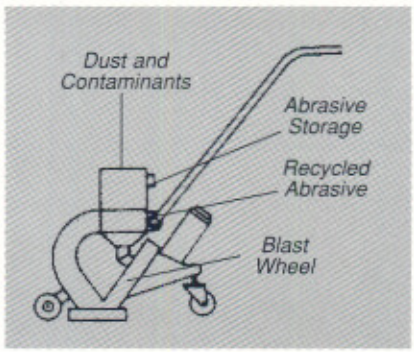
BLASTRAC
MODEL 1-8EZ
PORTABLE BLAST CLEANING SYSTEMS

PORTABLE SOLUTIONS
FOR SURFACE PREPARATION

Featuring a cleaning capacity up to 160 sq. ft./hr., manually operated Model 1-8EZ is engineered for smaller sized flooring surface applications, edging, or other confined area preparations.



APPLICATION

Blastrac portable abrasive blasting equipment is industry's most cost-effective and environmentally safe way to remove dirt, paint, coatings and other contaminants from floor surfaces. The patented "one-step" machine economically cleans and profiles surfaces of concrete or steel. Major applications for the 1-8EZ include warehouse or plant line stripes, edging and touch up in confined areas.

TECHNOLOGY

The shot blasting system incorporates the high performance airless centrifugal wheel for propelling blast media in a controlled pattern and direction. Metal abrasive thrown by the rapidly rotating blast wheel scours the concrete surface and rebounds along with removed contaminants into a recovery chamber. Pulverized abrasive, dust and contaminants are removed by a separate dust collector. Very little abrasive is lost, and the usable media is returned to the storage hopper for recirculation by the blast wheel.

U.S. FILTER
BLASTRAC

PARTS FOR THE 1-8EZ

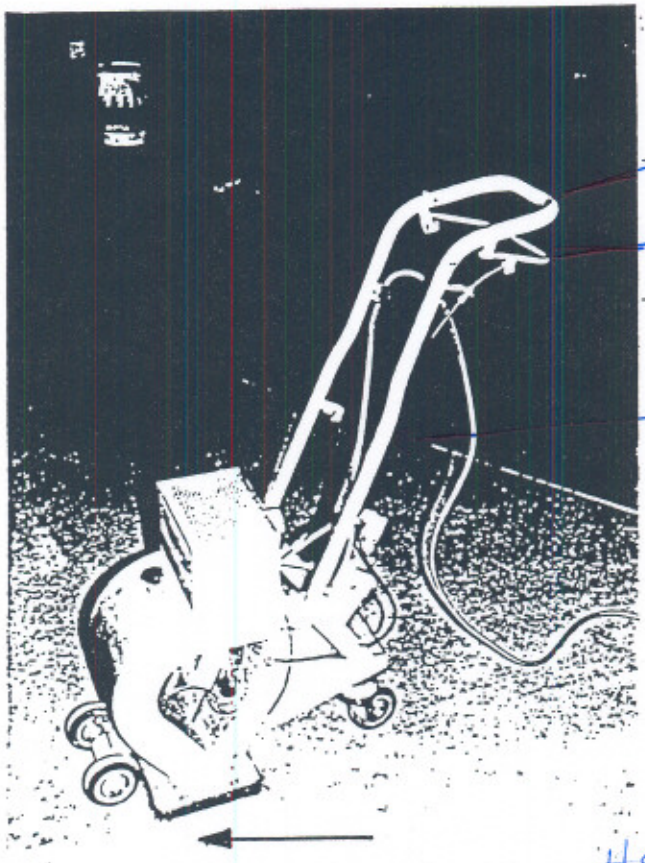
DESCRIPTION	TILGHMAN PART #	BLASTRAC PART #	MANUAL PAGE #	USED ON
Tune-up kit, comprising of: (B20189) Blast Wheel and Control Cage	691748	6788230	16 / 29 / 37	The Blastwheel
110V Motor (Makita Motor) 970/030	B21654	N/A		
Anchoring clip for Control cage (Retaining Clips)	N/A	9698030	31	The Blast Pattern
Blast Wheel Lock Nut	959639	N/A	16	The Blastwheel
Blast Wheel Motor	B21654	9701030		
Brushes for Makita Grinders (motors) 2/Set	#191957-7	P000127		
Brush Seals - Front/Rear	B20062(001623)	7162890	21	Shot Seals
Brush Seals - Side	B20063(001624)	7162880	21	Shot Seals
Castors - Front	N/A	N/A		
Castors - Rear	971518	6753560		
Clip	968306	9683060	17	Shot Separator
Deflector	960858	9608580	18	Shot Separator
Feed Spout	967577	9675770	19 / 31	Shot Solenoid Valve
Front Magnet	960705	N/A	21	Shot Seals
Lock Nuts for Side Liners (Fixing Screws 10mm)	N/A	9695860	37	Spare Parts
Magnetic Valve Assy	B20225	P000001	43	Drawing
Mesh for Shot Container	004586	N/A	18	Shot Separator
Separator	972060	9720600	17	Shot Separator
Shot Control Cable	B20204	6933320	19	Shot Solenoid Valve
Side Liner - Left	969580	9695800	37	Spare Parts
Side Liner - Right	969581	9695810	37	Spare Parts
Side Magnet	N/A	9697800	21	Shot Seals
Solenoid Valve	B20910	N/A	19	Shot Solenoid Valve
Solenoid Valve Lever	B20072	N/A	19	Shot Solenoid Valve
Star Grip	975615	9756150	17	Shot Separator

On/off Switch (Limit) Screen — BB20910 4973200 — $26.62/cost — P001021 Shot Separator.

PARTS FOR THE 1-8EZ

DESCRIPTION	TILGHMAN PART #	BLASTRAC PART #	MANUAL PAGE #	USED ON
Upper Liner - Top	959676	4973070	18 / 37	Spare Parts
Wheel	960682	N/A		
Wheel Hub	976310	~~N/A~~ 69627S0	29	Blast Wheel Unit Maint
Wheel Support (4 bolt holes)	B20064	N/A		

BLASTRAC MACHINE ASSEMBLIES
1-8EZ



Handle only

Steering Handle BB20069 (A)
BB20199 (B)
NO BT P/N

Direction of travel

~~Cost~~ List $ 110.00
7-26-01 (as)

Fig. 4

Terms:

1. Operating lever
2. Separator
3. Blast wheel drive
4. Rebound chamber
5. Magnets
6. Blast wheel

THE BLAST WHEEL

The heart of the patent shot blast machine is the blast wheel. It throws the shot onto the surface to be cleaned by centrifugal force. The wheel is fitted in a protective housing that is lined with replaceable wear plates. The wheel is driven by an electrical motor.

Facing the centre of the blast wheel are 4 spigots, the impeller, which feeds the shot in measured quantities onto the blades of the rotating wheel. On top of this is the control cage that regulates the flow of shot once it has been carefully adjusted.

Fig. 5

1. Blast wheel 6788230
   >Tune-up Kit 691748
2. Control cage
3. Blast wheel locking nut 959639

16

THE SHOT SEPARATOR

Fitted directly onto the rebound chamber is a system which separates contaminants from the shot. After cleaning, the shot is again fed to the shot circuit.

So that no coarse contaminants can get into the blast wheel, a mesh is fitted to the floor of the shot container. The separator can be removed by loosening a star grip so that the mesh can be cleaned.

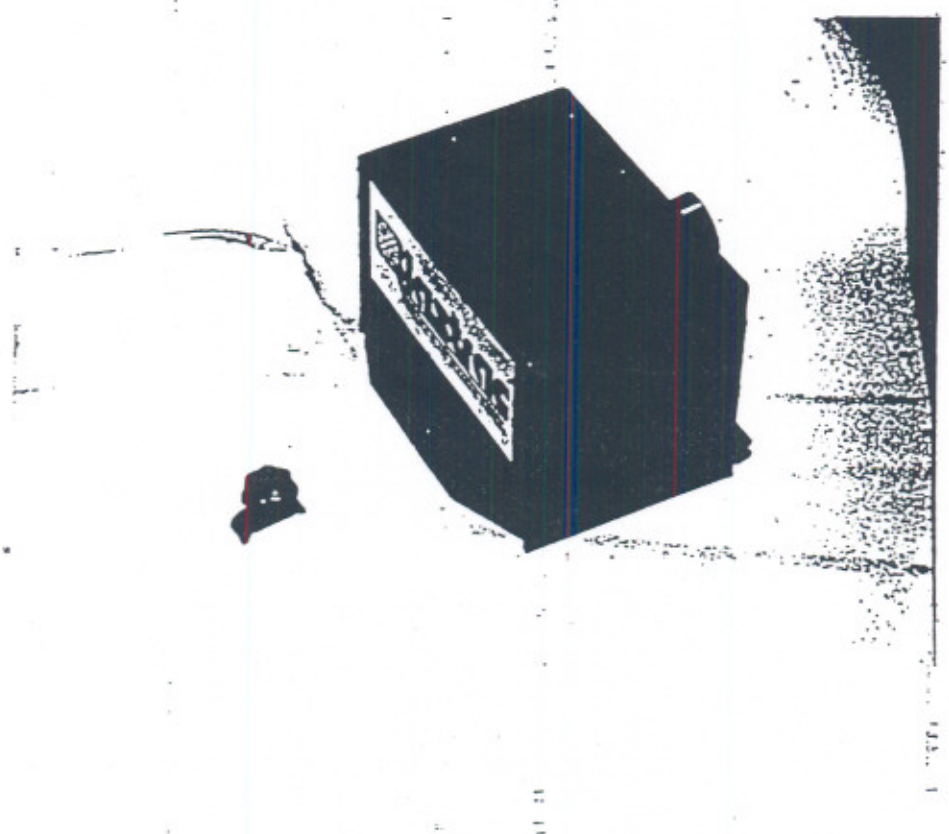


Fig. 6

1.	Separator	972060
2.	Star grip	975615
3.	Clip	968306

L same as Control cage
Clamp on 1-8DEC
P/N 9700120

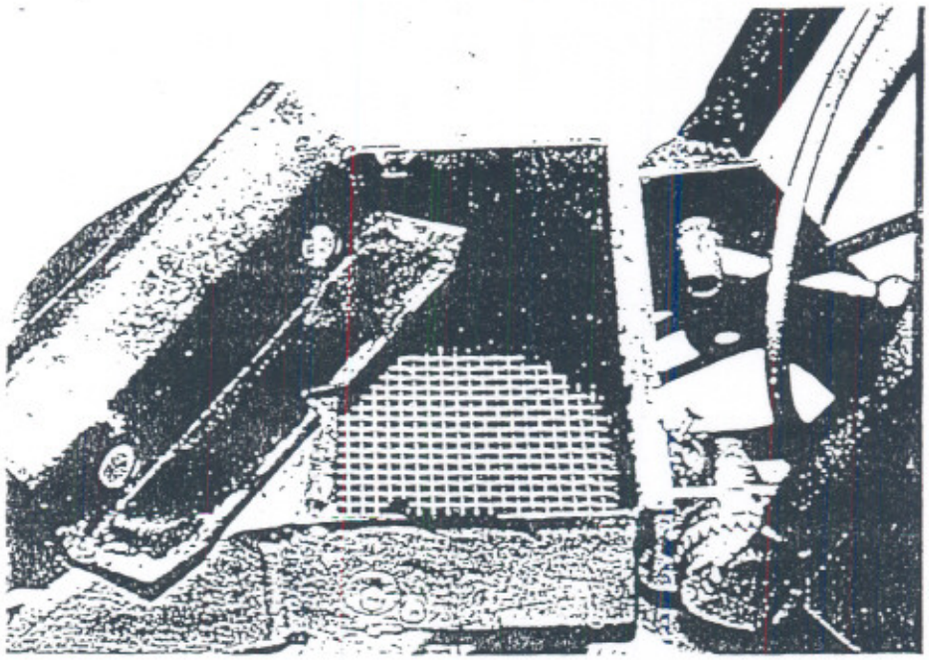


Fig. 7 Replaceable parts in the separator

1.	Mesh for shot container	004586
2.	Deflector	960858

B/T # N/A
4973200
8 5/8" x 3 1/2"

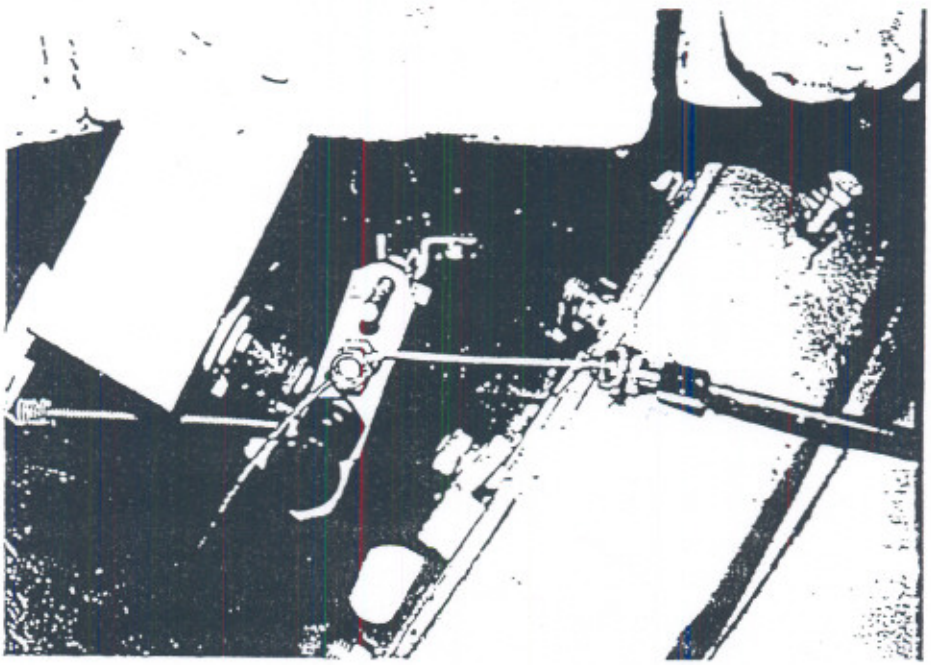
Screen dim s/B
8 5/8 x 5 3/4

18

We have 9718020
1-80MK III 8 5/8 x 6

THE SHOT SOLENOID VALVE

A permanent magnetic valve is fitted between the shot container and the feed pipe to regulate the flow of shot to the blast wheel. Any change in the solenoid valve opening alters the amount of shot fed in. The valve is hand-operated and can be set so that any amount of shot can flow through. The optimum blast performance is achieved when the actuating lever is pulled up to the stop and the solenoid valve is opened at most up to the vertical position.



(Limit)
On/off switch -> BB20910- $ ____ cost P601021

Fig. 8

1. Feed spout	967577	
2. Solenoid valve	~~969819~~	B20910 , ist as
3. Solenoid valve lever	980134	B20072 , cost as of 7 BT # N/A
4. Shot control cable	960682	B20204 - L6933320 Cable

Wheel
BT # N/A

L6962870 spring/Return

This lever, arranged on the operating lever, controls the flow of shot to the blast wheel via the shot solenoid valve. The valve is manually operated and can be blocked by a stop bolt.

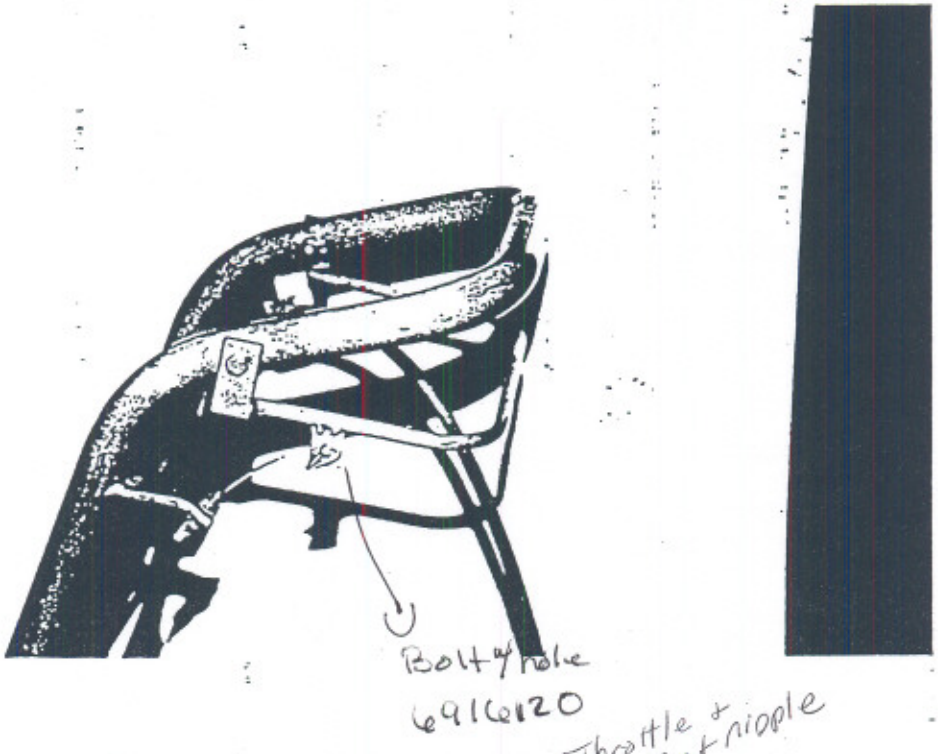


Fig. 9 Shot controls

1. Shot control lever

Control lever blast wheel on/off

When the control lever that controls the shot flow is actuated, the blast wheel motor switches on automatically in order to prevent damage due to operator error. If one lets go of the control lever, it snaps back into place due to elastic force, and the current to the motor is interrupted immediately. At the same time the solenoid valve closes and the shot feed is stopped.

THE SHOT SEALS

Magnetic seals are fitted to the front and the sides of the blast head. The blast head is surrounded by brush seals.

The seals should seal the blast area so that no shot can escape.

The correct height setting for the magnetic seals (approx. 6 mm) is very important for the optimum function of the machine. The setting can be made using adjusting screws on the wheels of the machine.

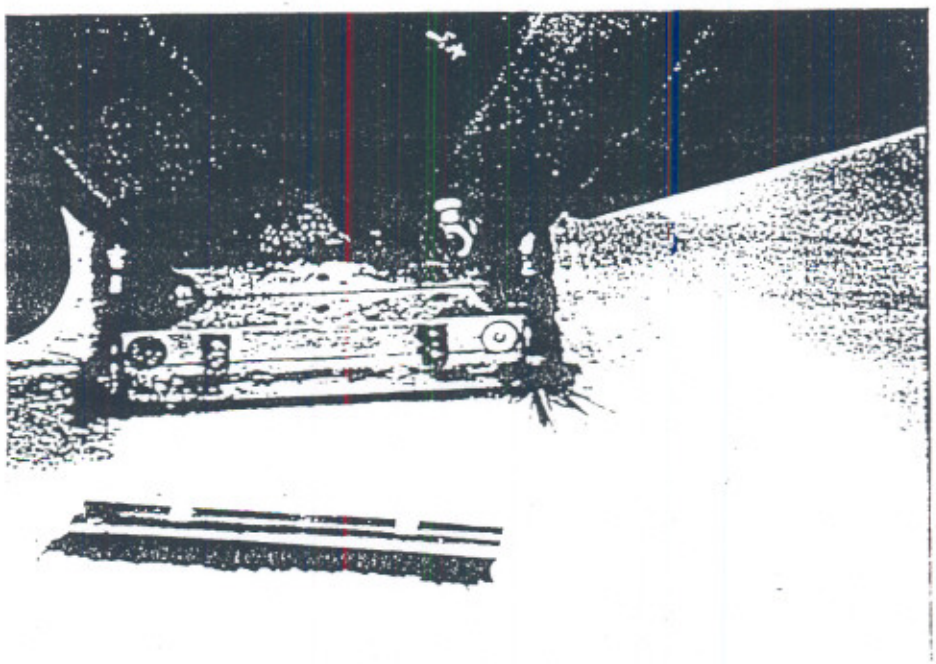


Fig. 10

1.	Front magnet	960705
2.	Side magnet	969780
3.	Brush seal	
Till # B20063	side	001624
Till # B20062	front/rear	001623

THE IMPORTANCE OF THE ROTATING BLAST WHEEL PARTS

It is very important that the rotating parts (blast wheel) are in good condition and are not out of balance, in order to prevent the excessive vibration of the machine parts. Excessive vibration of the machine parts can adversely affect the operation and life of the blast wheel motor bearings.

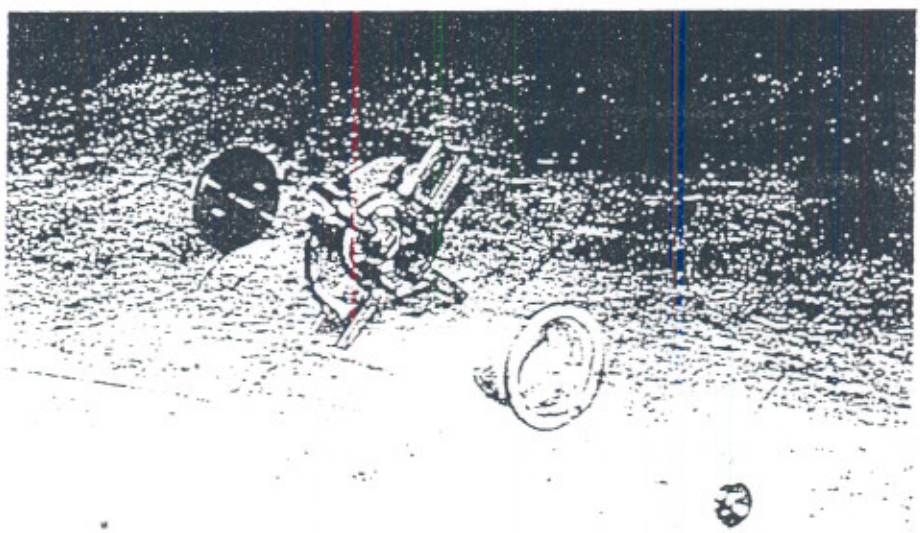


Fig. 12 Blast wheel unit

1.	Locking nut	959639
2.	Tune-up Kit	B20189
3.	Wheel hub	976310

THE BLAST PATTERN

The shot that leaves the blades of the blast wheel is not thrown indiscriminately in all directions. The scatter is restricted to an angle of approx. 50° which is set by a control cage that encloses the impeller. The position of the window in the control cage determines the blast pattern.

The correct setting of the control cage and thus the blast pattern is the most important factor for optimum working with the Blastrac machine 1-8EZ

Incorrect setting of the control cage leads to extremely high wear rates and premature blasting-through of the wear plates of the blast wheel housing, as well as reduced cleaning power and a possible loss of shot rebound energy.

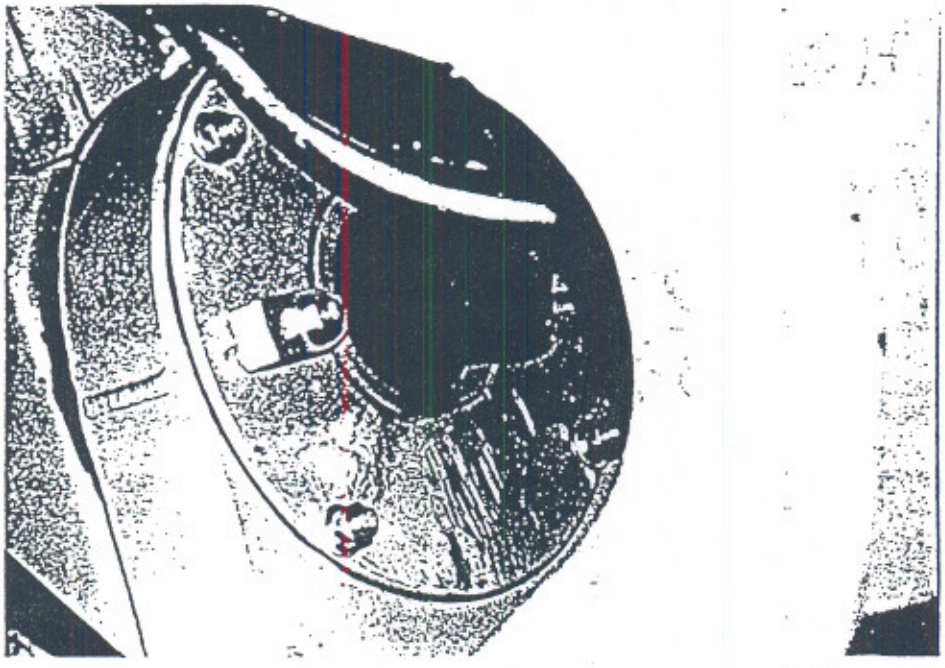


Fig. 13

1. Retaining clips 969803
2. Control cage
3. Feed spout 967577

The position of the control cage has been set at Blastrac and is fixed by pins and recesses Do not remove any fixings.

SPARE PARTS SUBJECT TO A LOT OF STRESS

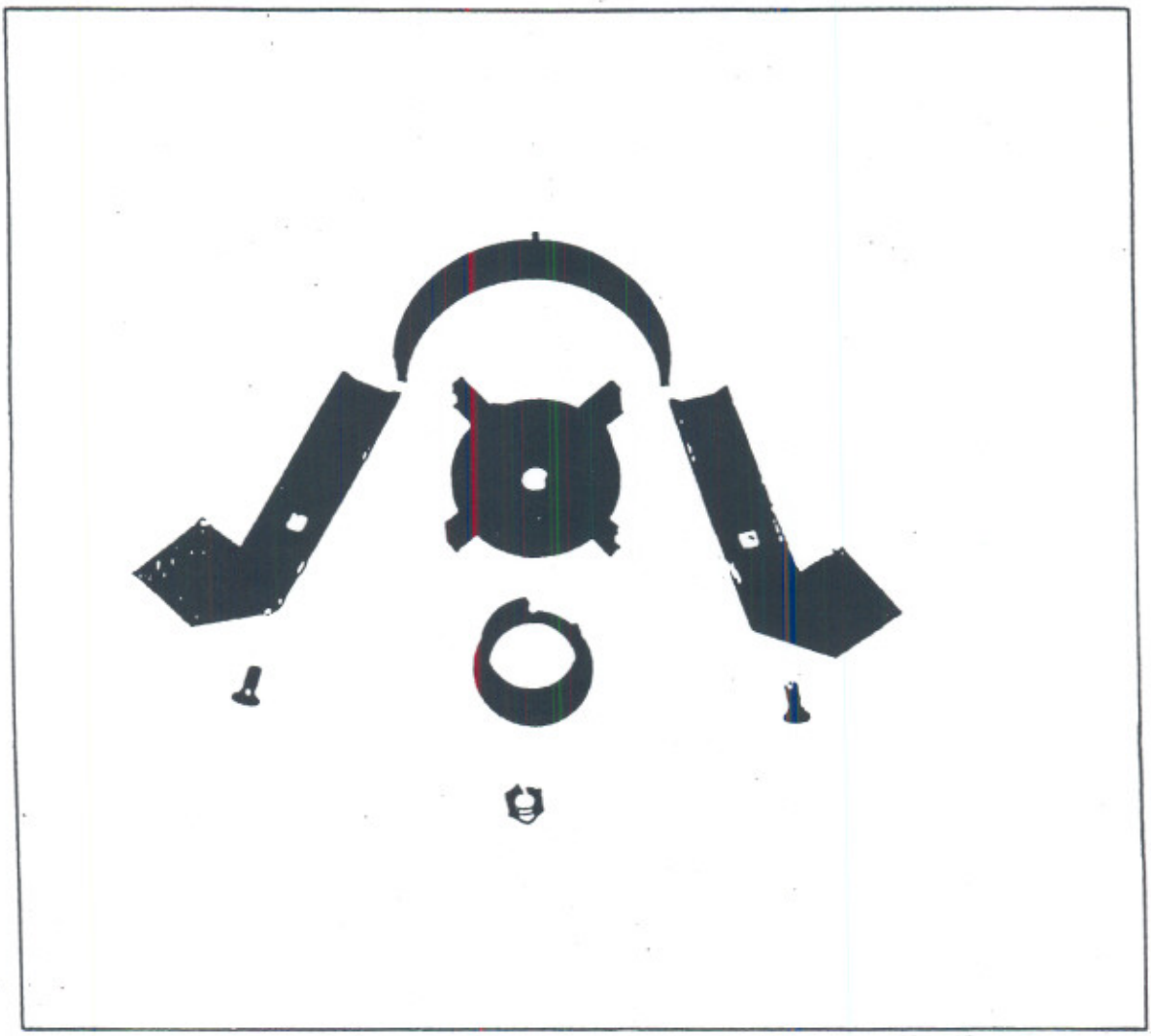


Fig. 16

1. Blast wheel	> Tune-up kit	6788230
2. Control cage		
3. Liner - right side		969581
4. Liner - left side		969580
5. Liner - top		497307
6. Fixing screw w/nut		969586

LIST OF WEAR PARTS

Part	Inspection Interval	Sign of Wear	Repair
Tune up kit (blast wheel, control cage).	10-20 h	Blast wheel blades worn down to 1/3, deep furrows in blades.	Replace with new tune-up kit,. undo the nuts.
Feed spout	100 h	Wear	Replace with new feed spout.
Liners in the blast wheel housing.	50 h	Worn down to 1/3 of the original thickness.	Replace with new liners.
Rebound chamber	100 h	Weld seams worn.	Blastrac service to replace weld seams.
Deflector plate in the separator.	100 h	Wear mainly on the weld seams.	Replace weld seams, fit new rebound plate if necessary.
Shot storage container separator.	150 h	Wear mainly on the weld seams.	Blastrac service to replace weld seams.
All round brush seal.		Daily Wear on bottom edge especially on uneven floors.	Replace with new seal.

REPLACING THE TUNE-UP KIT AND THE LINERS

The tune-up kit consists of the BLAST WHEEL and the CONTROL CAGE.

To dismantle and replace the tune-up kit and the liners follow the instructions below:

Remove the feed spout by drawing it out of the housing. Then undo the retaining clips and take out the control cage.

Undo the 4 screws on the front cover and remove the cover.

You now have access to the blast wheel and the fixing screws.

Hold the blast wheel firmly in order to undo the fixing screw. Now take the blast wheel out of the housing.

Once the blast wheel is removed, check the liners for wear and replace if necessary.

Remove the right and left-hand liners by undoing the fixing screws and drawing the plates out of the housing. To remove the upper liner undo the lock nut and draw it out through the lower opening likewise.

To fit the liners proceed in the reverse order.

Push the upper liner through the blast wheel housing opening, guiding the threaded pin through the borehole. Tighten the nut lightly by hand and undo the two forcing screws.

Position the side liners in the housing so that the borehole in the liner plate lines up with the borehole in the housing. Place the fixing screw from the inside through the borehole and tighten it securely with the nut.

Ensure that the upper liner is flush with the edges of the side liners. You can do this by turning the forcing screws slightly so that the upper liner presses against the side liners. Tighten the fixing nut of the upper liner

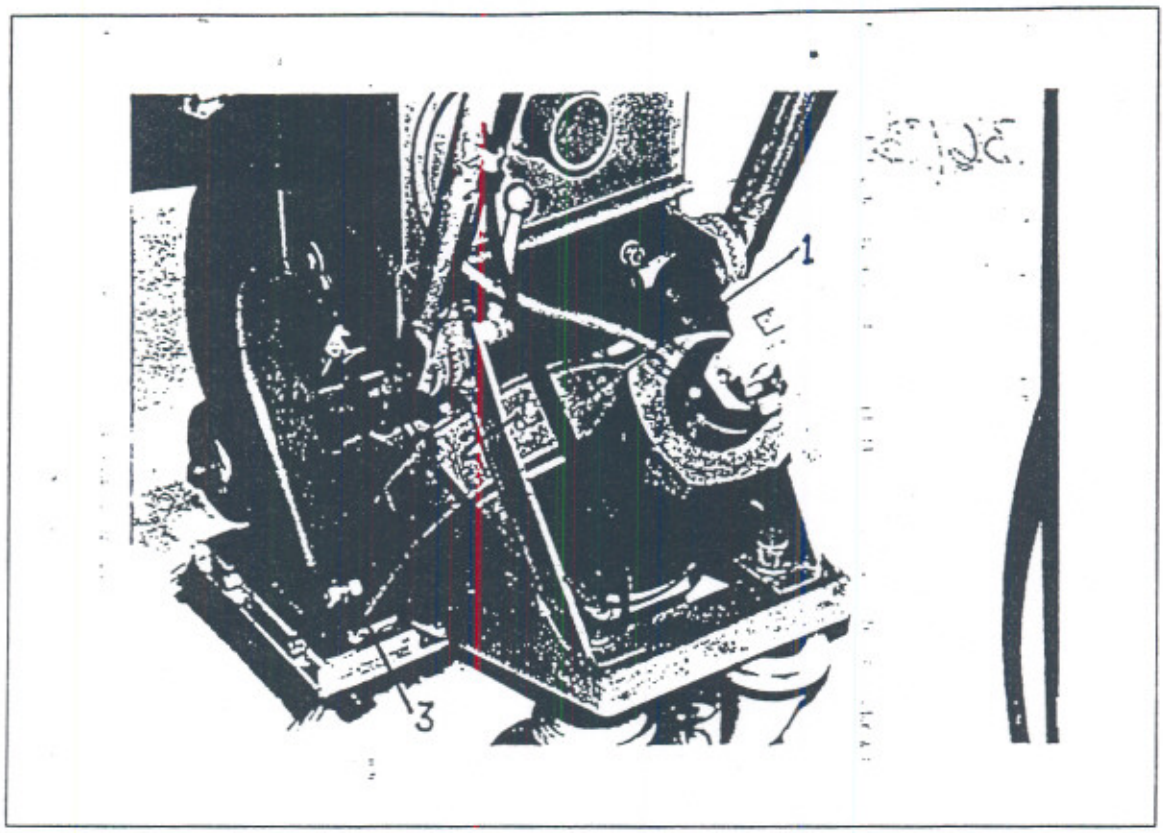


Fig. 17

1. Fixing nut for upper liner
2. Forcing screws for upper liner
3. Fixing screw for side liner

Fit the blast wheel by inserting it through the opening in the housing and placing it on the pintle of the wheel hub. Tighten it with the fixing screw.

Position the front cover and screw it up tightly. Place the control cage in the blast wheel and clamp the cage with the clamps so that the blast wheel runs freely.

Place the feed spout in the housing.

TROUBLESHOOTING

A THOROUGH KNOWLEDGE OF THE REGULATIONS AND WARNINGS, AS DESCRIBED IN THE CHAPTER "SAFETY REGULATIONS", IS REQUIRED IN ORDER TO CARRY OUT ANY MAINTENANCE WORK ON THE INSTALLATION. BEFORE ATTEMPTING TO CARRY OUT INSPECTIONS OR SERVICING WORK ENSURE THAT YOU MEET THESE REQUIREMENTS.

Defects	Possible causes	Remedy
Excessive vibration indicates that the blast wheel is running out of balance. Can lead to damage to the bearinmgs.	1. Blast Wheel worn unevenly.	1. Replace the tune-up kit.
	2. Worn or broken blast wheel blades.	2. Broken blades lead to unbalance and cause damage to other parts. Replace the tune-up kit and remove all broken-off parts from the machine.
Unusual noise, rotating parts may be running out of balance. Can lead to malfunction and heavy wear.	1. Too little play or poor alignment of the rotating parts with the control cage.	1. Check the alignment of the rotating parts (blast wheel with control cage).
	2. Loose or incorrectly set	2. Check that screws and all parts are secure.
Excessive wear in the blast wheel housing and rebound chamber.	1. Control cage incorrectly set.	1. Shot flow is directed onto housing and not onto the surface to be blast cleaned. Carry out a blast test.
Escaping shot.	1. Poor sealing.	1. Check all seals and replace
	2. Setting of shot solenoid valve.	2. Check position of shot valve. If closed, OK, replace if necessary.
Shot staying on surface or shot escaping from blast head..	1. Height of seals incorrectly set. 2. Worn seals. 3. Poor quality shot 4. Tune-up kit worn.	1. Set magnet height 2. Replace seals. 3. Contact Blastrac. 4. Replace tune-up kit.
Contaminated shot.	1. Filter producing too little suction, so that dust remains in the shot.	

THE MOST IMPORTANT SPARE PARTS

1-8EZ

QUANTITY	DESCRIPTION	ARTICLE NO.
1	Tune-up kit, comprising: Blast Wheel and Control Cage	6788230
1	Blast wheel lock nut	4973110
2	Anchoring clip for control cage	9698030
1	Side liner - right	9695810
1	Side liner - left	9695800
1	Upper liner	4973070
4	Fixing screw w/nut	9695860
1	Front magnet	6962800
2	Side magnet	9697800
2	Brush seals front/rear	7162890
2	Brush seals - side	7162880
1	Shot control cable	6933320
2	Casters - front	6753540
2	Castors - rear	6753560
1	Blast Wheel motor	9701030
1	Wheel hub	4973120