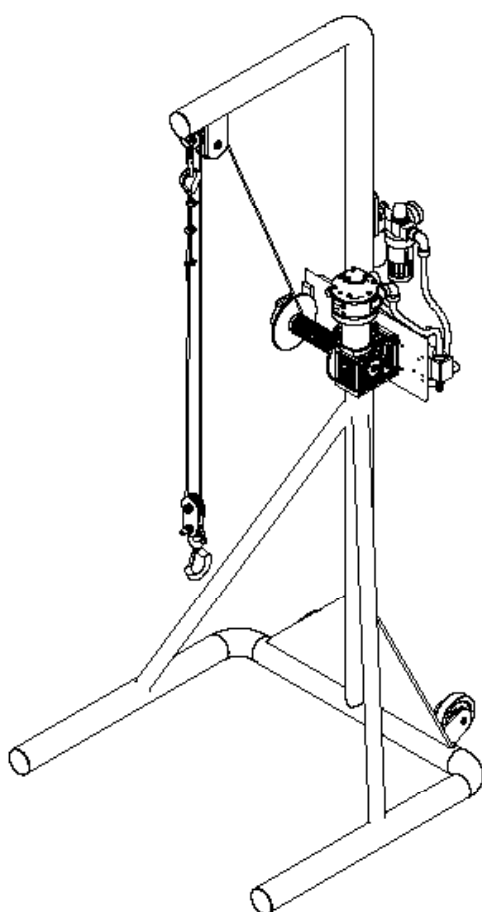
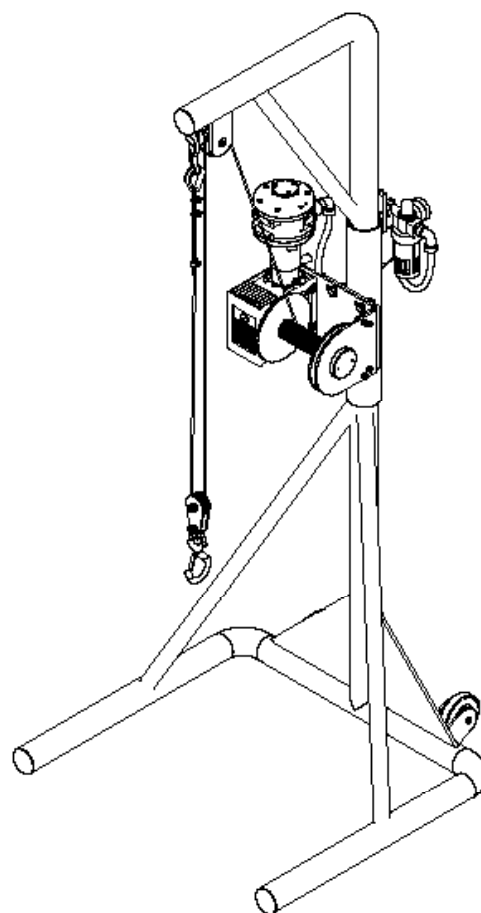




Operation and Maintenance Guide



MCW-100



MCW-200 / MCW-300

Pneumatic Driven Winch

Models	Descriptions	IMPA Code
MCW100	Pneumatic Driven Winch, 100Kg	59 06 03
MCW200	Pneumatic Driven Winch, 200Kg	59 06 05
MCW300	Pneumatic Driven Winch, 300Kg	59 06 07

Read this manual carefully before installing, operating or servicing this equipment. It's the responsibility of the employer to ensure this manual is read by the operator. Please preserve this manual.

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Introduction

Teryair Pneumatic Driven Winches are pneumatically driven, specially designed for tank cleaning purposes. They have a Galvanized non spinning cable and a non- sparking safety hook. The mucking winch has a powerful air motor and worm gear box control handle, all designed for easy operation.

Technical Data

Teryair Model No	IMPA Code	Lifting Capacity	Wire Rope Diameter	Wire Rope Length	Air Hose Diameter	Air Inlet
MCW100	59 06 01	50	4 mm	33 mtr	12	1/2" NPT
MCW100	59 06 02	75	4 mm	33 mtr	12	1/2" NPT
MCW100	59 06 03	100	4 mm	33 mtr	12	1/2" NPT
MCW200	59 06 04	150	4 mm	33 mtr	12	1/2" NPT
MCW200	59 06 05	200	4 mm	40 mtr	12	1/2" NPT
MCW300	59 06 06	250	4 mm	33 mtr	12	1/2" NPT
MCW300	59 06 07	300	4 mm	44 mtr	12	1/2" NPT

Intended Use

- Teryair Pneumatic Winches are ideal for tank cleaning purpose. They are compressed air operated driven.

Prohibitive use

- Use by an underage, untrained or person who is under the influence of drugs or alcohol.
- Use with non genuine spare parts or accessories is prohibited.

job site is clear of bystanders. Ensure that no loose items of clothing etc come in the vicinity of the winch.



Caution

Use only genuine Teryair or Teryair approved accessories.



Warning

Safety and protective clothing, eyewear, headgear, ear protection, gloves and footwear to be worn during operation of this equipment.



Warning

This equipment is not designed for use in an explosive environment.

Safety Instructions

Following symbols are used through out this manual.



Warning

If not followed could cause personal injuries



Caution

If not followed could result in damage to equipment.



Warning

This manual must be read and the operating instructions carefully followed.



Caution

Operators under 18 not allowed to operate this equipment. Operators must be made familiar with the instructions in this manual before attempting to operate the equipment. Ensure that

Operating instructions

Safety checks before and after operating the Winch

Check list before starting the Winch

- Check safety wear mentioned earlier in warnings.
- Check Hose fittings are secure.
- Do not wear loose clothing etc around the winch.
- Unlock the hook from the wire.
- Connect supply hose correctly.
- Make sure the the pneumatic valve is in off condition.

Air Supply

- The Mucking winch work best at 8 to 12 bar air pressure. The air should be clean, dry and lubricated.
- The maximum distance of Mucking winch working place should be 20mtrs. From air supply source & above that distance cfm received by Mucking winch will reduce and will effect the efficiency.
- Always top up the Lubricator with specified lubricants.

Maintenance

Shut off air supply and allow residual Pressure to bleed off.

Disconnect air supply from the FRL.

1. Keep wire rope properly oiled.
2. If air motor is dis-mantled for any repair work or maintenance, examine all components for wear after washing in suitable solvent. Replace any worn or damaged components. Coat parts with light oil and re-assemble carefully.

Disassembly and Re assembly

- Shut off air supply and allow residual Pressure to bleed off.
- Disconnect air supply from the FRL.

Disassembly of Air motor

Remove the PU tubes from the air motor.

- a. Unscrew the bolts (44) from adaptor (13).
- b. Remove the adaptor (13) from the gear box (3).
- c. Now remove the air motor (5) with love joy coupling (20).
- d. Remove the grub screw (36) to remove the Love joy coupling (20)

Suggested Lubricants

Brand	Above 27°C / 80°F	5°C to 27°C / 41°F to 80°F	Below 5°C / 80°F
Shell	Toona R 72	Toona R 41	Toona R 27
Mobil	Almo 529	Almo 527	Almo 525
Esso	--	Arox EP.65	Arox EP.45
Caltex	Rando Oil 100	Rando Oil 100	Rando Oil 46
Cp	--	--	Airolene Tool Oil
Texaco	Regal Oil F (R&O)	Regal Oil PE(P&E)	Regal Oil PE(R&O)
Daltron	Silkolene 881	Silkolene 548/T	Silkolene 733
Burmah Castrol	Castrol RD Oil 3	Castrol RD Oil Light	Megna SPX
Duckham	Garnet 7	Garnet 6	Zero Fio 5
Sternol	Merlin 87	Merlin 71	Merlin 54
Petrofina	Purifoc 53	Purifoc 46	Purifoc 32
Chevron	Vistac Oil 18X	Vistac Oil 19X	Vistac Oil 9X
Indoil	Servo Sbyn -22	--	--

Diassembly and Re-assembly for MCW-100

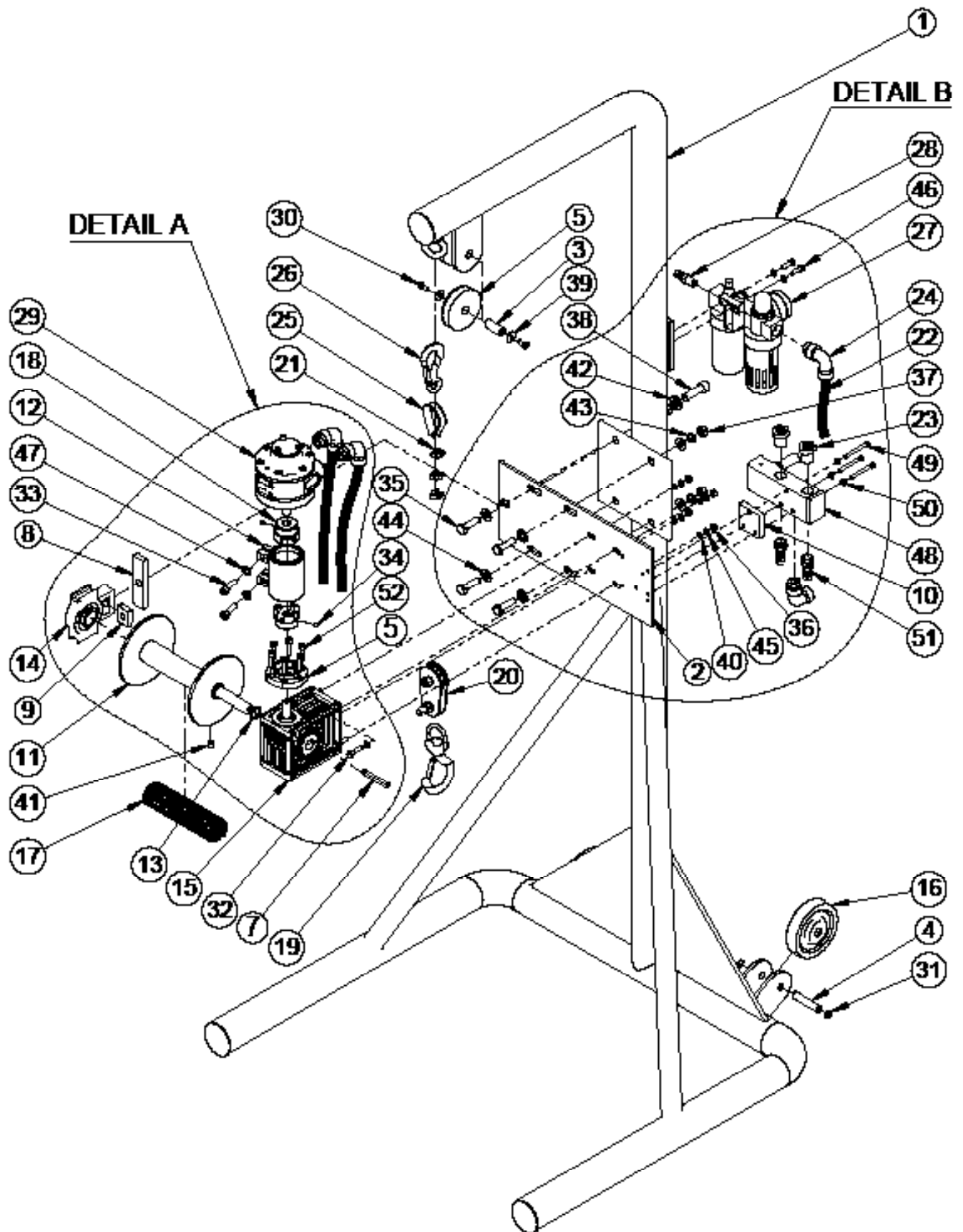
- a. Shut off air supply and allow residual Pressure to bleed off.
- b. Remove all Tubes (22) from Tube fitting elbow (24) & Tube fitting straight (23)
- c. Unscrew Tube fitting elbow (24) & Coupler (28) from FRL (27). Unscrew Allen bolt (46) with Plain washer (45) from FRL (27) and replace it with new one. (If found damaged/worn-out)
- d. Unscrew Tube fitting elbow (24), Tube fitting straights (23) & Hose nipples (51) from Deadman's valve (51) and replace with new one. (If found damaged/worn-out)
- e. Unscrew Allen bolt (49) with Plain washer (50) from Deadman's valve (51) to replace with new one. (If found damaged/worn-out)
- f. Loosen Wire rope Lock (21) to remove Wire rope (17) from Shackle (20) & Pulley (5).
- g. Unscrew Tube fitting elbows (24) from Air motor (29). Unscrew Allen bolt (33) with Plain washer (47) from Adaptor for gear box (12) to replace with new one. (If found damaged/worn-out)
- h. Unscrew Grub Screws (34) from Love joy couplings (18) to remove Air motor (29) & Love joy couplings (18) and replace with new one. (If found damaged/worn-out)
- i. Unscrew Allen bolt (52) from Spigot flange (6) to remove Spigot Flange (6).
- j. Unscrew Allen bolt (38) with Plain washer (42) from Bearing puller plate (9) and unscrew Allen bolt (32) with Plain washer (45) & Spring washer (40) from Hex nut (36) to Remove Spacer plate (8) & Bearing puller plate (9) .
- k. Remove Gear box assembly from Gear box mounting plate (2).
- l. Remove Bearing (14), Gear box (15), Key (19) & O-ring (13) from Rope drum (11) and replace with new one. (If found damaged/worn-out)
- m. Unwind Wire rope (17) from Rope drum (11) & unscrew Grub screw (41) from Rope drum (11) to replace with new one. (If found damaged/worn-out)
- n. Remove External circlips (31) from both sides of Pin for wheel (4) to remove Pin for wheel (4) & Wheel (16) and replace with new one. (If found damaged/worn-out)
- o. Unscrew Hex bolt (30) from both sides of Pin for Pulley (3) to remove Pin for Pulley (3) and Pulley (5) and replace with new one. (If found damaged/worn-out)
- p. Examine for any wear or damage to components and replace it if required. Now follow the above steps in reverse manner to reassemble the MCW-100.

Bill of Materials for MCW-100

Illu No	Part Number	Description	MCW-100
1	56 69 701	TUBULAR FRAME	1
2	56 63 301-10	GEAR BOX MOUNTING PLATE	1
3	56 62 101	PIN FOR PULLEY	1
4	56 62 102	PIN FOR WHEEL	2
5	56 62 103	PULLEY	1
6	56 62 104	SPIGOT FLANGE	1
7	56 62 201	KEY	1
8	56 63 101	SPACER PLATE	1
9	56 63 102	BEARING PULLER PLATE	1
10	56 63 103	SPACER PLATE	1
11	56 63 302	ROPE DRUM	1
12	56 63 303	ADAPTOR FOR GEAR BOX	1
13	56 64 001	O' RING	1
14	56 65 001	BEARING	1
15	56 65 002	GEAR BOX	1
16	56 65 003	WHEEL	2
17	56 65 005	WIRE ROPE	34 Mtr
18	56 65 006	LOVE JOY COUPLING	1 Set
19	56 65 007	HOOK	1
20	56 65 008	SHACKLE	1
21	56 65 009	WIRE ROPE LOCK	3
22	56 65 010	TUBE	1 Mtr
23	56 65 011	TUBE FITTING STRAIGHT	1
24	56 65 012	TUBE FITTING ELBOW	5
25	56 65 013	LIMB FOR HOOK	1
26	56 65 014	EYE HOOK	1

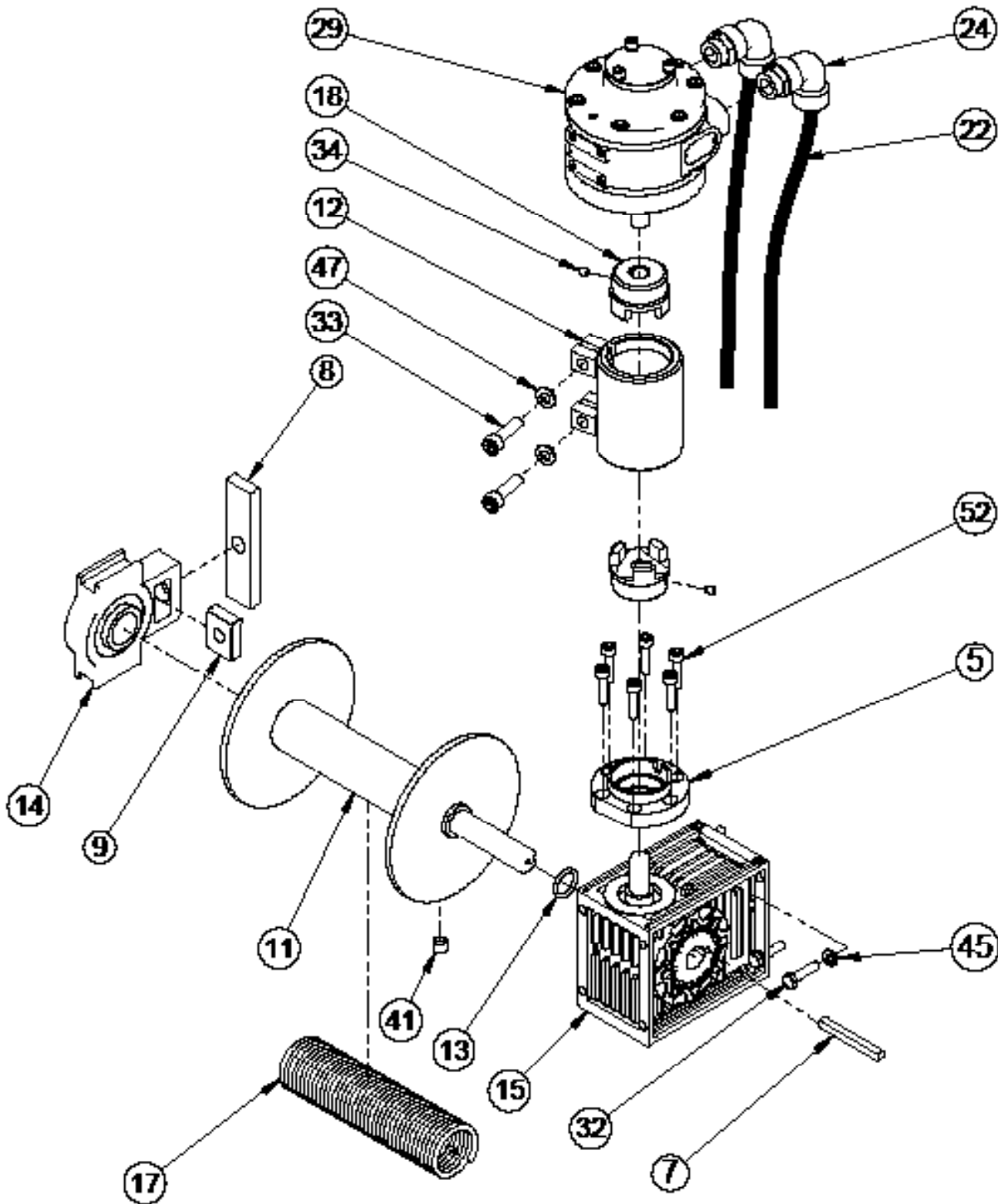
Illu No	Part Number	Description	MCW-100
27	56 65 015	FRL	1
28	35.13.55	COUPLER	2
29	80 40 000	AIR MOTOR	1
30	56 69 001	HEX BOLT	2
31	56 69 002	EXTERNAL CIRCLIP	4
32	56 69 003	HEX BOLT	4
33	56 69 004	ALLEN BOLT	2
34	56 69 007	GRUB SCREW	2
35	56 69 008	HEX BOLT	4
36	56 69 009	HEX NUT	12
37	56 69 010	HEX NUT	4
38	56 69 011	ALLEN BOLT	1
39	56 69 012	PLAIN WASHER	2
40	56 69 013	SPRING WASHER	4
41	56 69 014	GRUB SCREW	1
42	56 69 016	PLAIN WASHER	1
43	56 69 017	SPRING WASHER	4
44	56 69 018	PLAIN WASHER	8
45	56 69 020	PLAIN WASHER	10
46	56 79 001	ALLEN BOLT	2
47	56 79 005	PLAIN WASHER	2
48	56 75 006	DEADMAN'S VALVES	1
49	56 69 022	ALLEN BOLT	3
50	56 69 015	PLAIN WASHER	3
51	56 65 017	HOSE NIPPLE	2
52	15 04 026	ALLEN BOLT	6

Exploded View for MCW-100



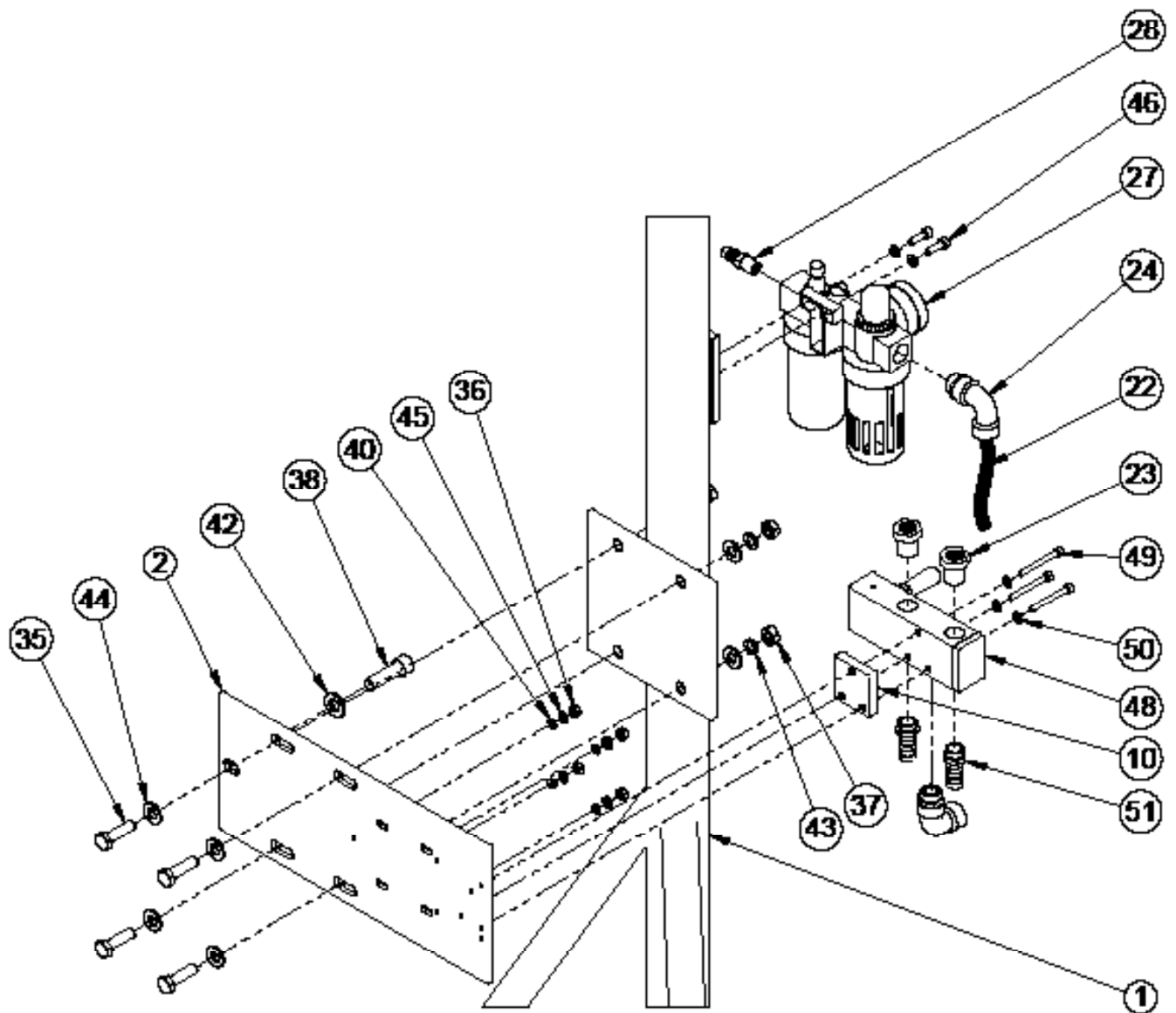
Exploded View Detail - A for MCW-100

DETAIL A

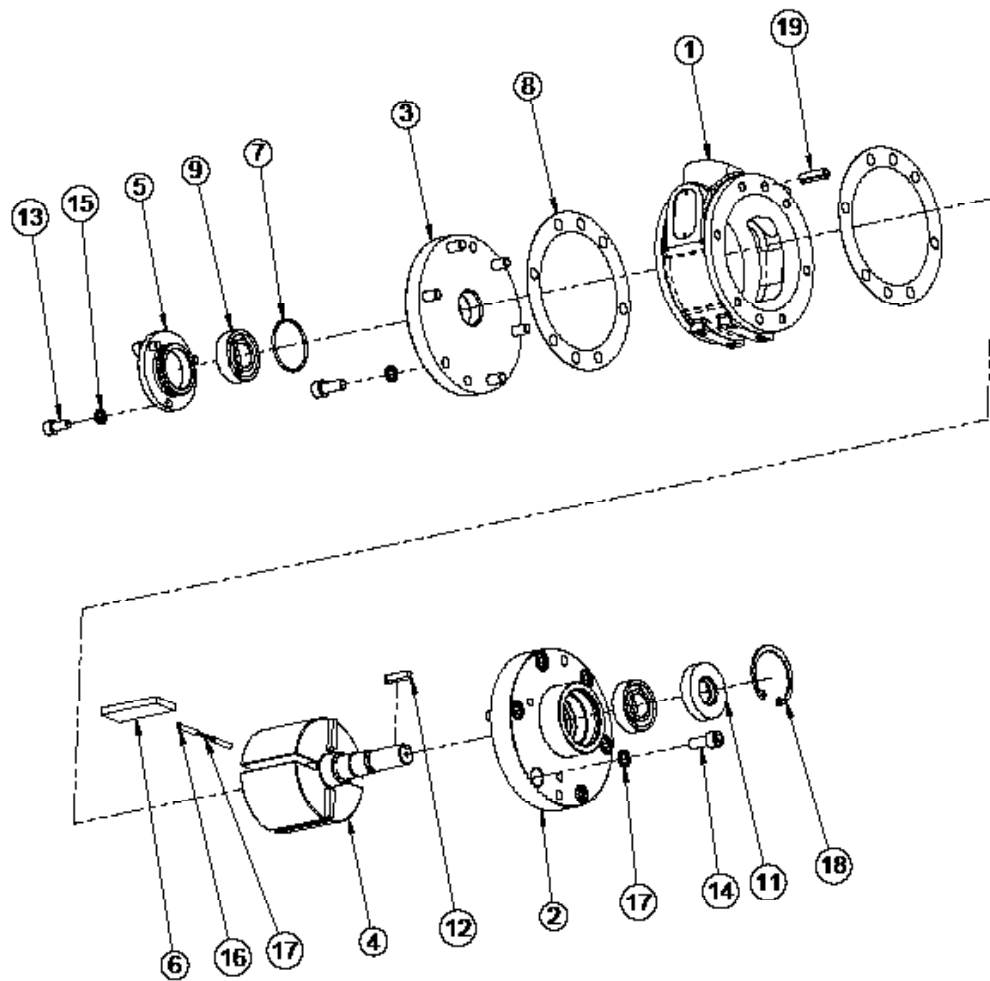


Exploded View Detail - B for MCW-100

DETAIL B



Exploded view Air Motor 8040000



Bill of Materials for MCW-100

Illu No	Part Number	Description	Qty
1	804 05 01	MOTOR HOUSING	1
2	804 05 02	FRONT FLANGE	1
3	804 05 03	REAR FLANGE	1
4	804 21 01	ROTOR SHAFT	1
5	804 21 02	BEARING CAP	1
6	804 39 01	ROTOR BLADE	4
7	804 40 01	O' RING	1
8	804 37 01	SHIM	2
9	804 50 01	BEARING	2
10	804 51 03	COMPRESSION SPRING	2

Illu No	Part Number	Description	Qty
11	804 60 01	OIL SEAL	1
12	566 22 02	KEY	1
13	550 90 28	SOCKET HEAD CAP SCREW	3
14	804 90 03	SOCKET HEAD CAP SCREW	12
15	805 90 01	SPRING WASHER	3
16	804 21 03	SPRING CAP	4
17	536 90 04	SPRING WASHER	12
18	804 90 02	INTERNAL CIRCLIP	1
19	804 90 04	ROLL PIN	4

Diassembly and Re-assembly for MCW-200

- a. Shut off air supply and allow residual Pressure to bleed off.

Replacement of FRL and Tube

- a. Remove all Tubes (18) from Tube fitting elbow (23) & Tube fitting straight (22)
- b. Unscrew Tube fitting elbow (23) & Coupler (24) from FRL (4). Unscrew Allen bolt (39) with Plain washer (40) from FRL (4) and replace it with new one. (If found damaged/worn-out)
- c. Remove FRL (4) from Tubular frame (1) and replace it with new one.

Replacement of Wire Rope

- a. Loosen Wire rope Lock (14) to remove Wire rope (21) from Shackle (11), Limb for Hook & Pulley (2).
- b. Unwind Wire rope (21) from Rope drum (8) & unscrew Grub screw (37) from Rope drum (8) to replace with new one. (If found damaged/worn-out)

Replacement of Love Joy Coupling

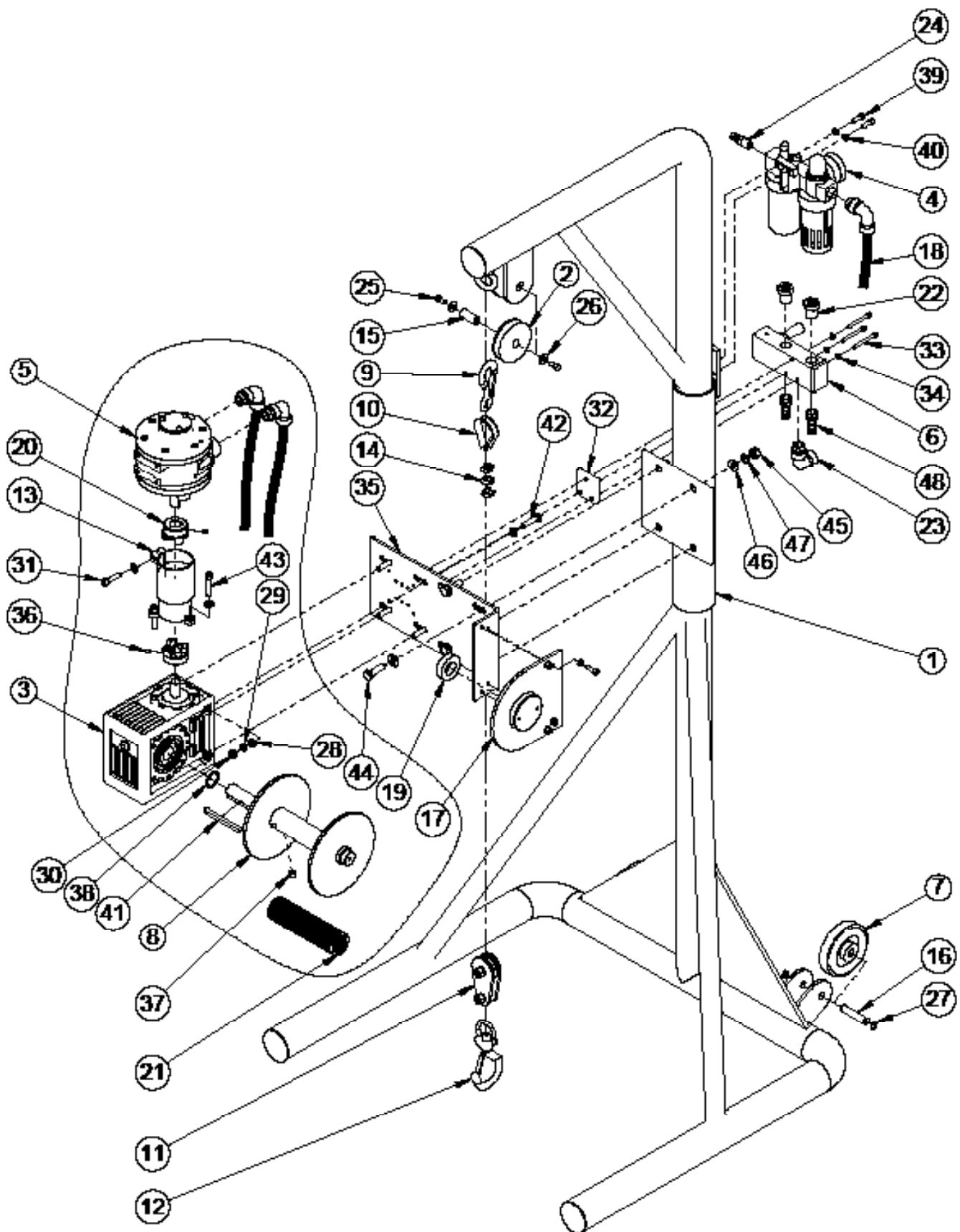
- a. Unscrew Allen bolt (43) with Plain washer (28) from Adaptor for gear box (13) to replace with new one. (If found damaged/worn-out)
- b. Unscrew Allen bolt (31) with Plain washer (28) from Adaptor for gear box (13) to replace with new one. (If found damaged/worn-out)
- c. Remove Adaptor for gear box (13) with Air motor (5) from Gear Box (3).
- d. Unscrew Grub Screws (36) from both Love joy couplings (20) to remove Love joy couplings (20) from Air motor (5) & Gear box (3) and replace with new one.

Bill of Materials for MCW-200

Illu No	Part Number	Description	MCW-200
1	56 79 701	TUBULAR FRAME	1 Set
2	56 62 103	PULLEY	1
3	56 75 001	GEAR BOX	1
4	56 65 015	FRL	1
5	80 50 000	AIR MOTOR	1
6	56 75 006	DEADMAN'S VALVE	1
7	56 65 003	WHEEL	2
8	56 73 303	ROPE DRUM	1
9	56 65 014	EYE HOOK	1
10	56 65 013	LIMB FOR HOOK	1
11	56 65 008	SHACKLE	1
12	56 65 007	HOOK	1
13	56 73 304	ADAPTOR FOR GEAR BOX	1
14	56 65 009	WIRE ROPE LOCK	2
15	56 62 101	PIN FOR PULLEY	1
16	56 62 102	PIN FOR WHEEL	2
17	56 73 101	BEARING PLATE	1
18	56 65 010	TUBE	1 Mtr
19	56 75 005	BALL BEARING	1
20	56 75 002	LOVE JOY COUPLING	1
21	56 65 005	WIRE ROPE	41 Mtr
22	56 65 011	FITTING STRAIGHT	1
23	56 65 012	FITTING ELBOW	5
24	35 13 55	COUPLER	2
25	56 69 001	HEX BOLT	2
26	56 69 012	PLAIN WASHER	2

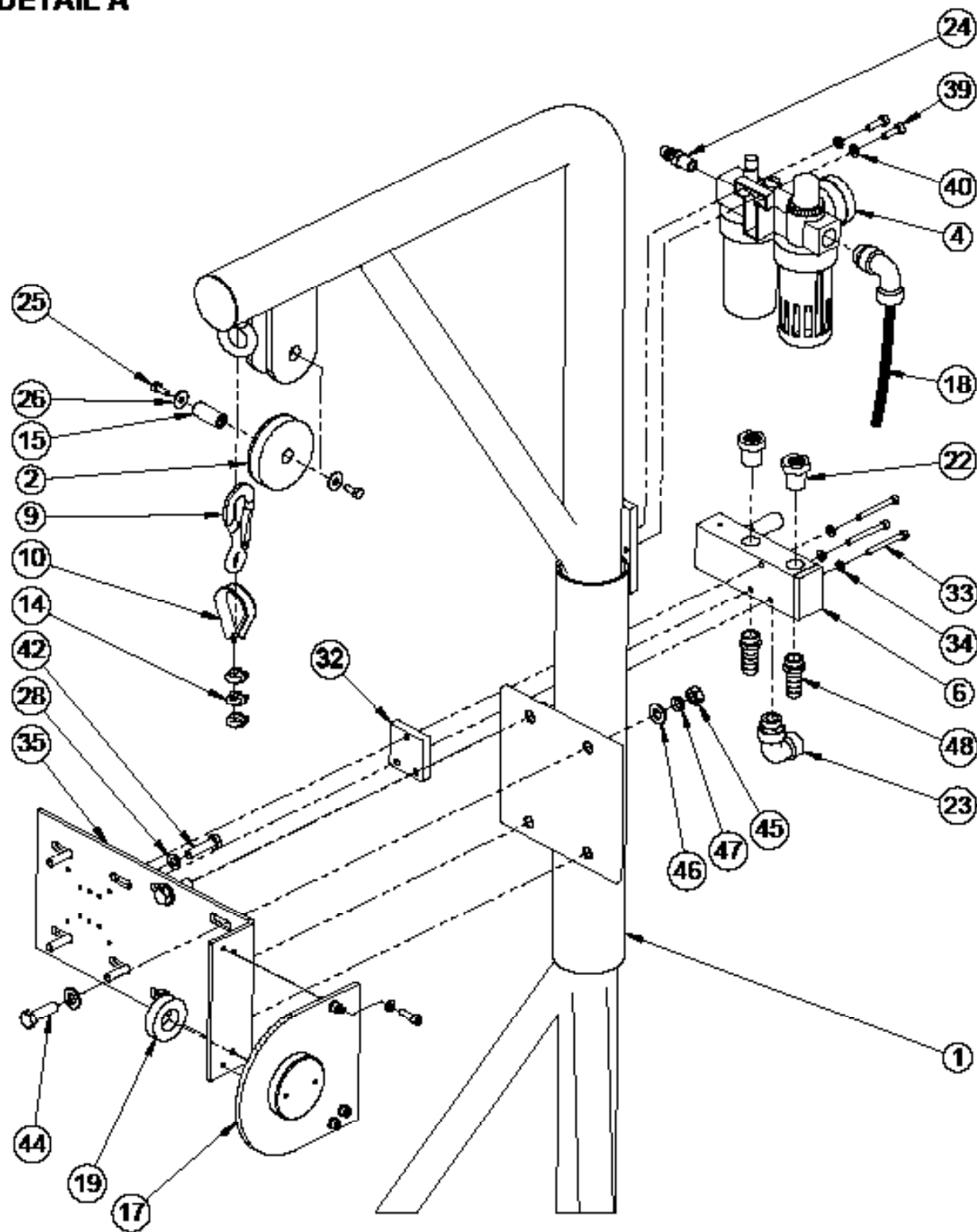
Illu No	Part Number	Description	MCW-200
27	56 69 002	EXTERNAL CIRCLIP	4
28	56 79 005	PLAIN WASHER	12
29	56 79 006	SPRING WASHER	4
30	56 79 003	HEX NUT	4
31	56 69 004	ALLEN BOLT	1
32	56 63 103	SPACER PLATE	1
33	56 69 022	ALLEN BOLT	3
34	56 69 015	PLAIN WASHER	3
35	56 73 301-13	GEAR BOX MOUNTING PLATE	1
36	56 69 006	GRUB SCREW	2
37	56 69 014	GRUB SCREW	1
38	56 74 001	O-RING	1
39	56 79 001	ALLEN BOLT	6
40	56 69 020	PLAIN WASHER	6
41	56 72 202	KEY	1
42	56 79 002	HEX BOLT	4
43	56 79 004	ALLEN BOLT	3
44	56 69 008	HEX BOLT	4
45	56 69 010	HEX NUT	4
46	56 69 018	PLAIN WASHER	8
47	56 69 017	SPRING WASHER	4
48	56 65 017	HOSE NIPPLE	2

Exploded View for MCW-200



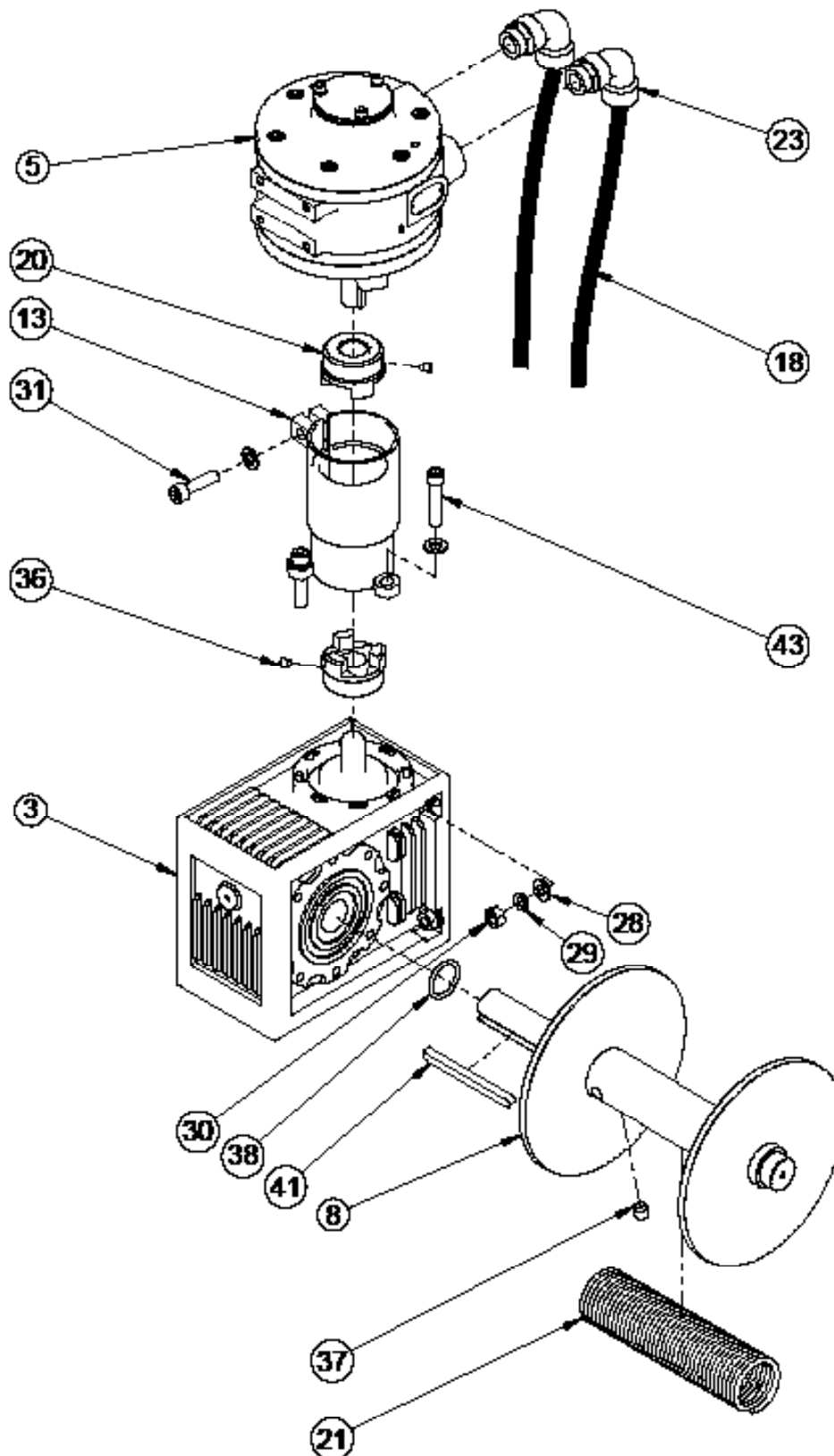
Exploded View Detail - A for MCW-200

DETAIL A



Exploded View Detail - B for MCW-200

DETAIL B



Diassembly and Re-assembly for MCW-300

- a. Shut off air supply and allow residual Pressure to bleed off.

Replacement of FRL and Tube

- a. Remove all Tubes (18) from Tube fitting elbow (23) & Tube fitting straight (22)
- b. Unscrew Tube fitting elbow (23) & Coupler (24) from FRL (4). Unscrew Allen bolt (39) with Plain washer (40) from FRL (4) and replace it with new one. (If found damaged/worn-out)
- c. Remove FRL (4) from Tubular frame (1) and replace it with new one.

Replacement of Wire Rope

- a. Loosen Wire rope Lock (14) to remove Wire rope (21) from Shackle (11), Limb for Hook & Pulley (2).
- b. Unwind Wire rope (21) from Rope drum (8) & unscrew Grub screw (37) from Rope drum (8) to replace with new one. (If found damaged/worn-out)

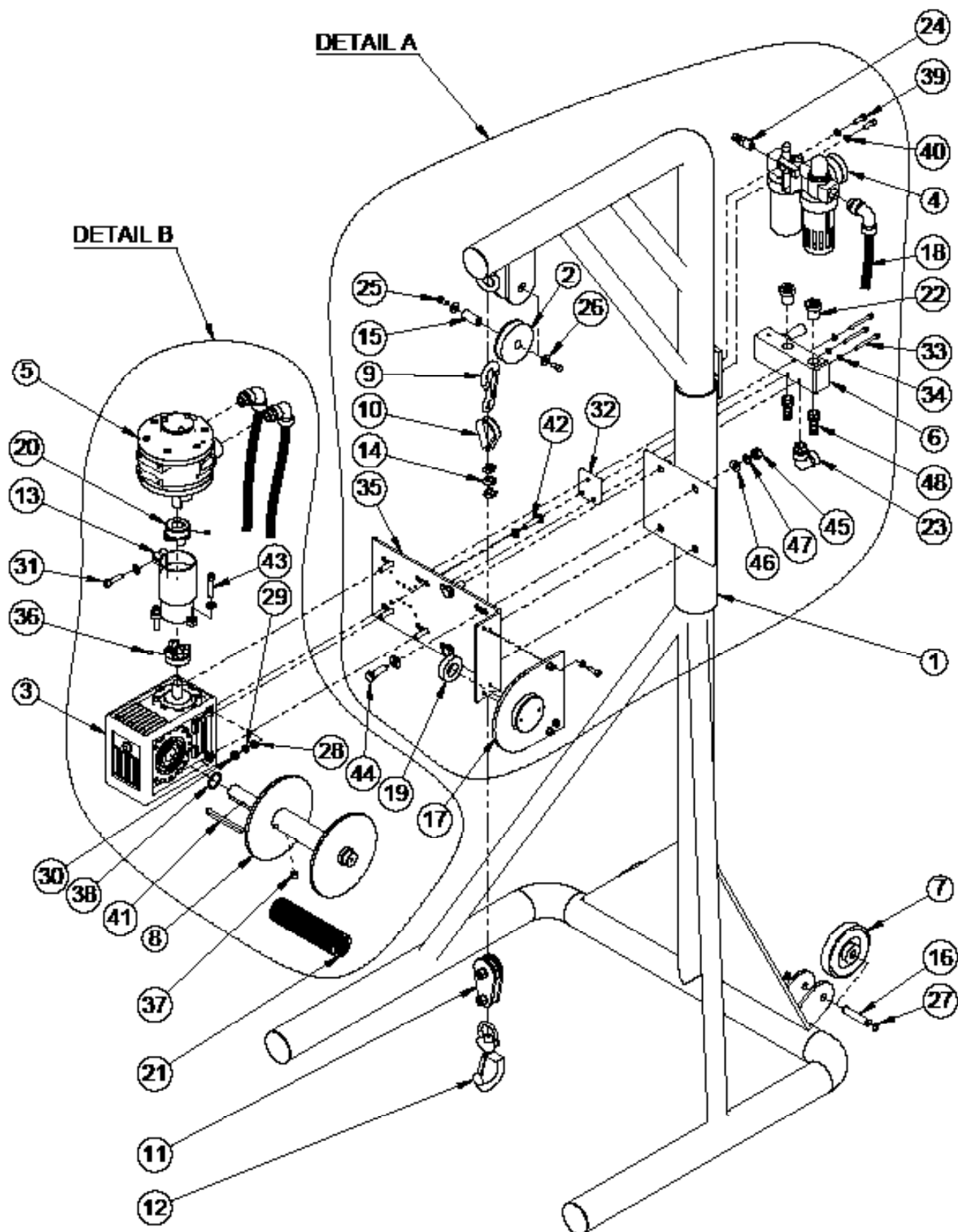
Replacement of Love Joy Coupling

- a. Unscrew Allen bolt (43) with Plain washer (28) from Adaptor for gear box (13) to replace with new one. (If found damaged/worn-out)
- b. Unscrew Allen bolt (31) with Plain washer (28) from Adaptor for gear box (13) to replace with new one. (If found damaged/worn-out)
- c. Remove Adaptor for gear box (13) with Air motor (5) from Gear Box (3).
- d. Unscrew Grub Screws (36) from both Love joy couplings (20) to remove Love joy couplings (20) from Air motor (5) & Gear box (3) and replace with new one.

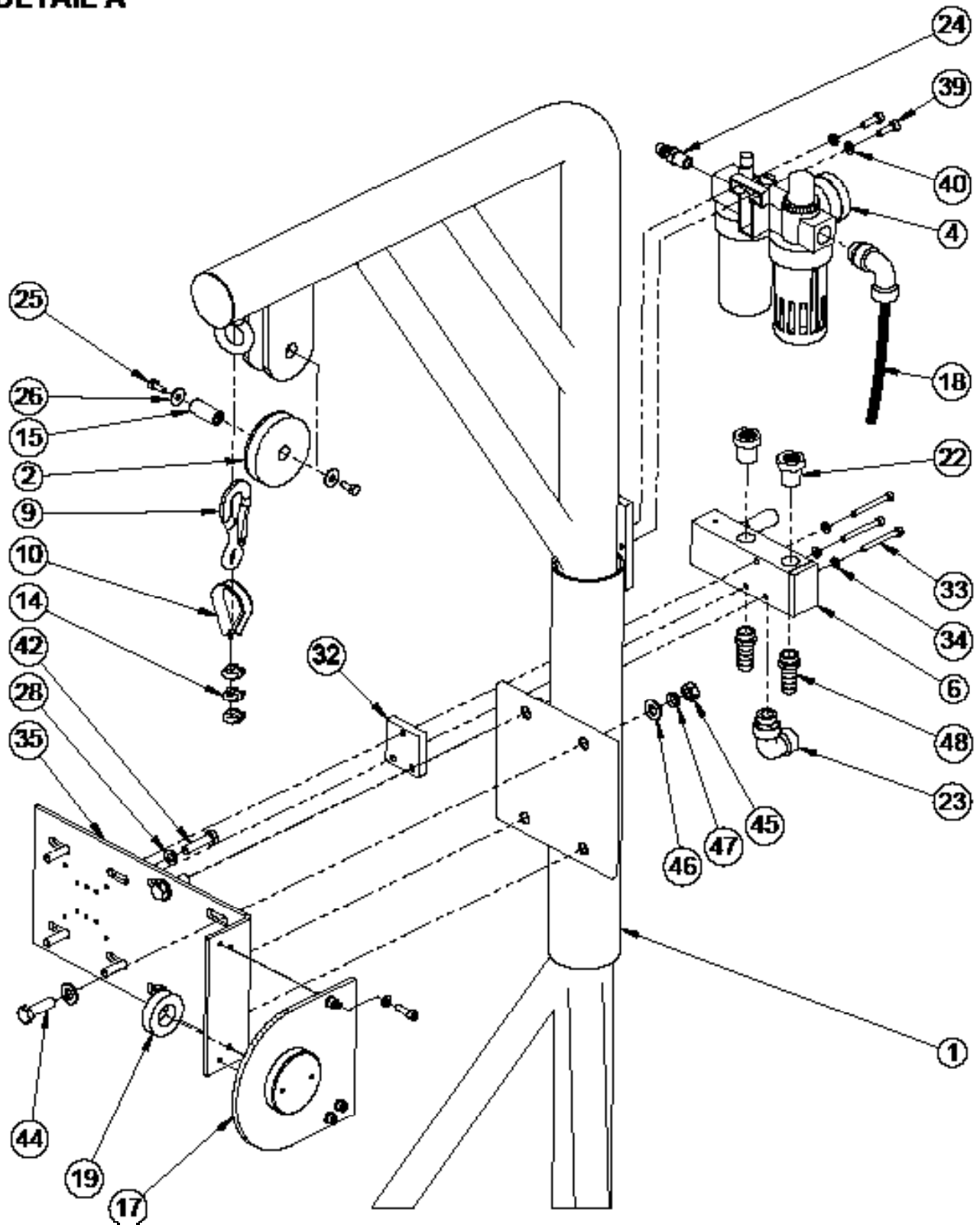
Bill of Materials for MCW-300

Illu No	Part Number	Description	MCW-300
1	56 89 701	TUBULAR FRAME	1 Set
2	56 62 103	PULLEY	1
3	56 75 001	GEAR BOX	1
4	56 65 015	FRL	1
5	80 50 000	AIR MOTOR	1
6	56 75 006	DEADMAN'S VALVE	1
7	56 65 003	WHEEL	2
8	56 73 303	ROPE DRUM	1
9	56 65 014	EYE HOOK	1
10	56 65 013	LIMB FOR HOOK	1
11	56 65 008	SHACKLE	1
12	56 65 007	HOOK	1
13	56 73 304	ADAPTOR FOR GEAR BOX	1
14	56 65 009	WIRE ROPE LOCK	2
15	56 62 101	PIN FOR PULLEY	1
16	56 62 102	PIN FOR WHEEL	2
17	56 73 101	BEARING PLATE	1
18	56 65 010	TUBE	1 Mtr.
19	56 75 005	BALL BEARING	1
20	56 75 002	LOVE JOY COUPLING	1
21	56 65 005	WIRE ROPE	41 Mtr.
22	56 65 011	FITTING STRAIGHT	1
23	56 65 012	FITTING ELBOW	5
24	35.13.55	COUPLER	2
25	56 69 001	HEX BOLT	2
26	56 69 012	PLAIN WASHER	2

Illu No	Part Number	Description	MCW-300
27	56 69 002	EXTERNAL CIRCLIP	4
28	56 79 005	PLAIN WASHER	12
29	56 79 006	SPRING WASHER	4
30	56 79 003	HEX NUT	4
31	56 69 004	ALLEN BOLT	1
32	56 63 103	SPACER PLATE	1
33	56 69 022	ALLEN BOLT	3
34	56 69 015	PLAIN WASHER	3
35	56 73 301-13	GEAR BOX MOUNTING PLATE	1
36	56 69 006	GRUB SCREW	2
37	56 69 014	GRUB SCREW	1
38	56 74 001	O-RING	1
39	56 79 001	ALLEN BOLT	6
40	56 69 020	PLAIN WASHER	6
41	56 72 202	KEY	1
42	56 79 002	HEX BOLT	4
43	56 79 004	ALLEN BOLT	3
44	56 69 008	HEX BOLT	4
45	56 69 010	HEX NUT	4
46	56 69 018	PLAIN WASHER	8
47	56 69 017	SPRING WASHER	4
48	56 65 017	HOSE NIPPLE	2

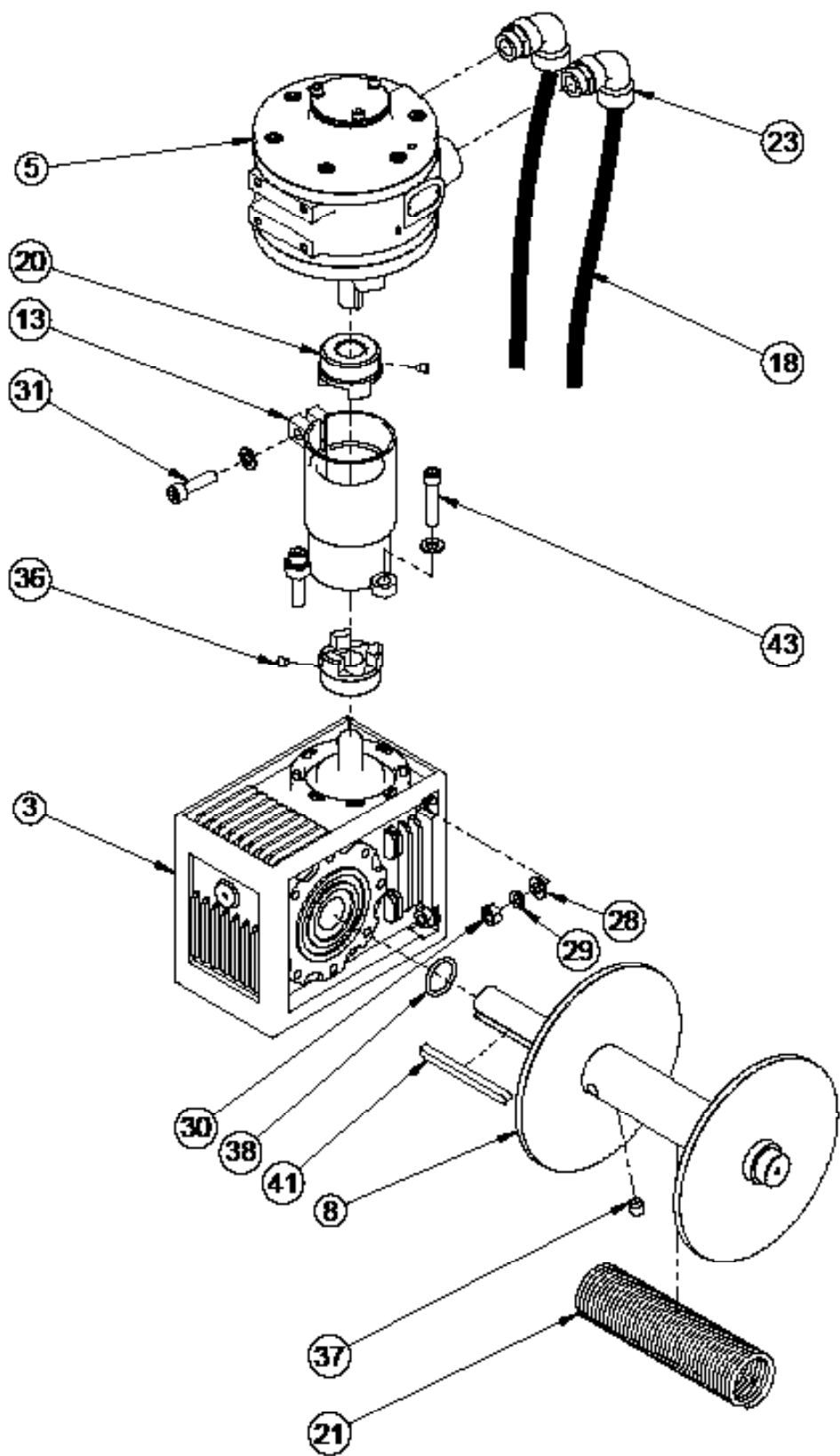
Exploded View for MCW-300

DETAIL A

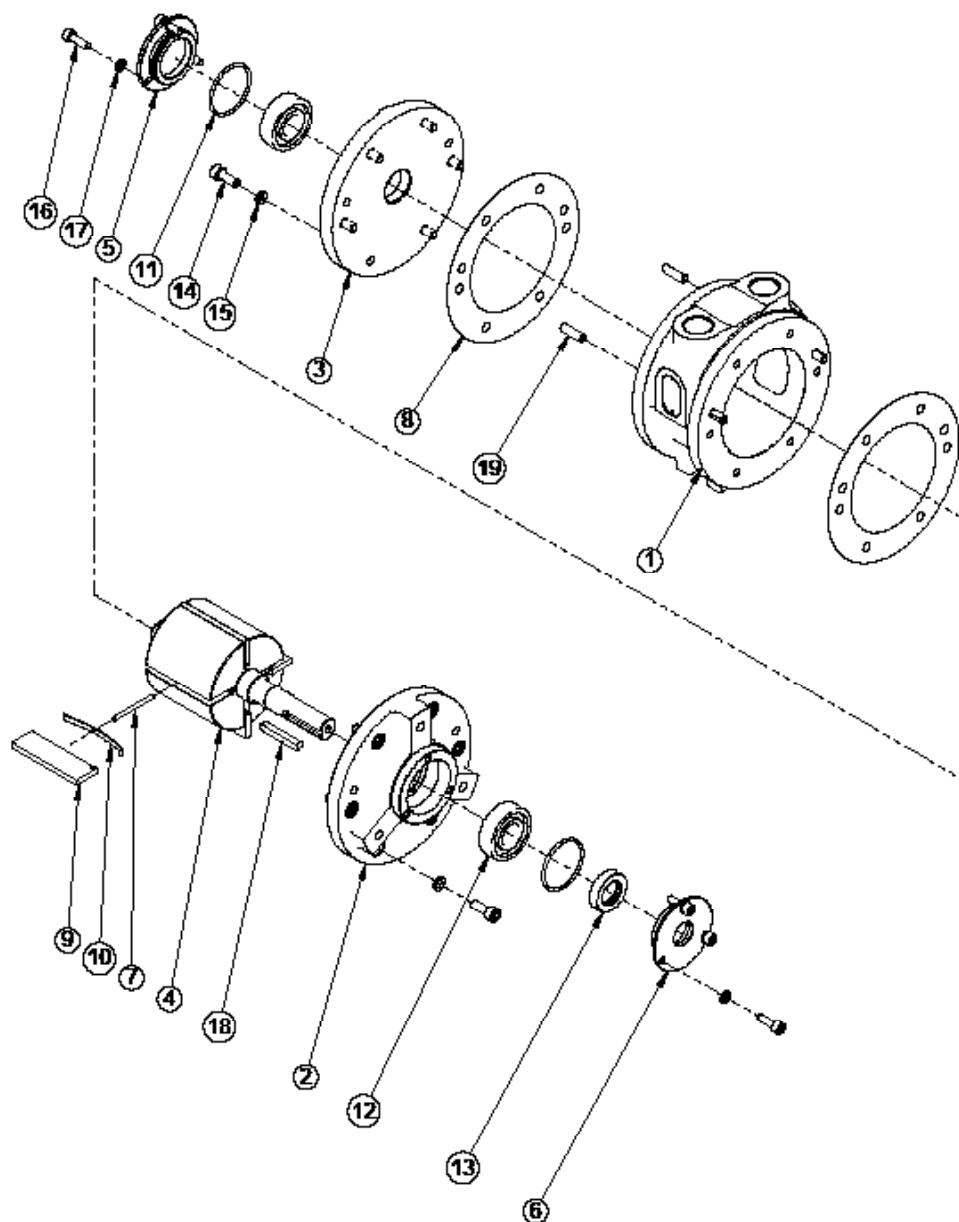


Exploded View Detail - B for MCW-300

DETAIL B



Exploded view Air Motor 8050000



Bill of Materials for MCW-200 & MCW-300

Illu No	Part Number	Description	Qty
1	805 05 01	MOTOR HOUSING	1
2	805 05 02	FRONT FLANGE	1
3	805 05 03	TOP FLANGE	1
4	805 21 01	ROTOR SHAFT	1
5	805 21 02	REAR BEARING CAP	1
6	805 50 02	BALL BEARING	2
7	805 40 01	O' RING	2
8	805 60 01	OIL SEAL	1
9	550 90 28	ALLEN BOLT	6
10	567 22 01	ONE SIDE	1

Illu No	Part Number	Description	Qty
11	804 90 04	ROLL PIN	4
12	804 90 03	ALLEN BOLT	12
13	805 39 02	ROTOR BLADE	4
14	805 21 03	FRONT BEARING CAP	1
15	805 21 08	DOWEL PIN	2
16	805 37 01	SHIM	2
17	536 90 04	SPRING WASHER	12
18	805 90 01	SPRING WASHER	6
19	805 51 02	LEAF SPRING	4

EU DECLARATION OF CONFORMITY

We hereby certify that the Listed Product stipulated below comply with all relevant provisions of the machinery directive (2006/42/EC) and the national laws and regulations adopting this directive.

Description : **Pneumatic Driven Winchs**

Model Number : **MCW Series**

Is in conformity with the provisions of the following European Directives: (2006/42/EC) Machinery Safety and Harmonized standards

ISO 12100-1: 2010: Safety of Machinery –general Principles for Design –Risk Assessment and Risk Reduction.

Registered Office : TERYAIR EQUIPMENT PVT. LTD.
A-1, Tirupati Udyog Nagar, Sativali Road,
Vasai(E), Palghar – 401 208. Maharashtra, India

Web site : www.teryair.com

Works : A-1, Tirupati Udyog Nagar, Sativali Road, Vasai East,
Palghar – 401208, Maharashtra, India.

CE certification registration no – C E 16831

Issued by – BMQR Certifications Pvt Ltd.
www.cemarking-india.com

Valid Till – 03/11/2025

Signed for and on behalf of

TERYAIR EQUIPMENT PVT. LTD.

Place of Issue : Vasai



Warranty Certificate

Every product manufactured by Teryair
is built to meet the highest standards of quality.

Teryair warrants that the Products, accessories and parts manufactured or supplied by the company be free from defects in material and workmanship for a period of six months from date of Teryair authorized dealer invoice to customer, or one year from date of Teryair invoice to dealer, whichever is earlier. Failure due to normal wear, misapplication, or abuse is, of course, excluded from this warranty.

Since the use of Teryair products and parts is beyond our control, Teryair cannot guarantee the suitability of any product or part for a particular application and Teryair shall not be liable for any consequential damage or expense arising from the use or misuse of its products on any application. Teryair does not warranty bought out products or components such as electric motors and hardware but will assist in directing warranty queries to the dealer/manufacturer responsible. Teryair responsibility is limited solely to replacement or repair of defective Teryair products or components.

Dealer/End User shall have no right or remedy and Teryair shall have no liability or obligation under the warranty, if: (i) a Product is altered, changed, modified or tampered with in any way; (ii) a Product is damaged after deposit with the transporter for shipment; (iii) a Product is not properly preserved, packaged, stored, processed or handled after receipt; (iv) a Product is not used and maintained in accordance with Teryair's recommended operating and maintenance manuals, instructions and procedures, if any; (v) a Product is not properly incorporated or installed in, or not properly combined with, an Other Product; (vi) the issue with a Product is directly or indirectly attributable to, or directly or indirectly results from or arises out of, a failure, substandard performance or other issue with another product, material, component or part not supplied by Teryair; (vii) the issue with a Product is directly or indirectly attributable to, or directly or indirectly results from or arises out of, compliance with any design, specification or other specific requirement of Dealer/End User; (viii) a Product is used in a manner, with a substance or for a purpose other than the normal manner, substance and purpose for which it is intended or is otherwise subjected to abnormal use or service; (ix) a Product is subjected to a power surge, brown out or other similar occurrence; (x) the issue with a Product is directly or indirectly attributable to, or directly or indirectly results from or arises out of, normal wear and tear of such Product (including, without limitation, things such as worn seals, diaphragms, balls, O rings, gaskets, chisels, cutters, hoses and other such wearing components; (xi) the issue with a Product is directly or indirectly.

Model Number : MCW Series

M Yadav, Q.A. Manager
(Company Seal)

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