Please dispose of packaging for the product in a responsible manner. It is suitable for recycling. Help to protect the environment, take the packaging to the local amenity tip and place into the appropriate recycling bin.

FOR HELP OR ADVISE ON THIS PRODUCT PLEASE CONTACT YOUR DISTRIBUTOR, OR SIP DIRECTLY ON:
TEL: 01509500400
EMAIL: sales@sip-group.com or technical@sip-group.com
www.sip-group.com

Ref: 170812

products for professionals

73 Piece Air Tool Set

07197

Please read and fully understand the instructions in this manual before operation. Keep this manual safe for future reference

SAFETY INSTRUCTIONS

- These air tools are designed to be used as hand held, hand controlled tools.
- **DO NOT** use the air tool for any other purpose than that for which it was designed.
- **DO NOT** modify the air tool in any way.
- **DO** ensure that only compressed air is used to supply the air tool.
- The compressed air supply MUST be at a suitable regulated pressure, with the correct amount of flow. Pipe work, regulators. Hoses, isolation valves and connection devices MUST be suitable for the intended application correctly installed and maintained in good condition by a competent person.
- Appropriate Personal protective equipment MUST be worn and MUST be designed to protect against all hazards created. Severe permanent injury can result from using inappropriate or insufficient protective equipment - Eyes in particular are at risk.
- Long hair MUST be tied back; loose clothing MUST NOT be worn. There is a severe risk of these being drawn in or trapped by the moving parts of the air tool.
- Open or damaged compressed air lines present a significant 'whip' hazard.
- This air tool is electrically conductive DO NOT allow them to come into contact with any source of electrical supply.
- After use wait for the air tool to STOP completely before putting it aside.
- When putting the air tool aside you MUST ensure that it placed in a stable position. To avoid inadvertent operation DO NOT place the air tool where it can be knocked or moved accidentally either directly or by the air connection hose.
- If the air tool is not required or the air supply is interrupted, disconnect the air tool from the air supply and place in secure storage to prevent unauthorised use.
- Ensure the air valve (or trigger) is in the "off" position before connecting to the air supply.
- Disconnect the air tool from the air supply before making any adjustments, changing stones etc. and before servicing the tool.
- Always keep your air tool clean and lubricated. Daily lubrication is essential to avoid internal corrosion and possible failure.
- Do not overload the tool. Allow the tool to operate at its optimum speed for maximum efficiency.
- Do not increase the air pressure above the manufacturers recommended level, as excessive pressure can cause the tool casing to split. Also this creates excessive wear on moving parts and possible failure.
- Always ensure that the work piece is firmly secured leaving both hands free to control the tool.

CAUTION: The warnings and cautions mentioned in this user manual can not cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be applied.

DECLARATION OF CONFORMITY

Declaration of Conformity

We

SIP (Industrial Products) Ltd
Gelders Hall Road
Shepshed
Loughborough
Leicestershire
LE12 9NH
England

As the manufacturer's authorised representative within the EC
declare that the

73 Piece Airtool Kit - SIP Pt. No. 07197
Suppliers Part No. RP7857

Conforms to the requirements of the following directive(s), as indicated.

2006/42/EC Machinery Directive

Signed: ……...

Mr P. Ippaso - Director - SIP (Industrial Products) Ltd
Date: 09/02/2010.

CE

PARTS LIST - 150MM AIR HAMMER

No.	Description	Sip Part No.
1	Hammer Body	AI05-00120
2	Trigger Pin (3×16)	AI05-00121
3	Regulator Valve Pin (3×17.5)	AI05-00122
4	O-ring 8×1.8	AI05-00123
5	Regulator	AI05-00124
6	Trigger	AI05-00125
7	Pin	AI05-00126
8	Pin Seat	AI05-00127
9	Throttle Spring	AI05-00128
10	Air Inlet	AI05-00129
11	Upper valve case	AI05-00130
12	Valve disc	AI05-00130
13	Lower valve case	AI05-00130
14	Piston	AI05-00133
15	Cylinder	AI05-00133
16	Spring Retainer	AI05-00135
N/A	4pc Chisel Set	AI05-00131

*Note PT 11-13 & 14-15 come as a kits

SAFETY INSTRUCTIONS….cont

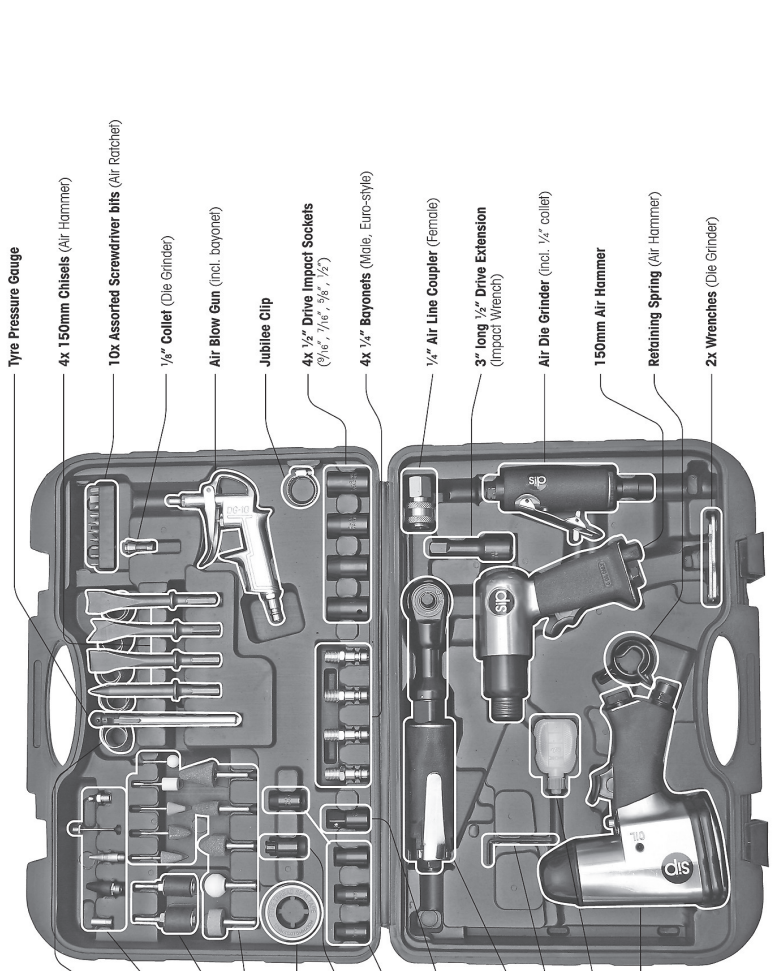
- Always wear safety goggles or glasses during operation.
- Do not wear watches, rings bracelets or loose clothing when using air tools.
- Use as light weight a hose as possible from the tool to the wall or compressor coupling.
- In the interests of safety and possible damage to the machine/operator, always ensure that the tool has stopped before putting it down after use.
- Always ensure that the accessories such as sanding discs are rated / designed for use with the particular tool, and are correctly and securely fastened before connecting the tool to the air supply.
- When grinding, sanding or cutting always wear an appropriate face mask or respiratory equipment.
- Do not use this product in wet or damp conditions.
- Do not carry air tools by its air hose.
- All sanding discs, attachments etc. must be the correct size and the correct type and grade for the application.
- Sparks and particles resulting from grinding and sanding operations etc. present a hazard make yourself and bystanders aware of this hazard.

Always wear eye protection when using or maintaining any air tool.

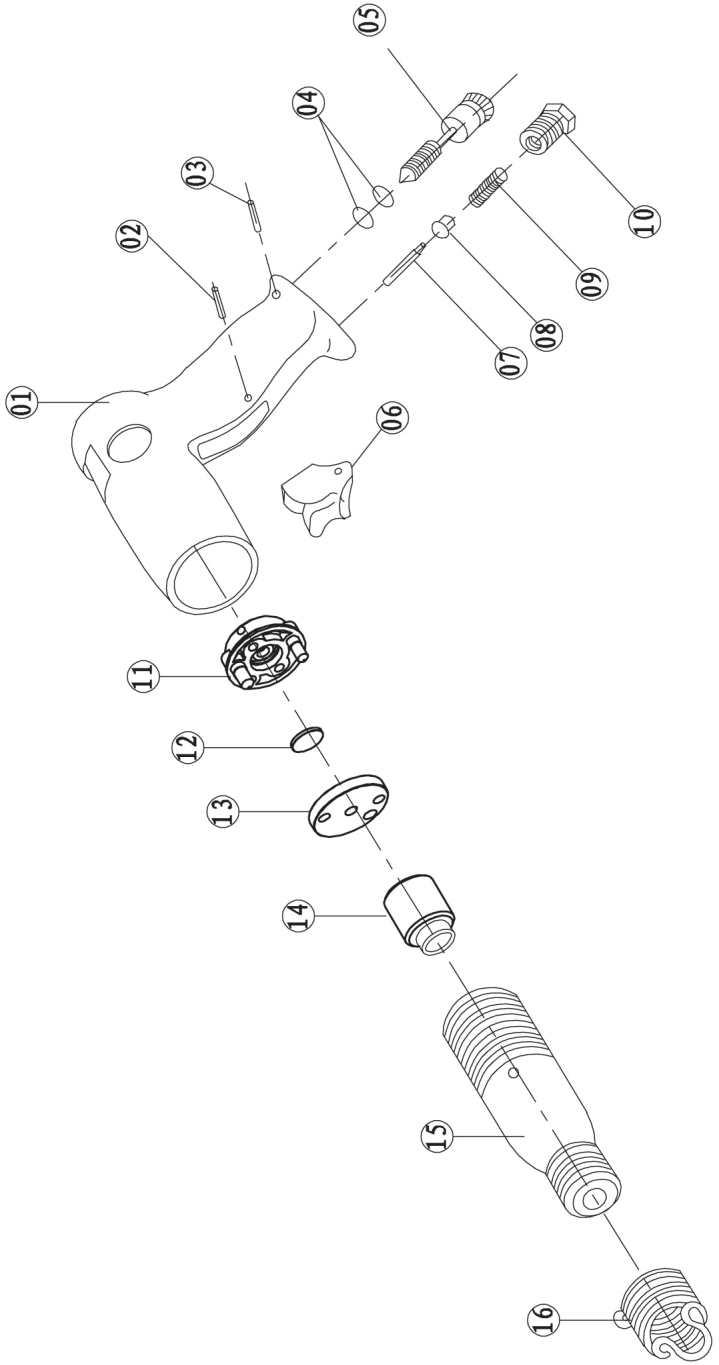
We recommend wearing a face mask or respiratory equipment when using any air tool; particularly during sanding, grinding or other operations likely to cause airborne particles.

We recommend wearing ear protection - particularly during extended periods of operation.

GETTING TO KNOW YOUR TOOL SET



EXPLODED DRAWING - 150MM AIR HAMMER



PARTS LIST - DIE GRINDER

No.	Description	Sip Part No.	No.	Description	Sip Part No.
1	Housing	AI05-00224	20	End plate	AI05-00243
2	Valve Bushing	AI05-00225	21	Pin 2×6	AI05-00244
3	Trigger	AI05-00226	22	Rotor	AI05-00245
4	Trigger Pin	AI05-00227	23	Rotor blade	AI05-00246
5	Spring	AI05-00228	24	Cylinder	AI05-00247
6	Trigger Ring	AI05-00229	25	Washer	AI05-00248
7	Pin 3×18	AI05-00230	26	Bushing	AI05-00249
8	Pin 3×24	AI05-00231	27	Front plate	AI05-00250
9	O-ring 3.3×1.5	AI05-00232	28	Pin 1.5×4	AI05-00251
10	O-ring 4×2	AI05-00233	29	Bearing	AI05-00252
11	Valve Stem	AI05-00234	30	Collet holder	AI05-00253
12	Spring	AI05-00235	31	Retainer ring	AI05-00254
13	Air regulator	AI05-00236	32	Lock ring	AI05-00255
14	O-ring 7×2	AI05-00237	33	Collet	AI05-00256
15	O-ring 11×2	AI05-00238	34	Collet nut	AI05-00257
16	Screw cap	AI05-00239	35	Wrench	AI05-00258
17	Muffle cover	AI05-00240	36	Wrench	AI05-00259
18	Air inlet	AI05-00241	N/A	10pc Stone Assortment Kit	06731
19	Bearing	AI05-00242	N/A	Sanding Roll	06741

TECHNICAL SPECIFICATIONS

3/8" Ratchet	
Square Drive	3/8"
Torque	50ft/lb (68Nm)
No Load Speed	160 rpm
Average Air Consumption	4 cfm (114 l/min)
Operating Pressure	6.3 bar (90 psi)
Air Inlet	1/4" bsp
Sound Pressure	89.6 dB(A)
Sound Power	100.6 dB(A)
Vibration	1.2 m/s^2

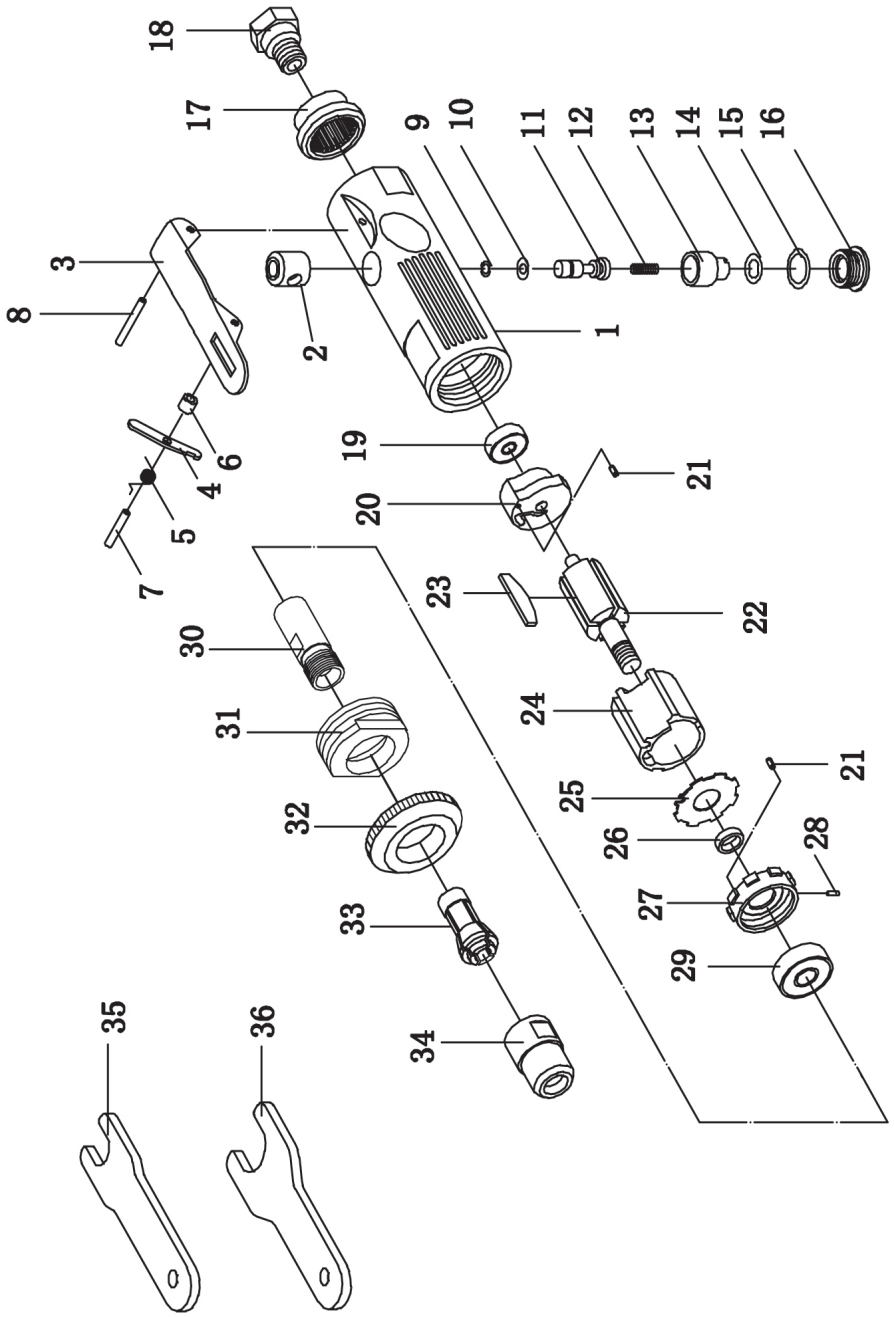
½" Impact Wrench	
Square Drive	½"
Torque	230ft/lb (310Nm)
No Load Speed	7000 rpm
Average Air Consumption	8 cfm (228 l/min)
Operating Pressure	6.3 bar (90 psi)
Air Inlet	1/4" bsp
Sound Pressure	84.4 dB(A)
Sound Power	95.4 dB(A)
Vibration	2.6 m/s^2

TECHNICAL SPECIFICATIONS….cont

1/4" Die Grinder	
Collet Size	¼"
No Load Speed	25,000 rpm
Average Air Consumption	3 cfm (86 l/min)
Operating Pressure	6.3 bar (90 psi)
Air Inlet	1/4" bsp
Sound Pressure	82.4 dB(A)
Sound Power	93.4 dB(A)
Vibration	0.8 m/s^2

150mm Air Hammer	
Chisel Shank	10.2mm
Bore Diameter	19.05mm
Blow Per Min	4500 rpm
Average Air Consumption	2.8 cfm (79 l/min)
Operating Pressure	6.3 bar (90 psi)
Air Inlet	1/4" bsp
Sound Pressure	96.9 dB(A)
Sound Power	107.9 dB(A)
Vibration	14.6 m/s^2

EXPLODED DRAWING - DIE GRINDER



PARTS LIST - RATCHET WRENCH

No.	Description	Sip Part No.	No.	Description	Sip Part No.
1	Valve Plug	AI05-00181	23	Clamp nut	AI05-00203
2	O-ring 9.5×2	AI05-00182	24	Ratchet Housing	AI05-00204
3	Spring	AI05-00183	25	Needle Bearing	AI05-00205
4	O-ring 4×1.8	AI05-00184	26	Bearing shell	AI05-00206
5	Valve Stem	AI05-00185	27	Crank shaft	AI05-00207
6	Air inlet	AI05-00186	28	Drive bushing	AI05-00208
7	Roll Pin 3×24	AI05-00187	29	Ratchet Yoke	AI05-00209
8	Trigger	AI05-00188	30	Spring	AI05-00210
9	Housing	AI05-00189	31	Bushing	AI05-00210
10	Rear Bearing	AI05-00190	32	Lock Pin 2×6	AI05-00210
11	Rear Plate	AI05-00191	33	Reverse Button	AI05-00210
12	Rotor Blade	AI05-00192	34	Washer	AI05-00210
13	Rotor	AI05-00193	35	Ratchet Pin	AI05-00210
14	Pin 1.5×6	AI05-00194	36	Ratchet Pawl	AI05-00210
15	Rotor Housing	AI05-00195	37	Ratchet Anvil	AI05-00210
16	Front Plate	AI05-00196	38	Steel ball	AI05-00210
17	Bearing	AI05-00197	39	Spring	AI05-00210
18	V Washer	AI05-00198	40	Spring	AI05-00210
19	Thread Ring Gear	AI05-00199	41	Steel ball	AI05-00210
20	Idler Gear	AI05-00200	42	Washer	AI05-00210
21	Idler Gear Pin	AI05-00201	43	Retainer ring 30	AI05-00210
22	Idler Gear Seat	AI05-00202			

*Note PT`s 30-43 (Tune-up kit) come as a kit

GUARANTEE

Guarantee:

This SIP air tool is covered by a 12 month parts and labour warranty covering failure due to manufacturers defects. This does not cover failure due to misuse or operating the machine outside the scope of this manual.
This guarantee does not cover consumables.

In the unlikely event of warranty claims, contact your distributor as soon as possible. Proof of purchase will be required before any warranty can be honoured.

Failure to lubricate your air tool will shorten its working life and reduce performance. Also note the warranty does not cover rusting air tools and tools failed due to the lack of lubrication.

Note: Proof of purchase will be required before any warranty can be honoured.

OPERATING INSTRUCTIONS

Air Supply:

1. Ensure the air tool air valve (trigger) is in the "off" position before connecting to the air supply.
2. You will require an air pressure of 90psi, and an air flow according to specification of each individual tool.
3. **WARNING!** Ensure the air supply is clean and does not exceed 90psi while operating the tools. Too high an air pressure and unclean air will shorten the product life due to excessive wear, and may be dangerous causing damage and/or personal injury.
4. Drain the air tank / receiver of the compressor daily. Water in the air line will damage the air tools.
5. Clean air inlet filter weekly. Recommended hook-up procedure is shown in fig 1.
6. Line pressure should be increased to compensate for unusually long air hoses (over 8 metres). The minimum hose diameter should be 1/4" I.D. and fittings must have the same inside dimensions.
7. Keep hose away from heat, oil and sharp edges. Check hose for wear, and make certain that all connections are secure.

OPERATING INSTRUCTIONS….cont

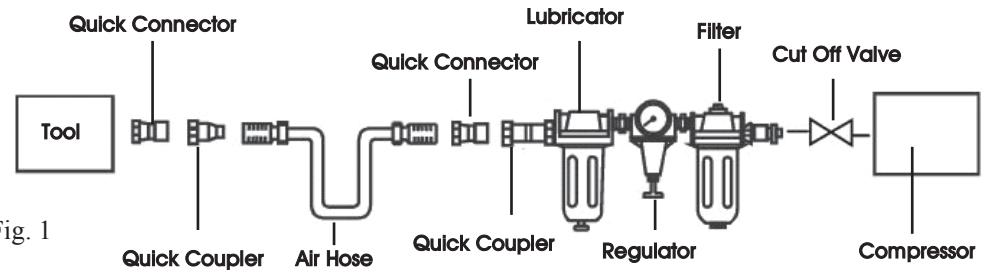


Fig. 1

MAINTENANCE

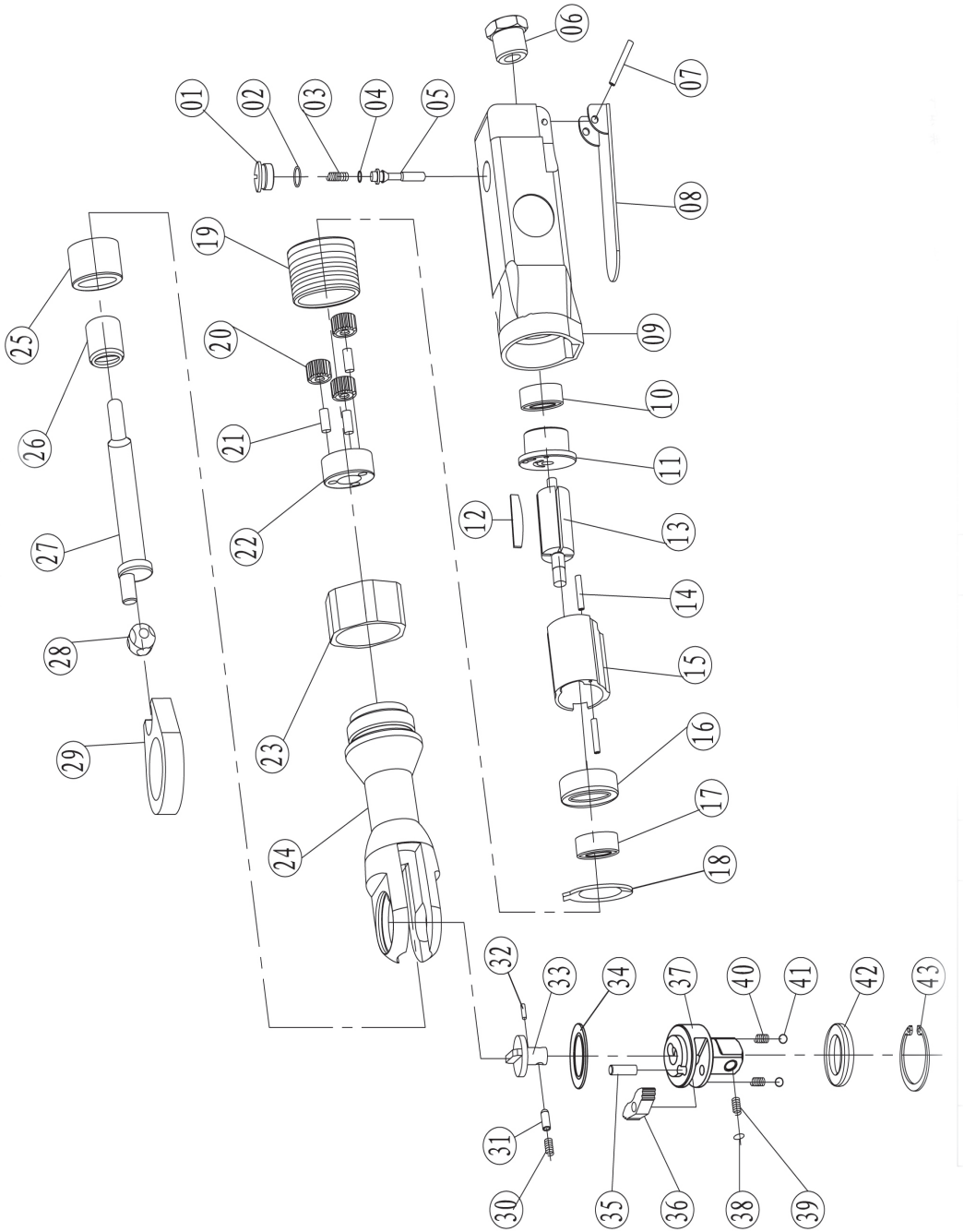
Warning! Always disconnect the air tool from air supply before changing accessories, cleaning or performing maintenance tasks. Replace or repair damaged parts - Use genuine parts only; non-authorized parts may be dangerous, reduce the performance and life of the tool and will invalidate the warranty. Servicing or repairs should only be performed by a competent person.

1. Ensure that the air tool is lubricated daily, ideally with an inline oiler, see Fig. 1, or if not with a few drops of air tool oil dripped into the air inlet.
2. Clean the tools after use. **DO NOT** use the tool with worn, or damaged parts - replace / have them replaced immediately.
3. Loss of power or erratic action may be due to the following:

a. Excessive drain on the air line. Moisture or restriction in the air line. Incorrect size or type of hose connectors.
b. Grit or gum deposits in the air tool may also reduce performance. If your model has an air strainer (located in the area of the air inlet), remove the strainer and clean it. Flush the air tool out with gum solvent oil or an equal mixture of SAE No 10 oil and paraffin. Allow to dry before use.

5. When not in use, disconnect from air supply, clean and store in a safe, dry, child-proof location.

EXPLODED DRAWING - RATCHET WRENCH



PARTS LIST - IMPACT WRENCH

No.	Description	Sip Part No.	No.	Description	Sip Part No.
1	Protecting Rubber	AI05-00136	24	Bolt M5×20	AI05-00159
2	Housing	AI05-00137	25	Rear Protection Rubber	AI05-00160
3	Bolt M8×6	AI05-00138	26	Valve Sleeve	AI05-00161
4	Anvil Bushing	AI05-00139	27	Reverse Valve	AI05-00162
5	Anvil Collar	AI05-00140	28	O-ring 6.7×1.8	AI05-00163
6	O-ring 7.5×1.8	AI05-00141	29	Valve Stem	AI05-00164
7	Anvil	AI05-00142	30	Seal	AI05-00165
8	Hammer Pin	AI05-00143	31	Steel ball	AI05-00166
9	Hammer Cage	AI05-00144	32	Inlet Spring	AI05-00167
10	Hammer Dog	AI05-00145	33	Air Inlet Plug	AI05-00168
11	Drive Cam	AI05-00146	34	Air Inlet Cover	AI05-00169
12	Ball Bearing	AI05-00147	35	Spring	AI05-00170
13	Oil seal	AI05-00148	36	O-ring 8.5×1.8	AI05-00171
14	Front End plate	AI05-00149	37	Air Regulator	AI05-00172
15	Rotor blade	AI05-00150	38	Bolt	AI05-00173
16	Rotor	AI05-00151	39	Pin 3×14	AI05-00174
17	Pin 3×10	AI05-00152	40	Trigger	AI05-00175
18	Rotor Housing	AI05-00153	41	Exhaust cover	AI05-00176
19	Pin 3×17.5	AI05-00154	42	Bolt	AI05-00177
20	Rear End Plate	AI05-00155	43	Bolt M5×6	AI05-00178
21	Gasket	AI05-00156	44	Spring	AI05-00179
22	Rear Cover	AI05-00157	45	Pin	AI05-00180
23	Washer	AI05-00158			

LUBRICATION

- An automatic in-line filter-regulator-lubricator is recommended (see Fig.1) as it increases tool life and keeps the tool in sustained operation. The in-line lubricator should be regularly checked and filled with air tool oil.
- Proper adjustment of the in-line lubricator is performed by placing a sheet of paper next to the exhaust ports and holding the throttle open approximately 30 seconds. The lubricator is properly set when a light stain of oil collects on the paper. Excessive amounts of oil should be avoided.
- In the event that it becomes necessary to store the tool for an extended period of time (overnight, weekend, etc.), it should receive a generous amount of lubrication at that time. The tool should be run for approximately 30 seconds to ensure oil has been evenly distributed throughout the tool. The tool should be stored in a clean and dry environment.
- It is most important that the tool be properly lubricated by keeping the air line lubricator filled and correctly adjusted. Without proper lubrication the tool will not function correctly and parts will wear prematurely.
- Use the proper lubricant in the air line lubricator. The lubricator should be of low air flow or changing air flow type, and should be kept filled to the correct level. Use only recommended lubricants, specially made for pneumatic applications. Substitutes may harm the rubber compounds in the tools O-rings and other rubber parts.

CAUTION: If a filter/regulator/lubricator is not installed on the air system, air operated tools should be lubricated at least once a day or after 2 hours work with 2 to 6 drops of oil, depending on the work environment, directly through the male fitting in the tool housing.

TROUBLE SHOOTING

The following table lists the common operating issues, with problems and solutions.

If any of the following symptoms appears during operation, stop using the tool immediately, or serious personal injury could result. Only a qualified person or an authorized service centre can perform repairs or replace parts of tool.

TROUBLE SHOOTING….cont

PROBLEMS	POSSIBLE CAUSES	REMEDIES
Tool runs at normal speed but loses power under load	• Motor parts worn. • Cam clutch worn or sticking due to lack of lubricant.	• Lubricate clutch housing. • Check for excess clutch oil. Clutch cases need only be half full. Overfilling can cause drag on high speed clutch parts, ie. a typical oiled/lubricated wrench requires 1/2 ounce of oil. • **NOTE:** Heat usually indicates insufficient grease in chamber. Severe operating conditions may require more frequent lubrication.
Tool runs slowly. Air flow is low from exhaust	• Motor parts jammed with dirt particles. • Power regulator in closed position. • Air flow blocked by dirt.	• Check air inlet filter for blockage. • Pour air tool lubricating oil into air inlet as per instructions. • Operate tool in short bursts quickly reversing rotation back and forth where applicable. • Repeat above as needed. If this fails return to service centre.
Tools will not run. Air flows freely from exhaust	• One or more motor vanes stuck due to material build up.	• Pour air tool lubricating tool into air inlet. • Operate tool in short bursts of forward and/or reverse rotation where applicable. • Tap motor housing gently with plastic mallet. • Disconnect supply. Free motor by rotating drive shank manually where applicable • If tool remains jammed return to service center.
Tool will not shut off	• 'O' rings throttle valve dislodged from seat inlet valve.	• Replace 'O' ring or return to service center.

Note: Repairs should be carried out by a qualified person.

EXPLODED DRAWING - IMPACT WRENCH