

OPERATING & PARTS MANUAL

BTSP10H – BTSP10E



Table of Content

1.	QUALITY ASSURANCE / MACHINE BREAK IN	3
2.	SURFACE PREPARATION SYSTEM WARRANTY	3
3.	MAINTENANCE RECORD	4
4.	ROUTINE SERVICE INTERVALS.....	5
5.	FOREWORD.....	7
6.	SAFETY PRECAUTIONS	7
7.	OPERATING PRINCIPLE	9
8.	WORKING WITH THE SPS.....	9
9.	CUTTER LIFE.....	9
10.	STARTING AND STOPPING PROCEDURE	9
11.	MAINTENANCE.....	10
12.	STORAGE.....	11
13.	LUBRICATION / ENGINE OIL	11
14.	ASSEMBLY DRAWINGS AND PARTS LIST	12
15.	DECLARATION OF CONFORMITY	18

1. QUALITY ASSURANCE / MACHINE BREAK IN

The Beton Trowel nv Surface Preparation System is the product of extensive engineering development designed to give long life and unmatched performance. The SPS's are shipped completely assembled with the exception of attaching the handle, and only require filling with fuel and a brief check of lubricant levels in preparation for operation.

You can help ensure that your Surface Preparation machine will perform at top levels by observing a simple routing on first use. Consider that your new SPS is like a new car. Just as you would break in a new car to the road or any new machine to the job, you should start gradually and build up to full use. Learn what your machine can do and how it will respond. Refer to the engine manufacturer's manual for run-in times. Full throttle and control may be used after this time period, as allowed by material. This will serve to further break in the machine on your specific application, as well as provide you with additional practice using the machine.

We thank you for the confidence you have placed in us by purchasing a Beton Trowel nv Surface Preparation System and wish you many years of satisfied use.

2. SURFACE PREPARATION SYSTEM WARRANTY

Beton Trowel nv agrees to furnish without charge, F.O.B. our plant, a replacement for any part or portion thereof, Beton Trowel nv SPS Machine, save and except, all cutting tools and holders, drive belts, power units, and/or electrical controls which prove upon our examination, to be defective in either material or workmanship within a period of 90 days from date of purchase, provided that notice of such defective part or portion thereof is given to Beton Trowel nv Ltd. within the said period of 90 days. No further or other guarantee or warranty expressed or implied in connection with the sale of the SPS Machine is given and our sole liability consists in replacing defective parts or portions aforesaid. We shall not be responsible for any special, indirect or consequential damages arising in any manner whatsoever.

This guarantee is for the sole benefit of the original purchaser. Our responsibility under this guarantee ends in the case the original purchaser transfers ownership of the SPS Machine, makes any changes or adds any parts or devices not of our manufacture to the SPS Machine.



4. ROUTINE SERVICE INTERVALS

Routine Service Intervals		Each use	After 1.5 months or 50 hrs	Each 3 months or 100 hrs	Each 6 months or 200 hrs	Each 9 months or 300 hrs	Each 12 months or 400 hrs
General Inspection:							
Guards	Check		o	o	o	o	o
Warning stickers	Check		o	o	o	o	o
Wheels	Check operation	o	o	o	o	o	o
Test run	Check operation		o	o	o	o	o
Engine							
Engin oil	Check level	o	o	o	o	o	o
	Change		o		o		o
Engine oil filter	Replace				o		o
Oil cooler	Clean			o	o	o	o
Cooler Fins	Clean		o	o	o	o	o
Air cleaner	Check – clean	o	o	o	o	o	o
	Replace						o
Air Intake Line	Check				o		
	Replace						2 yrs
Fan Belt	Check tightness				o		o
	Replace						500 hrs
Valve clearance	Check-adjust				o		o
Fuel filter	Check & clean			o	o	o	o
	Replace				o		o
Fuel Tank	Clean						500 hrs
Engine Wiring	Check						o
Cage:							
Teeth: (see individual Cage for specifications)	Check wear	o	o	o	o	o	o
	Change						
Shaft: (see Individual Cage for specifications)	Check wear	o	o	o	o	o	o
	Change						

The machine is generally run in very dusty conditions. Engine life will be extended by maintaining a clean engine and using a proper dust control system. Keep the air filter clean at all times. Wash the element in a non-oil based solvent. Squeeze out any residue and allow the filter to dry before reinstalling the air cleaner. Some general maintenance guidelines will extend the useful life of your trowel.

- The initial service for your SPS Machine should be performed after 25 hours of use, at which time your mechanic (or authorized repair shop) should complete all of the recommended checks in the schedule above. The chart on page 6 (six) is handy for keeping a record of the maintenance performed and the parts used for servicing your trowel.
- Regular service according to the schedule above will prolong the life of the surface preparation system and prevent expensive repairs.
- Keeping your SPS Machine clean and free from debris is the single most important regular maintenance operation, over and above the checks in the service schedule above, that can be performed. After each use your SPS Machine should be cleaned to remove any dust and debris from the undercarriage and surrounding components. Use of a power washer will make clean up quick and easy, especially if a nonstick coating was applied prior to use.
- In the Service Schedule above, items that should be checked, replaced or adjusted are indicated by “o” in the appropriate column. Not all SPS models include the same features and options and as such not all service operations may have to be performed. For ease of recording place a checkmark (V) through the “o” when the item is complete. If an item is not required or not completed place an “x” through the “o” in the box.
- All SPS Machines have governed engine speed of 3600 rpm. See engine manufacturer’s manual for exact specifications. Care should be used when making any adjustments to the SPS Machine not to change the governed speed. Running the engine at lower rpm’s will cause the cutters to skip over the surface rather than cut into it. It will create excessive “out-of-synch” vibrations resulting in poor surface results, handling, maneuverability, and discomfort to the operator.
- Failure to have your Surface Preparation System regularly serviced and properly maintained in accordance with the manufacturer’s instructions will lead to premature failure and void the warranty.

5. FOREWORD

It is important that the following information be read carefully in order that the operational characteristics and performance of the Surface Preparation System be fully understood. Proper adherence to operation and maintenance procedures will ensure long life and top performance of your equipment.

6. SAFETY PRECAUTIONS

- Always keep unauthorized, inexperienced, untrained people away from this machine.
- Rotating and moving parts will cause injury if contacted. Make sure guards are in place. Keep hands and feet away from moving parts.
- Fuel the machine only when the engine is stopped, using all necessary safety precautions.
- The engine must always be stopped before attempting any repair or adjustments. Ignition switch should be off.
Danger: Never operate the machine in an explosive atmosphere, near combustible materials or where ventilation does not clear exhaust fumes. Repair fuel leaks immediately. Refer to your engine owner's manual for more safety instructions.
- Be careful not to come in contact with the muffler when the engine is hot, serious burns may result!
- Do not run the air motor without sufficient oil in the lubrication system. The lubricant levels should be checked regularly on gas and air powered units. Refer to manufacturer's manual for amounts.
- Before starting you SPS machine, always raise the cutter cage assembly using the hand knob adjustment, so that cutters do not contact the surface.

SAFETY PRECAUTIONS	
	 DANGER EXPLOSION HAZARD Never operate the machine in an explosive atmosphere, near combustible materials or where ventilation does not clear exhaust fumes.
	 WARNING BURN HAZARD Never come into contact with the engine or muffler when engine is operating or shortly after it is turned off. Serious burns may occur.
	 CAUTION MOVING PARTS Before starting the machine ensure that all guards and safety devices are in place and functioning properly
	 CAUTION MACHINE DAMAGE Advance cutter depth in small increments to avoid premature blade wear or damage.
	 ATTENTION READ OWNERS MANUAL Read and understand operator's manual before using this machine. Failure to follow operating instructions could result in serious injury or death.

7. OPERATING PRINCIPLE

The SPS employs a belt-pulley drive, for the cages which contact the surfaces to be prepared. The hand knob adjustment allows the cages to be raised or lowered as necessary to perform efficient work. The vibration isolators on the bridge make it easier on the operator and the machine, while the hexagonal drive bearing produces more positive cutter engagement. A dust control vacuum should be used to provide a clean work area. The SPS Machine is designed to run at an engine speed (engine take off shaft) of 3600 rpm. (normally considered full throttle).

Never force the cutter head into the surface to a point where the machine starts to bounce. This will minimize results and do more damage to the machine than the work surface. Let the cutters do the work, but make sure you have the best cutter/cage assembly for the job.

8. WORKING WITH THE SPS

We have found that working the machine in a figure “8” pattern, when milling misaligned concrete slabs or joints will produce more aggressive removal of material. The cutters will work against the cut and tend to produce more consistent and faster removal of material. Moving the machine in a straight line tends to create grooves that the cutters will follow. The Tungsten Carbide Tipped cutters produce the longest life in milling applications and should be considered as the best choice, in spite of the higher initial costs. Your time is valuable and when you have to change cutters or even cutter assemblies you are not using the machine to make money.

9. CUTTER LIFE

How long cutters and cages last on a particular job is a difficult thing to predict. There are a number of variables involved which must always be considered. How old/hard is the material you are working with? Are there any hardeners or additives that will slow you down? Are you forcing the cage into the surface? Is the equipment properly maintained? Is the operator familiar with the machine and its capabilities? Do you have the proper cutter/cage set up for the application?

There are additional cutters and cages to those below, but this is a fair representation of estimated rates for production and cutter life. We preset them as a guide only, due to variables such as above

10. STARTING AND STOPPING PROCEDURE

STARTING PROCEDURE (GAS OPERATED):

14B* *WARM CLIMATE*

IMPORTANT: Set the machine in an upright position and adjust the cutter cage to maximum height by turning the height adjustment knob (51) to its farthest position. (This will ensure clearance for the Rotation cage.) Open fuel valve on gas tank. Set throttle lever to “Fast” idle position, set choke to closed position, start engine. Open choke slightly to prevent flooding. Move to “Open” or “Run” position when engine is warm, increase throttle to maximum operation position (3600 rpm).

STARTING PROCEDURE (GAS OPERATED):

* *COLD CLIMATE*

With the machine in upright position, follow same procedure as above but allow longer warm-up period – 3 to 5 minutes. In cold weather, oil is much heavier to move and requires more time to work its way into the moving

parts. If maximum power is not attained, allow further warm-up time. Fill fuel tank with clean gasoline, use safety approved gas containers. DO NOT MIX OIL WITH GASOLINE (USE UNLEADED GAS ONLY.)

STARTING PROCEDURE (ELECTRIC):

With the cage in maximum raised position, plug in power cord to power source. Press the start button. Run-in for two (2) minutes. Press the stop button, then re-start. Ensure your cable is of sufficient size to run the motor properly. (14/3 type S for 220 volt; 16/3 type S for 440 volt.)

STARTING PROCEDURE (AIR):

With cage in maximum raised position, attach air supply (minimum 90 C.F.M. at 90 P.S.I.) turn quick opening valve on. Run in for two (2) minutes. Turn off valve, then restart. The air regulator is equipped with a pressure gauge.

The recommended operating pressure is 90 P.S.I. at 90 C.F.M.; however when the unit is running with no load (cutters not engaged) the gauge will read 40 P.S.I. When the cutters are engaged the indicator needle should rise to 90 P.S.I.

STOPPING PROCEDURE:

With machine in upright position, adjust the cutter cage to maximum height by turning the height adjustment knob (51) to its farthest position. (This ensures clearance for the rotating cage.)

GAS UNIT – Stop engine by depressing kill switch button (53) located at top of handle.

AIR UNIT – Turn off air supply valve (25).

ELECTRIC UNIT – Turn off switch on handle (11).

11. MAINTENANCE

The SPS Machine is generally run in very dusty conditions. Engine life will be extended by maintaining a clean engine and using a dust control system. See owner's manual for a complete maintenance schedule.

AIR CLEANER (GAS UNIT)

Keep air filter clean at all times. Wash away dust and debris using a non-oil based cleaning solvent. Let the filter dry before reinstalling.

LUBRICATION

Always check engine oil regularly. Use proper engine oil as recommended. See chart below. Fill crankcase to levels as recommended in manufacture's engine manual.

SPARK PLUG (GAS UNIT)

Check and clean spark plugs regularly. A fouled, dirty or carboned spark plug causes hard starting and poor engine performance. Set spark plug gap to recommended clearance. Refer to engine manual.

BELT TENSION – IMPORTANT!

If there is excessive belt play, there will be a decrease in the cutting/grinding action, which could cause cage and machine damage. The normal belt play should be 3/8" to 1/2" which is attained by depressing the top section of the belt at the belt guard mounting bracket location. When adjusting the belt make sure that the drive pulley is in alignment with cage pulley. Tighten all engine mount bolts, adjust the two engine-stop bolts, and tighten lock nuts.

DRIVE SHAFT

Keep a coating of grease on the drive shaft and threads for easy installation or removal and longer bushing life.

SPOT CHECKS

Perform as required. Machine should be inspected with ignition in “OFF” position or power disconnected. Do not perform inspections while machine is running.

- Check all fasteners for tightness – machine is subject to vibration.
- Check “V” belt for wear; adjust or replace as required.
- Check that wheels are clean and rotation freely.
- Check that inside of housing is clean; remove any build-up as required.

Check that pulleys are aligned properly to ensure that “V” belt is running true. (i.e. not at an angle.)

12. STORAGE

Before

The following steps should be taken to prepare your SPS gas unit for extended storage.

1. Close fuel shut off valve.
2. Remove excess gasoline from tank.
3. Start engine until it stops from lack of fuel. This will use up all the fuel in the carburetor and prevent formation of deposits due to evaporation of fuel.
4. Remove spark plug and pour 2 oz. of SAE-30 or SAE- 40 motor oil into the cylinder. Slowly crank the engine 2 or 3 times to distribute the oil throughout the cylinder. This will help prevent rust during storage. Replace spark plug.
5. Store the unit in an upright position in a cool, dry, well ventilated area.

After

The following steps are recommended to ensure a smooth, proper startup after a prolonged storage.

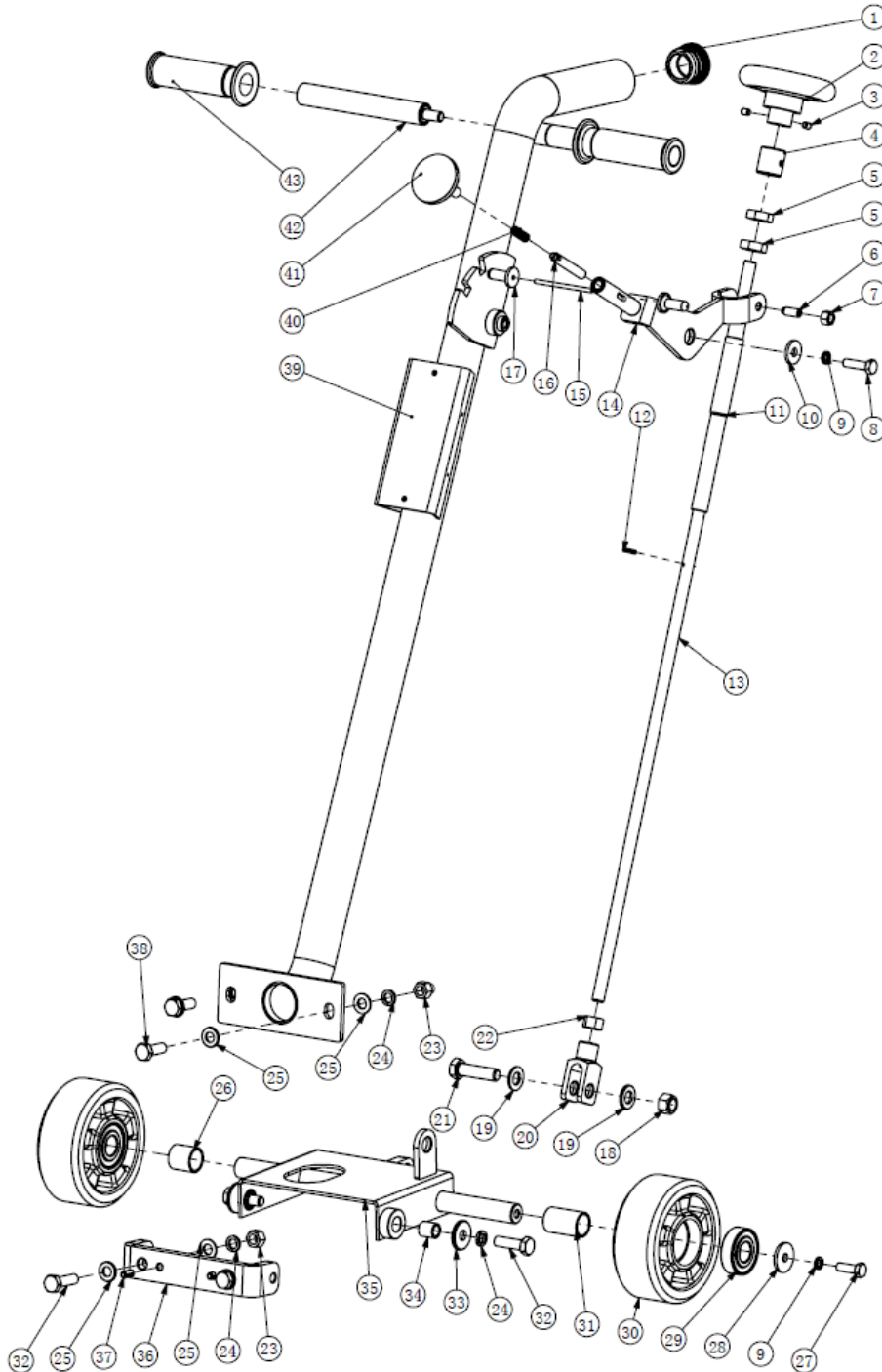
1. Refuel
2. Open shut off valve
3. Start engine. Any excess oil residue will quickly burn off without harming operation.

13. LUBRICATION / ENGINE OIL

Always check engine oil before starting and at regular intervals thereafter. Use proper engine oil as recommended – see chart below. Keep engine oil clean, change accordingly. Fill crankcase to levels as recommended in manufacturer’s engine manual.

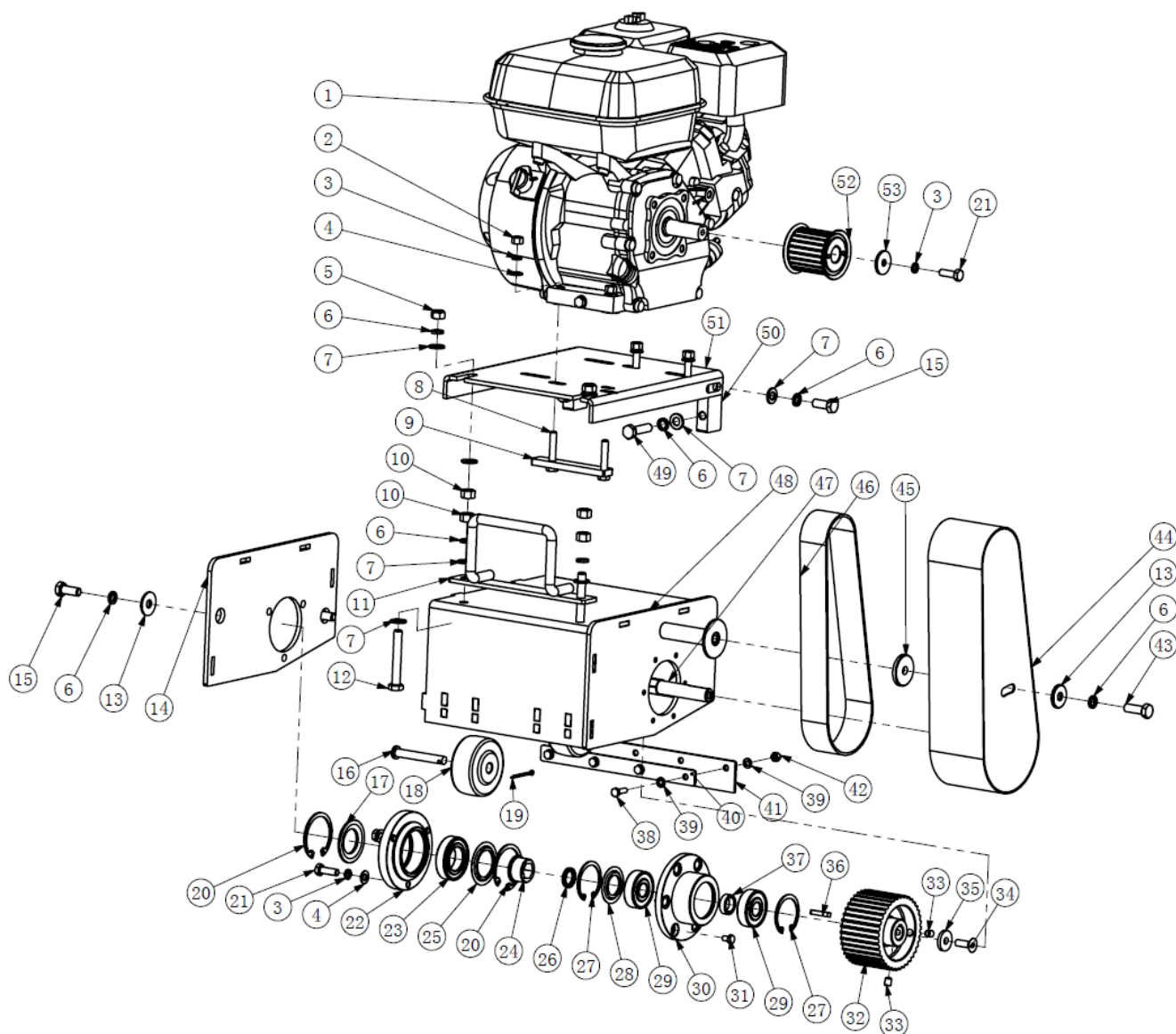
Season Temperature All Seasons
Grade of Engine Oil SAE 10W - 30

14. ASSEMBLY DRAWINGS AND PARTS LIST



HANDLE ASSEMBLY			
Item	Description	Code	QTY
1	RUBBER PLUG	1001-00024-4	1
2	HANDLE WHEEL	SP300100	1
3	SCREW	SP300101	2
4	CYLINDER	SP300102	1
5	NUT	SP300103	2
6	SET SCREW	SP300104	2
7	NUT	SP300105	2
8	BOLT	SP300106	1
9	SW	SP300107	3
10	WASHER	SP300108	1
11	ADJUSTMENT TUBE	SP300109	1
12	SPRING PIN	SP300110	1
13	ADJUSTMENT BAR	SP300111	1
14	LIFT-OFF HANDLE	SP300112	1
15	SHAFT	SP300113	1
16	SPRING	SP300114	1
17	RUBBER FINGER KNOB	SP300115	2
18	NYLON NUT	SP300116	1
19	WASHER	SP300117	2
20	FORK HEAD	SP300118	1
21	BOLT	SP300119	1
22	NUT	SP300120	1
23	NUT	13100000	4
24	SW	12100000	6
25	WASHER	11100000	8
26	SPACER TUBE	SP300121	1
27	BOLT	SP300134	2

Item	Description	Code	QTY
28	WASHER		2
29	BEARING		4
30	WHEELS	SP300122	2
31	SPACER TUBE	SP300123	1
32	BOLT	15100350	4
33	WASHER	11103003	2
34	BUSH	1001-00035-4	2
35	WHEEL SHAFT	1001-07000-3	1
36	WHEEL BALANCE HOLDER	1001-00003-2	1
37	SPRING PIN	19061603	2
38	BOLT	15100300	2
39	BAR		1
40	SPRING	SP300124	1
41	KNOB	SP300125	1
42	HANDLE	SP300126	2
43	GRIP	SP300127	2



HOUSING FOR CUTTER			
Item	Description	Code	QTY
1	HONDA GX160	HONGX160QX4	1
2	NUT	13080000	4
3	SW	SP300128	8
4	WASHER	SP300129	7
5	NYLON WASHER	13100001	2
6	SW	12100000	11
7	WASHER	11100000	12
8	BOLT	15080450	4
9	BASE PLATE FOR ENGINE	1001-00015-2	2
10	NUT	13100000	4
11	HANDLE BAR	1001-01000-3	1
12	BOLT	15100700	2
13	WASHER	11103003	3
14	HOUSING COVER RIGHT	1001-00006-2	1
15	BOLT	15100250	4
16	SHAFT	SP300130	2
17	COVER	1001-00008-4	1
18	WHEEL	SP300131	2
19	PIN	SP300132	2
20	CLIP	SP300133	2
21	BOLT	SP300134	4
22	BEARING HOUSING RIGHT	SP300135	1
23	BEARING	SP300136	1
24	HEXAGON CAP	SP300137	1
25	PROTECTION (RIGHT)	SP300138	1
26	COLLAR	SP300139	1
27	CLIP	SP300140	2

Item	Description	Code	QTY
28	PROTECTION (LEFT)	SP300141	1
29	BEARING	SP300142	2
30	BEARING HOUSING LEFT	SP300143	1
31	BOLT	SP300144	6
32	SHAFT PULLEY	SP300145	1
33	SCREW	SP300146	2
34	SCREW	16082504	1
35	WASHER	11082604	1
36	KEY	SP300156	1
37	COLLAR	1001-00005-1	1
38	BOLT	15060200	4
39	WASHER	11060000	8
40	FENDER PLATE	1001-00014-2	1
41	FENDER	1001-00030-4	1
42	NYLON WASHER	SP300154	4
43	BOLT	15100300	1
44	BELT COVER	1001-05000-3	1
45	WASHER	11104005	1
46	BELT	SP300147	1
47	HEXAGON SHAFT	SP300148	1
48	HOUSING FOR CUTTER	1001-08000-3	1
49	BOLT	15100400	2
50	BASE PLATE SUPPORT	1001-00002-2	2
51	BASE SUPPORT	1001-00001-2	1
52	GEAR	SP300149	1
53	WASHER		1

15. DECLARATION OF CONFORMITY

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

Model : BTSP10H

We Beton Trowel NV

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

Declarons sous notre responsabilite que le produit cette declaration est conforme aux norms suivantes ou d'autres documents habituels.

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

Declaramos bajo nuestra unica responsabilidad que el producto en lo que esta declaracion concierne, es conforme con la siguiente normative u otros documentos.

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

Dichiariamo sotto la ns. Unica responsabilita che il prodotto al quale questa dichiarazione si riferisce, e fabbricato in conformita ai seguenti standard e documenti di normative.

EN 349.1993 EN ISO 4872.1978 EN 12100-1.2003 EN ISO 5349-2.2001

EN 12100-2.2003 EN 418.1993 EN ISO 5349-1.2001

Following the provisions of Directives:

Suivant les directives determinees:

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



Responsible Technical File :

Chris Livingston for

Beton Trowel NV

Nijverheidsstraat 10

B-1840 Londerzeel

Belgium

Tel 0032 52315350

Fax 0032 52303739

30/09/2019