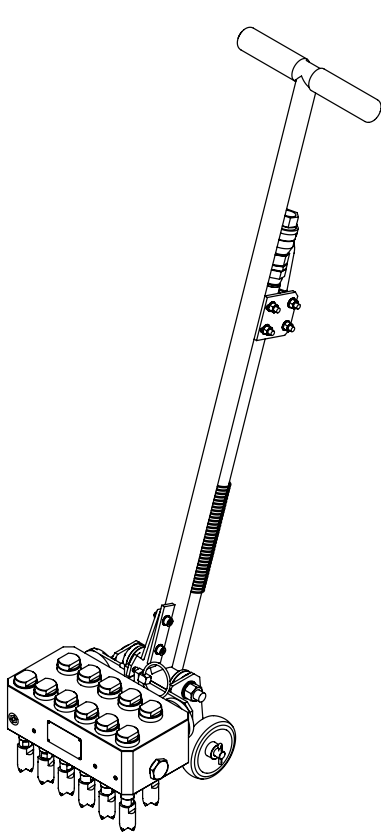
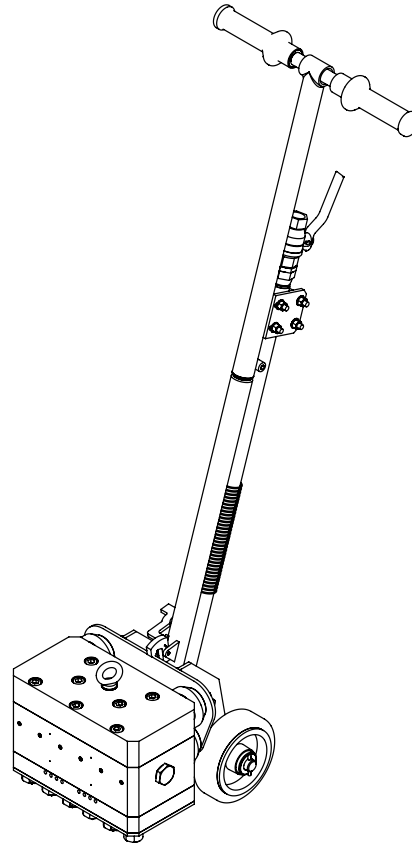


Operation and Maintenance Guide



FPLD - 11



FPHD - 11

Models	Descriptions
FPLD-11	Pneumatic Deck Scaler Light Duty
FPHD-11	Pneumatic Deck Scaler Heavy Duty

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 Deck Scalers are perfect for preparation of floor surfaces. These machines are ideally used for removal of floor coating like paint, chemical & corrosion. Pistons are tungsten tipped & easily replaceable.

Technical Data

Teryair Model No		FPLD11	FPHD11
Maximum operating pressure		6kg/cm2 (90 psi)	
Air Consumption (No Load)	CFM	50	70
	m3/ min	1.42	1.98
Working width	(mm)	252	250
Height	(mm)	1230	1290
Blows per min	(BPM)	3000x11	2200x11
Sound Power Level (Load)	LwA db(A)	113.1	97
Vibration Level Primary	m/s2	5.76	5.0
Mass (Weight)	Kg	36	70
Thread Size of Air Inlet		3/4" BSP	

Intended Use

Floor preparation machines are intended for preparation of floor surfaces. These machines are ideally used for removal of floor coating of paint, chemical & corrosion. Floor preparation machines are primarily designed for removal of heavy rust, paint & scale from ships decks or heavy steel surfaces. FPLD deck scaler is also available fitted with tungsten carbide tips. All machines can be used both indoors & outdoors.

Prohibitive use

- Any use in an explosive atmosphere is prohibited
- Use on materials containing asbestos is prohibited
- 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

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.



Warning

Operators under eighteen not allowed to operate this Pneumatic Piston Scabbler. Operators must be made familiar with the instructions in this manual before attempting to operate the Pneumatic Piston Scabbler. Ensure that job site is clear of bystanders



Caution

Use only genuine Teryair or Teryair approved accessories.



Warning

Never run the Piston Scabbler continuously in the same place, as the cutter heads will dig into the surface.

**Warning**

This Pneumatic Piston Scabblers is not designed for use in an explosive environment.

**Caution**

Completely turn off the Pneumatic Piston Scabblers and disconnect air supply line before attempting any service. Read Assembly and Disassembly instructions.

**Warning**

Take care not to exceed the maximum 7 bar (100psi) supply air pressure. Use a filter and regulator and lubricator as close to the Pneumatic Piston Scabblers inlet as operation will allow ensuring a clean and regulated and lubricated air flow.

**Caution**

Do not exert excessive pressure against the work surface. Keep hoses in good condition. Check hoses for signs of wear, cracks & bulges and ensure that they are secure. Accidental disconnection while hose is pressurized makes the hose whip and can be a safety hazard.

**Caution**

Please check the hose connection prior to starting Piston Scabblers. Be aware that these Pneumatic Piston Scabblers can create dust & flying debris. Keep hands & clothing away from moving parts. Store these Pneumatic Piston Scabblers in secure & dry environment. Do not allow the Pneumatic Piston Scabblers to run unattended. Do not modify this Pneumatic Piston Scabblers in any way as this will invalidate the warranty and could lead to serious injury.

**Warning**

- Eye and face and ear protection must be worn at all times during operation of the Pneumatic Piston Scabblers. There is a chance of flying debris from the jobsite and the quality of wear should be such to protect against such flying debris such as flakes of the removed layer.
- Suitable gloves must be worn at all times during operation.
- Safety Shoes with toe cap protection are a must during operation.

Operating Instructions

This floor scaler can be used for removing scales and surface paint from ship deck. Tungsten Carbide Tipped Cruciform cutter head is threaded on to the pistons to make use of scalers on steel surfaces for removal of heavy rust and scale. The scaling head (6) has 11 pistons in reciprocating motion and they are accommodated in single screw cap design, so individual piston replacement is simplified. The nylon brush seals at nose end of pistons, clean every piston on each and every stroke, thereby the tool performance is improved. The scaling head (6) is assembled with anti-vibration mountings and on trolley with rubber wheels. Also the height of operating handle is at a height so that the operator can stand during use of scaler, he will not feel any jerks and his eyes are protected from dust and chipped material. The operator does not get tired early.

Daily Before Operating

Blow out any accumulated dirt in the hose line, disconnect air supply. Tilt the scaling head (9), unscrew adaptor (tool end) (23), pour in one to two ounces of recommended oil into the tool and screw on male adaptor (tool end) (40).

Lubrication Requirements

Always install a line lubricator on the air line as close to the tool as possible. A Filter Regulator Lubricator unit (FRL) is strongly recommended. Keep the lubricator bowl topped up with recommended grade of oil and check that the oil is reaching the tool. Running the tool without lubrication is likely to cause damage to the components causing premature replacement.

Air Supply

Tool should not be operated at air pressure below 5.9 Bar (85psi) and above 6.9 bar (100psi). The correct operating pressure is 6.2 bar (90 psi). Ensure that only 3/8" (10 mm) bore airline is used and all couplings are tight, leakproof and in good condition. The air should be clean, dry and lubricated. Install a FRL unit as close as operation will permit.

Hoses

Daily before operation check the hoses for damage or leaks.

Use genuine Teryair spares and if possible mention the serial number of the Pneumatic Piston Scabbler when ordering spares.

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 Spyn -22	--	--

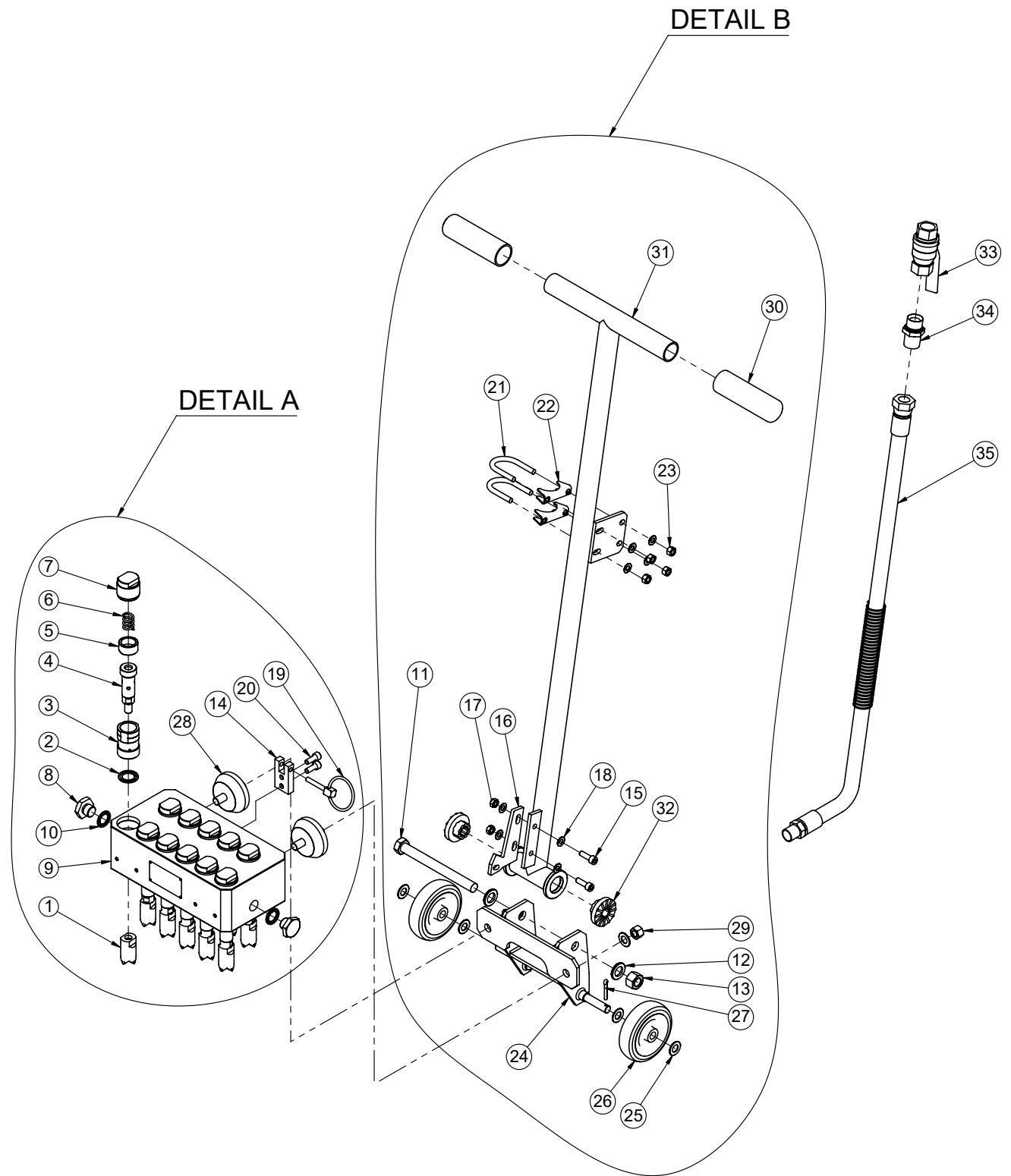
Diassembly and Re-assembly for FPLD-11

- a. Shut off air supply and allow residual Pressure to bleed off.
- b. Unscrew Cruciform Cutter Heads (1) from Piston (4) to replace it with new ones.
- c. Unscrew Screwed Cap (7) from Scaling Head (9) & remove Compression Spring (6), Spring Cap (5), Piston (4) and Cylinder (3) with Brush Seal (2) respectively to replace it with new ones. (If found damaged/worn-out)
- d. Follow Step 'b' & 'c' to replace the remaining piston assembly from Scaling Head (9).
- e. Unscrew Hexagonal Plug (8) with Sealing Washer (10) from Scaling Head (9) and replace it with new ones. (If found damaged/worn-out)
- f. Remove Locking Pin (19) from Bracket (14) & unscrew Nyloc Nut (29) with Plain Washer (25 – Common) from Rubber Mounting Block (28) to replace it with new ones. (If found damaged/worn-out)
- g. Unscrew Ball valve (33) from Male Adaptor (34) & unscrew Male Adaptor (34) from Armoured Hose (35) to replace it with new ones. (If found damaged/worn-out)
- h. Unscrew Nyloc Nuts (23) with Plain washer (18-common) from U Bolt (21) to replace it with new ones.
- i. Unscrew Armoured Hose (35) from Scaling Head (9) to replace it with new ones. (If found damaged/worn-out)
- j. Remove Scaling head assembly from Sub Frame (24) and unscrew Rubber Mounting Block from Scaling Head (9) to replace it with new ones. (If found damaged/worn-out)
- k. Unscrew Nyloc Nut (13) with Plain Washer (12) from Hex Bolt (11) and remove Handle (31) from Sub frame (24)
- l. Remove Rubber Mountings (32) from Handle and replace it with new ones.
- m. Now follow the above steps in reverse manner to reassemble the FPLD-11.

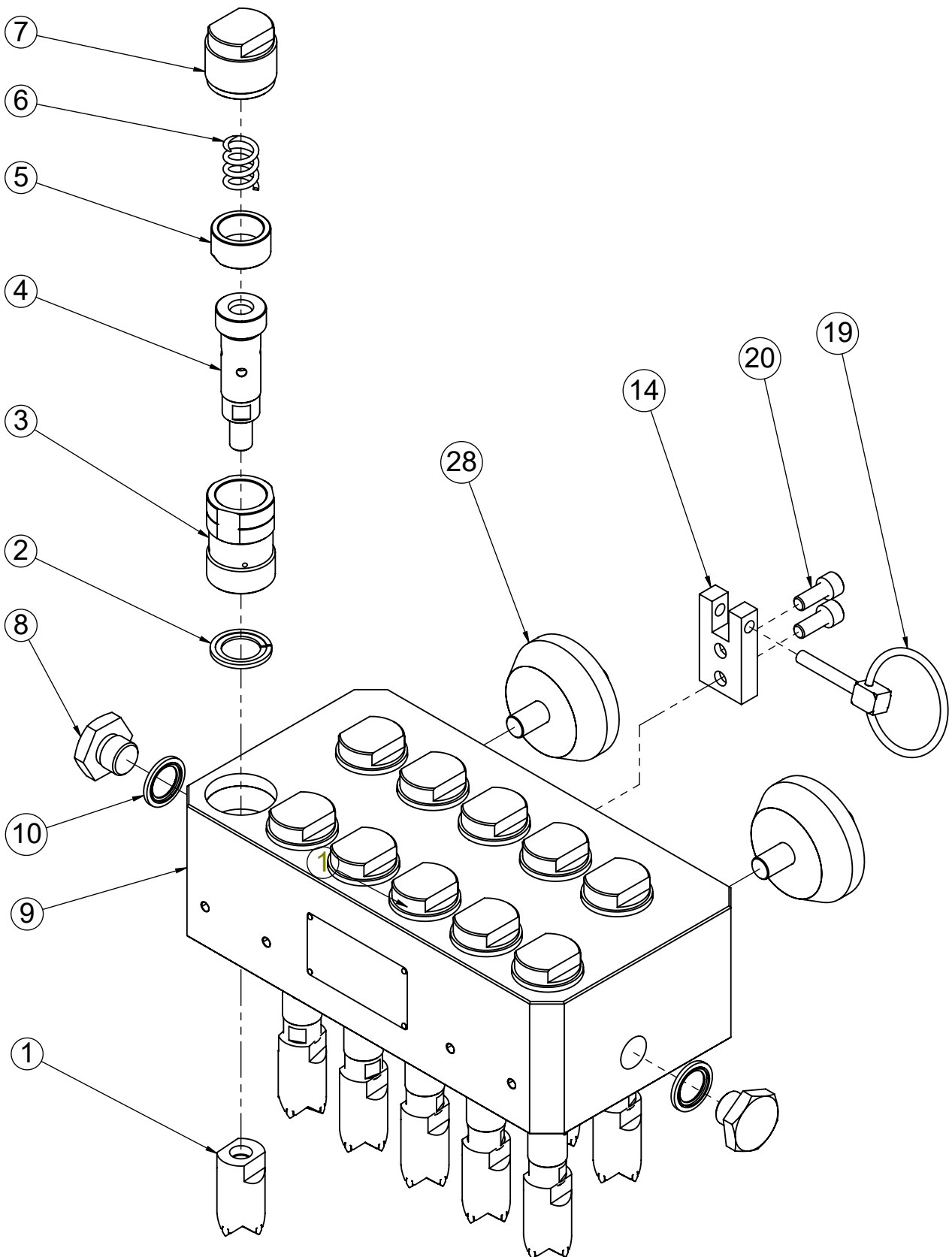
Bill of Materials for FPLD-11

Illustration Number	Part Number	Description	FPLD-11
1	126 21 05	CRUCIFORM CUTTER HEAD	11
2	126 40 23	BRUSH SEAL	11
3	126 21 03	CYLINDER	11
4	126 21 04	PISTON	11
5	126 21 02	SPRING CAP	11
6	126 51 42	COMPRESSION SPRING	11
7	126 21 01	SCREWED CAP	11
8	121 21 18	HEXAGON PLUG	2
9	126 22 06	SCALING HEAD	1
10	121 40 12	SEALING WASHER	2
11	126 90 36	HEX HEAD BOLT	1
12	126 90 37	PLAIN WASHER	2
13	126 50 29	NYLOC NUT	1
14	126 22 13	BRACKET FOR LOCKING POSITION	1
15	022 90 37	SOCKET HEAD BOLT	2
16	126 30 17	LOCKING PLATE FOR HANDLE	1
17	022 40 21	HEX NUT	2
18	171 90 50	PLAIN WASHER	8
19	126 21 11	LOCKING PIN	1
20	126 90 40	SOCKET HEAD BOLT	2
21	126 21 10	U BOLT	2
22	126 30 14	CLAMP	2
23	126 50 30	NYLOC NUT	4
24	126 30 18	SUB FRAME FOR WHEELS	1
25	342 90 24	PLAIN WASHER	6
26	126 40 29	WHEEL	2
27	23.24.80.1.2	SPLIT PIN	2
28	130 40 21	RUBBER MOUNTING BLOCK	2
29	126 50 31	NYLOC NUT	2
30	126 40 42	HANDLE GRIP	2
31	126 33 41	HANDLE	1
32	126 40 26	RUBBER MOUNTING	2
33	250 90 40	BALL VALVE	1
34	250 21 41	THREADED MALE/ MALE ADAPTOR	1
35	126 97 39	ARMOURED HOSE	1

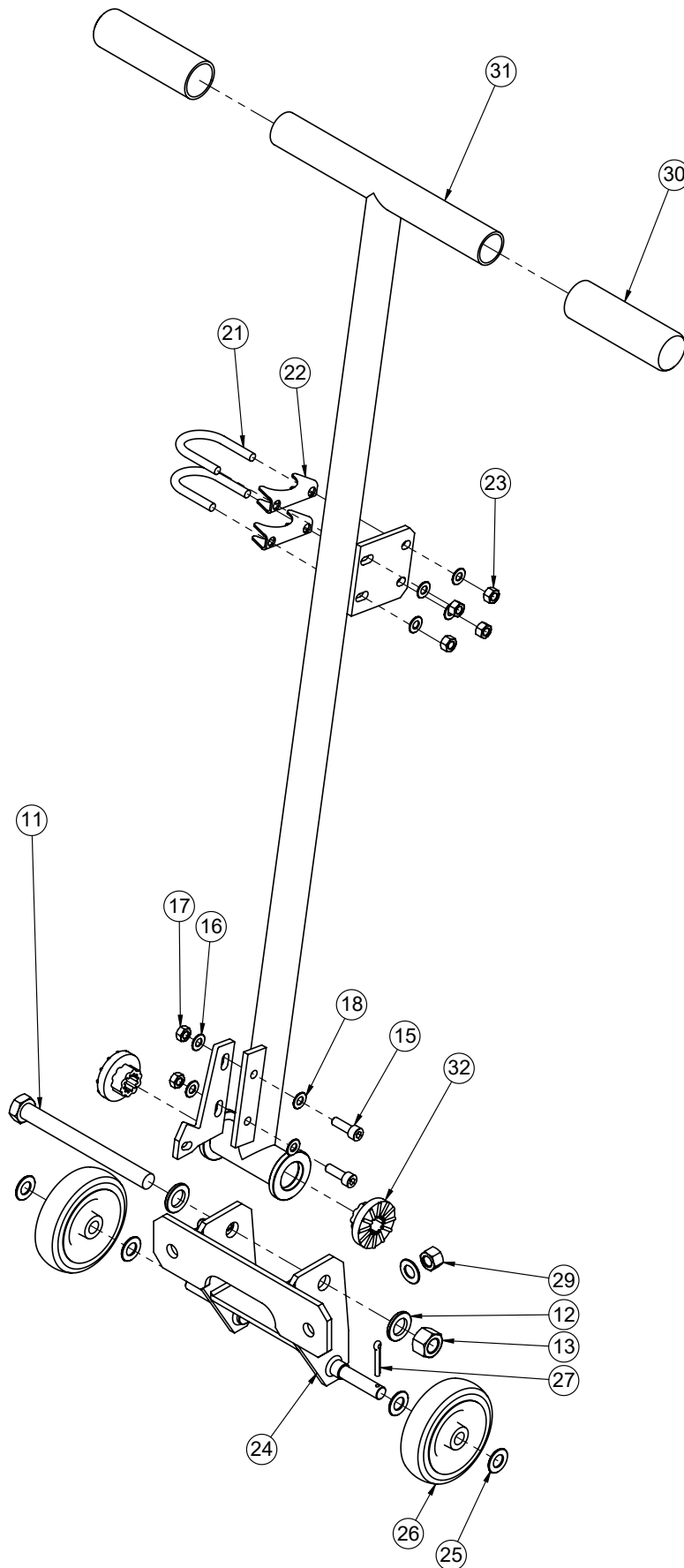
Exploded View for FPLD-11



Exploded View Detail-A for FPLD-11



Exploded View Detail-B for FPLD-11



Diassembly and Re-assembly for FPHD-11

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

Handle & Armoured Hose:

- b. Unscrew Ball valve (15) from Male Adaptor (16) & unscrew Male Adaptor (16) from Armoured Hose (14) to replace it with new ones. (If found damaged/worn-out)
- c. Unscrew Nyloc Nuts (38) with Plain washer (13-common) from U Bolt (36) to replace it with new ones.
- d. Unscrew Armoured Hose (14) from Cylinder Block (7) to replace it with new ones. (If found damaged/worn-out)
- e. Unscrew Nyloc Nuts (34) with Plain washers (35) from Rubber Mounting (33) and Rubber Mountings (20) and replace it with new ones. (If found damaged/worn-out)
- f. Now remove the Rubber mountings (33) and Rubber Mountings (20) with Cylinder Block Assembly from Sub-Frame (26)

Cylinder Block Assembly:

- g. Unscrew Allen Bolt (10) & Allen Bolt (11) from Top Plate (6).

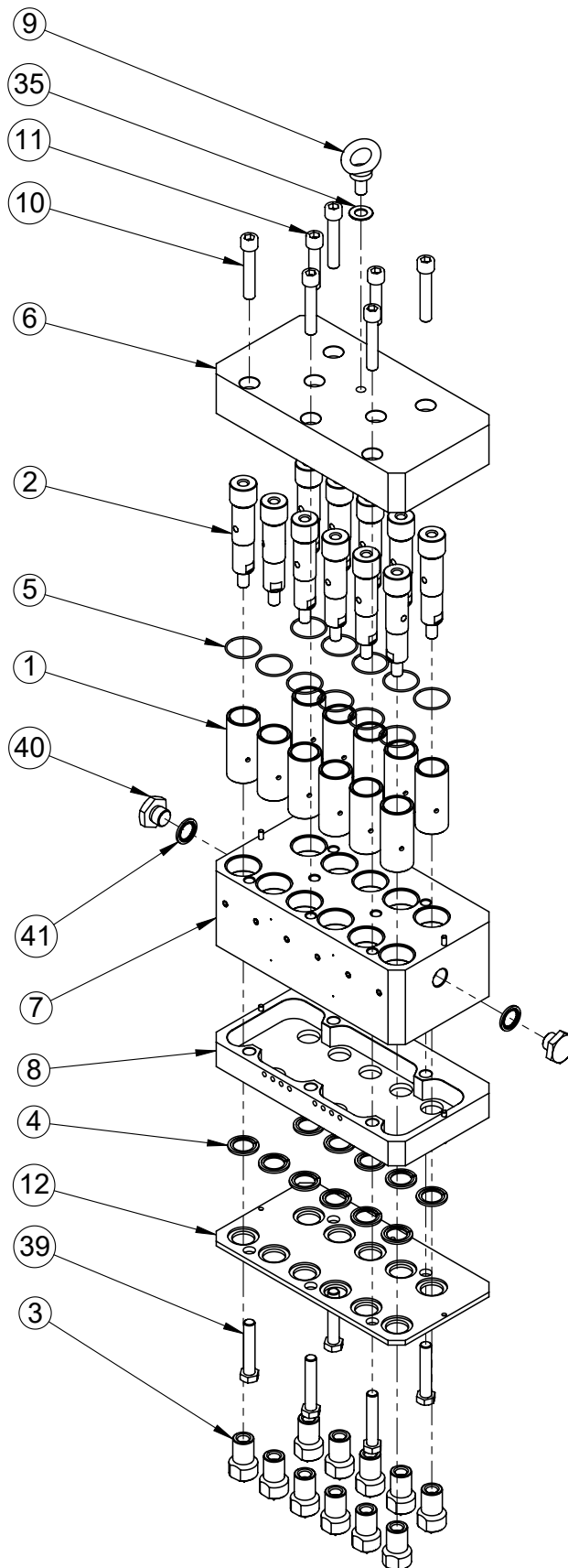
- h. Unscrew Cruciform Cutter Heads (3) from Piston (2) to replace it with new ones.
- i. Remove O-ring (5), Piston (5), Cylinder (1), Hexagonal Plug (40) and Sealing washer from Cylinder Block (7) respectively to replace it with new ones. (If found damaged/worn-out)
- j. Follow Step 'c' & 'd' to replace the remaining piston assemblies from Cylinder Block (7).
- k. Unscrew Hex Head Bolts (39) from Sealing Plate (12) & Remove Brush Seals (4) from Sealing Plate (12) to replace it with new ones. (If found damaged/worn-out).
- l. Remove Pin Spiral (30) from Bottom handle (17) & remove Torsion Spring (32) from Latch (31) to replace it with new ones. (If found damaged/worn-out).
- m. Unscrew Nyloc Nut (23) with Plain Washer (24) from Hex Bolt (22) and remove Bottom Handle (17) from Sub frame (26)
- n. Remove Rubber Mountings (25) from Bottom Handle (17) and replace it with new ones.
- o. Now follow the above steps in reverse manner to reassemble the FPHD-11.

Bill of Materials for FPHD-11

Illustration Number	Part Number	Description	FPHD-11
1	130 21 04	CYLINDER	11
2	130 21 05	PISTON (THREADED)	11
3	130 21 06	BUSH HAMMER CUTTER HEAD	11
4	130 40 23	BRUSH SEAL	11
5	130 40 24	O' RING	11
6	130 30 14	TOP PLATE	1
7	130 30 15	CYLINDER BLOCK	1
8	130 30 26	INTERMEDIAT PLATE	1
9	126 90 35	EYE BOLT	1
10	130 90 14	SOCKET HEAD SCREW	5
11	130 90 34	SOCKET HEAD SCREW	2
12	130 30 17	SEALING PLATE	1
13	171 90 50	PLAIN WASHER	4
14	126 97 39	ARMOURED HOSE	1
15	250 90 40	BALL VALVE	1
16	250 21 41	THREADED MALE/ MALE ADAPTOR	1
17	130 97 19	BOTTOM HANDLE	1
18	130 97 18	TOP HANDLE	1
19	200 90 68	CAP HEAD SCREW	1
20	130 40 21	RUBBER MOUNTING	2
21	130 40 22	HANDLE GRIP	2
22	126 90 36	HEX HEAD BOLT	1
23	126 50 29	NYLOC NUT	1
24	126 90 37	PLAIN WASHER	2
25	126 40 26	RUBBER MOUNTING	2
26	130 30 11	SUB- FRAME FOR WHEEL	1
27	130 97 10	WHEEL	2
28	130 21 10	PLAIN WASHER	2
29	23.24.80.1.2	SPLIT PIN	2
30	130 90 31	PIN- SPIROL	1
31	130 30 13	LATCH	1
32	130 51 33	TORTION SPRING	1
33	130 40 31	RUBBER MOUNTING	2
34	126 50 31	NYLOC NUT	4
35	342 90 24	PLAIN WASHER	5
36	126 21 10	U BOLT	2
37	126 30 14	CLAMP	2
38	126 50 30	NYLOC NUT	4
39	130 90 27	HEX HEAD BOLT	5
40	121 21 18	HEXAGON PLUG	2
41	121 40 12	SEALING WASHER	2

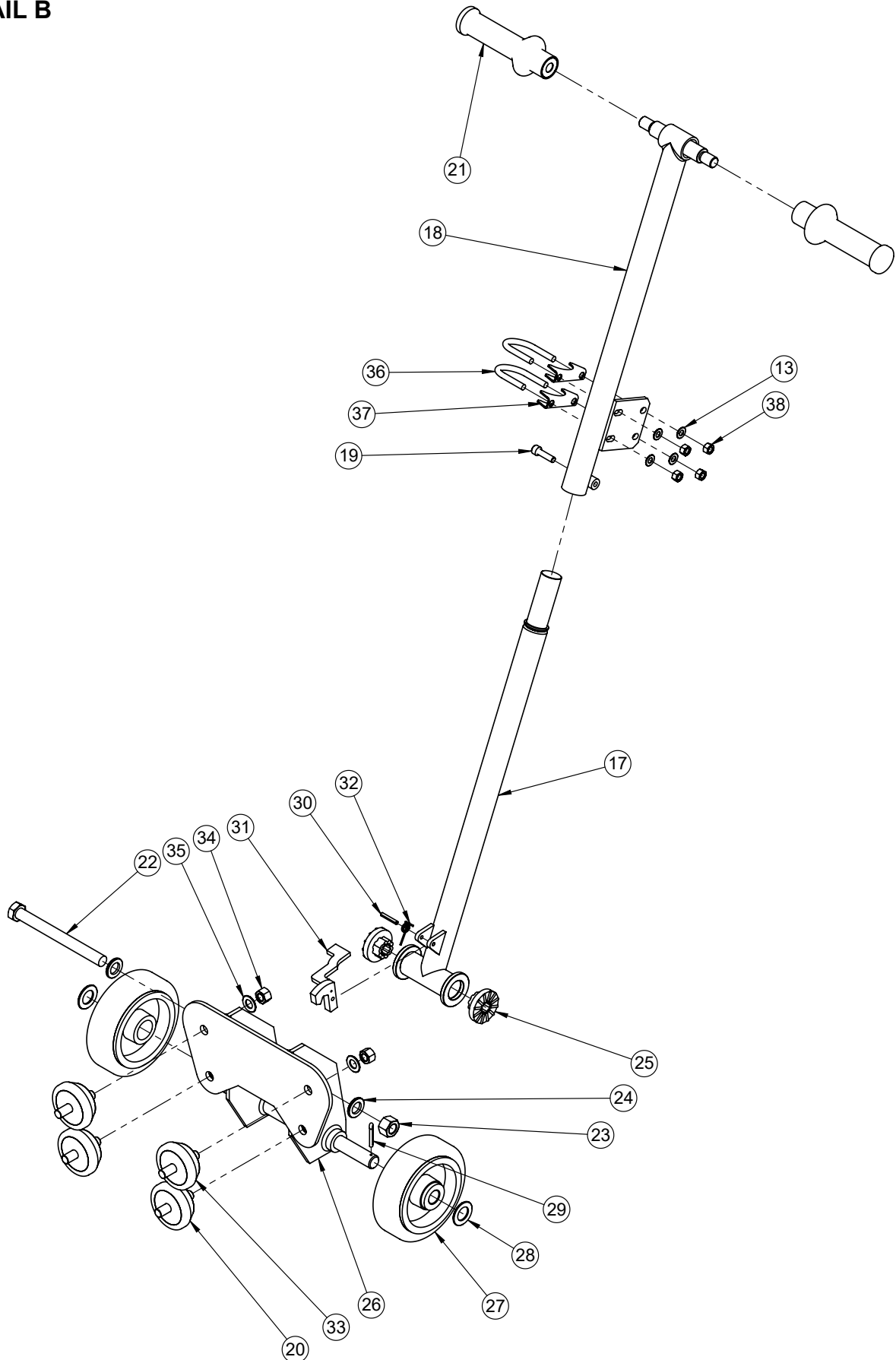
Exploded View Detail-A for FPHD-11

DETAIL A



Exploded View Detail-B for FPHD-11

DETAIL B



Repair Kits For FPLD - 11

Illu. No.	Part No.	Description	1269700
1	126 21 05	CRUCIFORM CUTTER HEAD	11
2	126 40 23	BRUSH SEAL	11
8	121 21 18	HEXAGON PLUG	2
10	121 40 12	SEALING WASHER	2
11	126 90 36	HEX HEAD BOLT	2
25	342 90 24	PLAIN WASHER	2
27	23.24.80.1.2	SPLIT PIN	2
28	130 40 21	RUBBER MOUNTING BLOCK	2
29	126 50 31	NYLOC NUT	2
32	126 40 26	RUBBER MOUNTING	2
34	250 21 41	THREADED MALE/ MALE ADAPTOR	1
35	126 97 39	ARMOURED HOSE	1

Repair Kits For FPHD - 11

Illu. No.	Part No.	Description	1309700
3	130 21 06	BUSH HAMMER CUTTER HEAD	11
4	130 40 23	BRUSH SEAL	11
5	130 40 24	O' RING	11
10	130 90 14	SOCKET HEAD SCREW	5
11	130 90 34	SOCKET HEAD SCREW	2
14	126 97 39	ARMOURED HOSE	1
16	250 21 41	THREADED MALE/ MALE ADAPTOR	1
20	130 40 21	RUBBER MOUNTING	2
25	126 40 26	RUBBER MOUNTING	2
29	23.24.80.1.2	SPLIT PIN	2
30	130 90 31	PIN- SPIROL	1
32	130 51 33	TORTION SPRING	1
33	130 40 31	RUBBER MOUNTING	2
34	126 50 31	NYLOC NUT	4
35	342 90 24	PLAIN WASHER	5
38	126 50 30	NYLOC NUT	4
39	130 90 27	HEX HEAD BOLT	5
40	121 21 18	HEXAGON PLUG	2
41	121 40 12	SEALING WASHER	2

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 Deck Scalers**

Model Number : **FPHD-11 / FPLD-11 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 : FPHD-11 / FPLD-11 Series

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

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