684-203	23	684-203	23	684-203	BOLT	16
24	631-014	24	631-014	24	631-014	WASHER	24
25	631-421	25	631-421	25	631-421	SPRING WASHER	12
26	611-204	26	611-204	26	611-204	BOLT	12
27	631-015	27	631-015	27	631-015	WASHER	24
28	631-422	28	631-422	28	631-422	SPRING WASHER	12
29	627-014	29	627-014	29	627-014	NUT	12
33	611-177	33	611-177	33	611-177	BOLT	4
34	627-013	34	627-013	34	627-013	NUT	12
35	611-149	35	611-149	35	611-149	BOLT	4
36	682-276	36	682-276	36	682-276	NUT WITH FLANGE	4
40C	640-065	40N	640-065	40T	643-065	O-RING	4
E	683-999	V	642-065			O-RING	4
H	643-065	S	683-999			O-RING	4
				41T	643-015	O-RING	4
43	634-050	43	634-050	43	634-050	ELBOW	1
44	680-913	44	680-913	44	680-913	SILENCER	1
45	634-605	45	634-605	45	634-605	BUSHING	1
51	770-582	51	770-582			CUSHION	2
				53T	643-136	O-RING	4

PARTS LIST							
NDP-40-BF..							
No.	B F C B F E B F H	No.	B F N B F V B F S	No.	B F T	DESCRIPTION	Q`TY
1	713-156	1	713-156	1	713-156	PUMP CHAMBER	2
2	713-162	2	713-162	2	713-162	INLET MANIFOLD	1
3	713-159	3	713-159	3	713-159	OUTLET MANIFOLD	1
5	803-125	5	803-125	5	803-125	BODY ASSY	1
7	711-900	7	711-900	7	711-939	CENTRE ROD	1
8	711-902	8	711-902	8	707-817	CENTRE DISC	2
9	711-903	9	711-903	9	707-818	CENTRE DISC	2
10C	771-853	10N	771-700	10T	770-814	DIAPHRAGM	2
E	771-854	V	771-799			DIAPHRAGM	2
H	771-701	S	771-975			DIAPHRAGM	2
11C	771-956	11N	771-994	11T	711-908	VALVE SEAT	4
E	771-921	V	771-997			VALVE SEAT	4
H	771-793	S	772-003			VALVE SEAT	4
12C	770-550	12N	770-584	12T	770-692	BALL	4
E	770-593	V	770-602			BALL	4
H	770-692	S	770-593			BALL	4
14	684-323	14	684-323	14	684-323	BALL VALVE	1
15	634-034	15	634-034	15	634-034	ELBOW	1
16	634-601	16	634-601	16	634-601	BUSHING	1
19	711-911	19	711-911	19	711-911	BASE	2
20	771-402	20	771-402	20	771-402	CUSHION	4
21C	683-408	21N	683-408	21T	706-128	NUT	2
E	683-408	V	706-128			NUT	2
H	683-408	S	683-408			NUT	2
22	682-740	22	682-740	22	682-740	CONED SPRING WASHER	2
23	686-023	23	686-023	23	686-023	BOLT	16
25	631-917	25	631-917	25	631-917	SPAK WASHER	4
26	611-202	26	611-202	26	611-202	BOLT	12
27	631-015	27	631-015	27	631-015	WASHER	24
28	631-422	28	631-422	28	631-422	SPRING WASHER	12
29	627-014	29	627-014	29	627-014	NUT	12
33	611-175	33	611-175	33	611-175	BOLT	4
34	627-013	34	627-013	34	627-013	NUT	4
35	611-149	35	611-149	35	611-149	BOLT	4
36	682-276	36	682-276	36	682-276	NUT WITH FLANGE	4
40C	640-065	40N	640-065	40T	643-065	O-RING	4
E	683-999	V	642-065			O-RING	4
H	643-065	S	683-999			O-RING	4
				41	643-015	O-RING	4
43	634-050	43	634-050	43	634-050	ELBOW	1
44	680-913	44	680-913	44	680-913	SILENCER	1
45	634-605	45	634-605	45	634-605	BUSHING	1
51	770-582	51	770-582			CUSHION	2
				53T	643-136	O-RING	4

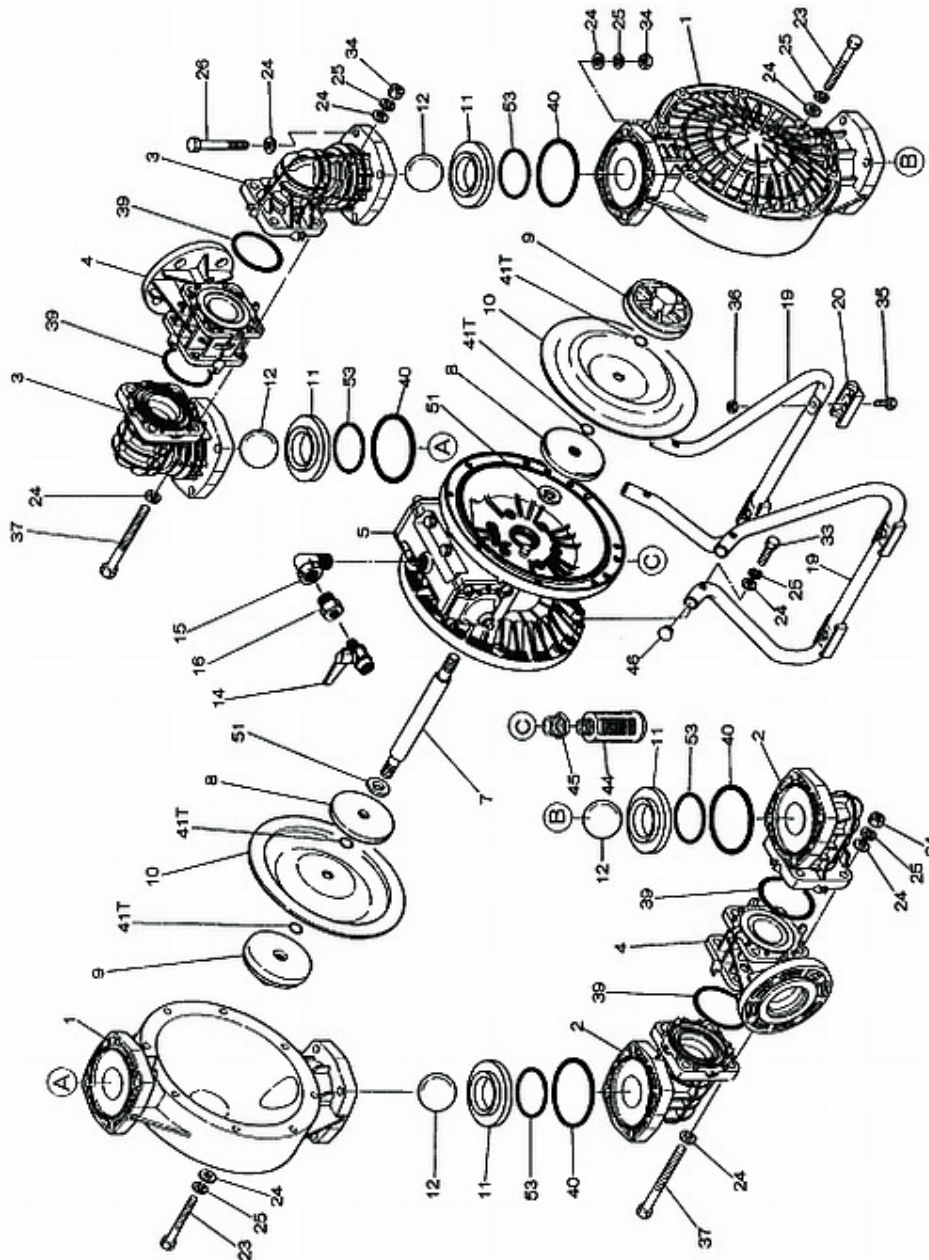
EXPLODED VIEW ■ NDP-40- BS



PARTS LIST							
NDP-40-BS..							
No.	B S C B S E B S H	No.	B S N B S V B S S	No.	B S T	DESCRIPTION	Q`TY
1	712-931	1	712-931	1	712-931	PUMP CHAMBER	2
2	712-610	2	712-610	2	712-610	INLET MANIFOLD	1
3	712-609	3	712-609	3	712-609	OUTLET MANIFOLD	1
5	803-125	5	803-125	5	803-125	BODY ASSY	1
7	711-900	7	711-900	7	711-939	CENTRE ROD	1
8	711-902	8	711-902	8	707-817	CENTRE DISC	2
8	711-903	9	711-903	9	707-818	CENTRE DISC	2
10C	771-853	10N	771-700	10T	770-814	DIAPHRAGM	2
E	771-854	V	771-799			DIAPHRAGM	2
H	771-701	S	771-975			DIAPHRAGM	2
11C	771-956	11N	771-994	11T	711-908	VALVE SEAT	4
E	771-921	V	771-997			VALVE SEAT	4
H	771-793	S	772-003			VALVE SEAT	4
12C	770-550	12N	770-584	12T	770-692	BALL	4
E	770-593	V	770-602			BALL	4
H	770-692	S	770-593			BALL	4
14	684-323	14	684-323	14	684-323	BALL VALVE	1
15	634-034	15	634-034	15	634-034	ELBOW	1
16	634-601	16	634-601	16	634-601	BUSHING	1
19	711-911	19	711-911	19	711-911	BASE	2
20	771-402	20	771-402	20	771-402	CUSHION	4
21C	683-408	21N	683-408	21T	706-128	NUT	2
E	683-408	V	706-128			NUT	2
H	683-408	S	683-408			NUT	2
22	682-740	22	682-740	22	682-740	CONED SPRING WASHER	2
23	621-180	23	621-180	23	621-180	BOLT	16
24	631-174	24	631-174	24	631-174	WASHER	24
25	680-257	25	680-257	25	680-257	SPRING WASHER	20
26	621-202	26	621-202	26	621-202	BOLT	12
27	631-175	27	631-175	27	631-175	WASHER	24
28	680-607	28	680-607	28	680-607	SPRING WASHER	12
29	628-014	29	628-014	29	628-014	NUT	12
33	621-175	33	621-175	33	621-175	BOLT	4
34	628-013	34	628-013	34	628-013	NUT	4
35	611-149	35	611-149	35	611-149	BOLT	4
36	682-276	36	682-276	36	682-276	NUT WITH FLANGE	4
40C	640-065	40N	640-065	40T	643-065	O-RING	4
E	683-999	V	642-065			O-RING	4
H	643-065	S	683-999			O-RING	4
				41	643-015	O-RING	4
43	634-050	43	634-050	43	634-050	ELBOW	1
44	680-913	44	680-913	44	680-913	SILENCER	1
45	634-605	45	634-605	45	634-605	BUSHING	1
51	770-582	51	770-582			CUSHION	2
				53T	643-136	O-RING	4

EXPLODED VIEW

■ NDP-40-BP/BV



PARTS LIST							
NDP-40-BP..							
No.	B P C B P E B P H	No.	B P N B P V B P S	No.	B P T	DESCRIPTION	Q T Y
1	772-076	1	772-076	1	772-076	PUMP CHAMBER	2
2	772-079	2	772-079	2	772-079	INLET MANIFOLD	2
3	780-150	3	780-150	3	780-150	OUTLET MANIFOLD	2
4	771-797	4	771-797	4	771-797	CENTRE MANIFOLD	2
5	803-125	5	803-125	5	803-125	BODY ASSY	1
7	711-900	7	711-900	7	711-939	CENTRE ROD	1
8	711-902	8	711-902	8	707-817	CENTRE DISC	2
9	771-725	9	771-725	9	771-726	CENTRE DISC	2
10C	771-853	10N	771-700	10T	770-814	DIAPHRAGM	2
E	771-854	V	771-799			DIAPHRAGM	2
H	771-701	S	771-975			DIAPHRAGM	2
11	772-096	11	772-096	11	772-096	VALVE SEAT	4
12C	770-550	12N	770-584	12T	770-692	BALL	4
E	770-593	V	770-602			BALL	4
H	770-692	S	770-593			BALL	4
14	684-323	14	684-323	14	684-323	BALL VALVE	1
15	634-034	15	634-034	15	634-034	ELBOW	1
16	634-601	16	634-601	16	634-601	BUSHING	1
19	711-925	19	711-925	19	711-925	BASE	2
20	771-865	20	771-865	20	771-865	CUSHION	4
23	683-541	23	683-541	23	683-541	BOLT	16
24	631-330	24	631-330	24	631-330	WASHER	68
25	680-257	25	680-257	25	680-257	SPRING WASHER	44
26	621-183	26	621-183	26	621-183	BOLT	16
33	621-179	33	621-179	33	621-179	BOLT	4
34	628-013	34	628-013	34	628-013	NUT	24
35	621-149	35	621-149	35	621-149	BOLT	4
36	683-837	36	683-837	36	683-837	NUT WITH FLANGE	4
37	683-542	37	683-542	37	683-542	BOLT	8
39C	640-060	39N	640-060	39T	643-060	O-RING	4
E	683-998	V	642-060			O-RING	4
H	643-060	S	683-998			O-RING	4
40C	640-064	40N	640-064	40T	643-064	O-RING	4
E	684-121	V	642-064			O-RING	4
H	643-064	S	684-121			O-RING	4
				41T	643-015	O-RING	4
44	683-098	44	683-098	44	683-098	SILENCER	1
45	634-605	45	634-605	45	634-605	BUSHING	1
46	683-641	46	683-641	46	683-641	CAP	4
51	770-582	51	770-582			CUSHION	2
53C	640-136	53N	640-136	53T	643-136	O-RING	4
E	685-447	V	642-136			O-RING	4
H	643-136	S	685-447			O-RING	4

PARTS LIST							
NDP-40-BV..							
No.	B V C B V E B V H	No.	B V N B V V B V S	No.	B V T	DESCRIPTION	Q`TY
1	780-215	1	780-215	1	780-215	PUMP CHAMBER	2
2	772-727	2	772-727	2	772-727	INLET MANIFOLD	2
3	780-205	3	780-205	3	780-205	OUTLET MANIFOLD	2
4	780-219	4	780-219	4	780-219	CENTRE MANIFOLD	2
5	803-125	5	803-125	5	803-125	BODY ASSY	1
7	711-900	7	711-900	7	711-939	CENTRE ROD	1
8	711-902	8	711-902	8	707-817	CENTRE DISC	2
9	771-725	9	771-725	9	771-726	CENTRE DISC	2
10C	771-853	10N	771-700	10T	770-814	DIAPHRAGM	2
E	771-854	V	771-799			DIAPHRAGM	2
H	771-701	S	771-975			DIAPHRAGM	2
11	772-739	11	772-739	11	772-739	VALVE SEAT	4
12C	770-550	12N	770-584	12T	770-692	BALL	4
E	770-593	V	770-602			BALL	4
H	770-692	S	770-593			BALL	4
14	684-323	14	684-323	14	684-323	BALL VALVE	1
15	634-034	15	634-034	15	634-034	ELBOW	1
16	634-601	16	634-601	16	634-601	BUSHING	1
19	711-925	19	711-925	19	711-925	BASE	2
20	771-865	20	771-865	20	771-865	CUSHION	4
23	683-541	23	683-541	23	683-541	BOLT	16
24	631-330	24	631-330	24	631-330	WASHER	68
25	680-257	25	680-257	25	680-257	SPRING WASHER	44
26	621-183	26	621-183	26	621-183	BOLT	16
33	621-179	33	621-179	33	621-179	BOLT	4
34	628-013	34	628-013	34	628-013	NUT	24
35	621-149	35	621-149	35	621-149	BOLT	4
36	683-837	36	683-837	36	683-837	NUT WITH FLANGE	4
37	683-542	37	683-542	37	683-542	BOLT	8
39C	640-060	39N	640-060	39T	643-060	O-RING	4
E	683-998	V	642-060			O-RING	4
H	643-060	S	683-998			O-RING	4
40C	640-064	40N	640-064	40T	643-064	O-RING	4
E	684-121	V	642-064			O-RING	4
H	643-064	S	684-121			O-RING	4
				41T	643-015	O-RING	4
44	683-098	44	683-098	44	683-098	SILENCER	1
45	634-605	45	634-605	45	634-605	BUSHING	1
46	683-641	46	683-641	46	683-641	CAP	4
51	770-582	51	770-582			CUSHION	2
53C	640-136	53N	640-136	53T	643-136	O-RING	4
E	685-447	V	642-136			O-RING	4
H	643-136	S	685-447			O-RING	4

Servicekits Diaphragm pumps (NDP-40)

DIAPHRAGM KITS (BA⁰⁰,BS⁰⁰,BF⁰⁰)

No.	DESCRIPTION	K40D-MN	Q'TY	K40D-MH	Q'TY	K40D-MC	Q'TY	K40D-ME	Q'TY	K40D-MS	Q'TY
10	DIAPHRAGM	771-700	2	771-701	2	771-853	2	771-854	2	771-975	2
21	NUT	683-408	2	683-408	2	683-408	2	683-408	2	683-408	2
22	CONED DISC SPRING	682-740	2	682-740	2	682-740	2	682-740	2	682-740	2
40	O-RING	640-065	4	643-065	4	640-065	4	683-999	4	683-999	4
41T	O-RING										

No.	DESCRIPTION	K40D-MV	Q'TY	K40D-MT	Q'TY
10	DIAPHRAGM	771-799	2	770-814	2
21	NUT	706-128	2	706-128	2
22	CONED DISC SPRING	682-740	2	682-740	2
40	O-RING	642-065	4	643-065	4
41T	O-RING			643-015	4

DIAPHRAGM KITS (BP⁰⁰,BV⁰⁰,BTT⁰⁰)

No.	DESCRIPTION	K40D-PN	Q'TY	K40D-PH	Q'TY	K40D-PC	Q'TY	K40D-PE	Q'TY	K40D-PS	Q'TY
10	DIAPHRAGM	771-700	2	771-701	2	771-853	2	771-854	2	771-975	2
40	O-RING	640-064	4	643-064	4	640-064	4	684-121	4	684-121	4
41T	O-RING										

No.	DESCRIPTION	K40D-PV	Q'TY	K40D-PT	Q'TY	K40D-TT	Q'TY
10	DIAPHRAGM	771-799	2	770-814	2	770-814	2
40	O-RING	642-064	4	643-064	4	02-0730	4
41T	O-RING			643-015	4	643-015	4

VALVE KITS (BA⁰⁰,BS⁰⁰,BF⁰⁰)

No.	DESCRIPTION	K40V-MN	Q'TY	K40V-MH	Q'TY	K40V-MC	Q'TY	K40V-ME	Q'TY	K40V-MS	Q'TY
11	VALVE SEAT	771-994	4	771-793	4	771-956	4	771-921	4	772-003	4
12	BALL	770-584	4	770-692	4	770-550	4	770-593	4	770-593	4
40	O-RING	640-065	4	643-065	4	640-065	4	683-999	4	683-999	4

No.	DESCRIPTION	K40V-MV	Q'TY	K40V-AT	Q'TY	K40V-ST	Q'TY
11	VALVE SEAT	771-997	4	712-382	4	711-908	4
12	BALL	770-602	4	770-692	4	770-692	4
40	O-RING	642-065	4	643-065	4	643-065	4
53T	O-RING			643-136	4	643-136	4

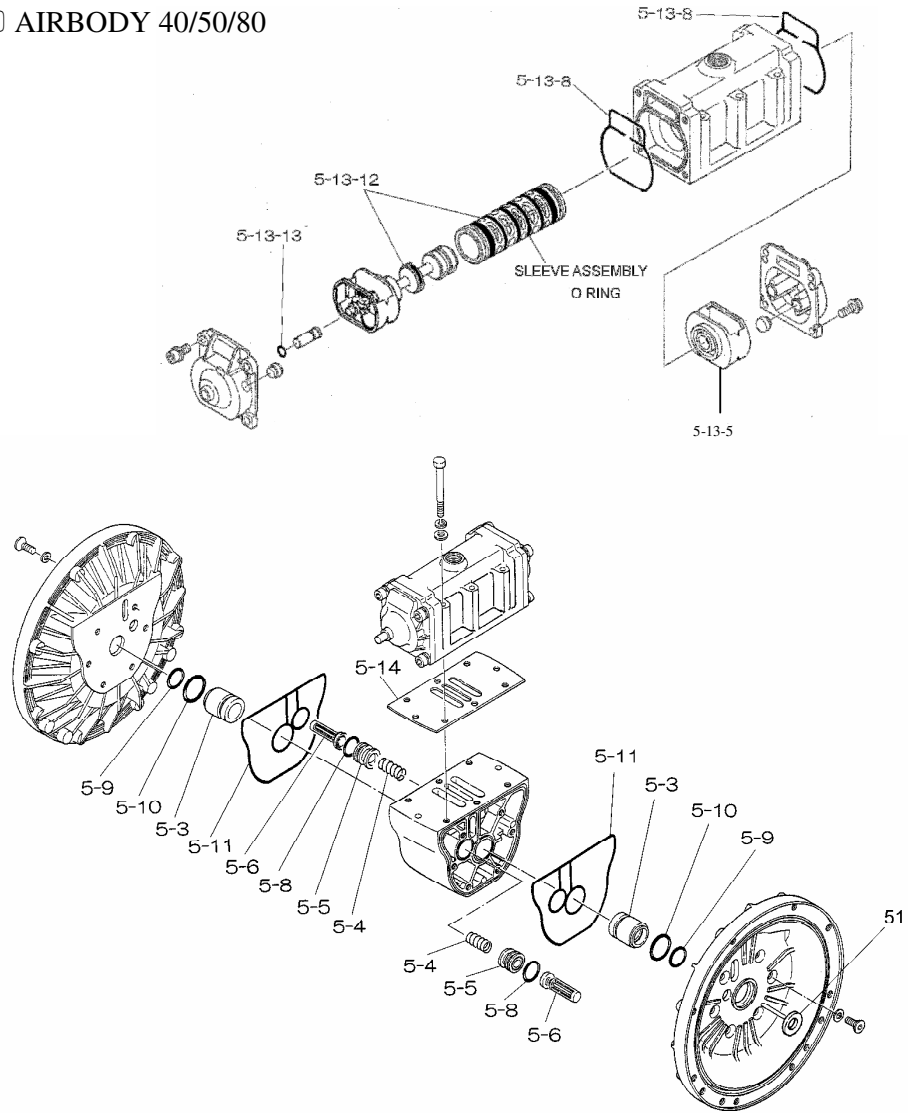
VALVE KITS (BP⁰⁰,BV⁰⁰,BTT⁰⁰)

No.	DESCRIPTION	K40V-PN	Q'TY	K40V-PT	Q'TY	K40V-PC	Q'TY	K40V-PE	Q'TY	K40V-PV	Q'TY
11	VALVE SEAT	772-096	4	772-096	4	772-096	4	772-096	4	772-096	4
12	BALL	770-584	4	770-692	4	770-550	4	770-593	4	770-602	4
40	O-RING	640-064	4	643-064	4	640-064	4	684-121	4	642-064	4
53T	O-RING	640-136	4	643-136	4	640-136	4	685-447	4	642-136	4

No.	DESCRIPTION	K40V-VN	Q'TY	K40V-VT	Q'TY	K40V-VC	Q'TY	K40V-VE	Q'TY	K40V-VV	Q'TY
11	VALVE SEAT	772-739	4	772-739	4	772-739	4	772-739	4	772-739	4
12	BALL	770-584	4	770-692	4	770-550	4	770-593	4	770-602	4
40	O-RING	640-064	4	772-741	4	640-064	4	683-998	4	642-064	4
53T	O-RING	640-136	4	643-136	4	640-136	4	685-447	4	642-136	4

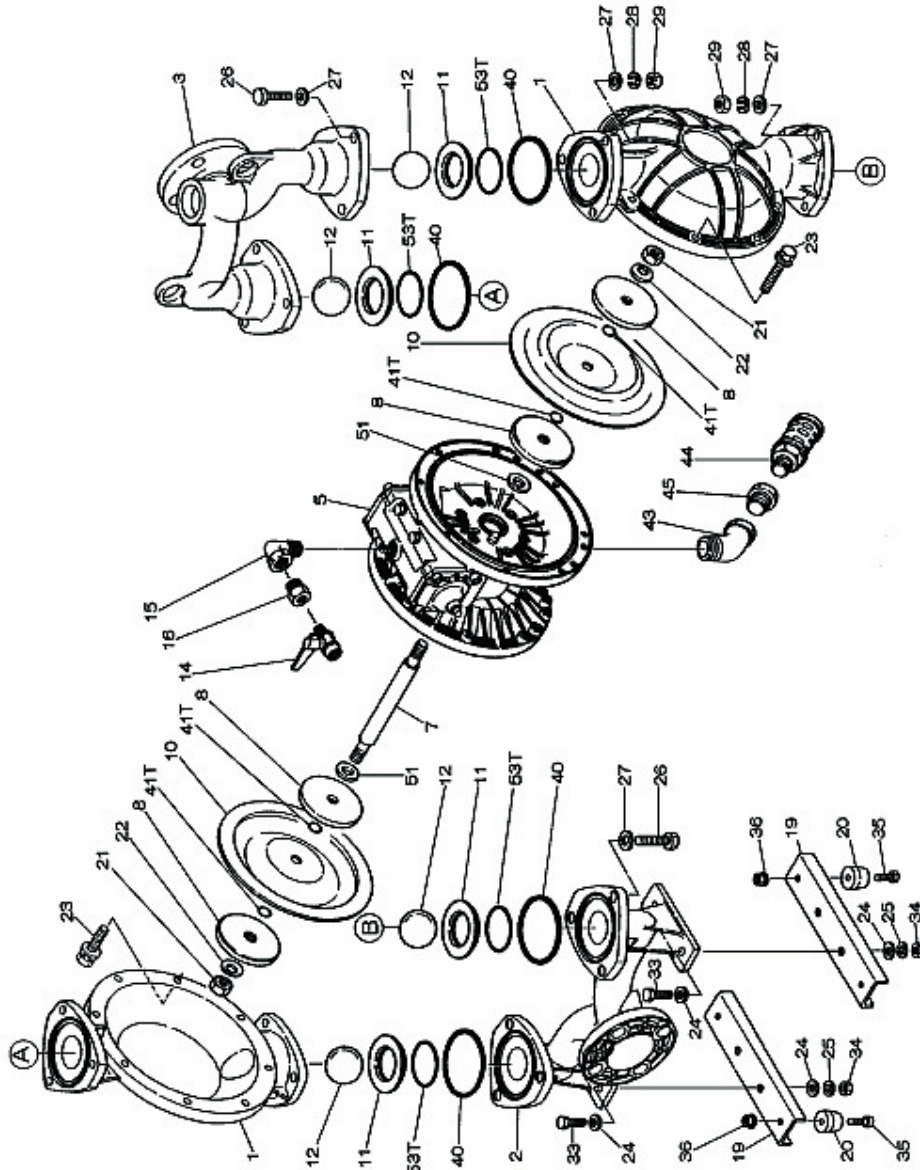
* NOTE K40V-PE/VE ARE ALSO FOR BPS/BVS K40V-PT/VT ARE ALSO FOR BPH/BVH

Exploded view □ AIRBODY 40/50/80



K40/50-AM AIR MOTOR KIT FOR NDP-40/50				
K40/50/80-AMS AIR MOTOR SEAL KIT FOR NDP-40/50/80				
NO.	PART NO.	DESCRIPTION	K40/50-AM	K40/50/80-AMS
5-3	772-689	THROAT BEARING	2	
5-4	711-937	SPRING	2	
5-5	771-740	VALVE SEAT	2	
5-6	832-162	PILOT VALVE ASSEMBLY	2	
5-8	640-020	O-RING	2	2
5-9	685-444	O-RING	2	2
5-9*	640-023	O-RING		2
5-10	640-029	O-RING	2	2
5-11	771-742	GASKET	2	2
5-14	771-712	GASKET	1	1
5-13-5	771-735	SPRING STOPPER	1	
5-13-8	771-738	GASKET	2	2
5-13-12	803-115	C-SPOOL ASSEMBLY	1	
5-13-12*2	640-037	O-RING		6
5-13-13	640-005	O-RING	1	1
51	770-582	CUSHION	1	
NOTE * 640-023 IS PART OF OLD BRONZE THROAT BEARING				
NOTE *2 640-037 IS PART OF 803-115				

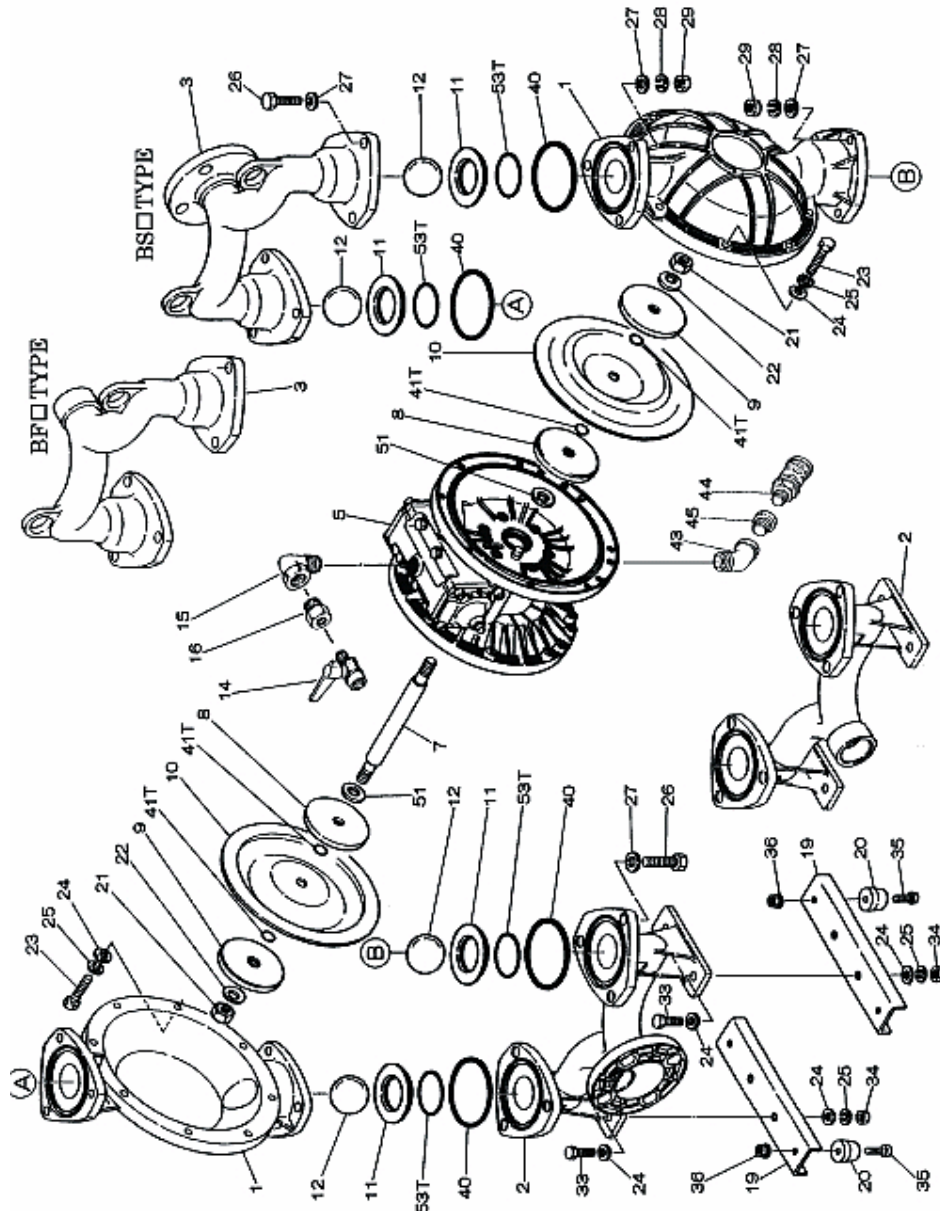
EXPLODED VIEW ■ NDP-50-BA



PARTS LIST							
NDP-50-BA..							
No.	B A C B A E B A H	No.	B A N B A V B A S	No.	B A T	DESCRIPTION	Q T Y
1	580-961	1	580-961	1	580-961	PUMP CHAMBER	2
2	714-368	2	714-368	2	714-368	INLET MANIFOLD	1
3	714-362	3	714-362	3	714-362	OUTLET MANIFOLD	1
5	803-126	5	803-126	5	803-126	BODY ASSY	1
7	711-900	7	711-900	7	711-939	CENTRE ROD	1
8	711-904	8	711-904	8	707-822	CENTRE DISC	4
10C	771-855	10N	771-702	10T	770-815	DIAPHRAGM	2
E	771-856	V	771-800			DIAPHRAGM	2
H	771-703	S	771-976			DIAPHRAGM	2
11C	771-957	11N	771-995	11T	712-383	VALVE SEAT	4
E	771-949	V	771-987			VALVE SEAT	4
H	771-794	S	772-004			VALVE SEAT	4
12C	770-627	12N	770-630	12T	770-693	BALL	4
E	770-633	V	770-636			BALL	4
H	770-693	S	770-633			BALL	4
14	684-324	14	684-324	14	684-324	BALL VALVE	1
15	634-034	15	634-034	15	634-034	ELBOW	1
19	711-928	19	711-928	19	711-928	BASE	2
20	771-402	20	771-402	20	771-402	CUSHION	4
21C	683-408	21N	683-408	21T	706-128	NUT	2
E	683-408	V	706-128			NUT	2
H	683-408	S	683-408			NUT	2
22	682-740	22	682-740	22	682-740	CONED SPRING WASHER	2
23	684-203	23	684-203	23	684-203	BOLT	16
24	631-014	24	631-014	24	631-014	WASHER	24
25	631-421	25	631-421	25	631-421	SPRING WASHER	12
26	611-203	26	611-203	26	611-203	BOLT	12
27	631-015	27	631-015	27	631-015	WASHER	24
28	631-422	28	631-422	28	631-422	SPRING WASHER	12
29	627-014	29	627-014	29	627-014	NUT	12
33	611-175	33	611-175	33	611-175	BOLT	4
34	627-013	34	627-013	34	627-013	NUT	12
35	611-149	35	611-149	35	611-149	BOLT	4
36	682-276	36	682-276	36	682-276	NUT WITH FLANGE	4
40C	640-069	40N	640-069	40T	643-069	O-RING	4
E	684-122	V	642-069			O-RING	4
H	643-069	S	684-122			O-RING	4
				41T	643-015	O-RING	4
43	634-050	43	634-050	43	634-050	ELBOW	1
44	681-040	44	681-040	44	681-040	SILENCER	1
45	634-605	45	634-605	45	634-605	BUSHING	1
51	770-582	51	770-582			CUSHION	2
				53T	643-139	O-RING	4

PARTS LIST							
NDP-50-BF..							
No.	B F C B F E B F H	No.	B F N B F V B F S	No.	B F T	DESCRIPTION	Q T Y
1	713-157	1	713-157	1	713-157	PUMP CHAMBER	2
2	713-163	2	713-163	2	713-163	INLET MANIFOLD	1
3	713-160	3	713-160	3	713-160	OUTLET MANIFOLD	1
5	803-126	5	803-126	5	803-126	BODY ASSY	1
7	711-900	7	711-900	7	711-939	CENTRE ROD	1
8	711-904	8	711-904	8	707-822	CENTRE DISC	2
9	711-905	9	711-905	9	707-823	CENTRE DISC	2
10C	771-855	10N	771-702	10T	770-815	DIAPHRAGM	2
E	771-856	V	771-800			DIAPHRAGM	2
H	771-703	S	771-976			DIAPHRAGM	2
11C	771-957	11N	771-995	11T	711-909	VALVE SEAT	4
E	771-949	V	771-987			VALVE SEAT	4
H	771-794	S	772-004			VALVE SEAT	4
12C	770-627	12N	770-630	12T	770-693	BALL	4
E	770-633	V	770-636			BALL	4
H	770-693	S	770-633			BALL	4
14	684-324	14	684-324	14	684-324	BALL VALVE	1
15	634-034	15	634-034	15	634-034	ELBOW	1
19	711-928	19	711-928	19	711-928	BASE	2
20	771-402	20	771-402	20	771-402	CUSHION	4
21C	683-408	21N	683-408	21T	706-128	NUT	2
E	683-408	V	706-128			NUT	2
H	683-408	S	683-408			NUT	2
22	682-740	22	682-740	22	682-740	CONED SPRING WASHER	2
23	686-023	23	686-023	23	686-023	BOLT	16
25	631-917	25	631-917	25	631-917	SPAK WASHER	4
26	611-203	26	611-203	26	611-203	BOLT	12
27	631-015	27	631-015	27	631-015	WASHER	24
28	631-422	28	631-422	28	631-422	SPRING WASHER	12
29	627-014	29	627-014	29	627-014	NUT	12
33	611-175	33	611-175	33	611-175	BOLT	4
34	627-013	34	627-013	34	627-013	NUT	4
35	611-149	35	611-149	35	611-149	BOLT	4
36	682-276	36	682-276	36	682-276	NUT WITH FLANGE	4
40C	640-069	40N	640-069	40T	643-069	O-RING	4
E	684-122	V	642-069			O-RING	4
H	643-069	S	684-122			O-RING	4
				41	643-015	O-RING	4
43	634-050	43	634-050	43	634-050	ELBOW	1
44	681-040	44	681-040	44	681-040	SILENCER	1
45	634-605	45	634-605	45	634-605	BUSHING	1
51	770-582	51	770-582			CUSHION	2
				53T	643-139	O-RING	4

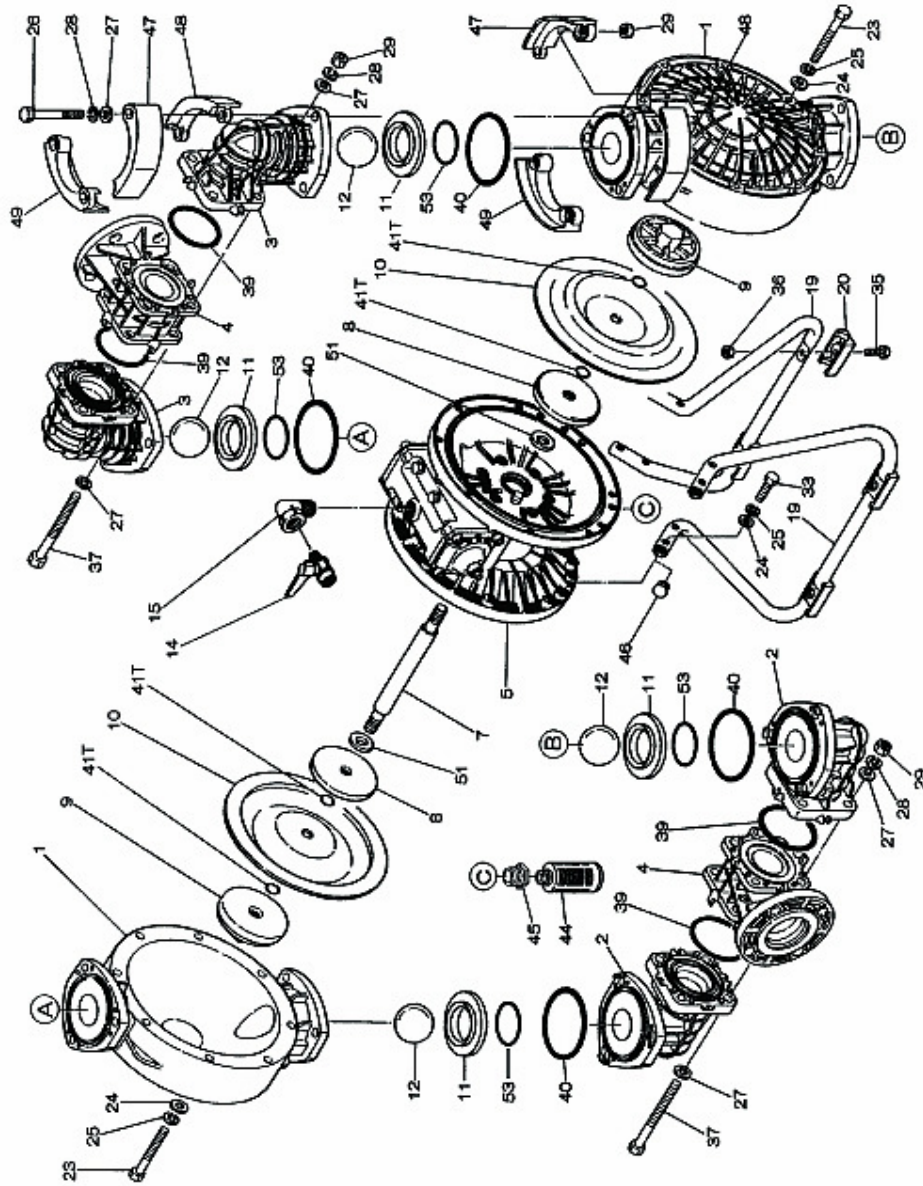
EXPLODED VIEW ■ NDP-50- BS



PARTS LIST							
NDP-50-BS..							
No.	B S C B S E B S H	No.	B S N B S V B S S	No.	B S T B S TA	DESCRIPTION	Q T Y
1	712-932	1	712-932	1	712-932	PUMP CHAMBER	2
2	712-557	2	712-557	2	712-557	INLET MANIFOLD	1
3	712-556	3	712-556	3	712-556	OUTLET MANIFOLD	1
5	803-126	5	803-126	5	803-126	BODY ASSY	1
7	711-900	7	711-900	7	711-939	CENTRE ROD	1
8	711-904	8	711-904	8	707-822	CENTRE DISC	2
9	711-905	9	711-905	9	707-823	CENTRE DISC	2
10C	771-855	10N	771-702	10T	770-815	DIAPHRAGM	2
E	771-856	V	771-800	10TA	772-629	DIAPHRAGM	2
H	771-703	S	771-976	10TA	772-627	DIAPHRAGM (TA BACKUP)	2
11C	771-957	11N	771-995	11T	711-909	VALVE SEAT	4
E	771-949	V	771-987	11TA	711-909	VALVE SEAT	4
H	771-794	S	772-004			VALVE SEAT	4
12C	770-627	12N	770-630	12T	770-693	BALL	4
E	770-633	V	770-636	12TA	770-693	BALL	4
H	770-693	S	770-633			BALL	4
14	684-324	14	684-324	14	684-324	BALL VALVE	1
15	634-034	15	634-034	15	634-034	ELBOW	1
19	711-928	19	711-928	19	711-928	BASE	2
20	771-402	20	771-402	20	771-402	CUSHION	4
21C	683-408	21N	683-408	21T	706-128	NUT	2
E	683-408	V	706-128	21TA	706-128	NUT	2
H	683-408	S	683-408			NUT	2
22	682-740	22	682-740	22	682-740	CONED SPRING WASHER	2
23	621-181	23	621-181	23	621-181	BOLT	16
24	631-174	24	631-174	24	631-174	WASHER	24
25	680-257	25	680-257	25	680-257	SPRING WASHER	20
26	621-202	26	621-202	26	621-202	BOLT	12
27	631-175	27	631-175	27	631-175	WASHER	24
28	680-607	28	680-607	28	680-607	SPRING WASHER	12
29	628-014	29	628-014	29	628-014	NUT	12
33	621-175	33	621-175	33	621-175	BOLT	4
34	628-013	34	628-013	34	628-013	NUT	4
35	611-149	35	611-149	35	611-149	BOLT	4
36	682-276	36	682-276	36	682-276	NUT WITH FLANGE	4
40C	640-069	40N	640-069	40T	643-069	O-RING	4
E	684-122	V	642-069	40TA	643-069	O-RING	4
H	643-069	S	684-122			O-RING	4
				41T	643-015	O-RING	4
				41TA	643-015	O-RING	2
43	634-050	43	634-050	43	634-050	ELBOW	1
44	681-040	44	681-040	44	681-040	SILENCER	1
45	634-605	45	634-605	45	634-605	BUSHING	1
51	770-582	51	770-582			CUSHION	2
				53T	643-139	O-RING	4
				53TA	643-139	O-RING	4

EXPLODED VIEW

■ NDP-50-BP/BV



PARTS LIST							
NDP-50-BP..							
No.	B P C B P E B P H	No.	B P N B P V B P S	No.	B P T	DESCRIPTION	Q T Y
1	780-148	1	780-148	1	780-148	PUMP CHAMBER	2
2	772-080	2	772-080	2	772-080	INLET MANIFOLD	2
3	780-151	3	780-151	3	780-151	OUTLET MANIFOLD	2
4	771-723	4	771-723	4	771-723	CENTRE MANIFOLD	2
5	803-126	5	803-126	5	803-126	BODY ASSY	1
7	711-900	7	711-900	7	711-939	CENTRE ROD	1
8	711-904	8	711-904	8	707-822	CENTRE DISC	2
9	771-727	9	771-727	9	780-063	CENTRE DISC	2
10C	771-855	10N	771-702	10T	770-815	DIAPHRAGM	2
E	771-856	V	771-800			DIAPHRAGM	2
H	771-703	S	771-976			DIAPHRAGM	2
11	772-097	11	772-097	11	772-097	VALVE SEAT	4
12C	770-627	12N	770-630	12T	770-693	BALL	4
E	770-633	V	770-636			BALL	4
H	770-693	S	770-633			BALL	4
14	684-324	14	684-323	14	684-323	BALL VALVE	1
15	634-034	15	634-034	15	634-034	ELBOW	1
19	711-926	19	711-926	19	711-926	BASE	2
20	771-865	20	771-865	20	771-865	CUSHION	4
23	683-541	23	683-541	23	683-541	BOLT	16
24	631-330	24	631-330	24	631-330	WASHER	24
25	680-257	25	680-257	25	680-257	SPRING WASHER	24
26	621-213	26	621-213	26	621-213	BOLT	12
27	631-331	27	631-331	27	631-331	WASHER	28
28	680-607	28	680-607	28	680-607	SPRING WASHER	20
29	628-014	29	628-014	29	628-014	NUT	20
33	621-179	33	621-179	33	621-179	BOLT	8
35	621-149	35	621-149	35	621-149	BOLT	4
36	683-837	36	683-837	36	683-837	NUT WITH FLANGE	4
37	684-592	37	684-592	37	684-592	BOLT	8
39C	640-064	39N	640-064	39T	643-064	O-RING	4
E	684-121	V	642-064			O-RING	4
H	643-064	S	684-121			O-RING	4
40C	640-069	40N	640-069	40T	643-069	O-RING	4
E	684-122	V	642-069			O-RING	4
H	643-069	S	684-122			O-RING	4
				41	643-015	O-RING	4
44	683-098	44	680-913	44	680-913	SILENCER	1
45	634-605	45	634-605	45	634-605	BUSHING	1
46	683-641	46	683-641	46	683-641	CAP	4
47	771-786	47	771-786	47	771-786	PROTECTOR A	8
48	771-787	48	771-787	48	771-787	PROTECTOR B	8
49	771-788	49	771-788	49	771-788	PROTECTOR C	8
51	770-582	51	770-582			CUSHION	2
52C	640-139	52N	640-139	52T	643-139	O-RING	4
E	685-448	V	642-139			O-RING	4
H	643-139	S	685-448			O-RING	4

PARTS LIST							
NDP-50-BV..							
No.	B V C B V E B V H	No.	B V N B V V B V S	No.	B V T B V TA	DESCRIPTION	Q T Y
1	780-153	1	780-153	1	780-153	PUMP CHAMBER	2
2	722-086	2	722-086	2	722-086	INLET MANIFOLD	2
3	780-154	3	780-154	3	780-154	OUTLET MANIFOLD	2
4	780-115	4	780-115	4	780-115	CENTRE MANIFOLD	2
5	803-126	5	803-126	5	803-126	BODY ASSY	1
7	711-900	7	711-900	7	711-939	CENTRE ROD	1
8	711-904	8	711-904	8	707-822	CENTRE DISC	2
9	771-901	9	771-901	9	780-116	CENTRE DISC	2
10C	771-855	10N	771-702	10T	770-815	DIAPHRAGM	2
E	771-856	V	771-800	10TA	772-629	DIAPHRAGM	2
H	771-703	S	771-976	10TA	772-627	DIAPHRAGM (TA BACKUP)	2
11	772-100	11	772-100	11	772-100	VALVE SEAT	4
12C	770-627	12N	770-630	12T	770-693	BALL	4
E	770-633	V	770-636	12TA	770-693	BALL	4
H	770-693	S	770-633			BALL	4
14	684-324	14	684-323	14	684-323	BALL VALVE	1
15	634-034	15	634-034	15	634-034	ELBOW	1
19	711-926	19	711-926	19	711-926	BASE	2
20	771-865	20	771-865	20	771-865	CUSHION	4
23	683-541	23	683-541	23	683-541	BOLT	16
24	631-330	24	631-330	24	631-330	WASHER	24
25	680-257	25	680-257	25	680-257	SPRING WASHER	24
26	621-213	26	621-213	26	621-213	BOLT	12
27	631-331	27	631-331	27	631-331	WASHER	32
28	680-607	28	680-607	28	680-607	SPRING WASHER	20
29	628-014	29	628-014	29	628-014	NUT	20
33	621-179	33	621-179	33	621-179	BOLT	8
35	621-149	35	621-149	35	621-149	BOLT	4
36	683-837	36	683-837	36	683-837	NUT WITH FLANGE	4
37	684-592	37	684-592	37	684-592	BOLT	8
39C	640-064	39N	640-064	39T	771-899	O-RING	4
E	684-121	V	642-064	39TA	771-899	O-RING	4
H	643-064	S	684-121			O-RING	4
40C	640-069	40N	640-069	40T	772-063	O-RING	4
E	684-122	V	642-069	40TA	772-063	O-RING	4
H	643-069	S	684-122			O-RING	4
				41T	643-015	O-RING	4
				41TA	643-015	O-RING	2
44	683-098	44	680-913	44	680-913	SILENCER	1
45	634-605	45	634-605	45	634-605	BUSHING	1
46	683-641	46	683-641	46	683-641	CAP	4
47	771-786	47	771-786	47	771-786	PROTECTOR A	8
48	771-787	48	771-787	48	771-787	PROTECTOR B	8
49	771-788	49	771-788	49	771-788	PROTECTOR C	8
51	770-582	51	770-582			CUSHION	2
53C	640-139	53N	640-139	53T	643-139	O-RING	4
E	685-448	V	642-139	53TA	643-139	O-RING	4
H	643-139	S	685-448			O-RING	4

Servicekits Diaphragm pumps (NDP-50)

DIAPHRAGM KITS (BA⁰⁰¹, BS⁰⁰¹, BF⁰⁰¹)

No.	DESCRIPTION	K50D-MN	Q'TY	K50D-MH	Q'TY	K50D-MC	Q'TY	K50D-ME	Q'TY	K50D-MS	Q'TY
10	DIAPHRAGM	771-702	2	771-703	2	771-855	2	771-856	2	771-976	2
21	NUT	683-408	2	683-408	2	683-408	2	683-408	2	683-408	2
22	CONED DISC SPRING	682-740	2	682-740	2	682-740	2	682-740	2	682-740	2
40	O-RING	640-069	4	643-069	4	640-069	4	684-122	4	684-122	4
41T	O-RING										

No.	DESCRIPTION	K50D-MV	Q'TY	K50D-MT	Q'TY	K50D-MTA	Q'TY
10	DIAPHRAGM	771-800	2	771-815	2	772-629	2
10	DIAPHRAGM					772-627	2
21	NUT	706-128	2	706-128	2	706-128	2
22	CONED DISC SPRING	682-740	2	682-740	2	682-740	2
40	O-RING	642-069	4	643-069	4	643-069	4
41T	O-RING			643-015	4	643-015	2

DIAPHRAGM KITS (BP⁰⁰¹, BV⁰⁰¹)

No.	DESCRIPTION	K50D-PN	Q'TY	K50D-PH	Q'TY	K50D-PC	Q'TY	K50D-PE	Q'TY	K50D-PS	Q'TY
10	DIAPHRAGM	771-702	2	771-703	2	771-855	2	771-855	2	771-976	2
40	O-RING	640-069	4	643-069	4	640-069	4	684-122	4	684-122	4
41T	O-RING										

No.	DESCRIPTION	K50D-PV	Q'TY	K50D-PT	Q'TY	K50D-VTA	Q'TY
10	DIAPHRAGM	771-800	2	771-815	2	772-629	2
10	DIAPHRAGM					772-627	2
40	O-RING	642-069	4	643-069	4	643-069	4
41T	O-RING			643-015	4	643-015	2

VALVE KITS (BA⁰⁰¹, BS⁰⁰¹, BF⁰⁰¹)

No.	DESCRIPTION	K50V-MN	Q'TY	K50V-MH	Q'TY	K50V-MC	Q'TY	K50V-ME	Q'TY	K50V-MS	Q'TY
11	VALVE SEAT	771-995	4	771-794	4	771-957	4	771-949	4	772-004	4
12	BALL	770-630	4	770-693	4	770-627	4	770-633	4	770-633	4
40	O-RING	640-069	4	643-069	4	640-069	4	684-122	4	684-122	4

No.	DESCRIPTION	K50V-MV	Q'TY	K50V-AT	Q'TY	K50V-ST	Q'TY
11	VALVE SEAT	771-987	4	712-383	4	711-909	4
12	BALL	770-636	4	770-693	4	770-693	4
52T	O-RING			643-139	4	643-139	4
40	O-RING	642-069	4	643-069	4	643-069	4

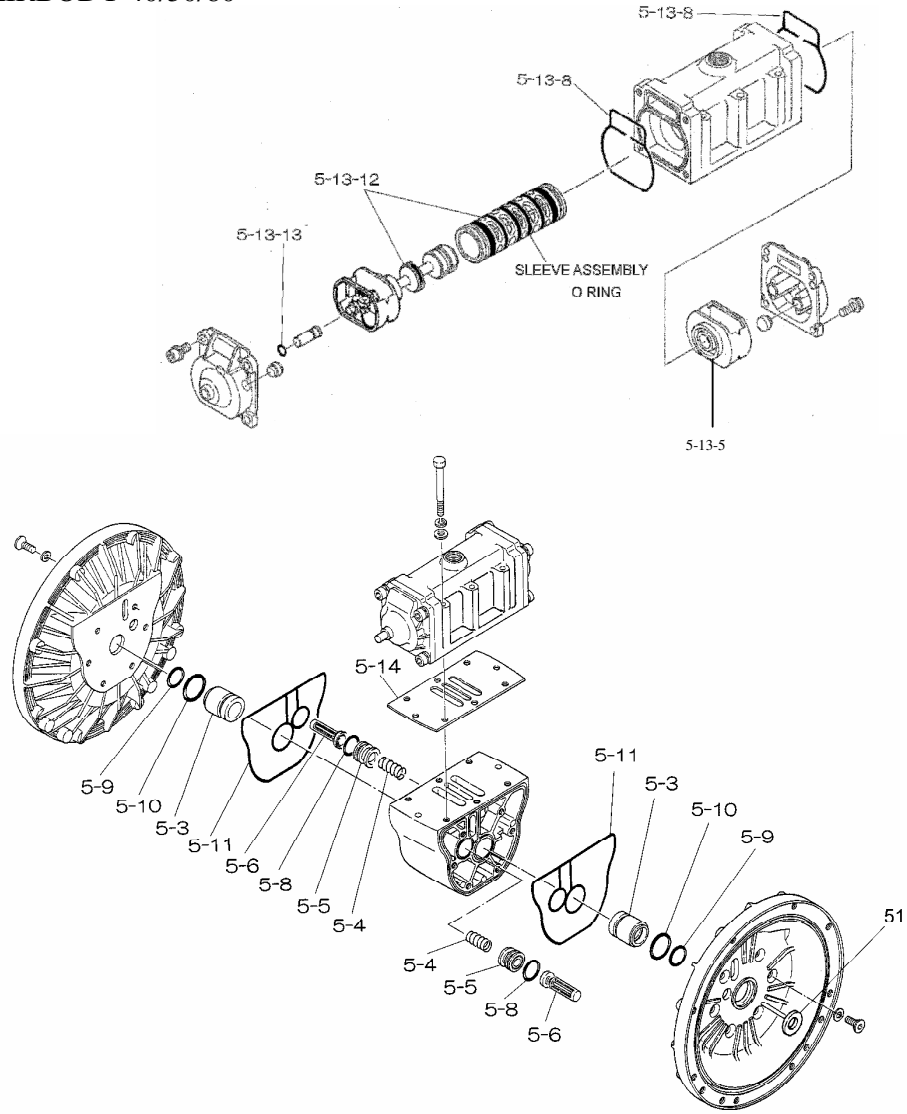
VALVE KITS (BP⁰⁰¹, BV⁰⁰¹)

No.	DESCRIPTION	K50V-PN	Q'TY	K50V-PT	Q'TY	K50V-PC	Q'TY	K50V-PE	Q'TY	K50V-PV	Q'TY
11	VALVE SEAT	772-097	4	772-097	4	772-097	4	772-097	4	772-097	4
12	BALL	770-630	4	770-693	4	770-627	4	770-633	4	770-636	4
52	O-RING	640-139	4	643-139	4	640-139	4	685-448	4	642-139	4
40	O-RING	640-069	4	643-069	4	640-069	4	684-122	4	642-069	4

No.	DESCRIPTION	K50V-VN	Q'TY	K50V-VT	Q'TY	K50V-VC	Q'TY	K50V-VE	Q'TY	K50V-VV	Q'TY
11	VALVE SEAT	772-100	4	772-100	4	772-100	4	772-100	4	772-100	4
12	BALL	770-630	4	770-693	4	770-627	4	770-633	4	770-636	4
52	O-RING	640-139	4	643-139	4	640-139	4	685-448	4	642-139	4
40	O-RING	640-069	4	772-063	4	640-069	4	684-122	4	642-069	4

* NOTE K50V-PE/VE IS ALSO FOR BPS/BVS K50V-PT/VT ARE ALSO FOR BPH/BVH

Exploded view □ AIRBODY 40/50/80



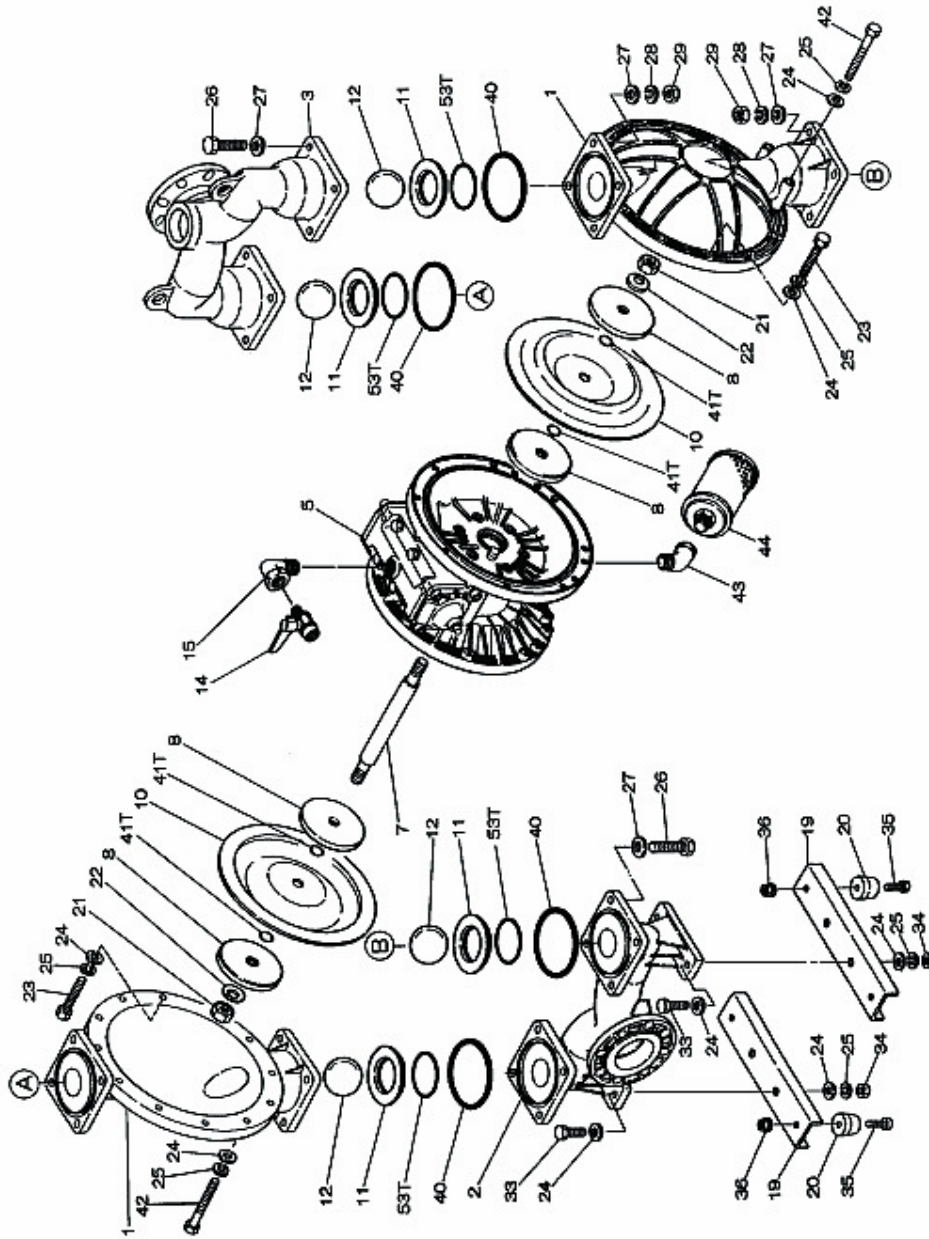
K40/50-AM AIR MOTOR KIT FOR NDP-40/50
K40/50/80-AMS AIR MOTOR SEAL KIT FOR NDP-40/50/80

NO.	PART NO.	DESCRIPTION	K40/50-AM	K40/50/80-AMS
5-3	772-689	THROAT BEARING	2	
5-4	711-937	SPRING	2	
5-5	771-740	VALVE SEAT	2	
5-6	832-162	PILOT VALVE ASSEMBLY	2	
5-8	640-020	O-RING	2	2
5-9	685-444	O-RING	2	2
5-9*	640-023	O-RING		2
5-10	640-029	O-RING	2	2
5-11	771-742	GASKET	2	2
5-14	771-712	GASKET	1	1
5-13-5	771-735	SPRING STOPPER	1	
5-13-8	771-738	GASKET	2	2
5-13-12	803-115	C-SPOOL ASSEMBLY	1	
5-13-12*2	640-037	O-RING		6
5-13-13	640-005	O-RING	1	1
51	770-582	CUSHION	1	

NOTE * 640-023 IS PART OF OLD BRONZE THROAT BEARING

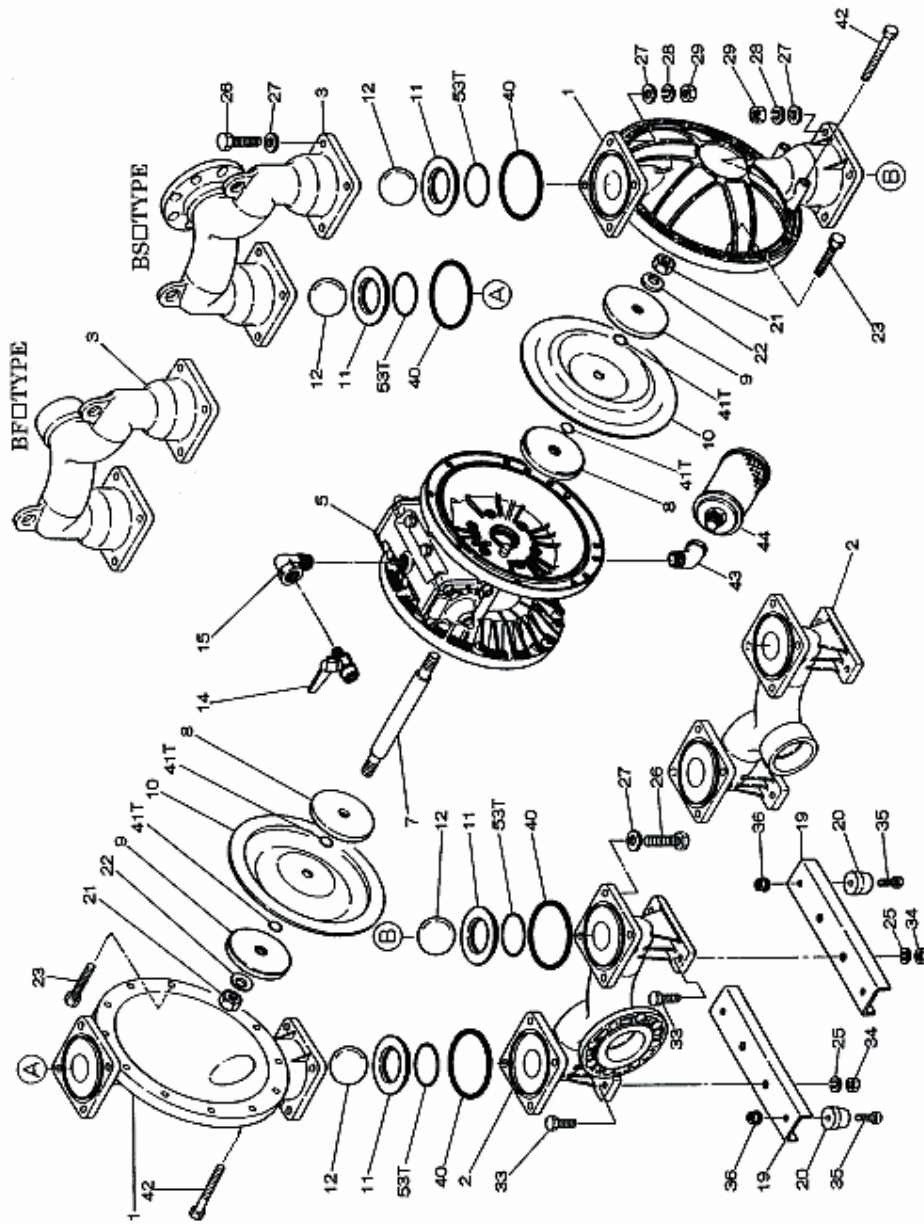
NOTE *2 640-037 IS PART OF 803-115

EXPLODED VIEW ■ NDP-80-BA



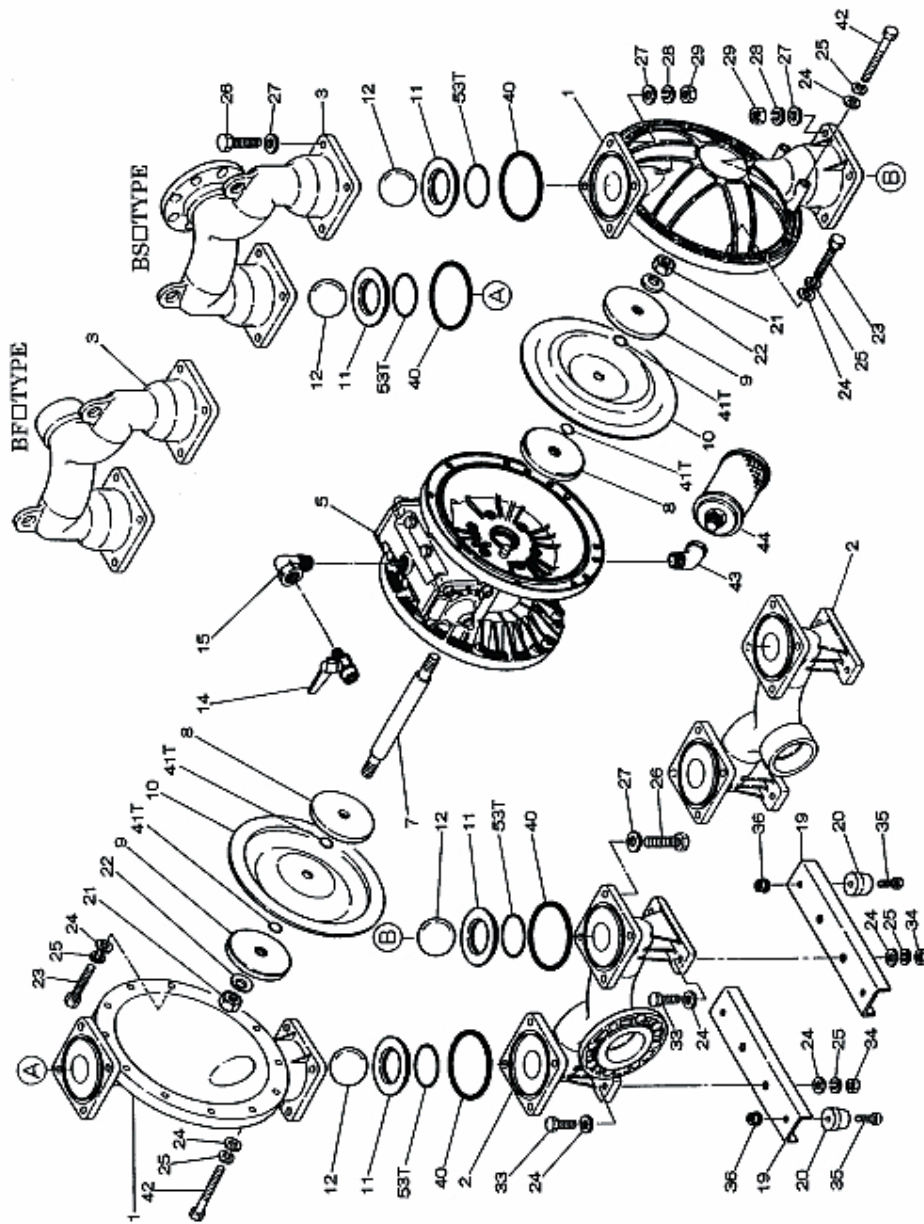
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NDP-80-BA..							
No.	B A C B A E B A H	No.	B A N B A V B A S	No.	B A T B A TA	DESCRIPTION	Q T Y
1	580-962	1	580-962	1	580-962	PUMP CHAMBER	2
2	714-370	2	714-370	2	714-370	INLET MANIFOLD	1
3	714-364	3	714-364	3	714-364	OUTLET MANIFOLD	1
5	803-123	5	803-123	5	803-123	BODY ASSY	1
7	711-901	7	711-901	7	711-940	CENTRE ROD	1
8	711-906	8	711-906	8	711-041	CENTRE DISC	4
10C	771-857	10N	771-704	10T	770-934	DIAPHRAGM	2
E	771-858	V	771-801	10TA	772-630	DIAPHRAGM	2
H	771-705	S	771-977	10TA	772-628	DIAPHRAGM (TA BACKUP)	2
11C	771-958	11N	771-996	11T	712-384	VALVE SEAT	4
E	771-999	V	771-998	11TA	712-384	VALVE SEAT	4
H	771-795	S	772-005			VALVE SEAT	4
12C	770-559	12N	770-587	12T	770-694	BALL	4
E	770-596	V	770-605	12TA	770-694	BALL	4
H	770-694	S	770-596			BALL	4
14	684-324	14	684-324	14	684-324	BALL VALVE	1
15	634-034	15	634-034	15	634-034	ELBOW	1
19	711-912	19	711-912	19	711-912	BASE	2
20	771-402	20	771-402	20	771-402	CUSHION	4
21C	683-408	21N	683-408	21T	706-144	NUT	2
E	683-408	V	706-144	21TA	706-144	NUT	2
H	683-408	S	683-408			NUT	2
22	682-740	22	682-740	22	682-740	CONED SPRING WASHER	2
23	611-186	23	611-186	23	611-186	BOLT	20
24	631-014	24	631-014	24	631-014	WASHER	32
25	631-421	25	631-421	25	631-421	SPRING WASHER	28
26	611-204	26	611-204	26	611-204	BOLT	16
27	631-015	27	631-015	27	631-015	WASHER	48
28	631-422	28	631-422	28	631-422	SPRING WASHER	24
29	627-014	29	627-014	29	627-014	NUT	24
33	611-177	33	611-177	33	611-177	BOLT	4
34	627-013	34	627-013	34	627-013	NUT	4
35	611-149	35	611-149	35	611-149	BOLT	4
36	682-276	36	682-276	36	682-276	NUT WITH FLANGE	4
40C	640-078	40N	640-078	40T	643-078	O-RING	4
E	684-124	V	642-078	40TA	643-078	O-RING	4
H	643-078	S	684-124			O-RING	4
				41T	643-015	O-RING	4
				41TA	643-015	O-RING	2
42	683-546	42	683-546	42	683-546	BOLT	4
43	634-050	43	634-050	43	634-050	ELBOW	1
44	681-040	44	681-040	44	681-040	SILENCER	1
				53T	643-145	O-RING	4
				53TA	643-145	O-RING	4

EXPLODED VIEW ■ NDP-80-BF



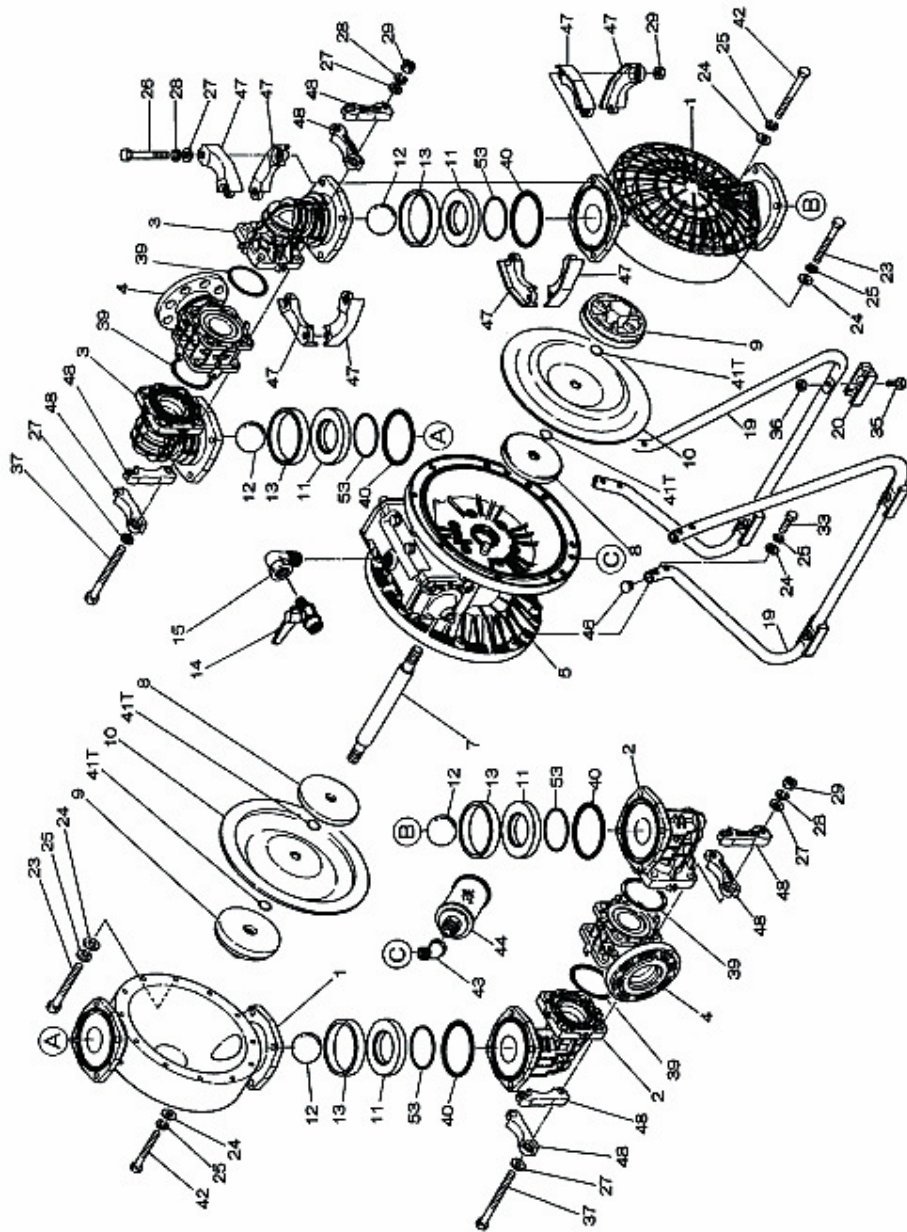
PARTS LIST							
NDP-80-BF..							
No.	B F C B F E B F H	No.	B F N B F V B F S	No.	B F T	DESCRIPTION	Q T Y
1	713-158	1	713-158	1	713-158	PUMP CHAMBER	2
2	713-164	2	713-164	2	713-164	INLET MANIFOLD	1
3	713-161	3	713-161	3	713-161	OUTLET MANIFOLD	1
5	803-127	5	803-127	5	803-127	BODY ASSY	1
7	711-901	7	711-901	7	711-940	CENTRE ROD	1
8	711-906	8	711-906	8	711-041	CENTRE DISC	2
9	711-907	9	711-907	9	711-039	CENTRE DISC	2
10C	771-857	10N	771-704	10T	770-934	DIAPHRAGM	2
E	771-858	V	771-801			DIAPHRAGM	2
H	771-705	S	771-977			DIAPHRAGM	2
11C	771-958	11N	771-996	11T	711-910	VALVE SEAT	4
E	771-999	V	771-998			VALVE SEAT	4
H	771-795	S	772-005			VALVE SEAT	4
12C	770-559	12N	770-587	12T	770-694	BALL	4
E	770-596	V	770-605			BALL	4
H	770-694	S	770-596			BALL	4
14	684-324	14	684-324	14	684-324	BALL VALVE	1
15	634-034	15	634-034	15	634-034	ELBOW	1
19	711-912	19	711-912	19	711-912	BASE	2
20	771-402	20	771-402	20	771-402	CUSHION	4
21C	683-408	21N	683-408	21T	706-144	NUT	2
E	683-408	V	706-144			NUT	2
H	683-408	S	683-408			NUT	2
22	682-740	22	682-740	22	682-740	CONED SPRING WASHER	2
23	686-024	23	686-024	23	686-024	BOLT	20
25	631-917	25	631-917	25	631-917	SPAK WASHER	4
26	611-203	26	611-203	26	611-203	BOLT	16
27	631-015	27	631-015	27	631-015	WASHER	32
28	631-422	28	631-422	28	631-422	SPRING WASHER	16
29	627-014	29	627-014	29	627-014	NUT	16
33	611-177	33	611-177	33	611-177	BOLT	4
34	627-013	34	627-013	34	627-013	NUT	4
35	611-149	35	611-149	35	611-149	BOLT	4
36	682-276	36	682-276	36	682-276	NUT WITH FLANGE	4
40C	640-078	40N	640-078	40T	643-078	O-RING	4
E	684-124	V	642-078			O-RING	4
H	643-078	S	684-124			O-RING	4
				41	643-015	O-RING	4
42	686-026	42	686-026	42	686-026	BOLT	4
43	634-050	43	634-050	43	634-050	ELBOW	1
44	681-040	44	681-040	44	681-040	SILENCER	1
				53T	643-145	O-RING	4

EXPLODED VIEW ■ NDP-80- BS



PARTS LIST							
NDP-80-BS..							
No.	B S C B S E B S H	No.	B S N B S V B S S	No.	B S T B S TA B S HA	DESCRIPTION	Q T Y
1	712-933	1	712-933	1	712-933	PUMP CHAMBER	2
2	712-603	2	712-603	2	712-603	INLET MANIFOLD	1
3	712-602	3	712-602	3	712-602	OUTLET MANIFOLD	1
5	803-127	5	803-127	5	803-127	BODY ASSY	1
7	711-901	7	711-901	7	711-940	CENTRE ROD	1
8	711-906	8	711-906	8	711-041	CENTRE DISC	2
9	711-907	9	711-907	9	711-039	CENTRE DISC	2
10C	771-857	10N	771-704	10T	770-934	DIAPHRAGM	2
E	771-858	V	771-801	10TA	772-630	DIAPHRAGM	2
H	771-705	S	771-977	10TA	772-628	DIAPHRAGM (TA BACKUP)	2
				10HA	771-705	DIAPHRAGM	2
				10HA	772-667	DIAPHRAGM BACKUP	2
11C	771-958	11N	771-996	11T	711-910	VALVE SEAT	4
E	771-999	V	771-998	11TA	711-910	VALVE SEAT	4
H	771-795	S	772-005	11HA	771-795	VALVE SEAT	4
12C	770-559	12N	770-587	12T	770-694	BALL	4
E	770-596	V	770-605	12TA	770-694	BALL	4
H	770-694	S	770-596	12HA	770-694	BALL	4
14	684-324	14	684-324	14	684-324	BALL VALVE	1
15	634-034	15	634-034	15	634-034	ELBOW	1
19	711-912	19	711-912	19	711-912	BASE	2
20	771-402	20	771-402	20	771-402	CUSHION	4
21C	683-408	21N	683-408	21T	706-144	NUT	2
E	683-408	V	706-144	21TA	706-128	NUT	2
H	683-408	S	683-408	21HA	706-128	NUT	2
22	682-740	22	682-740	22	682-740	CONED SPRING WASHER	2
23	621-183	23	621-183	23	621-183	BOLT	20
24	631-174	24	631-174	24	631-174	WASHER	32
25	680-257	25	680-257	25	680-257	SPRING WASHER	28
26	621-203	26	621-203	26	621-203	BOLT	16
27	631-175	27	631-175	27	631-175	WASHER	32
28	680-607	28	680-607	28	680-607	SPRING WASHER	16
29	628-014	29	628-014	29	628-014	NUT	16
33	621-177	33	621-177	33	621-177	BOLT	4
34	628-013	34	628-013	34	628-013	NUT	4
35	611-149	35	611-149	35	611-149	BOLT	4
36	682-276	36	682-276	36	682-276	NUT WITH FLANGE	4
40C	640-078	40N	640-078	40T	643-078	O-RING	4
E	684-124	V	642-078	40TA	643-078	O-RING	4
H	643-078	S	684-124	40HA	643-078	O-RING	4
				41	643-015	O-RING	4
42	683-543	42	683-543	42	683-543	BOLT	4
43	634-050	43	634-050	43	634-050	ELBOW	1
44	681-040	44	681-040	44	681-040	SILENCER	1
				53T	643-145	O-RING	4
				53TA	643-145	O-RING	4

EXPLODED VIEW ■ NDP-80-BP



PARTS LIST							
NDP-80-BP..							
No.	B P C B P E B P H	No.	B P N B P V B P S	No.	B P T	DESCRIPTION	Q`TY
1	780-149	1	780-149	1	780-149	PUMP CHAMBER	2
2	772-081	2	772-081	2	772-081	INLET MANIFOLD	2
3	780-152	3	780-152	3	780-152	OUTLET MANIFOLD	2
4	771-724	4	771-724	4	771-724	CENTRE MANIFOLD	2
5	803-127	5	803-127	5	803-127	BODY ASSY	1
7	711-901	7	711-901	7	711-940	CENTRE ROD	1
8	711-906	8	711-906	8	711-041	CENTRE DISC	2
9	780-064	9	780-064	9	771-730	CENTRE DISC	2
10C	771-857	10N	771-704	10T	770-934	DIAPHRAGM	2
E	771-858	V	771-801			DIAPHRAGM	2
H	771-705	S	771-977			DIAPHRAGM	2
11	772-098	11	772-098	11	772-098	VALVE SEAT	4
12C	770-559	12N	770-587	12T	770-694	BALL	4
E	770-596	V	770-605			BALL	4
H	770-694	S	770-596			BALL	4
13	772-099	13	772-099	13	772-099	VALVE GUIDE	4
14	684-324	14	684-324	14	684-324	BALL VALVE	1
15	634-034	15	634-034	15	634-034	ELBOW	1
19	711-927	19	711-927	19	711-927	BASE	2
20	771-865	20	771-865	20	771-865	CUSHION	4
23	683-543	23	683-543	23	683-543	BOLT	20
24	631-330	24	631-330	24	631-330	WASHER	32
25	680-257	25	680-257	25	680-257	SPRING WASHER	32
26	621-213	26	621-213	26	621-213	BOLT	16
27	631-331	27	631-331	27	631-331	WASHER	32
28	680-607	28	680-607	28	680-607	SPRING WASHER	24
29	628-014	29	628-014	29	628-014	NUT	24
33	621-179	33	621-179	33	621-179	BOLT	8
35	621-149	35	621-149	35	621-149	BOLT	4
36	683-837	36	683-837	36	683-837	NUT WITH FLANGE	4
37	683-544	37	683-544	37	683-544	BOLT	8
39C	640-070	39N	640-070	39T	643-070	O-RING	4
E	684-123	V	642-070			O-RING	4
H	643-070	S	684-123			O-RING	4
40C	640-080	40N	640-080	40T	643-080	O-RING	4
E	684-125	V	642-080			O-RING	4
H	643-080	S	684-125			O-RING	4
				41	643-015	O-RING	4
42	683-552	42	683-552	42	683-552	BOLT	4
43	634-050	43	634-050	43	634-050	ELBOW	1
44	681-040	44	681-040	44	681-040	SILENCER	1
46	683-641	46	683-641	46	683-641	CAP	4
47	771-789	47	771-789	47	771-789	PROTECTOR A	32
48	771-790	48	771-790	48	771-790	PROTECTOR B	16
53C	640-143	53N	640-145	53T	643-145	O-RING	4
E	685-448	V	642-145			O-RING	4
H	643-143	S	685-443			O-RING	4

Servicekits Diaphragm pumps (NDP-80)

DIAPHRAGM KITS (BA⁰⁰¹,BS⁰⁰¹,BF⁰⁰¹)

No.	DESCRIPTION	K80D-MN	Q'TY	K80D-MH	Q'TY	K80D-MC	Q'TY	K80D-ME	Q'TY	K80D-MS	Q'TY
10	DIAPHRAGM	771-704	2	771-705	2	771-857	2	771-858	2	771-977	2
21	NUT	683-408	2	683-408	2	683-408	2	683-408	2	683-408	2
22	CONED DISC SPRING	682-740	2	682-740	2	682-740	2	682-740	2	682-740	2
40	O-RING	640-078	4	643-078	4	640-078	4	684-124	4	684-124	4
41T	O-RING										

No.	DESCRIPTION	K80D-MV	Q'TY	K80D-MT	Q'TY	K80D-MTA	Q'TY	K80D-MHA	Q'TY
10	DIAPHRAGM	771-801	2	770-934	2	772-130	2	771-705	2
10	DIAPHRAGM					772-128	2	772-667	2
21	NUT	706-144	2	706-144	2	706-128	2	706-128	2
22	CONED DISC SPRING	682-740	2	682-740	2	682-740	2	682-740	2
40	O-RING	642-078	4	643-078	4	643-078	4	643-078	4
41T	O-RING			643-015	4	643-015	2		

DIAPHRAGM KITS (BP⁰⁰¹)

No.	DESCRIPTION	K80D-PN	Q'TY	K80D-PH	Q'TY	K80D-PC	Q'TY	K80D-PE	Q'TY	K80D-PS	Q'TY
10	DIAPHRAGM	771-704	2	771-705	2	771-857	2	771-858	2	771-977	2
40	O-RING	640-080	4	643-080	4	640-080	4	684-125	4	684-125	4
41T	O-RING										

No.	DESCRIPTION	K80D-PV	Q'TY	K80D-PT	Q'TY
10	DIAPHRAGM	771-801	2	770-934	2
40	O-RING	642-080	4	643-080	4
41T	O-RING			643-015	4

VALVE KITS (BA⁰⁰¹,BS⁰⁰¹,BF⁰⁰¹)

No.	DESCRIPTION	K80V-MN	Q'TY	K80V-MH	Q'TY	K80V-MC	Q'TY	K80V-ME	Q'TY	K80V-MS	Q'TY
11	VALVE SEAT	771-996	4	771-795	4	771-958	4	771-999	4	772-005	4
12	BALL	770-587	4	770-694	4	770-559	4	770-596	4	770-596	4
40	O-RING	640-078	4	643-078	4	640-078	4	684-124	4	684-124	4

No.	DESCRIPTION	K80V-MV	Q'TY	K80V-AT	Q'TY	K80V-ST	Q'TY
11	VALVE SEAT	771-998	4	712-384	4	711-910	4
12	BALL	770-605	4	770-694	4	770-694	4
53T	O-RING			643-143	4	643-143	4
40	O-RING	642-078	4	643-078	4	643-078	4

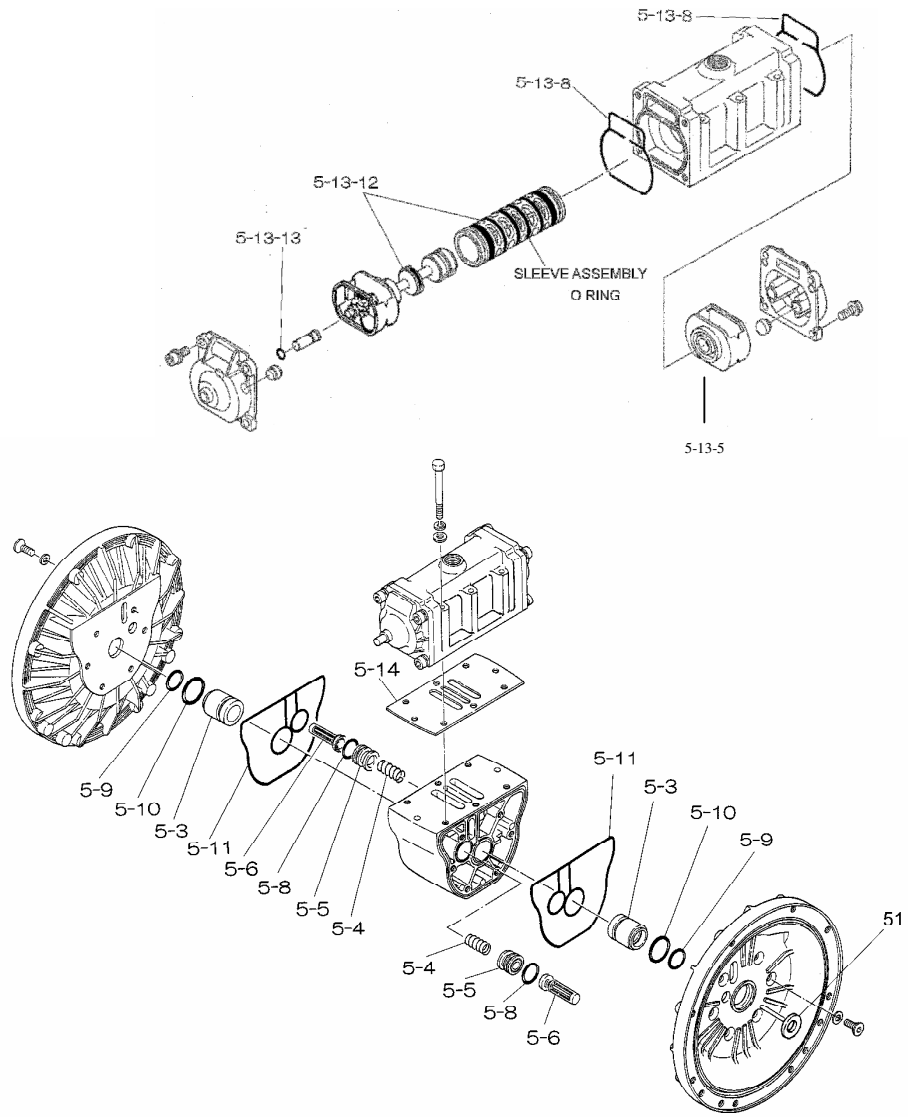
VALVE KITS (BP⁰⁰¹)

No.	DESCRIPTION	K80V-PN	Q'TY	K80V-PT	Q'TY	K80V-PC	Q'TY	K80V-PE	Q'TY	K80V-PV	Q'TY
11	VALVE SEAT	772-098	4	772-098	4	772-098	4	772-098	4	772-098	4
12	BALL	770-587	4	770-694	4	770-559	4	770-596	4	770-605	4
13	VALVE GUIDE	772-099	4	772-099	4	772-099	4	772-099	4	772-099	4
53	O-RING	640-143	4	643-143	4	640-143	4	685-443	4	642-143	4
40	O-RING	640-080	4	643-080	4	640-080	8	684-125	8	642-080	4

* NOTE K80V-PE IS ALSO FOR BPS

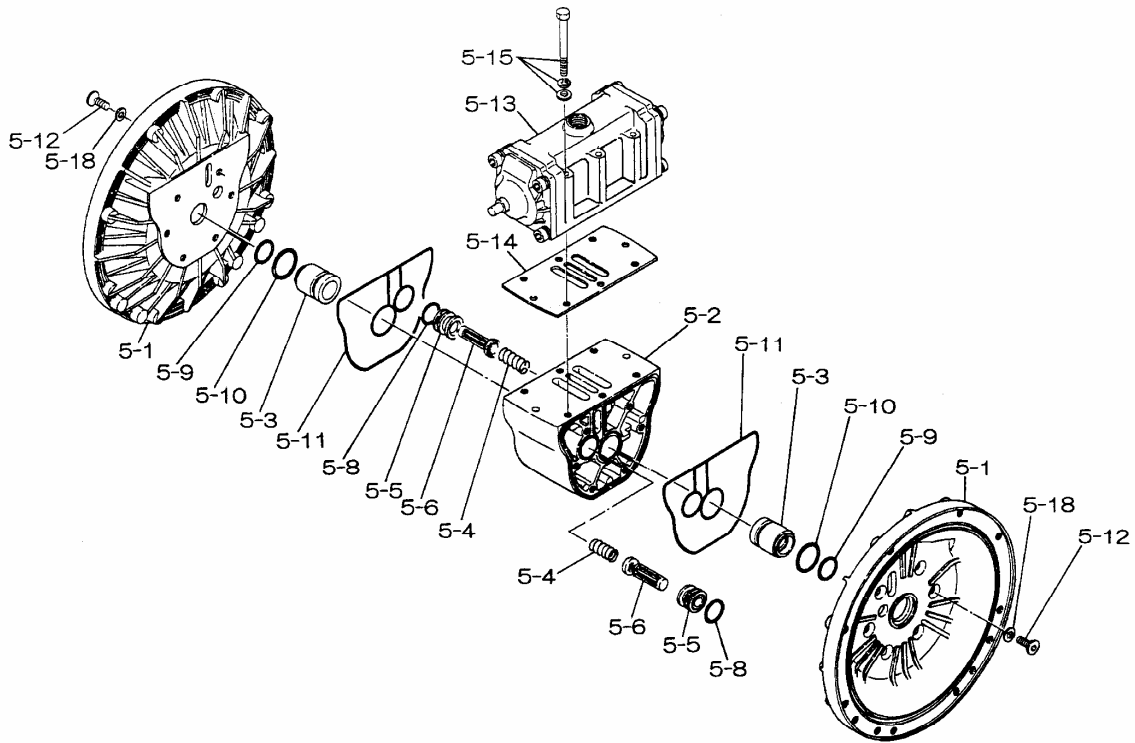
K80V-PT IS ALSO FOR BPH

Exploded view □ AIRBODY 40/50/80



K80-AM AIR MOTOR KIT FOR NDP-80				
K40/50/80-AMS AIR MOTOR SEAL KIT FOR NDP-40/50/80				
NO.	PART NO.	DESCRIPTION	K80-AM	K40/50/80-AMS
5-3	772-689	THROAT BEARING	2	
5-4	711-937	SPRING	2	
5-5	771-740	VALVE SEAT	2	
5-6	832-163	PILOT VALVE ASSEMBLY	2	
5-8	640-020	O-RING	2	2
5-9	685-444	O-RING	2	2
5-9*	640-023	O-RING		2
5-10	640-029	O-RING	2	2
5-11	771-742	GASKET	2	2
5-14	771-712	GASKET	1	1
5-13-5	771-735	SPRING STOPPER	1	
5-13-8	771-738	GASKET	2	2
5-13-12	803-115	C-SPOOL ASSEMBLY	1	
5-13-12*2	640-037	O-RING		6
5-13-13	640-005	O-RING	1	1
NOTE * 640-023 IS PART OF OLD BRONZE THROAT BEARING				
NOTE *2 640-037 IS PART OF 803-115				

EXPLODED VIEW Body Assembly

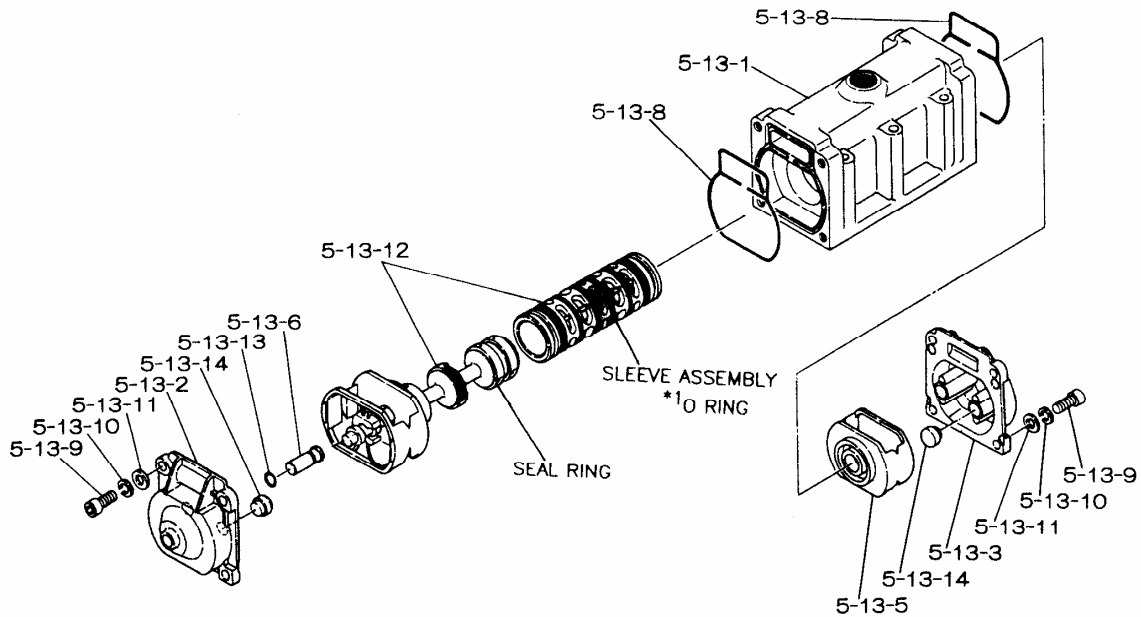


Parts List ■ Body Assembly

BODY ASSEMBLY

NO.	NDP-40	NDP-50	NDP-80	DESCRIPTION	Q'TY
	803-125	803-126	803-127		
5-1	711-933	711-934	711-935	AIR CHAMBER	2
5-2	711-947	←	←	BODY	1
5-3	772-689	←	←	THROAT BEARING	2
5-4	711-937	←	←	SPRING	2
5-5	771-740	←	←	VALVE SEAT	2
5-6	832-162	←	832-163	PILOT VALVE ASSEMBLY	2
5-8	640-020	←	←	O RING	2
5-9	685-444	←	←	O RING	2
5-10	640-029	←	←	O RING	2
5-11	771-742	←	←	GASKET	2
5-12	682-268	←	←	FLAT HEAD BOLT	12
5-13	803-120	←	←	VALVE BODY ASSEMBLY	1
5-14	771-712	←	←	GASKET	1
5-15	611-164	←	←	BOLT	6
5-18	684-987	←	←	PLAIN WASHER	12

EXPLODED VIEW Valve Body Assembly



Parts List ■ VALVE BODY Assembly

803120 VALVE BODY ASSEMBLY

NO.	PART NO.	DESCRIPTION	Q'TY
5-13-1	711-946	VALVE BODY	1
5-13-2	580-999	CAP A	1
5-13-3	581-000	CAP B	1
5-13-5	771-735	SPRING STOPPER	1
5-13-6	712-976	RESET BUTTON	1
5-13-8	771-738	GASKET	2
5-13-9	681-297	HEXAGON SOCKET HEAD BOLT	8
5-13-10	681-300	SPRING LOCK WASHER	8
5-13-11	631-173	PLAIN WASHER	8
5-13-12	803-115	C SPOOL VALVE ASSEMBLY	1
*1	640-037	O-RING	6
5-13-13	640-005	O RING	1
5-13-14	684-128	CUSHION	4

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