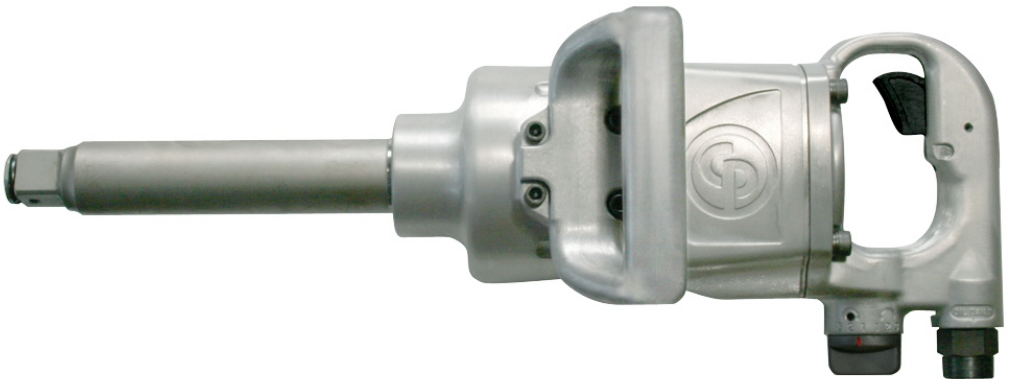


Operator's Manual



CP7778 Series Impact Wrench

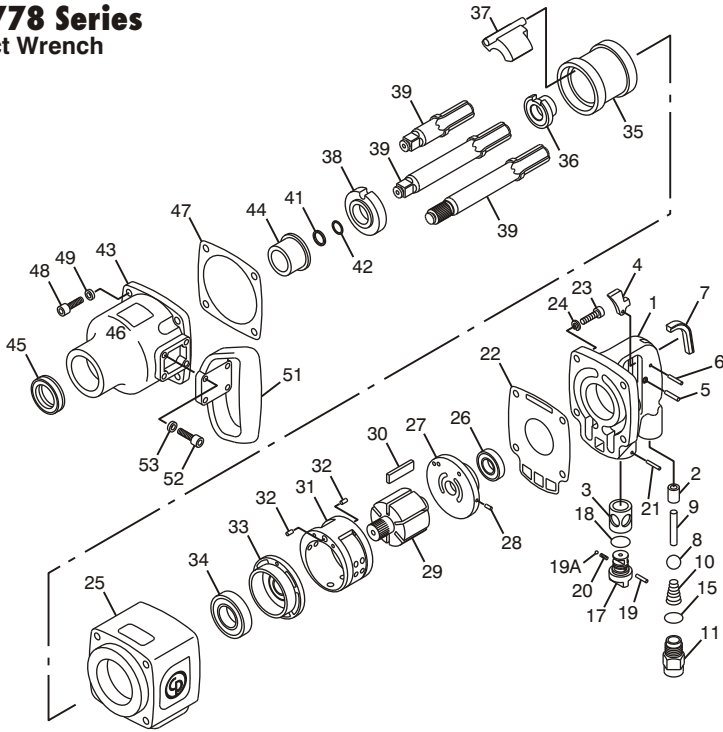
1" Square & #5 Spline Drive Model "K"



⚠ WARNING

To reduce risk of injury, everyone using, installing, repairing, maintaining, changing accessories on, or working near this tool must read and understand these instructions before performing any such task.

CP7778 Series Impact Wrench



Index No.	Part No.	Description	No. Req'd.	Index No.	Part No.	Description	No. Req'd.
1	8940162803	Throttle Handle Assembly (Incl: Index No. 2, 3)	1	34	8940162185	Bearing	1
2	8940162152	Bushing-Throttle	1	35	8940162186	Cage	1
3	8940162801	Bushing-Reverse Valve	1	36	8940162187	Cam	1
4	8940162809	Lever-Throttle	1	37	8940162188	Dog	1
5	8940162155	Pin-Throttle Lever	1	38	8940162189	Bushing-Cage	1
6	8940162156	Pin-Lever Stop	1	39	8940162190	Anvil (1in. Sq. Dr.) (Incl: Index Nos. 41, 42)	1
7	8940162810	Cover-Slot	1		8940162191	Anvil (1in. Sq. Dr. 6 in. Extension) (Incl: Index Nos. 41, 42)	1
8	8940162158	Valve-Throttle	1		8940162192	Anvil (#5 Spine 6 in. Extension) (Incl: Index Nos. 41, 42)	1
9	8940162811	Plunger-Throttle Valve	1	41	8940162193	Ring-Friction (1 in. Sq.)	1
10	8940162160	Spring-Throttle Valve	1		8940162194	Ring-Friction (#5 Spine)	1
11	8940162161	Inlet Bushing	1	42	8940162195	O-Ring (1 in. Sq.)	1
15	8940162165	O-Ring	1		8940162196	O-Ring (#5 Spine)	1
17	8940162812	Valve-Reverse	1	43	8940162197	Clutch Housing Assembly (Incl: Index Nos. 44, 45)	1
18	8940162167	O-Ring	1	44	8940162198	Bushing-Clutch Housing	1
19	8940162168	Pin	1	45	8940162199	Seal	1
19A	8940162169	Ball	1	46	CA155779	Decal-Safety Warning	1
20	8940162170	Spring	1	47	8940162200	Gasket-Clutch Housing	1
21	8940162171	Pin	1	48	8940162201	Screw	4
22	8940162172	Gasket-Handle	1	49	8940162202	Lock Washer	4
23	8940162173	Screw	4	51	8940162804	Handle-Support	1
24	8940162174	Lock Washer	4	52	8940162204	Screw	4
25	8940162802	Housing-Motor	1	53	8940162205	Lock Washer	1
26	8940162177	Bearing	1				
27	8940162178	Plate-Rear End	1				
28	8940162179	Pin	1				
29	8940162180	Rotor	1				
30	8940162181	Blade Set (6)	1				
31	8940162182	Liner	1				
32	8940162183	Pin	2				
33	8940162184	Plate-Front End	1				

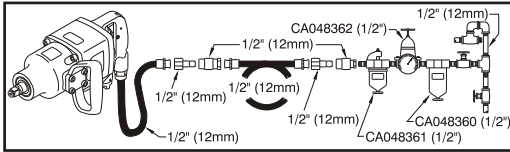
Tune-Up Kit
8940162816 (Incl: Index Nos. 15, 18, 22, 30, 41, 42, 45, 47)

Protective Boot
8940162416

INSTRUCTION MANUAL

Air Supply Requirements

1. Supply tool with 90 psig (6.2 bar) of clean, dry air. Higher pressure drastically reduces tool life.
2. Connect tool to air line using pipe, hose, and fitting sizes shown in the diagram.



Lubrication

1. Use an air line lubricator with SAE #10 oil, adjusted to two (2) drops per minute. If an air line lubricator cannot be used, add air motor oil to the inlet once a day.
2. Use 3 oz. (88 ml) of CP Pneu-Lube Synthetic Clutch Grease 8940158455.

Operation

1. The intended use of this impact wrench is with impact rated sockets operating upon threaded fasteners. To operate, pull trigger on handle. To operate in forward rotation, turn reverse valve toward forward arrow position. To operate in reverse, turn valve toward reverse arrow position.
2. This impact wrench is equipped with a regulator to enable adjustment of output power. Turn the regulator knob to # 3 for maximum power, to # 1 for minimum power.

Maintenance

1. After first year, disassemble and inspect air motor and impacting clutch every three (3) months if the tool is used every day. Replace damaged or worn parts.
2. High wear parts are underlined in the parts list.
3. To keep downtime to a minimum, the following service kits are recommended:

Tune-Up Kit 8940162816

(Incl: 15, 18, 22, 30, 41, 42, 45, 47)

EC DECLARATION OF CONFORMITY

We, Chicago Pneumatic Tool Company, 1800 Overview Drive, Rock Hill, SC 29730 USA, declare under our sole responsibility that the product to which this declaration relates, is in conformity with the requirements of the Council Directive of June 1998 on the approximation of the laws of the Member States relating to machinery (98/37/EC).

Machine Name CP7778 Series Impact Wrench
Machine Type Assembly Power Tool for Threaded Fasteners - No other use is permitted.

Serial No. Tools with No. 06160K or higher

Technical Data

1" (25mm) Sq. Dr. Std.

Air pressure 90 psi (6.2 bar)

Air Consumption 35 cfm

Harmonized Standards Applied EN292

National Standards Applied ISO 8662-7, ISO 15744-2002

Name And Position Of Issuer Yves Antier, General Manager, Chicago Pneumatic Tool Company

Signature Of Issuer

Noise & Vibration Declaration*

Sound pressure level 101 dB(A) impacting, 106 dB(A) free speed, in accordance with ISO 15744-2002. For sound power add 11 dB(A).

Vibration value 9.1 m/s², re. ISO 8662-7.

*These declared values were obtained by laboratory type testing in compliance with the stated standards and are not adequate for use in risk assessments. Values measured in individual work places may be higher than the declared values. The actual exposure values and risk of harm experienced by an individual user are unique and depend upon the way the user works, the workpiece and the workstation design, as well as upon the exposure time and the physical condition of the user. We, Chicago Pneumatic, cannot be held liable for the consequences of using the declared values, instead of values reflecting the actual exposure, in an individual risk assessment in a work place situation over which we have no control.



⚠ WARNING

To reduce risk of injury, everyone using, installing, repairing, maintaining, changing accessories on, or working near this tool must read and understand these instructions before performing any such task.

Air Supply And Connection Hazards

- ⚠ Air under pressure can cause severe injury.
- ⚠ Always shut off air supply, drain hose of air pressure and disconnect tool from air supply when not in use, before changing accessories or when making repairs.
- ⚠ Never direct air at yourself or anyone else.
- ⚠ Whipping hoses can cause serious injury. Always check for damaged or loose hoses and fittings.
- ⚠ Do not use quick disconnect couplings at tool. See instructions for correct set-up.
- ⚠ Whenever universal twist couplings are used, lock pins must be installed.
- ⚠ Do not exceed maximum air pressure of 90 psi (6.2 bar) or as stated on tool nameplate.

Entanglement Hazards

- ⚠ Keep away from rotating drive.
- ⚠ Do not wear jewelry or loose clothing.
- ⚠ Choking can occur if neckwear is not kept away from tool and accessories.
- ⚠ Scalping can occur if hair is not kept away from tool and accessories.
- ⚠ Avoid direct contact with accessories during and after use. Gloves will reduce the risk of cuts or burns.
- ⚠ Use only proper accessory retainers (see parts list). Use deep sockets wherever possible.

Projectile Hazards

- ⚠ Always wear impact-resistant eye and face protection when involved with or near the operation, repair or maintenance of the tool or changing accessories on the tool.
- ⚠ Be sure all others in the area are wearing impact-resistant eye and face protection.
- ⚠ Even small projectiles can injure eyes and cause blindness.
- ⚠ Use only impact wrench sockets and accessories in good condition. Sockets in poor condition or hand sockets and accessories used with impact wrenches can shatter.
- ⚠ Always use the simplest hook-up possible. Long, springy extension bars and adapters absorb impact power and could break. Use deep sockets wherever possible.

⚠ WARNING

To reduce risk of injury, everyone using, installing, repairing, maintaining, changing accessories on, or working near this tool must read and understand these instructions before performing any such task.

- ⚠ Never operate the tool off of the work. It may run too fast and cause the accessory to be thrown off the tool.
- ⚠ Serious injury can result from over-torqued or under-torqued fasteners, which can break, or loosen and separate. Released assemblies can become projectiles. Assemblies requiring a specific torque must be checked using a torque meter.

Note: So-called "click" torque wrenches do not check for potentially dangerous over-torque conditions.

Workplace Hazards

- ⚠ Slip/Trip/Fall is a major cause of serious injury or death. Beware of excess hose left on the walking or work surface.
- ⚠ High sound levels can cause permanent hearing loss. Use hearing protection as recommended by your employer or OSHA regulation (see 29 CFR part 1910).
- ⚠ Maintain a balanced body position and secure footing.
- ⚠ Be in control of the throttle at all times. Do not get caught between the tool and the work.
- ⚠ Repetitive work motions, awkward positions and exposure to vibration can be harmful to hands and arms. If numbness, tingling, pain or whitening of the skin occurs, stop using the tool and consult a physician.
- ⚠ Avoid inhaling dust or handling debris from the work process which can be harmful to your health. Use dust extraction and wear respiratory protective equipment when working with materials which produce airborne particles.
- ⚠ Proceed with care in unfamiliar surroundings. Be aware of potential hazards created by your work activity. This tool is not insulated for coming into contact with electric power sources.
- ⚠ Some dust created by power sanding, sawing, grinding, drilling and other construction activities contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. Some examples of these chemicals are:
 - Lead from lead based paints
 - Crystalline silica bricks and cement and other masonry products
 - And Arsenic and chromium from chemically-treated rubber

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: work in a well ventilated area, and work with approved safety equipment, such as dust masks that are specially designed to filter out microscopic particles.

Additional Safety Topics

- ⚠ This tool and its accessories must not be modified.
- ⚠ This tool is not recommended for use in explosive atmospheres.
- ⚠ Operators and maintenance personnel must be physically able to handle the bulk, weight and power of the tool.
- ⚠ For professional use only.

SAFETY INSTRUCTIONS

DO NOT DISCARD - GIVE TO USER

SAFETY INSTRUCTIONS

DO NOT DISCARD - GIVE TO USER

- Our goal is to produce tools that help you work safely and efficiently. The most important safety device for this or any tool is YOU. Your care and good judgment are the best protection against injury. All possible hazards cannot be covered here, but we have tried to highlight some of the important ones.
- Only qualified and trained operators should install, adjust or use this power tool.
- This tool and its accessories must not be modified in any way.
- Do not use this tool if it has been damaged.
- If the rated speed, operating pressure or hazard warning signs on the tool cease to be legible or become detached, replace without delay.

⚠ Air Supply And Connection Hazards

- Air under pressure can cause severe injury.
- Always shut off air supply, drain hose of air pressure and disconnect tool from air supply when not in use, before changing accessories or when making repair.
- Never direct air at yourself or anyone else
- Whipping hoses can cause serious injury. Always check for damaged or loose hoses and fittings.
- Do not use quick disconnect couplings at tool. See instructions for correct setup.
- Whenever universal twist couplings are used, lock pins must be installed.
- Do not exceed maximum air pressure of 90 psi/6.3 bar or as stated on tool nameplate.

⚠ Entanglement Hazards

- Keep away from rotating drive. Choking, scalping and / or lacerations can occur if loose clothing, gloves, jewellery, neck ware and hair are not kept away from tool and accessories.
- Gloves can become entangled with the rotating drive, causing severed or broken fingers.
- Rotating drive sockets and drive extensions can easily entangle rubber-coated or metal reinforced gloves.
- Do not wear loose-fitting gloves or gloves with cut or frayed fingers.
- Never hold the drive, socket or drive extension.

⚠ Projectile Hazards

- Always wear impact-resistant eye and face protection when involved with or near the operation, repair or maintenance of the tool or changing accessories on the tool.
- Be sure all others in the area are wearing impact-resistant eye and face protection. Even small projectiles can injure eyes and cause blindness.
- Serious injury can result from over-torqued or under-torqued fasteners, which can break, or loosen and separate. Released assemblies can become projectiles. Assemblies requiring a specific torque must be checked using a torque meter.

Note: So-called "click" torque wrenches do not check for potentially dangerous over-torque conditions.

- Use only impact wrench sockets and accessories in good condition. Sockets in poor condition or hand sockets and accessories used with impact wrenches can shatter.
- Never operate the tool off of the work. It may run too fast and cause the accessory to be thrown off the tool.
- Ensure that the workpiece is securely fixed.

⚠ Accessory hazards

- Use only proper accessory retainers (see parts list). Use deep sockets wherever possible.
- For tools using the pin and O-ring socket retention system, use the O-ring to retain the socket pin securely.
- Always use the simplest hook-up possible. Long, springy extension bars and adapters absorb impact power and could break. Use deep sockets wherever possible.

⚠ Operating hazards

- Operators and maintenance personnel must be physically able to handle the bulk, weight and power of the tool.
- Hold the tool correctly; be ready to counteract normal or sudden movements – have both hands available.
- Do not use with reduced air pressure or in a worn condition: the clutch may not operate, resulting in sudden rotation of the tool handle.
- Be in control of the throttle at all times. Do not get caught between the tool and the work.

⚠ Repetitive motion hazards

- When using a power tool to perform work-related activities, the operator might experience discomfort in the hands, arms, shoulders, neck, or other parts of the body.
- Adopt a comfortable posture whilst maintaining secure footing and avoiding awkward or offbalance postures. Changing posture during extended tasks can help avoid discomfort and fatigue.
- Do not ignore symptoms such as persistent or recurring discomfort, pain, throbbing, aching, tingling, numbness, burning sensation, or stiffness. Stop using the tool, tell your employer and consult a physician.

⚠ Noise and Vibration hazards

- High sound levels can cause permanent hearing loss and other problems such as tinnitus. Use hearing protection as recommended by your employer or occupational health and safety regulations.
- Exposure to vibration can cause disabling damage to the nerves and blood supply of the hands and arms. Wear warm clothing and keep your hands warm and dry. If numbness, tingling, pain or whitening of the skin occurs, stop using tool, tell your employer and consult a physician.
- Hold the tool in a light but safe grip because the risk from vibration is generally greater when the grip force is higher. Where possible use a suspension arm or fit a side handle.
- To prevent unnecessary increases in noise and vibration levels:
 - Operate and maintain the tool, and select, maintain and replace the accessories and consumables, in accordance with this instruction manual;
 - Do not use worn or ill-fitting screwdriver bits, sockets or extensions.
 - Do not touch sockets or accessories during impacting.

⚠ Workplace Hazards

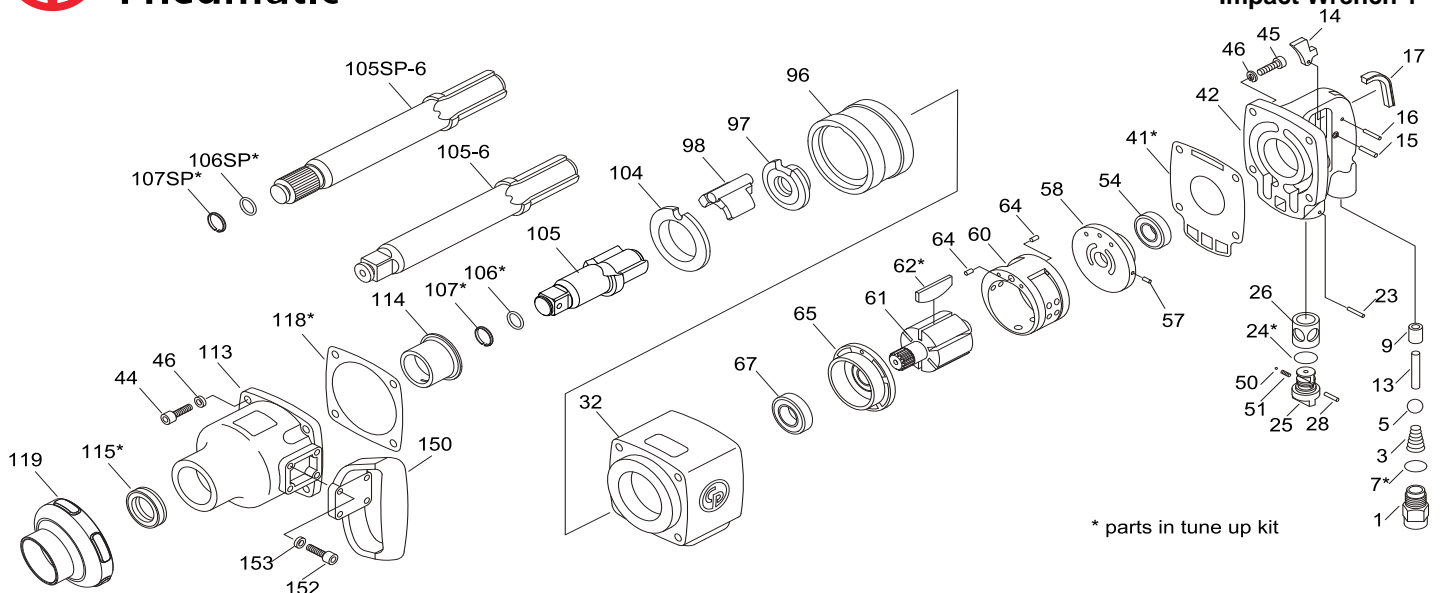
- Slip/Trip/Fall is a major cause of serious injury or death. Be aware of excess hose left on the walking or work surface.
- Avoid inhaling dust or fumes or handling debris from the work process which can be harmful to your health (for example, cancer, birth defects, asthma and/or dermatitis). Use dust extraction and wear respiratory

protective equipment when working with materials which produce airborne particles.

- Some dust created by power sanding, sawing, grinding, drilling and other construction activities contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. Some examples of these chemicals are:
 - Lead from lead based paints
 - Crystalline silica bricks and cement and other masonry products
 - And Arsenic and chromium from chemically- treated rubber


Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: work in a well ventilated area, and work with approved safety equipment, such as dust masks that are specially designed to filter out microscopic particles.

- Proceed with care in unfamiliar surroundings. Be aware of potential hazards created by your work activity. This tool is not insulated for coming into contact with electric power sources.
- This tool is not recommended for use in explosive atmospheres.



Item	Part No.	Description	Qty.
A	8940170247	HANDLE ASS'Y (Incl: Kit No. A1, A2, A3)	
1	8940162161	Inlet Bushing	1
41	8940162172	Gasket - Handle	1
42	8940162803	Throttle Handle Ass'y (Incl: Index No. 9, 26)	1
9		Bushing - Throttle Valve	1
26		Bushing - Reverse Valve	1
45		Screw	4
46		Lock Washer	4
A1	8940170361	THROTTLE VALVE KIT	
3		Spring-Throttle Valve	1
5		Valve - Throttle	1
Z		O-ring	1
9		Bushing - Throttle Valve	1
13		Plunger - Throttle Valve	1
A2	8940170248	TRIGGER KIT	
14		Lever - Throttle	1
15		Pin - Throttle Lever	1
16		Pin - Lever Stop	1
17		Cover - Slot	1
A3	8940170249	REVERSE VALVE KIT	
23		Pin - Lever Stop	1
24		O-Ring	1
25		Valve - Reverse	1
28		Pin	1
50		Ball	1
51		Spring	1
C	2050554053	REAR ENDPLATE KIT	
54	8940162177	Bearing	1
57		Pin	1
58		Plate - Rear End	1
64		Pin	1
D	8940170250	FRONT ENDPLATE KIT	
64		Pin	1
65		Plate-Front End	1
67	8940162185	Bearing	1
E	8940170251	CLUTCH KIT	
96		Cage	1
97	8940162187	Cam	1
98	8940162188	Dog	1
104	8940162189	Bushing - Cage	1
F1	8940162190	ANVIL ASS'Y - 1" SQ. DR. (Incl: Kit No. F1.1)	
105		Anvil - Square drive 1"	1
F1.1	2050554093	SOCKET RETAINER KIT - 1" SQUARE DRIVE	
106		O-Ring	1
107		Ring - Friction	1

Item	Part No.	Description	Qty.
F2	8940162191	ANVIL ASS'Y - 1" SQ. DR., 6" EXT. (Incl: Kit No. F1.1)	
105-6		Anvil - Square drive 1", 6" ext.	1
F1.1	2050554093	SOCKET RETAINER KIT - 1" SQUARE DRIVE	
106		O-Ring	1
107		Ring - Friction	1
F3	8940162192	ANVIL ASS'Y - #5 SPLINE DR., 6" EXT. (Incl: Kit No. F1.1)	
105SP-6		Anvil - Square drive 1", 6" ext.	1
F3.1	8940170255	SOCKET RETAINER KIT - #5 SPLINE DRIVE	
106SP		O-Ring	1
107SP		Ring - Friction	1
G	8940170256	CLUTCH HOUSING KIT	
44		Screw	4
46		Lock Washer	4
113		Clutch Housing Ass'y (Incl: Item No. 114, 115)	1
114		Bushing - Clutch Housing	1
115		Seal	1
118		Gasket - Clutch Housing	1
H	8940170257	SUPPORT HANDLE KIT	
150		Handle - Support	1
152		Screw	4
153		Lock Washer	4
I	2050554123	SCREWS KIT	
44		Screw	4
45		Screw	4
46		Lock Washer	8
152		Screw	4
153		Lock Washer	4
J	2050554203	SMALL PARTS KIT	
5		Valve - Throttle	1
15		Pin - Throttle Lever	1
16		Pin - Lever Stop	2
23		Pin - Lever Stop	1
28		Pin	1
50		Ball	2
51		Spring	2
57		Pin	1
64		Pin	2
OTHER PARTS AND SETS			
32	8940162802	Housing - Motor	1
60	8940162182	Liner	1
61	8940162180	Rotor	1
62	8940162181	Blades (Set of 6)	1
119	2050554943	Protective cover	1
-	CA155779	Warning label	1

	8940162817 OPERATOR'S MANUAL
	8940170227 CE DECLARATION OF CONFORMITY
	6159948710 SAFETY INSTRUCTIONS

8940162816 TUNE UP KIT
7, 24, 41, 62, 106, 106SP, 107, 107SP, 115, 118

Recommended accessories				
	Hose whip	Hose kit (incl. EasyFlow coupling)	Nipple	FRL kit (incl. EasyFlow coupling)
BSP (EURO 7.6mm)	6158112640	6153980575	6158105920	6153980375
NPT	CA049271	6153980615	6158105780	6153980405
NPT (Asia 7.5mm)	CA049271	6153980665	6158106850	6153980435