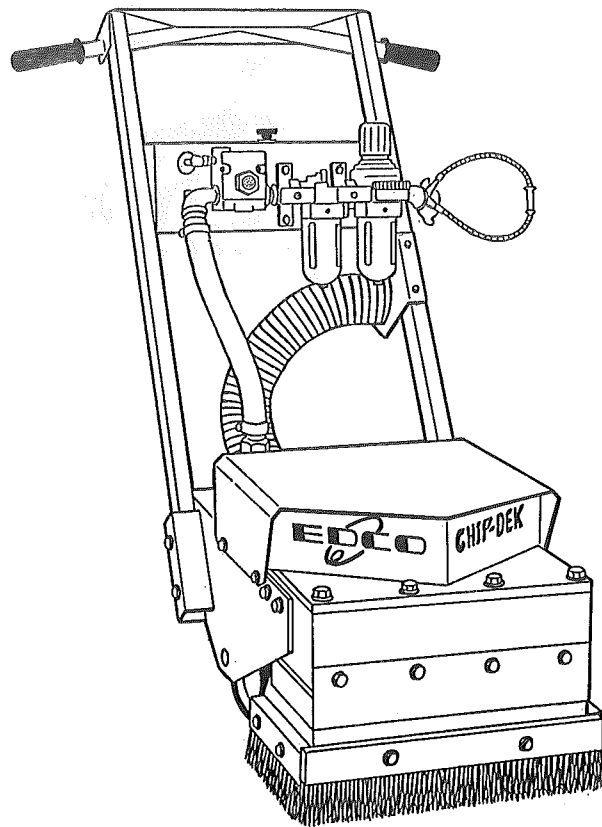


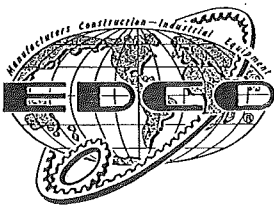
REVISED JULY 1994
STARTING SERIAL #62579

CHIP-DEK

AIR POWERED SCABBLER
INSTRUCTIONS AND PARTS LIST



Model CD-5



EQUIPMENT DEVELOPMENT COMPANY, INC.

100 THOMAS JOHNSON DRIVE, FREDERICK, MARYLAND 21702-4305 USA

PHONE (301)663-1600

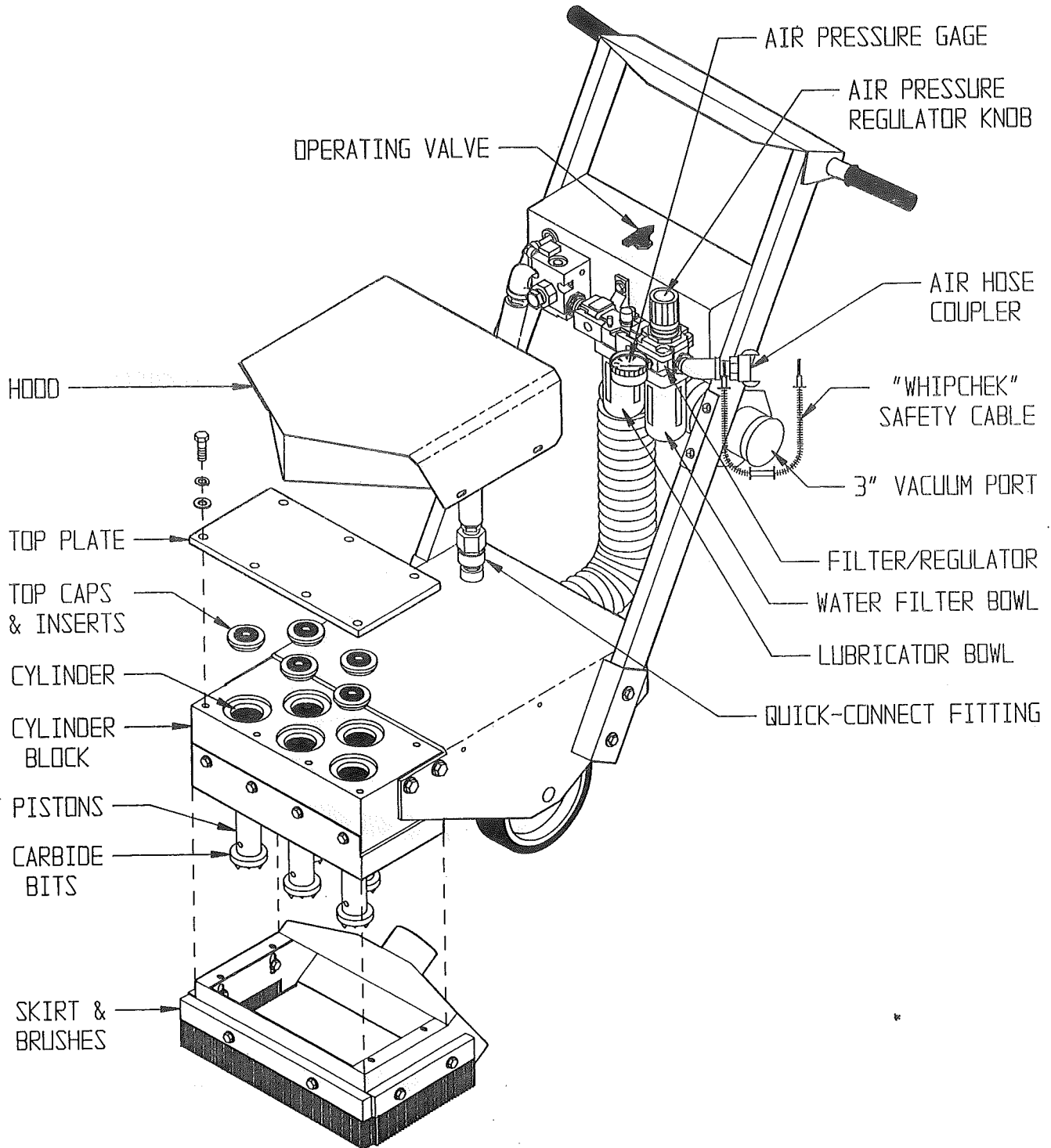
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EDCO MODEL CD-5 "CHIP-DEK" SCABBLER



INSTRUCTIONS FOR EDCO MODEL CD-5 "CHIP-DEK" SCABBLER

BEFORE STARTING OPERATION:

For efficient operation of the CD-5, be sure to use a compressor with adequate output. 150 CFM @ 90 PSI or larger is recommended.

Hook air hose (3/4" minimum) from air supply to coupler on handle of CD-5 - and do not exceed 60 feet of 3/4" hose.

WARNING!: Be sure to use a "whipchek" safety cable at this joint. Failure to do so could result in serious bodily injury or death.

Before supplying the air hose with air, ensure that the operating valve on the console of the CD-5 is in the "OFF" position.

Before operating the machine check to make sure the bowl of the filter/regulator is empty. There is a manual drain valve at the bottom of the bowl.

Also check the level of the lubricator. The proper oil to use is one with a viscosity of 32 centi-strokes (ISO-32). For example, Citgo AW-32 hydraulic oil or Lubriplate HO-32 hydraulic oil.

Tilt machine backwards and check the condition and secureness of the five carbide bits.

If job requires dust free operation, hook-up a dust control system such as EDCO VAC-150 to the 3 inch vacuum port on the handle bar assembly.

Determine if the slab is structurally sound and safe. While the CD-5 delivers a measured blow and should not damage the base, care should be taken that the slab is strong enough to withstand the impact of repeated hammering. A slab less than 4 inches thick may crack under repeated hammering.

OPERATING MACHINE:

To start operation of the CD-5, grasp handle bars and turn operating valve to the "ON" position and pistons will start pounding the pavement. The CD-5 will feel like the front head is floating. It will be necessary to move the machine so that it will not pound pockets into the slab. The CD-5 should be moved in a side to side sweeping motion to ensure a consistently uniform removal of material.

As the machine is operating, it may become necessary to adjust the air pressure to regulate the aggressiveness of the CD-5. The air pressure flowing to the pistons in the cylinder head may be adjusted from 0 PSI minimum to 90 PSI maximum. In most cases the air pressure regulator should be set somewhere in the range of 40 PSI to the maximum of 90 PSI depending on how aggressive the machine needs to be to accomplish the job.

To adjust the air pressure - pull up the knob on top of the air pressure regulator. An orange band should be visible. Turning the adjustment knob clockwise increases the operating air pressure and turning the adjustment knob counter-clockwise decreases the operating air pressure. After adjusting the air pressure regulator push the knob back down covering the orange band and locking the adjusting knob into the operating position.

During the operation of the CD-5 it will be necessary to visually inspect the level of condensation (water) that might accumulate in the water filter bowl located on the bottom of the air filter/regulator. If the accumulation of water exceeds the maximum level as marked on the water filter bowl, it will be necessary to drain the water filter bowl. To drain the water filter bowl, depress and hold the drain button located on the bottom of the water filter bowl.

Also during the operation of the CD-5 it will be necessary to maintain the correct amount of oil in the lubricator. This oil in the lubricator is essential to the operating life of the components in the cylinder head. The proper oil in the air flow reaching the pistons and cylinders will help flush away any contaminants as well as lubricate the close tolerance components and will leave a non-corrosive film to eliminate rusting of the surfaces.

The adjustment knob on top of the lubricator controls the oil drip rate. Adjustment should only be made under normal steady flow condition. Turning adjustment knob counter-clockwise will increase the drip rate and turning adjustment knob clockwise will decrease oil drip rate. The knob is set at the factory all the way counter-clockwise to the maximum (+) position. Each piston should be receiving lubrication and have a light film of oil on the surface, just enough to "feel" it. If oil starts to appear on the surface, then decrease the oil drip rate. Excess oil will stain the concrete.

When work is complete, close air compressor outlet valve then turn CD-5 operating valve to the "ON" position to empty the high pressure air from the hose before disconnecting machine from compressor.

MAINTENANCE:

If the CD-5 is to be stored or not used for a prolonged length of time it is recommended that the following suggestions be followed:

- (1) Drain moisture from water filter.
- (2) Fill lubricator bowl with proper grade of oil.
- (3) Remove top plate from cylinder block and remove top caps and generously apply the proper oil to top of pistons. Manually move the pistons up and down through their cycle several times to ensure all surfaces are coated with oil. Generously oil the top of the cylinders. Reassemble the machine taking care to ensure that the o-ring seals on the cylinder top caps are not damaged.

TROUBLE SHOOTING:

Fault	Possible Cause	Remedies
1. Machine will not operate	(a) Cylinders or valves clogged with dirt (b) Insufficient air supply (c) Valve not turned on (d) Low oil level	(a) Strip and clean (b) Check compressor output, hoses, and connections (c) Turn on valve (d) Add proper amount and grade of oil
2. Work finish is unsatisfactory	(a) Incorrect/worn bits (b) Too aggressive or not aggressive enough	(a) Replace with new or correct bits. (b) Regulate air supply or speed of machine.
3. Dust level is unacceptable	(a) Operating environment	(a) Moisten area to be machined with water or utilize vacuum for dust-free environment.
4. Work rate is too low	(a) Insufficient air supply (b) Worn bits	(a) Check compressor output. Check hose size. Check clearance between piston, cylinder and liner. (.006" max.) (b) Replace with new bits.

* * * * *

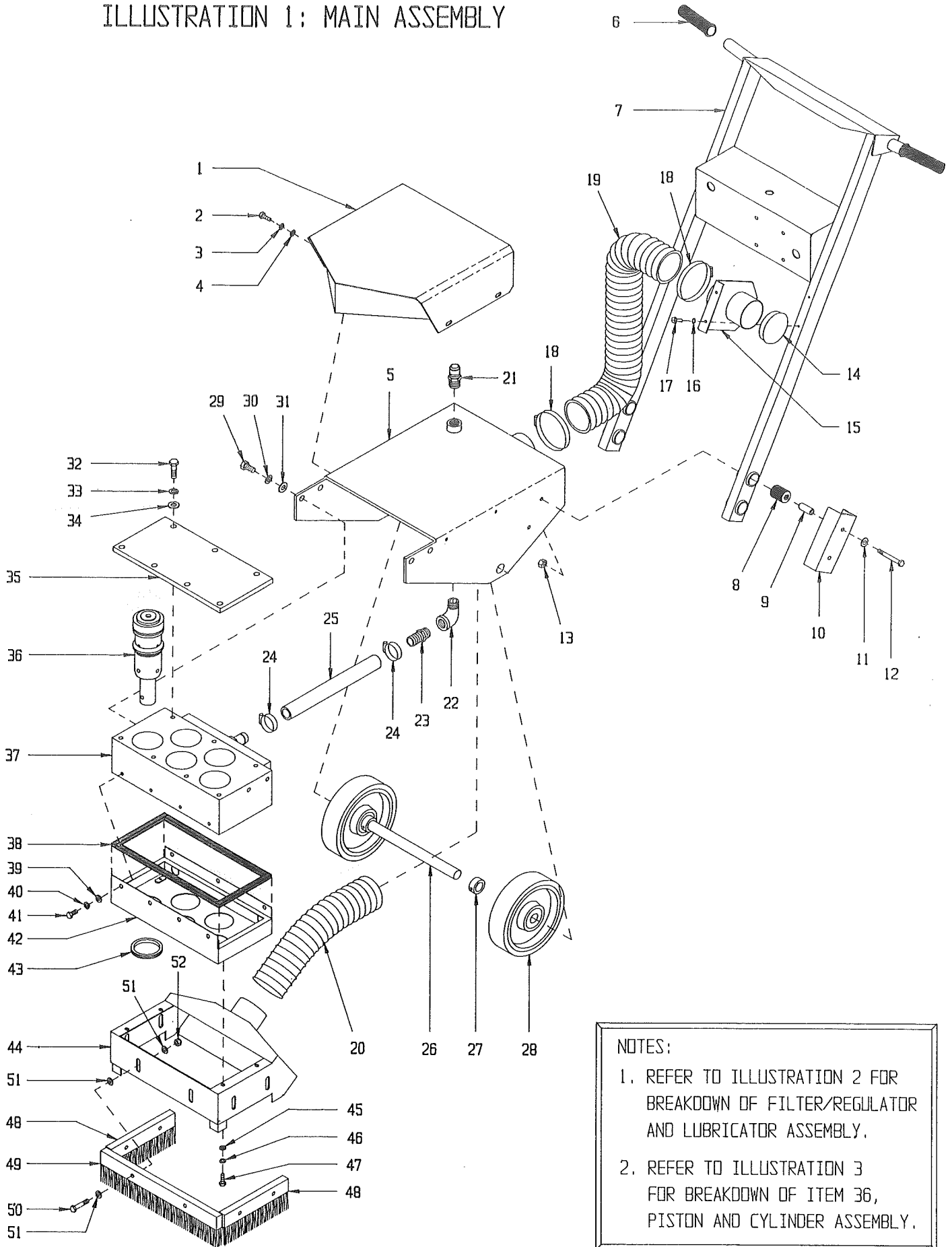
HOW TO ORDER REPAIR PARTS

To insure product safety and reliability, always use genuine EDCO replacement parts when making repairs to the equipment.

When ordering parts, please specify the MODEL and SERIAL NUMBER of the machine as given on the NAME PLATE. In addition, give part number, description, and quantity as listed on parts list.

Please note: Due to improvements and changes in the equipment, the illustrations shown may be different than the actual machine.

ILLUSTRATION 1: MAIN ASSEMBLY



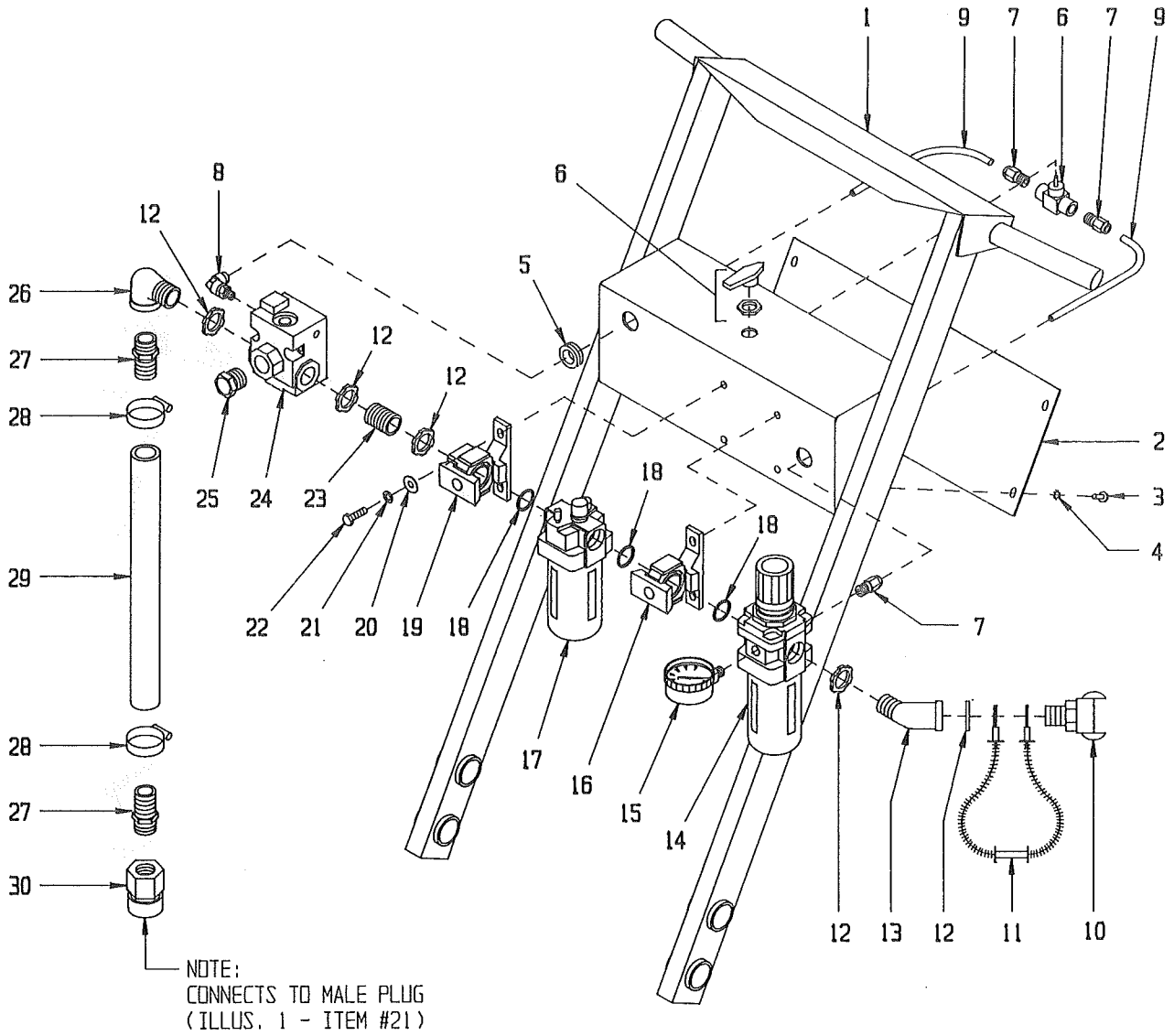
NOTES:

1. REFER TO ILLUSTRATION 2 FOR BREAKDOWN OF FILTER/REGULATOR AND LUBRICATOR ASSEMBLY.
2. REFER TO ILLUSTRATION 3 FOR BREAKDOWN OF ITEM 36, PISTON AND CYLINDER ASSEMBLY.

PARTS LISTING - ILLUSTRATION 1: MAIN ASSEMBLY

Item #	Part #	Description	Qty.
1	63115	Hood	1
2	10018	Screw, Cap 1/4-20 x 3/4	4
3	10038	Washer, Lock 1/4	4
4	10602	Washer, Flat 1/4	4
5	63101	Main Frame	1
6	10608	Grip, Hand, 1" Model AT	2
7	63104	Handle Bar	1
8	63106	Bushing, Rubber 1-1/4 x 5/8 x 1-1/2	4
9	63107	Tube, Bushing Center 5/8 x 3/8 x 1-9/16	4
10	63105	Bracket, Handle Bar Mounting	2
11	10025	Washer, Flat 3/8	4
12	10815	Screw, Cap 3/8-24 x 2-3/4	4
13	10152	Nut, Hex Nylon Lock 3/8-24	4
14	64030	Plug, Cap 3"	1
15	63112	Bracket, Vacuum Hose 3"	1
16	10455	Washer, Lock, Ext. Tooth #10	2
17	10877	Screw, S.T. Hex Washer 10-24 x 1/2	2
18	10849	Clamp, Hose Adjustable 3-3/4", Size 52	2
19	63117	Hose, Flex 3"ID x 26"L	1
20	63118	Hose, Flex 3"ID x 15"L	1
21	63065	Fitting, Quick-Connect Male Plug 3/4 NPT	1
22	10727	Elbow, Street 3/4NPT x 90 (Black)	1
23	63047	Barb, 1"Hose x 3/4MPT	1
24	10784	Clamp, Hose Adjustable 1-3/4", Size 20	2
25	63119	Hose, Air 1"ID x 12"L	1
26	63053	Axle Shaft 1"Rd. x 15"L	1
27	10427	Collar, Locking 1"	2
28	63050	Wheel, Poly 8 x 1-15/16 x 1"Brg.	2
29	10914	Screw, Cap 1/2-13 x 1	4
30	10045	Washer, Lock 1/2	4
31	10312	Washer, Flat 1/2	4
32	10356	Screw, Cap 1/2-13 x 1-1/2	7
33	10045	Washer, Lock 1/2	7
34	10312	Washer, Flat 1/2	7
35	63023	Plate, Cylinder Block Top	1
36	63010	Piston & Cylinder Assembly (Refer to Illus. 3 for Breakdown)	5
37	63024	Block, Cylinder	1
38	63026	Sealing Strips, Exhaust Box (2 each) 1/2"W x 3/8"Thk x 7"L 1/2"W x 3/8"Thk x 13-1/2"L	1
39	10907	Screw, Cap 3/8-16 x 3/4	7
40	10811	Washer, Lock 3/8	7
41	10025	Washer, Flat 3/8	7
42	63102	Exhaust Box	1
43	63110	Grommet 2-1/2"ID x 1/16"Grv x 2-3/4"GD	5
44	63103	Skirt, 3" Vacuum	1
45	10602	Washer, Flat 1/4	4
46	10038	Washer, Flat 1/4	4
47	10018	Screw, Cap 1/4-20 x 3/4	4
48	63114	Brush, Wooden 2"H x 8-1/2"L	2
49	63113	Brush, Wooden 2"H x 16"L	1
50	10029	Screw, Cap 3/8-24 x 1-3/4	6
51	10025	Washer, Flat 3/8	12
52	10152	Nut, Hex Nylon Lock 3/8-24	6

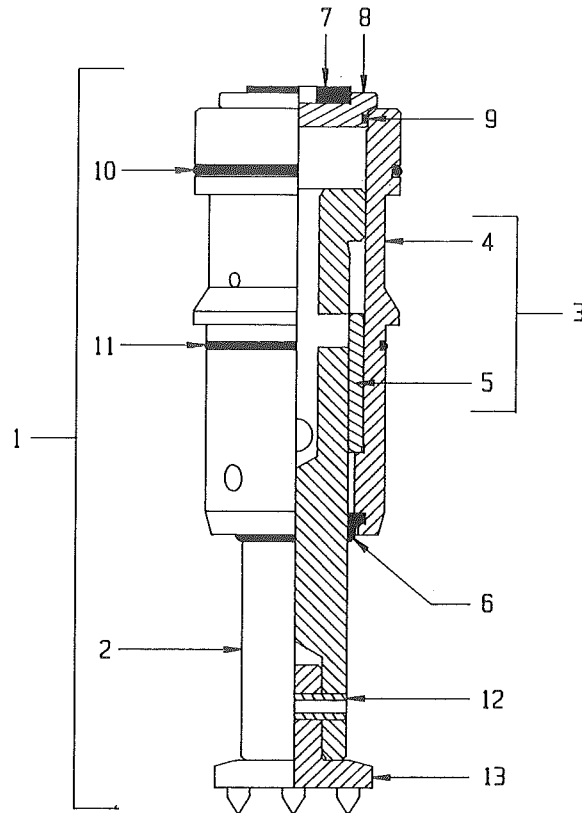
ILLUSTRATION 2: FILTER/REGULATOR AND LUBRICATOR ASSEMBLY



PARTS LISTING - ILLUSTRATION 2:
FILTER/REGULATOR AND LUBRICATOR ASSEMBLY

Item #	Part #	Description	Qty.
1	63104	Handle Bar (Refer to Illus. 1 - Item #7)	1
2	63116	Panel, F.R.L. Console Rear	1
3	10877	Screw, Self-Tap Hex Washer 10-24 x 1/2	4
4	10455	Washer, Lock, Ext. Tooth #10	4
5	63111	Grommet 3/4"ID x 1/8"Grv. x 1"GD	1
6	63004	Valve, Ball W/ Vent 1/2 Fem. NPT	1
7	63034	Fitting, Straight 5/16"Tube x 1/4MPT	3
8	63058	Fitting, Swivel Elbow 5/16"Tube x 1/8MPT	1
9	63121	Tubing, Nylon 5/16"OD x 8"L	2
10	63067	Coupler, Air Hose, 3/4 MPT	1
11	63040	Cable, "Whipchek" Safety 1/8 x 20-1/4	1
12	10740	Conduit Lock Nut 3/4 NP	5
13	50086	Elbow, Street 3/4NPT x 45 (Black)	1
14	63062	Filter/Regulator 3/4 NPT (NAW4000-N06)	1
15	C90207	Gauge, Air Pressure, Side Stem	1
16	63063	FRL Bracket, T-Type, Y50T (Includes 2 O-Rings, Item #18)	1
17	63061	Lubricator 3/4 NPT (NAL4000-N06)	1
18	63068	O-Ring #216, 1/8 x 1-1/8"ID x 1-3/8"OD (Included W/ Items #16 & #19)	3
19	63064	FRL Bracket, T-Type Adapter, NE50T-N06 (Includes 1 O-Ring, Item #18)	1
20	10213	Washer, Flat 5/16	4
21	10801	Washer, Lock 5/16	4
22	10053	Screw, Cap 5/16-18 x 3/4	4
23	10577	Pipe Nipple 3/4NPT x 1-1/2 (Black)	1
24	63060	Valve, Remote Air Pilot 3/4 NPT	1
25	63059	Vent, Breather Filter 3/4 NPT	1
26	10727	Elbow, Street 3/4NPT x 90 (Black)	1
27	63047	Barb, 1"Hose x 3/4MPT	2
28	10784	Clamp, Hose Adjustable 1-3/4", Size 20	2
29	63120	Hose, Air 1"ID x 14-1/2"L	1
30	63066	Fitting, Quick-Connect Fem. Coupler 3/4"	1

ILLUSTRATION 3: PISTON & CYLINDER ASSEMBLY



Item #	Part #	Description	Qty.
1	63010	Piston & Cylinder Assembly (Includes Items 2 thru 12)	5
2	63018	Piston	1ea.
3	63070	Cylinder & Liner Assembly (Includes Items 4 and 5)	1ea.
4	63015	Cylinder (Do not replace separately)	
5	63014	Liner (Do not replace separately)	
6	63019	Wiper Ring, Piston	1ea.
7	63011	Insert, Top Cap	1ea.
8	63012	Cap, Cylinder Top	1ea.
9	63013	O-Ring #133, 3/32 x 1-13/16" ID	1ea.
10	63016	O-Ring #231, 1/8 x 2-5/8" ID	1ea.
11	63017	O-Ring #141, 3/32 x 2-5/16" ID	1ea.
12	63009	Pin, Spiral 3/8 x 1-1/2	1ea.
*13		Bit, Tungsten Carbide (Not Included)	
	18810	5-Point (Medium, General Purpose)	
	18820	9-Point (Fine Surface Removal)	
	18830	Cross-Cut (Rough Surface Removal)	

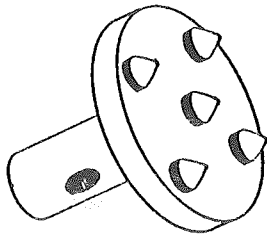
*** Note:**

Bits are not included with Piston & Cylinder Assembly.
Bits are interchangeable. Refer to Instructions for applications and suggested bit styles.

TUNGSTEN CARBIDE BITS

5 - POINT

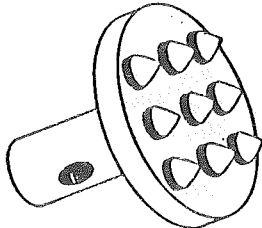
Item no. 18810
General surface removal
Penetration to 1/4 inch



Use 5-Point bits for general purpose removal of concrete due to spalling, blistering, excess surface material, or to bond new concrete overlays. Depth of removal is generally 1/4" or more and is dependent on speed with which the unit is moved across the surface.

9 - POINT

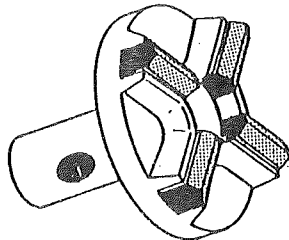
Item no. 18820
Laitence removal
Fine scabbling
Anti-slip surfacing
Penetration to 1/8 inch



The 9-POINT bits achieve surface removal of approximately 1/8". Creating an excellent bonding texture for overlays of thin coats of polymer concrete, epoxy or urethane. Also ideal for producing slip-resistant surfaces for fork trucks and other vehicular traffic.

CROSS-CUT

Item no. 18830
Demolition - Fast -
Rough - Surface removal
Grooving - Repairs to
spalled and deteriorated
slabs



CROSS-CUT bits may be used for fast, heavy surface removal of concrete for new overlays, repairs to deteriorated slabs, or roughening dairy barn floors to prevent cattle from slipping. Depth of removal is generally 3/8" or greater dependent on speed with which unit is moved across the surface.

Bits are easily and quickly changed or replaced. The uses listed above are merely suggested. Your own trials will determine which bit fits your need best. Choose the correct type to do the job. Use a hammer and punch to drive out the bit retaining pins. Remove the bits, replace and drive the retaining pins back in securely. If pins are loose or worn replace with new tight fitting pins.

LIMITED EQUIPMENT WARRANTY

Equipment Development Company, Inc. herein referred to as EDCO warrants that each new unit manufactured by EDCO to be free from defects in material and workmanship in normal use and service for a period of (1) one year (except in the case of the cutter drum assembly on all model concrete asphalt planes, in which case the warranty period shall be 90 days) from date of shipment to the original retail or equipment rental center owner.

EDCO will, at its option, repair or replace, at the EDCO factory or at a point designated by EDCO any part, which shall appear to the satisfaction of EDCO inspection to have been defective in material or workmanship.

This warranty, does not apply to failure occurring as a result of abuse, misuse, negligent repairs, corrosion, erosion, normal wear and tear, alterations or modifications made to the product without express written consent of EDCO: or failure to follow the recommended operating practices and maintenance procedures as provided in the products operating and maintenance manuals.

This warranty does not obligate EDCO to bear any transportation charges in connection with the replacement or repair of defective parts. This warranty does not obligate EDCO to bear any expenses for travel time or of personnel in connection with any service calls.

Accessories or equipment furnished and installed on the product by EDCO but manufactured by others, including but not limited to engines, motors, electrical equipment, transmissions, etc., shall carry the accessory manufacturers' own warranty.

THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, OR STATUTORY, INCLUDING ANY WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE.

LIABILITY LIMITATIONS

The remedies of the user set forth under provisions of warranty outlined above are exclusive and the total liability of EDCO with respect to their sale or the equipment and service furnished hereunder, in connection with the performance or breach thereof, or from the sale, delivery, installation, repair or technical direction covered by or furnished under the sale, whether based on contract, warranty, negligence, indemnity, strict liability, or otherwise shall not exceed the purchase price of the unit of equipment upon which such liability is based.

EDCO will not in any event be liable to the user, any successors in interest or any beneficiary or assignee relating to this sale for any consequential, incidental, indirect, special or punitive damages arising out of this sale or any breach thereof, or any defects on, or failure of, or malfunction of the equipment under this sale whether based upon loss of use, lost profits or revenue, interest, lost goodwill, work stoppage, impairment of other goods, loss by reason of shutdown or non-operation, increased expenses of operation of the equipment, cost of purchase or replacement power or claims of users or customers of the user for service interruption whether or not such loss or damage is based on contract, warranty, negligence, indemnity, strict liability, or otherwise.

EDCO reserves the right to modify, alter and improve any part or parts without incurring any obligation to replace any part or parts previously sold without such modified, altered or improved part or parts.

No person is authorized to give any other warranty or to assume any additional obligation on EDCO's behalf unless made in writing and signed by an officer of EDCO.

Equipment Development Company, Inc.