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OPERATION MANUAL

ROTOBLAST PIPE INTERNAL CLEANER

8"-36"

(PART NO. 0221-001/C)

IMPORTANT WARNING FOR SAFER BLAST CLEANING

1. Use protective equipment: Abrasive-resistant clothing, safety shoes, leather gloves, ear protection, CE-approved air-fed helmet. Air for helmet must be supplied by a breathing air compressor or through a helmet air filter.
2. Check for possible silicosis hazards. Avoid dust.
3. Do not blast with damaged or worn equipment.
4. Point nozzle only at area being cleaned.
5. Use only proper dry and well-screened abrasives specifically intended for blasting.
6. Keep unprotected workers out of the blast area.
7. Before blasting:
 - Check fittings and hose for wear.
 - Safety-wire couplings together.
 - Check helmet filters and air supply.
 - Check pop-up valve for alignment.
 - Test remote controls.
 - Make sure blast machine is adequately grounded.
8. Do not weld on blast machine, this voids approval.
9. Do not substitute any parts or modified equipment in any way.

ROTOBLAST INTERNAL PIPE CLEANER

GENERAL DESCRIPTION

The Rotoblast tool cleans the interior of pipes up to 40' long and ranging in size from 8" (210 mm) to 35" (890 mm) I.D. The tool connects to most abrasive blasting machines in place of a standard nozzle. As the tool passes through the length of the pipe being cleaned, abrasive is ejected by two special nozzles mounted on a rotating head. Optimal rotating speed is controlled by the braking system. An adjustable centering carriage supports the tool through the pipe internal. The chart below shows the recommended centering legs, nozzle sizes and compressor capacities for different pipe diameters.

IMPORTANT WARNING

**Failure to perform proper maintenance, particularly when dust seals are involved, will result in severe damage to this tool.
Read all the instructions carefully.**

SET-UP AND OPERATION

Equipment and materials required:

The system set-up for the Rotoblast operation is the same as for any other blast cleaning operation, i.e. an air compressor, an optional moisture separator, a blast machine, a helmet air supply system.

Consult the chart below to determine the proper carriage size.

Abrasive to be used for optimal operation is between 16 (1.2 mm) to 35 (0.5 mm) mesh size, except for Aluminum Oxide and Silicon Carbide (sand). These two abrasives shorten the tool's life unacceptably.

Centering carriage:

The carriage fits to the Rotoblast as one assembly.

It's consists of two collars, three two-wheel roller bars and four sets of centering legs (6 legs p/set).

Pipe I.D.	Nozzle size	Centering Legs	Compressor Size
8" - 10" / 210 mm-260 mm	6.0 mm x 45 orifices	12 cm	250 cfm / 7 cbm
11"-15" / 260 mm-380 mm	8.0 mm x 45 orifices	19 cm	365 cfm / 10.5 cbm
15"-23" / 380 mm-580 mm	9.5 mm x 45 orifices	29 cm	600 cfm / 17 cbm
23"-35" / 580 mm-890 mm	9.5 mm x 100 orifices	46 cm	600 cfm / 17 cbm

Set-up:

Select the appropriate set of centering legs; mount them to the collars and roller bars. Nuts and bolts are provided with the Rotoblast set.

- Mount the centering legs on the roller bar according to drawing.
- With the centering legs in place at the right angles to the collars, the wheels should be perpendicular to the center line of the tool.
- Insert the tool in the collar and fix it with the locking screws.

Operation:

Before operation, check the rotating head on drag.

There should be some drag, caused by the leather dust seal, to protect the ball bearings. If the head rotates without drag caused by the tightening of the leather dust seal, tighten the rubber lined nipple (pos.13) at the rear of the unit and lock it with the locking nut (pos.14) for the rear end plate (pos.11).

Couple the blast hose to one end of the pipe lance and the Rotoblast to the other end with CFT couplings (pos.22-23) (or leave the lance out). Pipes to be cleaned can be kept in stacks. Insert the Rotoblast just inside the pipe with the blast hose running through the pipe.

Now apply air only to the tool and check that no air or dust is escaping from the four pressure relief holes in the rear end plate (pos.3 & pos.11). If so, the pressure on the leather dust seal is insufficient or it's worn. A worn-out dust seal causes severe damage to the tool within several minutes.

Having checked the Rotoblast nozzle's add abrasive to the air. The air/abrasive mixture to the tool should be rich. A mixture too lean causes premature wear on the rotating head. Pull the Rotoblast towards you very steadily. The cleaning result is determined by the speed of movement. Before cleaning a pipe, always check for drag.

MAINTENANCE

Leather dust seal (pos.10):

The seal must be kept under adequate pressure to protect the bearings. It must never be allowed to wear through. On a new tool with your choice of abrasive, check the leather dust seal every 3 hours for wear.

Drag should be checked before the cleaning of each new pipe.

To replace the leather dust seal, loosen lock nut (pos.14) and unscrew the rubber lined nipple (pos.13). Now remove the rear end plate (pos.11).

Be careful with the tungsten carbide washer (pos.12), do not drop it.

Clean the exposed bearing seal (pos.9) and the grooved end to the tube casting (pos.6).

Lubricate the exposed parts with Vaseline or cup grease and install a new leather seal (pos.10) with the smooth side towards the bearing seal (pos.9).

Also, when you replace the bearing seal (pos.9) position the lip inside the bearing to the end of the tube (pos.6) on the side of the rear end plate (pos.11). After re-assembly, set the proper drag.

Tungsten Carbide Washer (pos.12):

Replace the washer before the opening gets wider than the one of the tube casting.

Nozzles (pos.29-33):

Rotate both blast nozzle $\frac{1}{4}$ turn each day to create even nozzle wear for longer nozzle life.

Nozzle Head (pos.1) and Plug (pos.2):

Replace the nozzle head plug (pos.2) every 8 hours, unless experienced longer or shorter life (life is influenced by operating pressure, type of abrasive and type of nozzle).

Also replace the nozzle head when it's worn out. When removing or replacing either the nozzle head or plug, remove the set screw (pos.17) from the brake housing (pos.3) and insert a proper size screwdriver into the hole to prevent the tube casting from turning.

Brake Lining (pos.5):

Inspect this part daily. Replace before it wears so thin that it damages the brake shoe or housing (pos.3)

Lock Ring / Bearing Seal (pos.7 & pos.9):

To replace tube casting (pos.6) or bearing (pos.8), the lock ring (pos.7) must be removed from the tube after the bearing seal (pos.9). Never re-use the lock ring (pos.7) or bearing seal (pos.9).

TROUBLESHOOTING

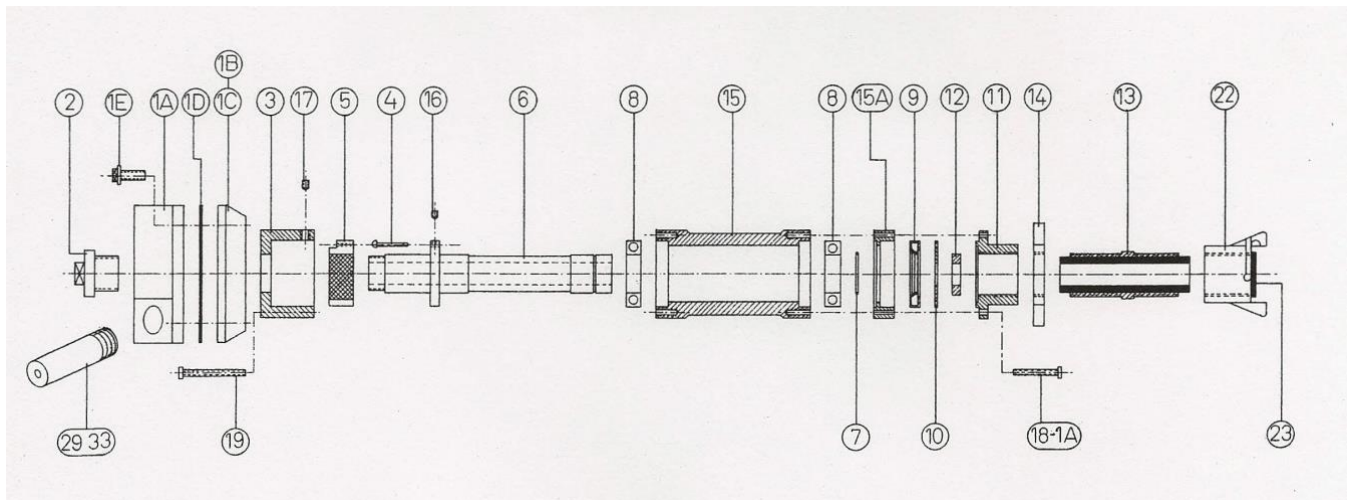
Problem	Cause	Remedy
Abrasive or air escaping the holes in the rear plate.	Leather dust seal is not tight enough. Leather dust seal is worn out.	Tighten rubber lined nipple (pos.13). Check leather dust seal (pos.10).
Nozzle head does not rotate or rotates too slowly.	Insufficient air pressure. Plugged nozzle. Excessive pressure on seals.	Check compressor and hoses. Remove obstruction or nozzle. Loosen rubber lined nipple (pos.13).
Nozzle head rotates too fast.	Worn out brake (pos.5). Nozzle are worn out. Leather dust seal too loose.	Replace brake (pos.5). Replace Nozzle. Tighten rubber lined nipple (pos.13).
Vibrating unit.	One nozzle is clogged. Unbalanced nozzle orifices. Loose centering carriage.	Remove obstruction or nozzle. Use two identical nozzles. Tighten all bolts on carriage.
Rotoblast runs hot.	Oil residue on brake lining.	Clean both brake & housing.
Rotoblast runs too slow and hooks at point in the Cycle.	Damaged leather dust seal. Damaged brake shoe and/or lining. Brake housing worn out or damaged.	Change leather dust seal. Change complete brake shoe (pos.5). Change brake housing (pos.3).
Rotoblast stop after minutes of rotating without abrasive.	Damaged bearing under pressure.	Change bearings (pos.9 2x).

PART LIST MANUAL

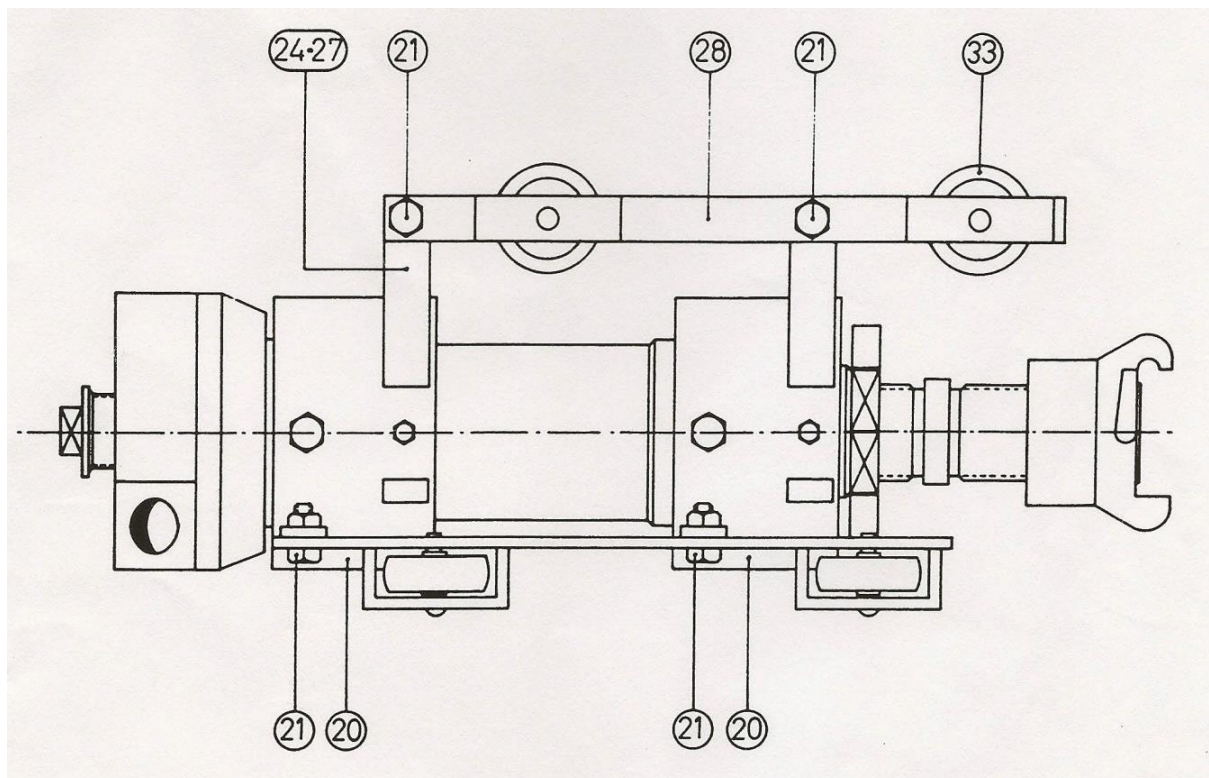
ROTOBLAST PIPE INTERNAL CLEANER 8"-36" (PART NO. 0221-001/C)



PART LIST 0221-001/C – SECTION 1



PART LIST 0221-001/C – SECTION 2



Rotoblast Internal Pipe Cleaner (PN 0221-001/C)
Part List: 8" – 35" (210mm - 890mm)

Item	Description	Article No.
1	RB-1 Nozzle Head 1" Thread	0233-010
2	RB-2 Pipe Plug 1"	0233-011
3	RB-3 Brake Housing	0233-018
4	RB-4 Brake Pin	0233-019
5	RB-5 Brake with Lining	0233-030
6	RB-6 Tube with 1" Thread	0233-022
7	RB-7 Lock Ring	0233-016
8	RB-8 Bearing	0233-020
9	RB-9 Bearing Seal	0233-017
10-1	RB-10-1 Dust seal (leather)	0233-014
11	RB-11 Rear end plate	0233-021
12	RB-12 Washer TC	0233-025
13	RB-13 Rubber Lined nipple	0233-012
14	RB-14 Lock Ring	0233-013
15	RB-15 Housing	0233-023
15-A	RB-15-A Housing Bearing Seal	0233-024
16	RB-3.1 Bolt	0233-026
17-1	RB-17-1 Bolt	0233-027
18-1	RB-18-1 Bolt (M5x20mm)	0233-028
18-1A	RB-18-1A Bolt (M5x45mm)	0233-029
19-1	RB-19-1 Bolt	0233-031
20-1	RB-20-1 Carriage Collar	0233-032
21-1	RB-21-1 Bolt	0233-033
22	RB-22 Cast Iron Coupling	0233-034
23	RB-23 Rubber Seal	0233-035
24	RB-24 Centering Leg (dia. 580 - 890mm)	0233-036
25	RB-25 Centering Leg (dia. 380 - 580mm)	0233-037
26	RB-26 Centering Leg (dia. 260 - 380mm)	0233-038
27	RB-27 Centering Leg (dia. 210 - 260mm)	0233-039
28	RB-28 Arms with Wheels (p-each)	0233-040
29	Nozzle, 8 X 85 mm, 13mm Entry	0052-018
35	RB-35 Wheel	0233-041