

OPERATING AND SAFETY INSTRUCTION MANUAL

ROLLER BTCDR700Y



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1. FOREWORD

This manual provides information and procedures to safely operate and maintain this model. For your own safety and protection from injury carefully read, understand and observe the safety instructions described in this manual.

Keep this manual or a copy of it with the machine. This machine is built with user safety in mind. However, it can present hazards if improperly operated and serviced. Follow operating instructions carefully!

The information contained in this manual was based on machines in production at the time of publications. reserves the right to change any portion of this information without notice.

2. SAFETY INFORMATION

This manual contains DANGER, WARNING, CAUTION, and NOTE callouts which must be followed to reduce the possibility of personal injury, damage to the equipment, or improper service.



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.



DANGER

DANGER indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.



WARNING

WARNING indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



CAUTION indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

CAUTION: Used without the safety alert symbol, CAUTION indicates a potentially hazardous situation which, if not avoided, may result in property damage.

Note: *Contains additional information important to a procedure.*

2.1. Operating Safety



Familiarity and proper training are required for the safe operation of equipment! Equipment operated improperly or by untrained personnel can be dangerous! Read the operating instructions contained in both this manual and the engine manual and familiarize yourself with the location and proper use of all controls. Inexperienced operators should receive instruction from someone familiar with the equipment before being allowed to operate the machine.

- 2.1.1 ALWAYS operate machine with all safety devices and guards in place and in working order.
- 2.1.2 ALWAYS check that all controls are functioning properly immediately after start-up! DO NOT operate machine unless all controls operate correctly.
- 2.1.3 ALWAYS remain aware of changing surface conditions and use extra care when operating over uneven ground, on hills, or over soft or coarse material. The machine could shift or slide unexpectedly.
- 2.1.4 ALWAYS remain aware of changing positions and movement of other equipment and personnel on the job site.
- 2.1.5 ALWAYS use caution when operating near the edges of pits, trenches or platforms. Check to be sure that ground surface is stable enough to support the weight of the machine and that there is no danger of the roller sliding, falling or tipping.
- 2.1.6 ALWAYS position yourself safely when operating machine in reverse or on hills. Leave enough space between yourself and the machine so you will not be placed in a hazardous position should the machine slide or tip.

- 2.1.7 ALWAYS operate the machine with both feet on the ground! DO NOT stand, sit, or ride on machine while in operation.
- 2.1.8 ALWAYS remain aware of moving parts and keep hands, feet, and loose clothing away from moving parts of equipment.
- 2.1.9 NEVER operate with fuel cap loose or missing.

2.2. Operator Safety while using Internal Combustion Engines



DANGER

Internal combustion engines present special hazards during operation and fueling! Read and follow warning instructions in engine owner's manual and safety guidelines below. Failure to follow warnings and safety guidelines could result in severe injury or death.

- 2.2.1. DO NOT run machine indoors or in an enclosed area such as a deep trench unless adequate ventilation, through such items as exhaust fans or hoses, is provided. Exhaust gas from the engine contains poisonous carbon monoxide gas; exposure to carbon monoxide can cause loss of consciousness and may lead to death.
- 2.2.2. DO NOT smoke while operating machine.
- 2.2.3. DO NOT smoke when refueling engine.
- 2.2.4. DO NOT refuel hot or running engine.
- 2.2.5. DO NOT refuel engine near open flame.
- 2.2.6. DO NOT spill fuel when refueling engine.
- 2.2.7. DO NOT run engine near open flames.
- 2.2.8. ALWAYS refill fuel tank in well-ventilated area.
- 2.2.9. ALWAYS replace fuel tank cap after refueling.
- 2.2.10. DO NOT touch or lean against hot exhaust pipes.
- 2.2.11. DO NOT mix diesel with any other fluids.






2.3. Service Safety





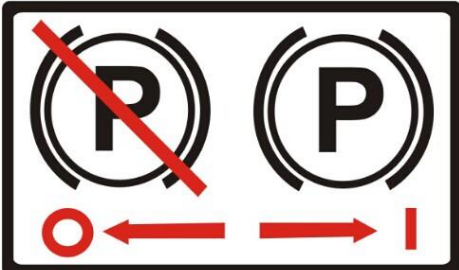


Poorly maintained equipment can become a safety hazard! In order for the equipment to operate safely and properly over a long period of time, periodic maintenance and occasional repairs are necessary.

- 2.3.1. DO NOT modify the equipment without express written approval of the manufacture.
- 2.3.2. DO NOT open hydraulic lines or loosen hydraulic connections while engine is running! Hydraulic fluid under pressure can penetrate the skin, cause burns, blind, or create other potentially dangerous hazards. Set all controls in neutral and turn engine off before loosening hydraulic lines.
- 2.3.3. ALWAYS check and tighten all external fasteners at regular intervals.
- 2.3.4. ALWAYS keep area around muffler free of debris such as leaves, paper, cartons, etc. A hot muffler could ignite them, starting a fire.
- 2.3.5. ALWAYS keep machine clean and labels legible. Replace all missing and hard-to-read labels. Labels provide important operating instructions and warn of dangers and hazards.
- 2.3.6. ALWAYS replace safety devices and guards after repairs and maintenance.
- 2.3.7. ALWAYS turn engine off before performing maintenance or making repairs.
- 2.3.8. ALWAYS make sure slings, chains, hooks, ramps, jacks and other types of lifting devices are attached securely and have enough weight-bearing capacity to lift or hold the machine safely. Always remain aware of the position of other people around you when lifting the machine.
- 2.3.9. ALWAYS turn engine off before servicing machine. If the engine has electric start, disconnect negative terminal on battery.

2.4. Safety and Informational Labels

Label	Meaning
	<p>DANGER! Engines emit carbon monoxide; operate only in well ventilated area. Read the Operator's Manual. No sparks, flames or burning objects near machine. Shut off engine before refueling.</p>
	<p>WARNING! Hot surface!</p>
	<p>WARNING! Read and understand the supplied operator's manual before operating this machine. Failure to do so increases the risk of injury to yourself or others.</p>
	<p>WARNING! To prevent hearing loss, wear hearing protection when operating this machine.</p>
	<p>Water Control Valve</p>

	<p>Vibration Control ON/OFF</p>
	<p>CAUTION! Lifting point.</p>
	<p>Hydraulic oil drain.</p>
	<p>Forward/Backward</p>
	<p>Disengage parking break/Engage parking break</p>

3. TECHNICAL DATA

3.1 Engine

Item No.	CDR-700-H	CDR-700-Y
Engine		
Engine Type	Petrol	Diesel
Engine Brand	Honda	Yanmar
Engine Model	GX390	L100
Rate Power Hp	13.0	10.0
Operating Speed rpm	3600	3600
Battery	12VDC	12VDC

3.2 Roller

Model	CDR-700
Overall Dimensions – Handle mm Up L x W x H	1168 x 692 x 2159
Overall Dimensions – Handle mm Down L x W x H	2645 x 692 x 1270
Operating Weight kg	720
Area Capacity m ² /hr	2600
Forward Speed (max) m/min	66
Reverse Speed (max) m/min	33
Vibration Frequency Hz	55
Hydraulic System Lubrication	SAE 10W30 hydraulic fluid/Gasoline Motor oil
Hydraulic System Capacity L	30
Grade Ability with vibration %	40
Grade Ability without vibration %	25

3.3 Sound and Vibration Measurements

The required sound specification, Paragraph 1.7.4.f of 89/392/EEC Machinery Directive, is:

the sound pressure level at operator's locations (L_{pA}) = 95 dB(A)

the guaranteed sound power level (L_{WA}) = 108 dB(A).

These sound values were determined according to ISO 3744 for the sound power level (L_{WA}) and ISO 6081 for the sound pressure level (L_{pA}) at the operator's location.

The weighted effective acceleration value, determined according to ISO 8662 Part 1, is approximately:

Hands = 9.66 m/s²

The sound and vibration measurements were obtained with the machine operating on hard asphalt at maximum RPM and top speed.

4. OPERATION

4.1 Before Starting

Before starting the machine, check the following:

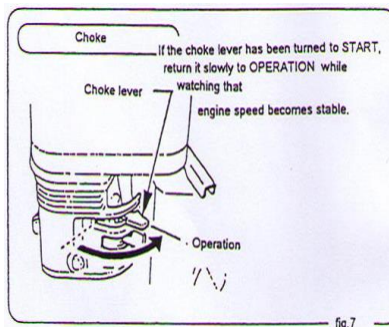
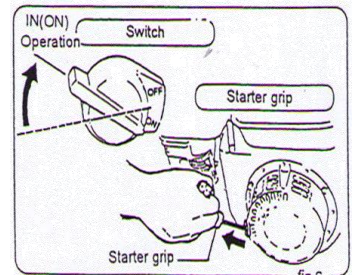
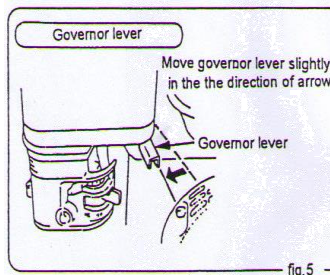
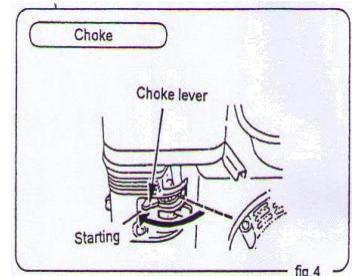
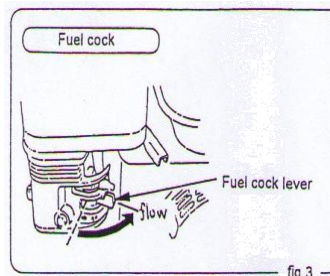
- Engine oil level
- Air cleaner maintenance indicator
- Fuel level
- Hydraulic fluid level
- Water tank level

4.2 Engine Throttle Control

The engine throttle control is pulled out to start the engine. Press in on the rubber button with your thumb while pulling the control out. The control will stay at any position, and can be fine-tuned by twisting the control in or out. To stop the engine, push the throttle control all the way in by pressing on the rubber button with the heel of your hand.

4.3 Starting the Machine Gasoline Engine

- 4.3.1 Align fuel cock lever with FLOW position (Fig.3)
- 4.3.2 When cold or somehow starting is difficult, turn choke lever to START position. This is not necessary when engine is warm. (Fig.4)
- 4.3.3 Turn governor lever slightly to high speed side. (Fig.5)
- 4.3.4 Turn engine start switch to ON position. (Fig.6)
- 4.3.5 Hold recoil starter grip and pull it slightly until you feel light resistance. Pull it strongly there. Be careful not to pull it too hard however because it may come off. Do not release the grip from the pulled position but return it to starter case before releasing. (Fig.6)
- 4.3.6 If engine has started, while listening to explosion sound, slowly return the choke lever to OPERATION position. (Fig.7)
After started, be sure to run the engine at low speed for a few minutes.
It must be done in cold climate in particular.
Check for abnormal noise of gas leak in the meantime.



Diesel Engine

4.3.7 Turn the throttle lever to START position (open by about 30 degrees) (Fig.8)

4.3.8 Operate Starter

In cast of self starter

- A. Insert the key into starter switch
- B. Turn the key to I (Run) mark.
- C. Turn the key further clockwise to (Start) mark and the engine will start. (Fig.9)

4.3.9 After starting up the engine, be sure to perform a warm up run for 2 to 3 minutes. This should be performed without fail, particularly during winter season. While doing this, check for abnormal sound of gas leaking.



CAUTION

If your engine fails to start, do not rotate

Starter motor for more than 5 seconds continuously, but return the key to (Run) mark and wait for 10 seconds or so, before attempting again.



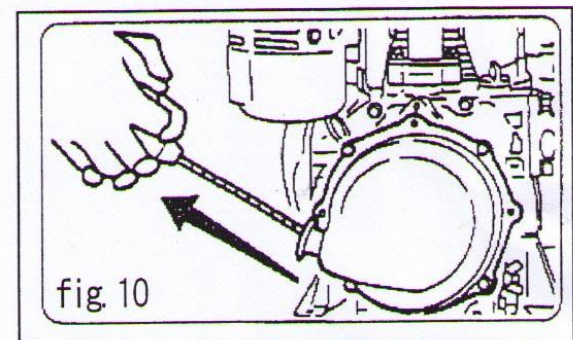
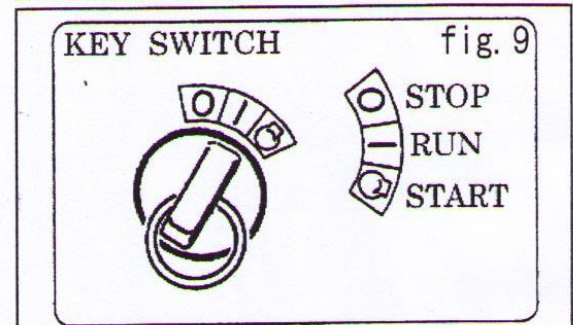
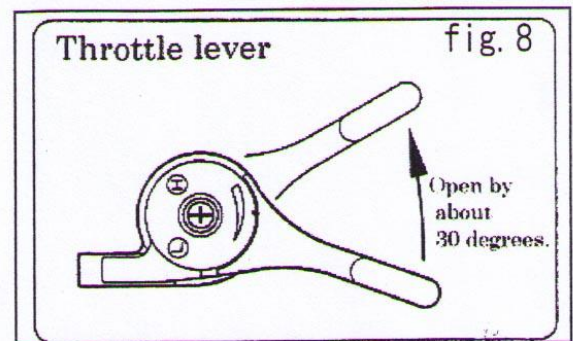
CAUTION

While your engine is running, never turn the key switch to (Star) Mark



CAUTION

In case you start with recoil starter or cranking, the key should be placed in I (Run) position as well.



In case of recoil starter

By pulling the starter knob slowly, you will reach such point where resistance becomes strong (compression point). By pulling it further, you will find a point where resistance is reduced. Return the knob but slowly return it original position. (Fig. 10)



CAUTION

Don't pull the rop al the way and don't take your hand off the pulled knob but slowly return it original position.

4.4 Starting the Machine

- 4.4.1 Check that the exciter is in the OFF position.
- 4.4.2 Pull the throttle control up to open engine throttle.
- 4.4.3 Turn the ignition switch to start the engine.



When the key is in the ON position, an alarm will sound. The alarm is a reminder to turn the key to the OFF position when the machine is not in use. Failure to do this will result in a dead battery.



Do not crank the engine starter for more than 15 seconds at one time. Longer cranking cycles could lead to starter damage.

- 4.4.4 Allow engine to warm up for a few minutes before operating machine.

4.5 Engine Speed

During operation, run the engine at full throttle (3600rpm). This ensures maximum exciter speed and will produce the best compaction.



Should the engine ever speed out of control and for some reason will not kill, pulling up on the decompression lever, which could be hot to the touch, will kill the engine

4.6 Stopping the Machine

- 4.6.1 Turn the exciter off and close the water control valve.
- 4.6.2 Push the throttle control to the minimum position to stop the engine.
- 4.6.3 Turn engine switch to OFF.
- 4.6.4 Apply the parking brake.
- 4.6.5 Clean the scraper bars before putting the roller away.

4.7 Direction and Speed Control

Travel direction and speed are controlled by the movable lever inside the handle. From the neutral position, the handle is pushed away from the operator to travel forward, and towards the operator to travel in reverse.



Keep both hands on handle while operating machine. Handle may pivot rapidly while in operation and cause injury.

Speed is varied by the movement of the lever; the farther the lever is pushed in either direction, the faster the roller will travel in that direction.



If the linkage separates from the directional lever while the machine is running, the roller could “run away” and cause injury. In the event of this occurring, the throttle must be pushed in to stop the engine.

4.8 Exciter

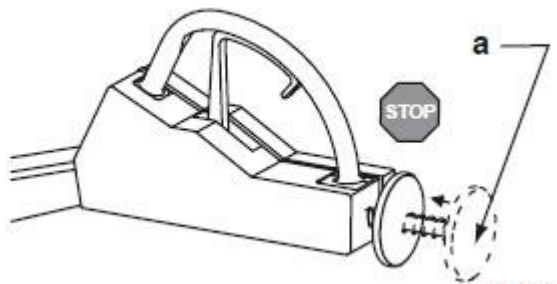
The exciter provides the vibration and can be used in most applications involving cohesive-type soils with heavy clay content, as well as loose soils and gravel.

CAUTION: DO NOT run machine with the vibration on over hard surfaces like concrete or compacted asphalt. The drum bearing can be damaged.

4.9 Back-Up Stop Pad

A back-up stop pad (a) is mounted to the rear section of the machine behind the control panel. The back-up stop pad operates in reverse only.

If the machine backs into an obstruction or if the operator becomes trapped behind it, the pad will be pressed forward and stop the machine. The machine can move only in the forward direction when the handle is brought back through the neutral position.



4.10 Parking Brake

The parking brake is used to ensure that the machine will not roll when not in use. It engages the weld stops on the drum, therefore a small amount of movement is possible before the brake will catch and stop the machine.

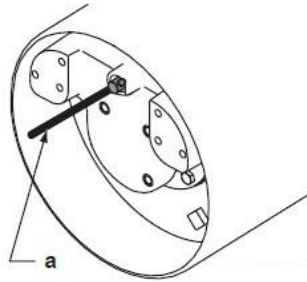
To disengage the parking brake:

Rotate the handle (a) 90° clockwise and bring it to rest in a shallow detent.

To engage the parking brake:

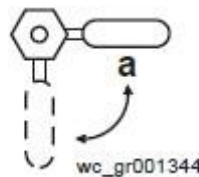
Rotate the handle (a) 90° counterclockwise and allow it to rest in the deep detent.

CAUTION: The parking brake is designed to hold the machine on an incline with the engine off. Do not drive against the parking brake in the engaged position. The brake may bend and damage the machine.



4.11 Watering System

The CDR-700 is equipped with a water control valve which allows the roller to be used wet or dry, and a sprinkler system to distribute the water evenly across the drums. The water is gravity fed to the sprinklers when the control valve is in the OPEN (horizontal) position (a).

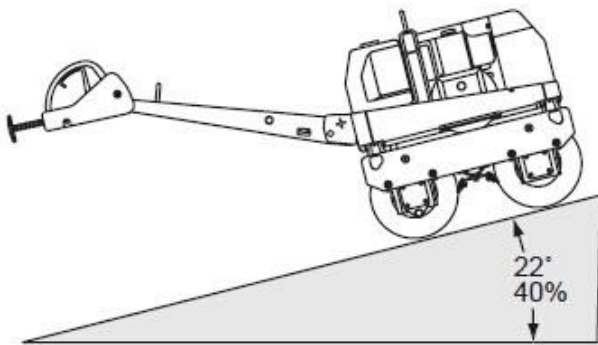


4.12 Operation on Slopes

When operating on slopes or hills special care must be taken to reduce the risk of personal injury or damage to the equipment. Always operate the machine up and down hills rather than from side to side. For safe operation and for protection of the engine, continuous duty use should be restricted to slopes of 22° (40% grade) or less.



NEVER operate machine on side slopes. The machine may roll over, even on stable ground.



4.13 Rollovers

Proper operation of the machine on slopes will prevent rollovers. Read and follow Safety instructions in “Operating Safety” and “Operation on Slopes”. If a machine rollover does occur, care must be taken to prevent damage to the engine. In this position, oil from the engine crankcase can flow into the combustion chamber, which can severely damage the engine next time it is started. If the machine has rolled on its side, immediate steps should be taken to right the machine.

CAUTION: To prevent damage to the engine after a roll-over, the machine must NOT be started, AND it must be serviced to remove any oil that may have been trapped in the combustion chambers.

5. MAINTENANCE

	Daily before startin g	After first 25 hrs.	Every 250 hrs.	Every 500 hrs.	Every 1200 hrs.
Check engine oil level	•				
Check air cleaner maintenance indicator	•				
Check the water trap	•				
Check hydraulic oil level	•				
Check the scraper bars.	•				
Check function of back-up stop pad and direction control lever.	•				
Check tappet clearance.		•			
Examine screw connections		•			
Replace engine oil and filter		•	•		
Check and adjust valve clearances			•		
Clean cooling system			•		
Replace fuel filter				•	
Clean or replace air filter				•	
Change hydraulic system return line filter				•	
Check and adjust scraper bars				•	
*Check linkage components				•	
Clean battery terminals				•	
Change hydraulic oil and filter					•

CAUTION: DO NOT tighten cylinder head fastenings

*Maintain linkages more frequently in dusty environments. Lubricating linkages is not recommended. However, if necessary, use a dry lubricant that does not attract dust.

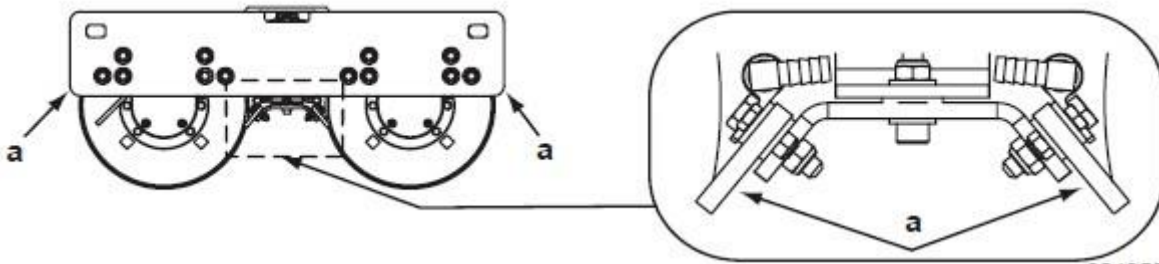
5.1 Scraper Bars

Check the four scraper bars (a) for wear. Scraper bars are made of synthetic materials which can wear very quickly when used with abrasive materials. Replace scraper bars as needed.

Cleaning the scraper bars

The scraper bars should be cleaned daily after use or as often as needed to remove built-up dirt, mud, and tar.

Use a high-pressure water jet and a strong brush if needed.



5.2 Hydraulic Oil Requirements

We recommend the use of a premium grade, petroleum-based hydraulic oil with anti-wear and anti-foam characteristics. Good anti-wear oils contain additives to reduce oxidation, prevent foaming, and provide for good water separation. These oils offer superior motor and pump life.

When selecting hydraulic fluid for your machine be sure to specify anti-wear properties. We offer a premium grade hydraulic oil for use in this machine.

Hydraulic oil (Gasoline Motor oil) – 10W30

Oil Viscosity

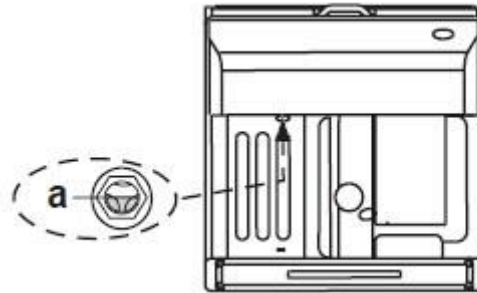
Most hydraulic oils are available in different viscosities. The SAE number for an oil is used strictly to identify viscosity. It does not indicate the type of oil (engine, hydraulic, gear, etc.) The higher the SAE number, the thicker the oil. For normal applications use a good non-detergent, anti-wear, hydraulic oil with viscosity rating of SAE 10W30

5.3 Hydraulic Oil Level

A hydraulic oil level sight glass is located on the hydraulic tank and is visible through the slots on the top over.

Check the oil level with the machine standing on a level surface. The oil level should be at the halfway mark on the sight glass. If the level is low, remove the top cover and top up with hydraulic oil as necessary.

If hydraulic oil continually needs to be added, inspect hoses and connections for possible leaks. Repair hydraulic leak immediately to prevent damage to hydraulic components.



5.4 Changing Hydraulic Fluid and Filter

Stop the machine, switch off the engine, and apply the parking brake with the machine standing on a level surface.

5.4.1 Remove the top over of the roller.

5.4.2 Remove the drain plug (b) from the end of the drain hose that is attached to the hydraulic tank.

5.4.3 Allow the hydraulic oil to drain into a suitable container.

5.4.4 When all the oil has drained out, reinstall the drain plug back into the hose and secure in place.

5.4.5 Please a plastic bag around the filter (a) to contain any oil spillage.

5.4.6 Unscrew the old filter.

5.4.7 Install the new filter. Screw the new filter on by hand, making sure that it is not cross threaded.

CAUTION: Use only original spare parts.

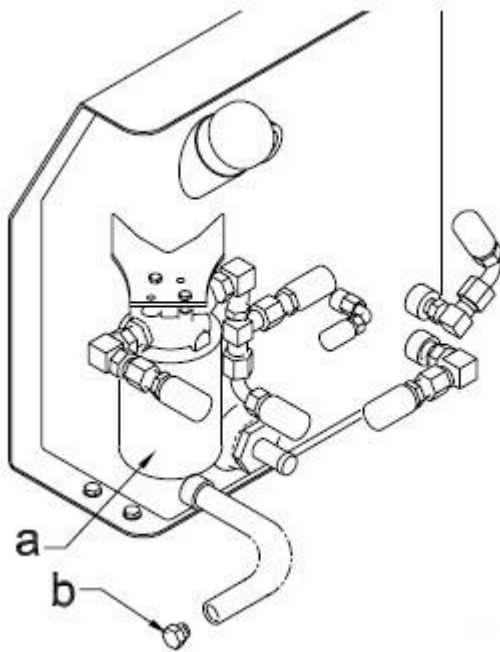
5.4.8 Tighten using both hands.

5.4.9 Fill the hydraulic tank with hydraulic oil until the level is visible halfway up the sight glass.

5.4.10 Run the engine briefly, then stop the engine and check for leaks.

5.4.11 Check the level in the sight glass, and top up if necessary.

Note: In the interests of environmental protection, place plastic sheeting and a container under the machine to collect the liquid which drains off. Dispose of the liquid properly.



5.5 Pressure Washing the Machine

When pressure washing the machine, avoid using harsh chemicals and only use moderate water pressure (35-70MPa [500-1000psi])

Avoid direct pressure to the following components:

- Engine
- Hydraulic
- Water tank / Plastic parts
- Hoses
- Labels

5.6 Storing the Machine

If machine is to be stored for more than 30days:
Drain the fuel tank and the water tank
Open the water valve and drain water from the sprinkling system
Change the oil
Clean the entire roller and engine compartment
Remove dirt from the engine cooling fins
Cover the roller and place it in a dry, protected area
Remove the diesel injectors and put a little oil into the engine cylinders
Remove battery from machine and charge it periodically

5.7 Hoisting

Attach a ling or chain to the lifting eye (a) using a suitable hook or shackle.
Each lifting device must have capacity of at least 650kgs.

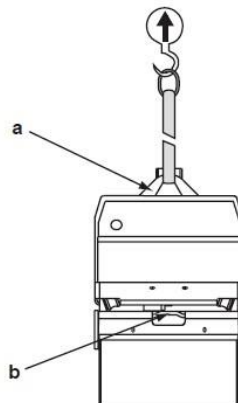


Only use steel ropes or chains for hoisting. The rope or chain must have the suitable specified lifting capacity of 650kg. Do not use improvised ropes or chains.

CAUTION: Never use any other part of the roller to lift the machine, as severe damage many occur.



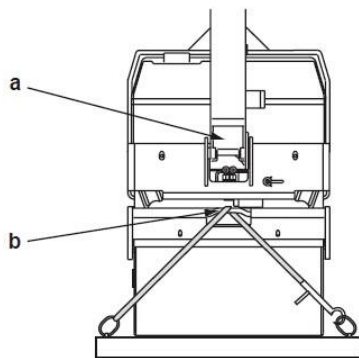
Do not stand under, or get onto, the machine while it is being hoisted or moved.



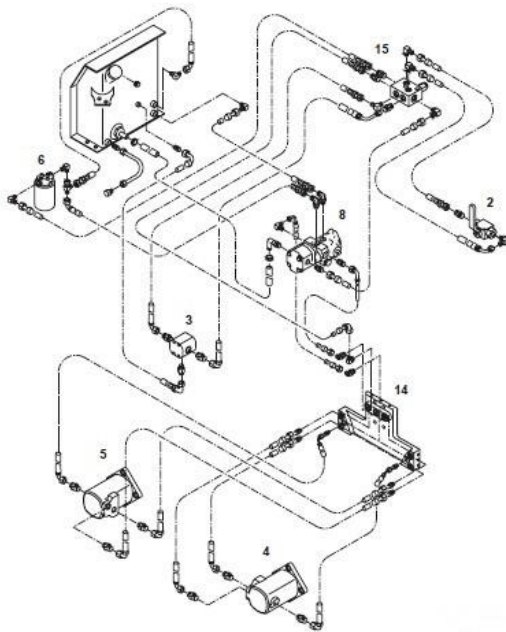
5.8 Transporting

Before transporting the machine, place blocks in front of and behind each drum. Use the front and rear tie-down (b) to secure the machine to the trailer. Lift handle (a) into upright position.

CAUTION: Never use any other part of the roller to tie the machine down, as severe damage may occur.



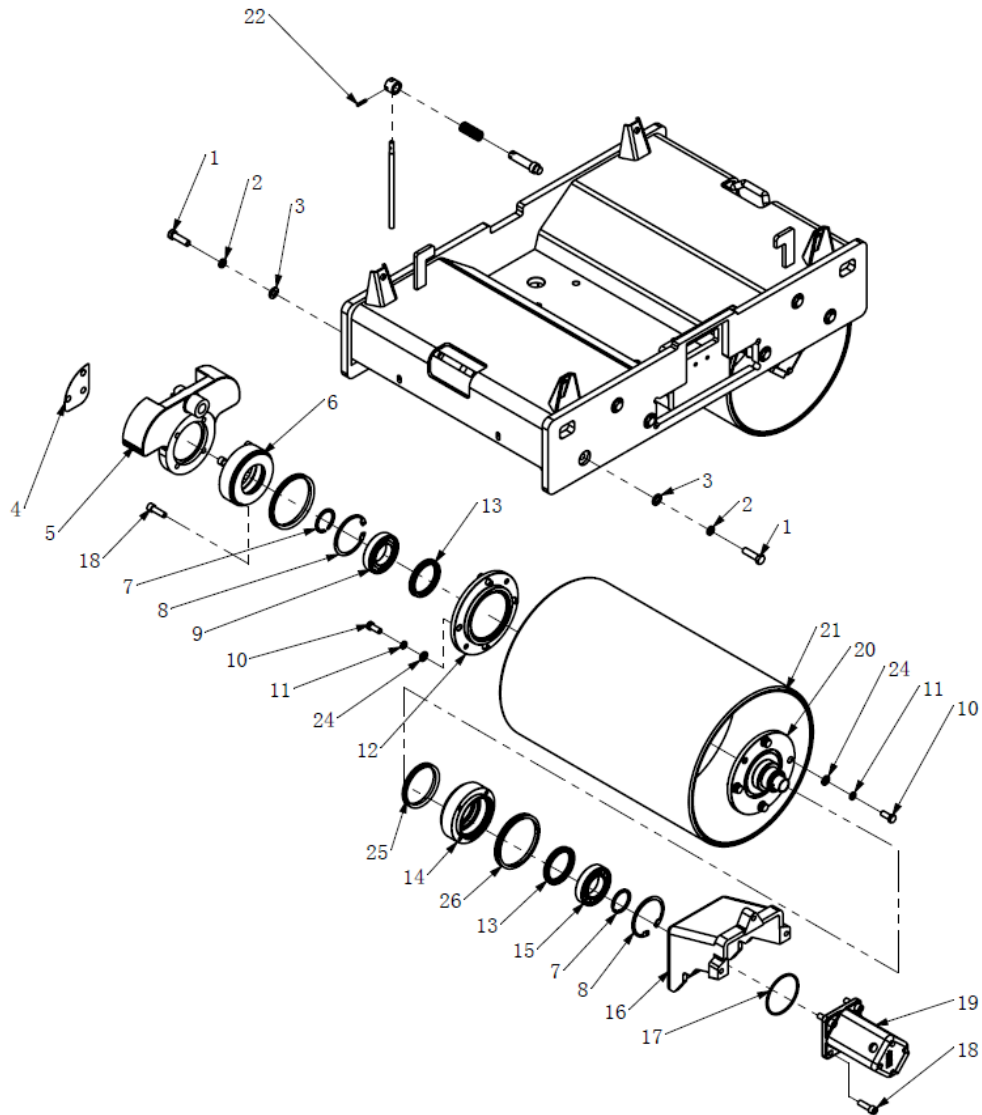
5.9 Hydraulic Diagram



5.10 Troubleshooting

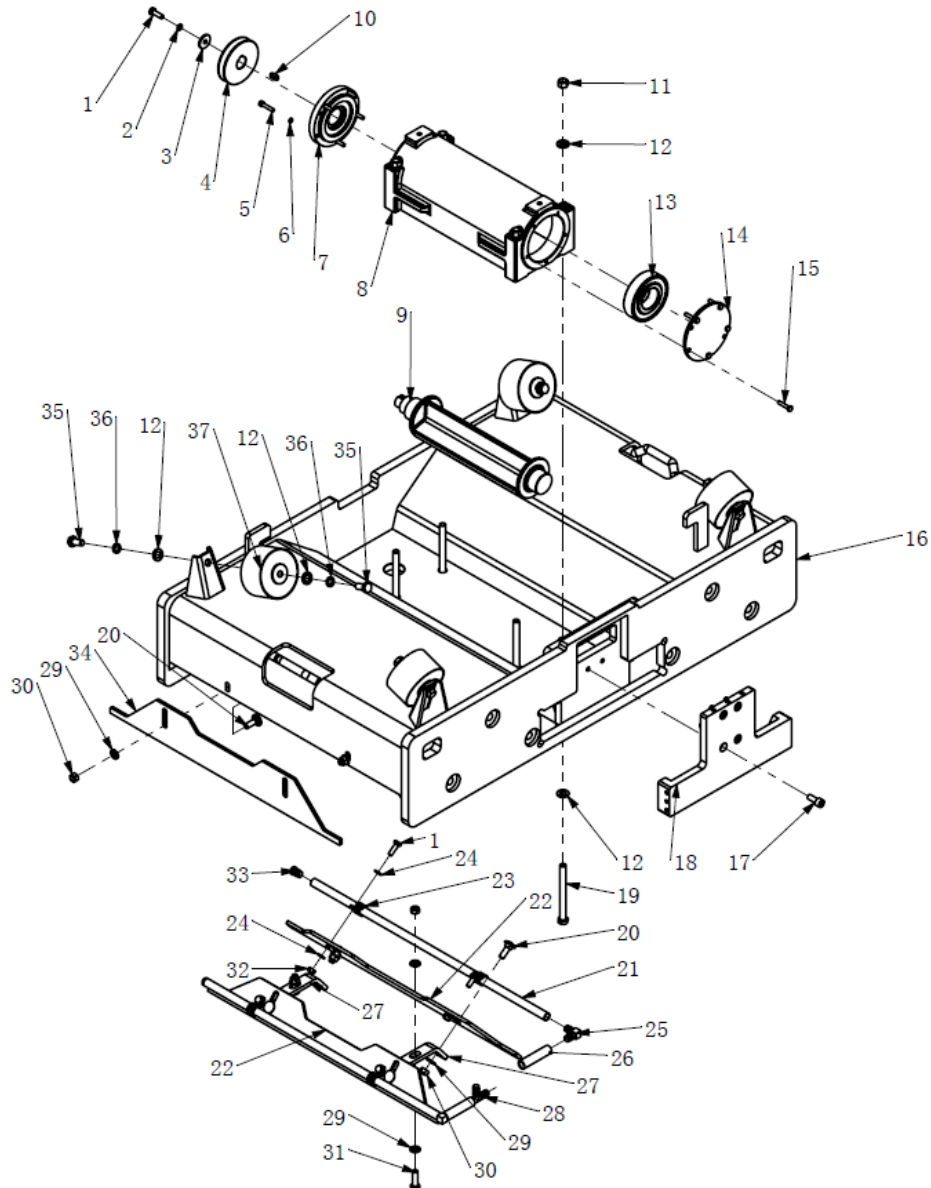
Problem	Reason
Engine does not start	<ul style="list-style-type: none"> ● Fuel tank empty ● Wrong type of fuel ● Old fuel. Drain tank, change fuel filter and fill with fresh fuel. ● Fuel system not primed ● Fuel filter restricted or plugged. Replace filter ● Check / adjust valve clearance ● Oil pressure lost. Check engine oil level / activate mechanical oil pressure monitor ● Air cleaner element plugged ● Check / adjust decompression device ● Battery connections loose or corroded. Battery dead ● Starter motor defective ● Electrical connections loose or broken ● Key switch defective
Engine stops by itself	<ul style="list-style-type: none"> ● Fuel tank empty ● Fuel filter plugged ● Fuel lines broken or loose
No vibration	<ul style="list-style-type: none"> ● Valve damaged ● Exciter assembly damaged ● Exciter motor coupling damaged or broken ● Exciter motor damaged ● Pump damaged
No travel Or Travel only in one direction	<ul style="list-style-type: none"> ● Control cable loose or broken ● Drive motor damaged ● Drive pump damaged ● Defective relief valve or valves

6. SPARE PARTS – ROLLER DRUM



ROLLER DRUM			
Item	Description	Part No.	QTY
1	BOLT M14x50	15140500	18
2	SW M14	12140000	18
3	WASHER M14	11140000	18
4	SHIMMING WASHER	2402-00038-2	4
5	BRACKER	2402-00006-1	2
6	HUB (RIGHT)	2402-00010-1	2
7	STOP RING Ø55	2402-00063-4	4
8	CIRCLIP Ø100	18100002	4
9	ROLLER BEARING NUP211EM1	21NUP211M	2
10	BOLT M12x35	15120350	16
11	SW M12	12120000	16
12	INSERT (RIGHT)	2402-00008-1	2
13	OIL SEAL	2402-00037-4	4
14	HUB (LEFT)	2402-00009-1	2
15	ROLLER BEARING NJ211EM1 (NBI)	21NJ211EM1	2
16	BRACKET	2402-00005-1	2
17	OIL SEAL	2402-00040-4	2
18	SOCKET HEAD BOLT	16124015	16
19	HYDRAULIC MOTOR	2402-00004-4	2
20	INSERT (LEFT)	2402-24000-3	2
21	DRUM	2402-01000-4	2
22	BREAKER ASSEMBLY	2402-17000-1	1
23	SPLINE	2402-24001-1	1
24	WASHER M12	11120000	16

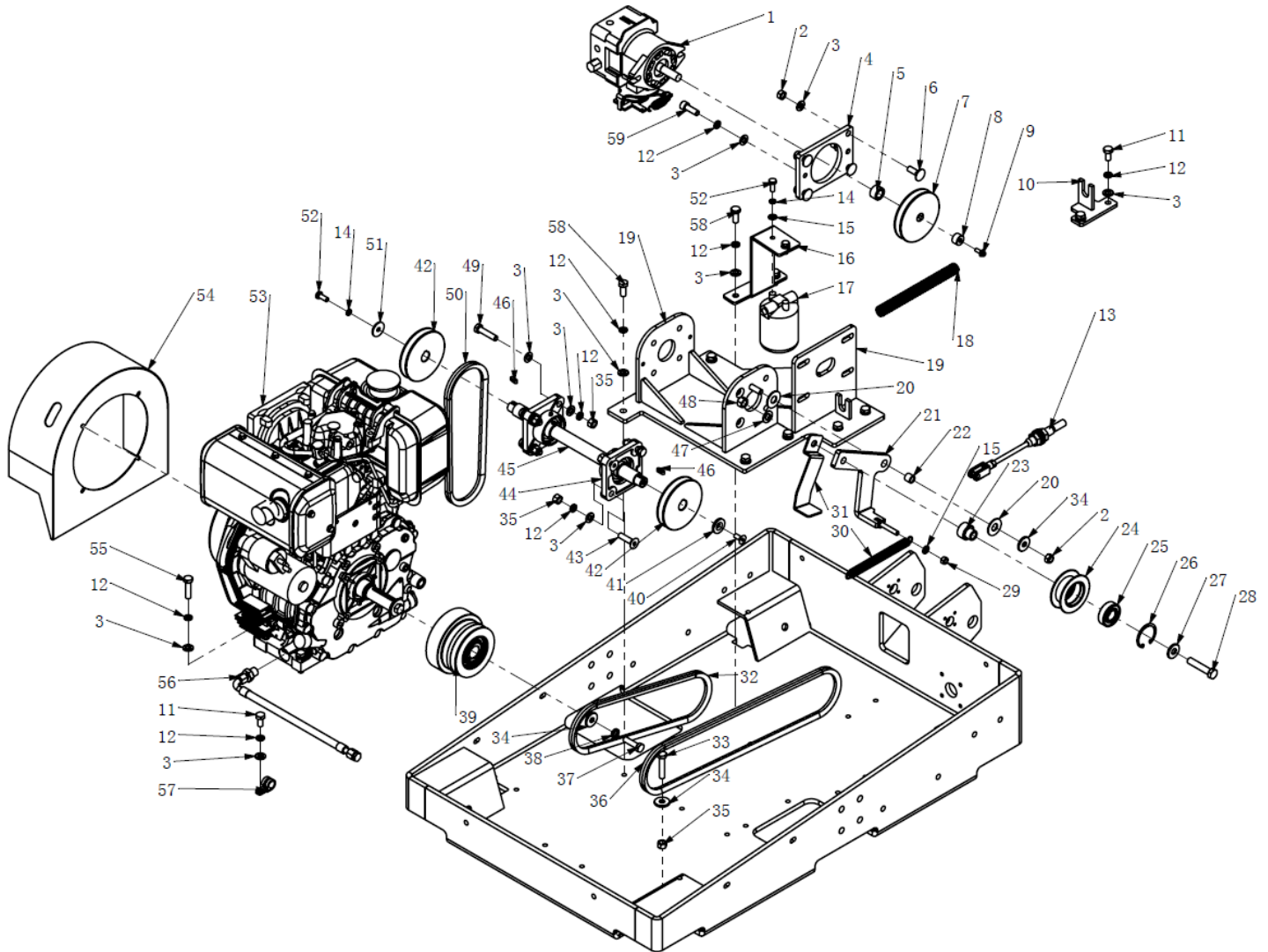
7. SPARE PARTS – LOWER FRAME



UPPER FRAME			
Item	Description	Part No.	QTY
1	BOLT M8x25	15080250	5
2	SW M8	12080000	1
3	WASHER M8x30x3	11083003	1
4	VIBRATION PULLEY	2402-00016-1	1
5	SOCKET HEAD BOLT M6x30	16063003	5
6	SW M6	12060000	5
7	VIBRATION CASE COVER (L)	2402-00014-1	1
8	VIBRATION CASE	2402-00011-1	1
9	VIBRATION SHAFT	2402-00012-1	1
10	KEY 8x19	20080719A	1
11	LOCK NUT M12	13120001	4
12	WASHER M12	11120000	16
13	BEARING 6309-2Z(HRB)	216309-2ZHRB	2
14	VIBRATION CASE COVER (R)	2402-00013-1	1
15	BOLT M6x30	15060300	5
16	LOW FRAME ASSY	2402-02000-3	1
17	SOCKET HEAD BOLT M10x25	16100253	4
18	PORTING BLOCK	2402-02006-1	1
19	BOLT M12x130 (H)	151213015	4
20	BOLT M10x30	15100304	8
21	SPRAY PIPE	2402-00106-1	2
22	INNER SCRAPER	2402-00067-2	2
23	R-CLIP Ø16	70000020	4
24	WASHER M8	11080000	8
25	WATER PIPE ELBOW	2402-00108-4	2
26	WATER PIPE	2402-00105-1	2
27	SCRAPER SUPPORT (LOW)	2402-00065-2	2
28	WATER PIPE TEE	2402-00056-4	1
29	WASHER M10	11100000	12
30	LOCK NUT M10	13100001	10

31	BOLT M10x35	15100350	2
32	LOCK NUT M8	13080001	4
33	WATER PIPE PLUG	2402-00107-4	2
34	OUTER SCRAPER	2402-00064-2	2
35	BOLT M12x25	15120250	8
36	SW M12	12120000	8
37	SHOCK ABSROBER	2402-00007-4	4

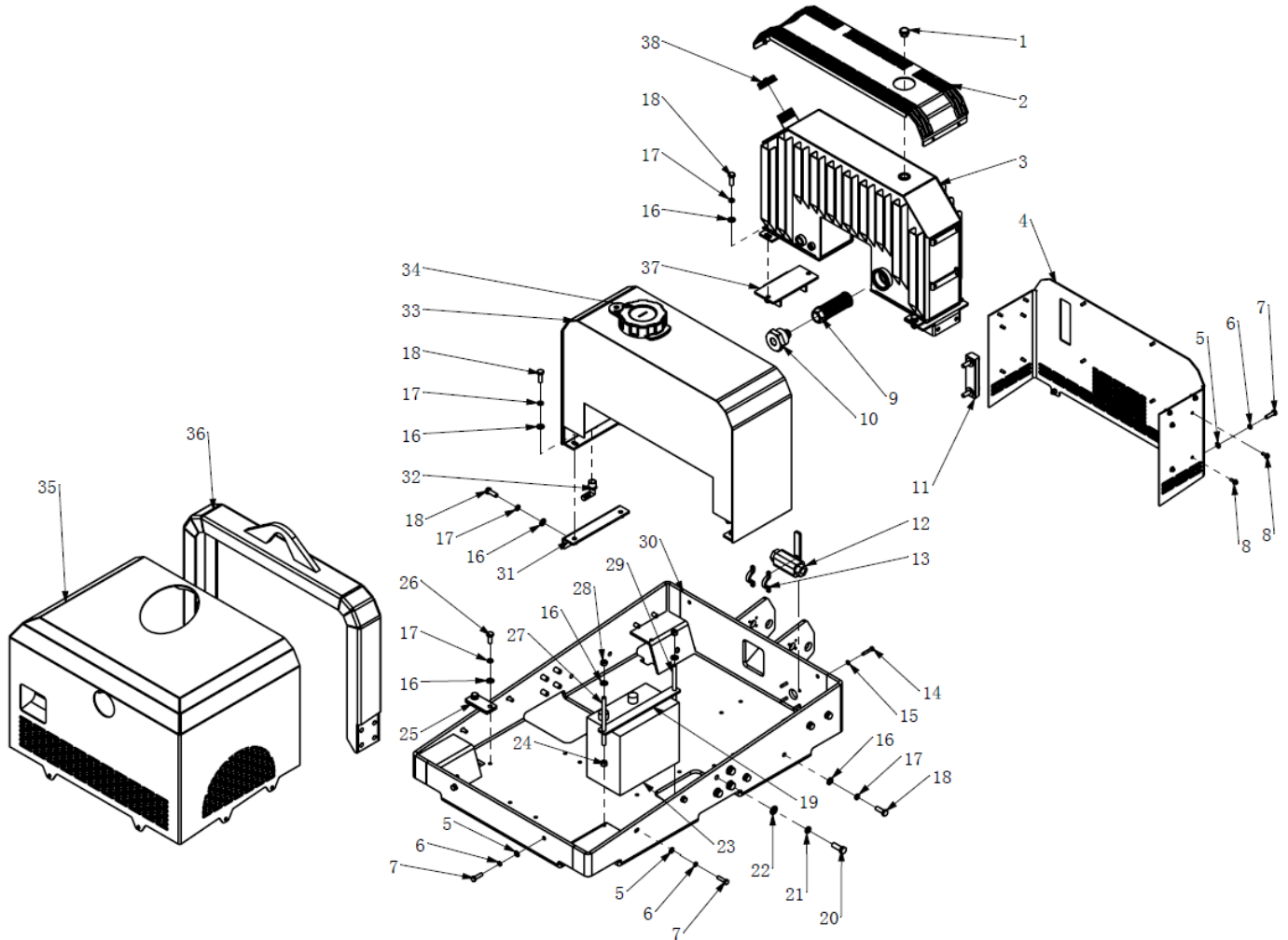
8. SPARE PARTS – POWER TRANSMISSION



POWER TRANSMISSION			
Item	Description	Part No.	QTY
1	HYDRAULIC PUMP	2402-24000-1	1
2	LOCK NUT M10	13100001	5
3	WASHER M10	11100000	36
4	HYDRAULIC PUMP SUPPORT	2402-00051-2	1
5	HYDRAULIC PUMP BUSH	2402-00053-1	1
6	BOLT M10X35	15100354	4
7	HYDRAULIC PUMP PULLEY	2402-00052-1	1
8	HYDRAULIC PUMP COVER	2402-00054-1	1
9	FLANGE BOLT	15060162	1
10	REVERSIBLE CABLE SUPPORT	2402-18000-3	1
11	BOLT M10x20	15100200	5
12	SW M10	12100000	26
13	VIBRATION CABLE	2402-00076-4	1
14	SW M8	12080000	3
15	WASHER M8	11080000	4
16	OIL FILTER SUPPORT	2402-00057-2	1
17	OIL FILTER	2401-00025-4	1
18	RETURN SPRING	2402-00103-4	1
19	ENGINE SUPPORT	2402-22000-3	1
20	TENSION ROLLER ARM - NYLON WASHER	2402-00069-1	2
21	TENSION ROLLER ARM	2402-23000-3	1
22	TENSION ROLLER ARM BUSH	2402-00068-1	1
23	TENSION ROLLER BUSH	2402-00070-1	1
24	TENSION ROLLER	2402-20000-3	1
25	BEARING 6204-2R	216204-2R	1
26	CIRCLIP Ø47	18470002	1
27	WASHER M12x30x3	11123003	1
28	BOLT M12X60 (H)	15120601	1
29	LOCK NUT M8	13080001	1
30	VIBRATION CABLE SPRING	2402-00031-4	1

31	VIBRATION BELT PLATE	2402-00078-2	1
32	BELT	27AV13X864Li	1
33	BOLT M10X50	15100500	1
34	WASHER M10x30x3	11103003	3
35	NUT M10	13100000	9
36	BELT	27AV13X1120Li	1
37	BOLT 7/16-20x1-1/2	15100400Y	1
38	SW M12	12120000	1
39	CLUTCH ASSEMBLY	2402-01000-1	1
40	SOCKET HEAD BOLT M8X20	16082004	1
41	VIBRATION PULLEY LOCK WASHER	2402-00071-1	1
42	VIBRATION PULLEY	2402-00036-1	2
43	SOCKET HEAD BOLT M10X40	16100404	2
44	BEARING UCFU205	21UCFU205	2
45	VIBRATION SHAFT	2402-00035-1	1
46	KEY 6X18	20060618A	2
47	WASHER M12	11120000	1
48	LOCK NUT M12	13120001	1
49	BOLT M10x45	15100450	6
50	BELT	27AV13X686Li	1
51	WASHER M8x30x3	11083003	1
52	BOLT M8X20	15080200	3
53	YANMAR ENGINE	25000014	1
54	ENGINE FAN	2402-12000-3	1
55	BOLT M10X40	15100400	4
56	DRAIN HOSE M16x1.5	1602-19000-4	1
57	R-CLIP Ø16	70000020	1
58	BOLT M10x25	15100250	7
59	SOCKET HEAD BOLT M10x30	16103003	2

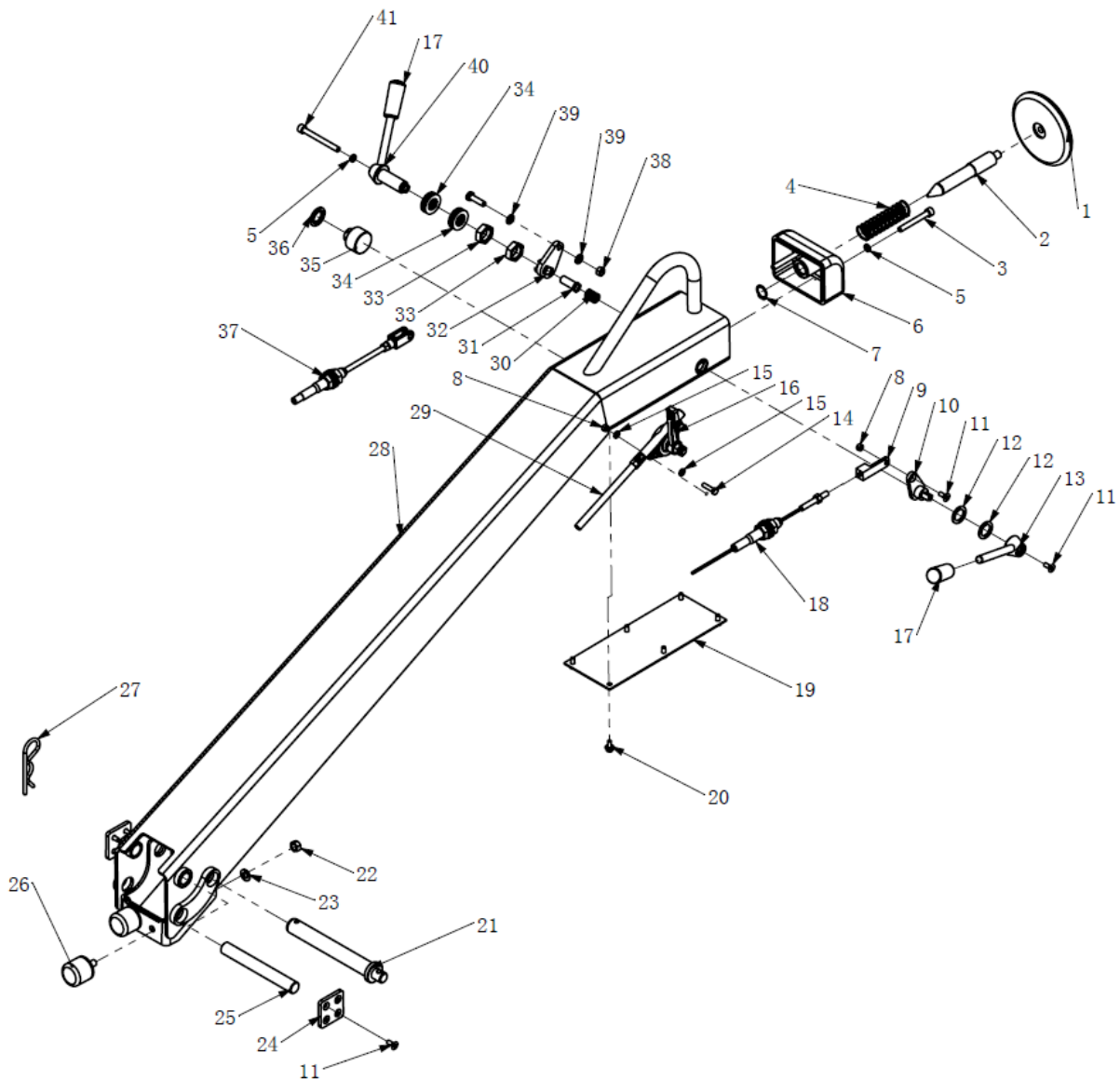
9. SPARE PARTS – UPPER FRAME



UPPER FRAME			
Item	Description	Part No.	QTY
1	VALVE	2402-00033-4	1
2	HYDRAULIC OIL TANK PROTECTION NET	2402-11000-3	1
3	HYDRAULIC OIL TANK ASSY	2402-13000-3	1
4	HYDRAULIC OIL TANK PROTECTION	2402-16000-3	1
5	WASHER M8	11080000	8
6	SW M8	12080000	8
7	BOLT M8x30	15080300	8
8	FLANGE BOLT M6x16	15060162	16
9	OIL FILTER (OUT)	2402-00055-4	1
10	JOINT (OUT)	2402-00058-4	1
11	OIL LEVEL METER	2402-00032-4	1
12	WATER TANK VALVE	2402-00077-4	1
13	WATER TANK VALVE CLIP	2402-00104-4	2
14	BOLT M6x35	15060350	4
15	WASHER M6	11060000	4
16	WASHER M10	11100000	22
17	SW M10	12100000	20
18	BOLT M10x30	15100300	16
19	BATTERY PLATE	2402-00072-2	1
20	BOLT M12x35	15120350	8
21	SW M12	12120000	8
22	WASHER M12	11120000	8
23	BATTERY	2304-20003-4	1
24	NUT M10	13100000	2
25	FRAME (ENGINE) PLATE	2402-00075-2	2
26	BOLT M10x25	15100250	4
27	BATTERY ROD (SHORT)	2402-00074-1	1
28	LOCK NUT M10	13100001	2
29	BATTERY ROD (LONG)	2402-00073-1	1
30	FRAME (ENGINE)	2402-03000-3	1

31	WATER TANK SUPPORT	2402-15000-3	2
32	FITTING	1904-00035-4	2
33	WATER TANK ASSY	2402-10000-3	1
34	WATER TANK CAP	2204-30005-4	1
35	ENGINE COVER	2402-08000-3	1
36	HOOK ASSEMBLY	2402-09000-3	1
37	HYDRAULIC OIL TANK SUPPORT	2402-14000-3	2
38	HYDRAULIC OIL TANK CAP	2402-00034-4	1

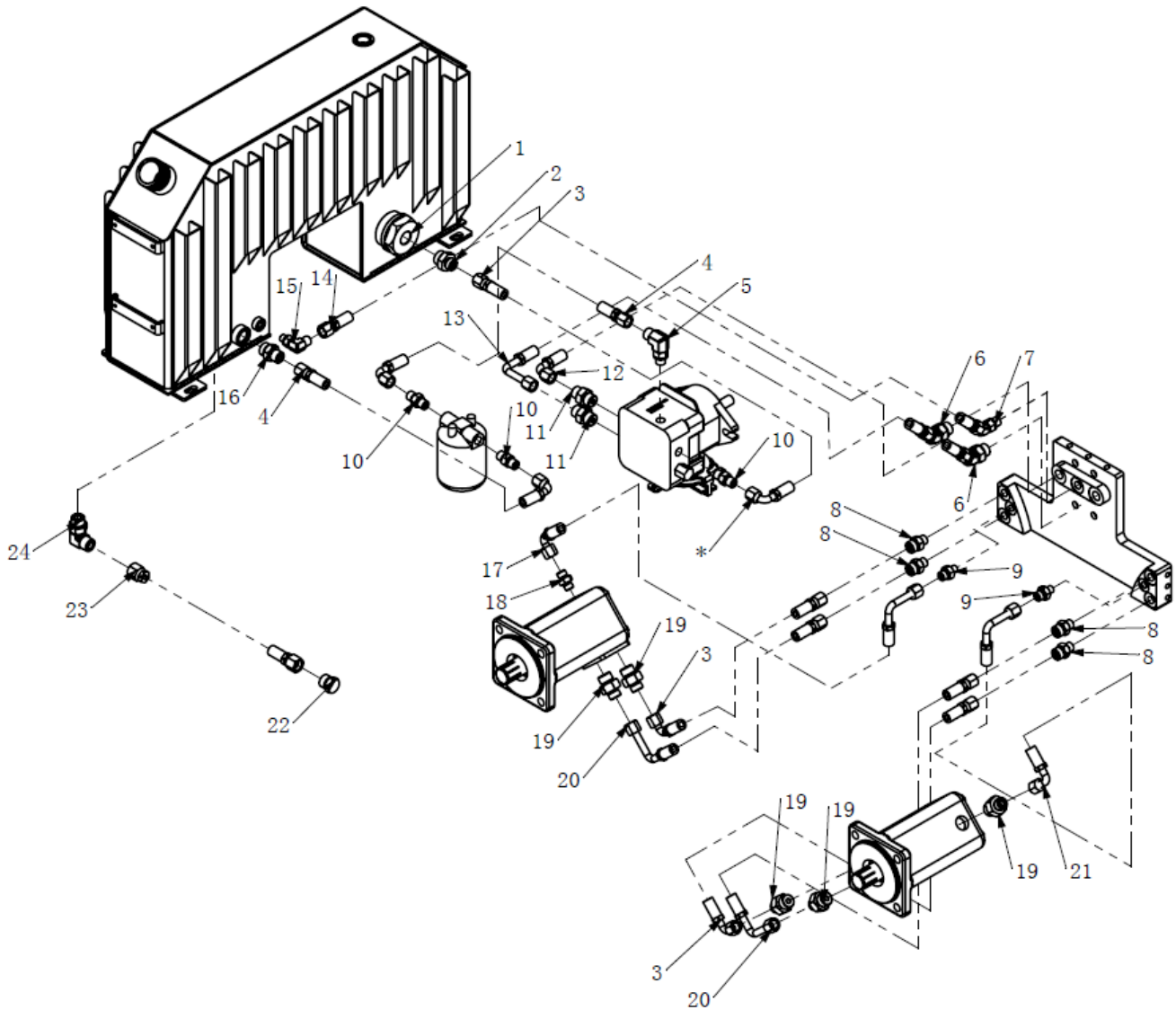
10. SPARE PARTS - HANDLE



HANDLE			
Item	Description	Part No.	QTY
1	DISC	2402-00019-1	1
2	ROD	2402-00020-1	1
3	SOCKET HEAD BOLT M8x65 (H)	16086503	2
4	SPRING	2402-00021-4	1
5	SW M8	12080000	3
6	HANDLE COVER	2402-00022-4	1
7	CIRCLIP Ø20	18200001	1
8	LOCK NUT M6	13060001	3
9	CABLE PLATE	2402-00026-1	1
10	VIBRATION HANDLE ARM	2402-06000-3	1
11	SOCKET HEAD BOLT M6x16	16061604	10
12	VIBRATION HANDLE SHAFT NYLON WASHER	2402-00062-1	2
13	VIBRATION HANDLE	2402-07000-3	1
14	BOLT M6x25	15060250	2
15	WASHER M6	11060000	4
16	THROTTLE LEVER ASSY	2302-09000-3	1
17	THROTTLE LEVER GRIP	2304-00021-4	2
18	VIBRATION CABLE	2402-00076-4	1
19	HANDLE COVER (BACK)	2402-00059-2	1
20	FLANGE BOLT M6X12	15060122	6
21	PIVOT	2402-00041-1	1
22	LOCK NUT M10	13100001	2
23	WASHER M10	11100000	2
24	PLATE	2402-00029-2	2
25	PITCH PIN	2402-00042-1	1
26	SHOCK ABSORBER	2302-00001-4	2
27	R-CLIP Ø5	2402-00060-4	1
28	HANDLE ASSEMBLY	2402-04000-3	1
29	THROTTLE CABLE	2402-00001-4	1

30	REVERSIBLE HANDLE SPRING	2402-00061-4	1
31	REVERSIBLE HANDLE BUSH	2402-00024-1	1
32	REVERSIBLE ARM	2402-21000-3	1
33	NUT M20x1.5	13201504	2
34	THRUST BEARING 51104	2151104	2
35	KEY	2402-00109-4	1
36	SWITCH AL BUSH	2402-00101-1	1
37	REVERSIBLE CABLE	2402-00017-4	1
38	LOCK NUT M8	13080001	1
39	WASHER M8	11080000	2
40	REVERSIBLE HANDLE	2402-05000-3	1
41	SOCKET HEAD BOLT M8x80	16088013	1
42	BOLT M8x30	15080300	1

11. SPARE PARTS – HYDRAULIC SYSTEM



HYDRAULIC SYSTEM			
Item	Description	Part No.	QTY
1	JOINT (OUT)	2402-00058-4	1
2	OIL TANK JOINT (OUT)	2402-00089-4	1
3	OIL HOSE - MOTOR B	2402-00083-4	3
4	OIL HOSE - PUMP RETURN	2402-00090-4	2
5	ELBOW - PUMP	2402-00096-4	1
6	ELBOW 1 - PORTING BLOCK	2402-00087-4	2
7	ELBOW 2 - PORTING BLOCK	2402-00088-4	1
8	JOINT 1 - PORTING BLOCK	2402-00086-4	4
9	JOINT 2 - PORTING BLOCK	2402-00085-4	2
10	JOINT 2 - PUMP	2402-00097-4	3
11	JOINT 1 - PUMP	2402-00093-4	2
12	OIL HOSE - PORTING BLOCK	2402-00092-4	1
13	OIL HOSE - PORTING BLOCK RETURN	2402-00102-4	1
14	OIL HOSE - MOTOR FILLER	2402-00018-4	1
15	ELBOW 2 - OIL TANK	2402-00095-4	1
16	JOINT - OIL TANK RETURN	2402-00091-4	1
17	OIL HOSE - MOTOR (B) FILLER	2402-00084-4	1
18	JOINT 2 - MOTOR	2402-00082-4	1
19	JOINT 1 - MOTOR	2402-00080-4	5
20	OIL HOSE A - MOTOR	2402-00081-4	2
21	OIL HOSE - MOTOR (F) FILLER	2402-00100-4	1
22	PLUG - OIL TANK	2402-00099-4	1
23	OIL TANK DRAIN HOSE	2402-00098-4	1
24	ELBOW - OIL TANK DRAIN HOSE	2402-00094-4	1

12. DECLARATION OF CONFORMITY

Declaration of Conformity / Certificat de conformite / Gelijkvormigheidscertificaat / Declaracion de Conformidad / Declaracao de Concomridade / Dichiarazione Di Conformita

We Beton Trowel NV

Declare under our sole responsibility that the product to which this declaration relates is in conformity with the following standard(s) or other normative documents.

Déclarons sous notre responsabilité que le produit cette déclaration est conforme aux normes suivantes ou d'autres documents habituels.

Verklaren onder onze verantwoordelijkheid dat het product naar welke de verklaring verwijst conform de volgende standaards of anders gebruikelijke documenten is.

Declaramos bajo nuestra única responsabilidad que el producto en lo que esta declaración concierne, es conforme con la siguiente normativa u otros documentos.

Declara sob sua responsabilidade que o produto a quem esta declaração interessar, está em conformidade com os seguintes documentos legais ou normas directivas.

Dichiariamo sotto la ns. unica responsibilita che il prodotto al quale questa dichiarazione si riferisce, è fabbricato in conformità ai seguenti standard e documenti di normative.

EN 349:1993	Safety of Machinery - Minimum gaps to avoid crushing of parts of the human body.
EN 418:1993	Safety of Machinery - Emergency stop equipment, functional aspects - Principles for design
EN 12100-1:2003	Safety of Machinery - Basic Concepts, general principles for design - Part 1: Basic Terminology, methodology
EN 12100-2:2003	Safety of Machinery - Basic Concepts, general principles for design - Part 2: Technical Principles
EN ISO 4872:1978	Acoustics - Measurement of Airborne noise emitted by construction equipment Intended for outdoor use - Method for determining compliance with noise limits.
EN ISO 5349-1:2001	Mechanical vibration. Measurement and evaluation of human exposure to hand-transmitted vibration. General requirements
EN ISO 5349-2:2001	Mechanical vibration. Measurement and assessment of human exposure to hand-transmitted vibration. Practical guidance for measurement at the workplace.

Following the provisions of Directives / Suivant les directives determines / Volgens de vastgestelde richtlijnen:
Siguiendo las directivas / No sequimento das clausulas da Directivas / Seguendo quanto indicato dalla Direttivas:

98/37/EC	Machinery Directive
2000/14/EC	Noise Directive
2001/95/EC	General Product Safety Directive
2002/95/EC	Reduction of Hazardous Waste Directive



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