



ATEX APPROVED

AIR SAWS FOR THE PROFESSIONAL



JSM

operating instructions



EC Declaration of Conformity

Cengar. Ltd.
Springfield Works, Saddleworth Road
Halifax, England HX4 8LZ

We the undersigned, declare under our sole responsibility that the following apparatus: -

Machine description: Cengar Air Saw
Machine Type: JSM

Is in conformity with the following relevant EC legislation:

Machinery Directive 2006/42/EC
Atex Directive 94/ 9/EC

Based on the following Harmonised Standards:

EN13463-1:2009

And therefore complies with the essential requirements of those directives.

Additional Information:

ATEX Coding II 2G T5 I M2
Certificate No. TRL08ATEX21175X
Technical File No. CEEX-0803

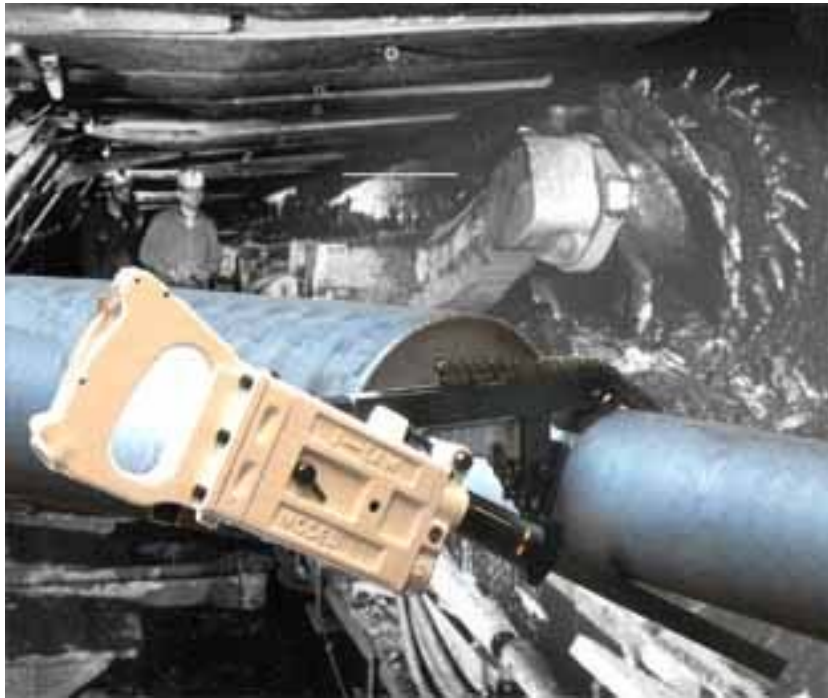
A handwritten signature in black ink, appearing to read "Ray J. H. H. H.", written over a horizontal line.

Authorised Signature:

Date: 15/12/09

Cengar Air Saw Model JSM

We recommend normal safe working practices should be followed as per the Health and Safety at Work Act, or the appropriate National and State Laws. We recommend that eye protection be worn



SPECIFICATIONS

Speed	400/600 strokes per minute
Stroke	57 mm
Air Consumption	0.168m ³ /minute
Air Pressure	5-6 Bar
Weight	6.9 Kgs.
Length	448 mm.
Height	141 mm.
Width	54 mm.
Vibration Level averaged	1.38 m/s ²
Sound Pressure Level	80.5 db.
Sound Power Level	89.9 db.

CENGAR SAWS

are hand held reciprocating saws designed to cut metals and plastics in production environments and can be used in Atex zoned areas where appropriate. They should only be used by trained operators who are responsible for the safety of themselves and others in the vicinity. Saw blades are capable of causing serious injury

Think safe

Act safe

Be safe

LUBRICATION

Use Cengar Green Oil with longer lasting coating properties for best results. Cengar Green Oil is specially prepared to: -

- 1 Emulsify the water generally found in compressed air lines.
- 2 Give perfect mist lubrication.
- 3 Remain fluid at the low working temperature of compressed air tools.
- 4 Contains corrosion and oxidation inhibitors.

Incorrect oils if used will soon “break down” forming a sludge which will slow and eventually stop the action of the saw. See maintenance details.

INSTALLATION OF BLADES.

Before attempting to insert or change a blade, ensure that the air supply is isolated by disconnecting the air line. Loosen the retaining grub screws with the key provided, insert blade through nosepiece so that the teeth are cutting on the pull stroke.

Locate the back screw in the hole in the end of the blade, for a positive drive, the front screw can then be tightened to grip the blade firmly.

BLADES

Cengar “Shatterproof” Bi-Metal blades are specially prepared for use with Cengar saws, to withstand the high operating speeds, and give maximum cutting life.

Choose the teeth per inch to suit the characteristics of the material being cut.

Choose pitch to ensure that at least 3 or 4 teeth are cutting at the same time.

Always remove the saw from the airline before commencing any

OPERATING THE SAW

We recommend that eye protection be worn, and normal safe working practices observed as per the Health and Safety at work act, and the appropriate National and State Laws.

The JSM should be used in conjunction with the pipe clamp where possible.

Connect the air supply, rest the blade on the material to be cut with the nosepiece firmly abutted to the work piece, with forward hand pressure, to prevent judder. Allow the Cengar Saw to cut under its own weight, with just a slight downward hand pressure to keep the teeth engaged in the cut. It is not necessary to put excessive downward pressure on the saw, this only accelerates blade wear, and prevents the saw from operating efficiently. Normal airline pressure of 5 to 6 Bar is required , any higher pressure only accelerates internal wear of the machine.

USE IN HAZARDOUS AREAS

We strongly advise that the contact area of the blade on the work piece be quenched with coolant or water during cutting to dissipate any heat which may be created by the cutting process.

Anti-static conductive air hose must be used, with adequate earth bond continuity (resistance below 1 ohm), to ground any electrostatic charges.

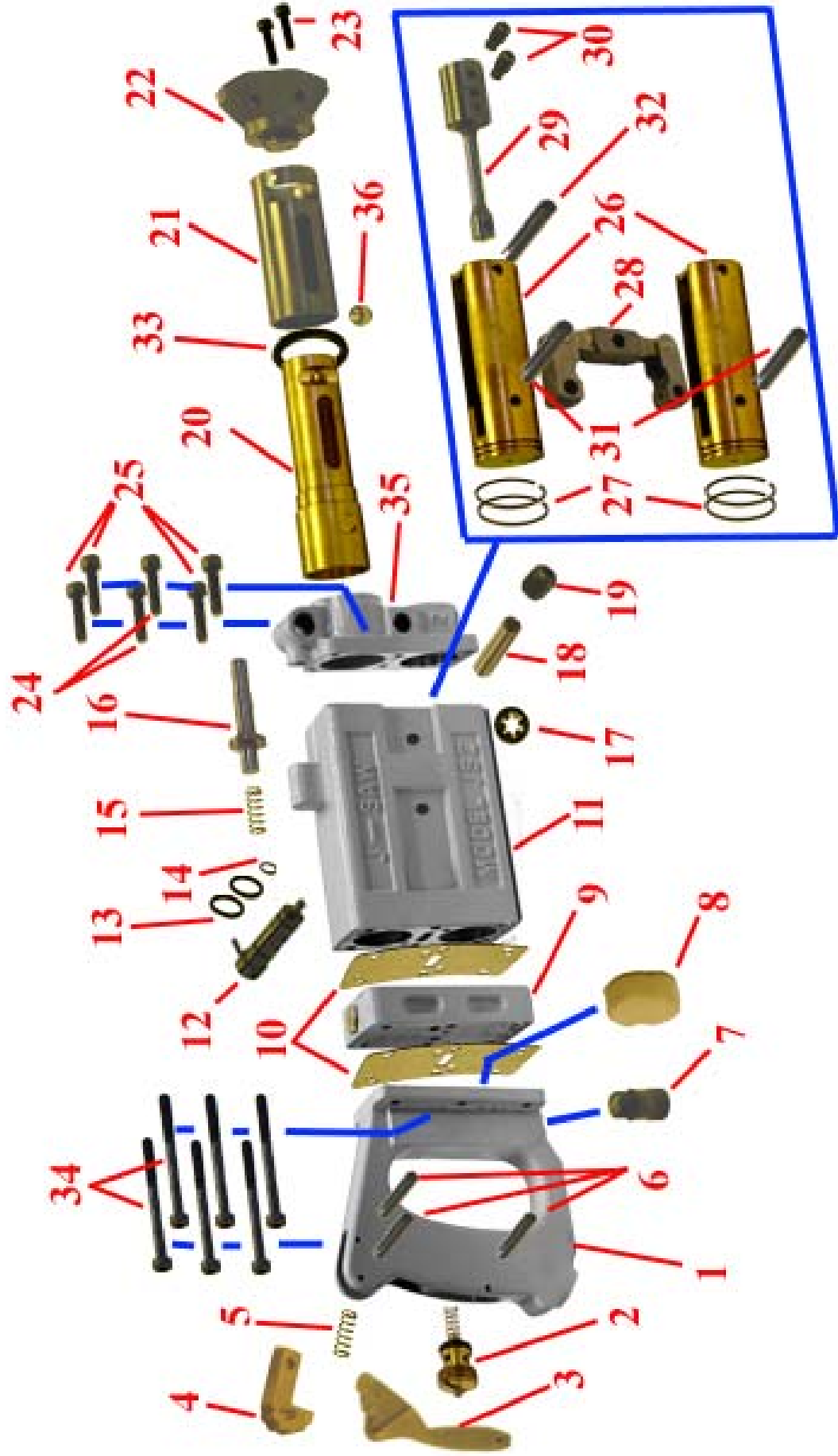
MAINTENANCE AND GENERAL HINTS

Always ensure sufficient oil in the tool, especially when the saw is in constant use.

The valve unit part no. 8308ZA is a vital component manufactured to close tolerances, and will not tolerate abusive treatment. Lubrication is essential. Any neglect will seriously affect performance of the saw, causing the saw to stall intermittently, or stop completely.

Very little maintenance is required if the correct oil is used, but incorrect oil will soon breakdown into sludge, slowing down the

JSM Exploded View



Item	Part No.	Description	Number Per Tool	Item	Part No.	Description	Number Per tool
1	8301M	Handle ZA12	1	19	8313	Screw for above	1
2	50034	Valve in Handle	1	20	8319	Conn. Rod Guide	1
3	8303	Trigger & Catch	1	21	8320	Silencer Guard	1
			1	22	8324	Nosepiece	1
5	9334A	Spring	1	23	54160	Screws—nosepiece	2
6	51834	Pins for trigger	3	24	54034	Screws	2
7	8306	Oil Plug & Seal	1	25	53034	Screws	4
8	8307F	Filter	1	26	8310	Piston	2
9	8308M	Valve Unit Complete	1	27	8310LS	Piston Seal	2
10	8307	Gasket	2	28	8312	Ling to Pistons	1
11	8309M	Body	1	29	8318	Connecting Rod	1
12	8314	Speed Regulator	1	30	55516	Blade Grip Screws	2
13	5012	'O' Ring	2	31	51114	Pins to Piston	2
14	5006	'O' Ring	1	32	51114	Pin to Conn Rod	1
15	8315A	Spring	1	33	0291	'O' Ring	1
16	8315	Clamp Securing Pin	1	34	54134	Screws—Handle	6
17	8314C	Regulator retainer	1	35	8316M	Front end Bracket	1
18	55161	Centre Shaft	1	36	9332C	Détente Ball	1

IF THE SAW DOES NOT OPERATE

- 1 Check that the air supply is switched on.
- 2 Check air supply is correct.
- 3 Valve in handle (part no. 50034) could be worn and/or the seal is broken, blocking an air passage. Check and replace if necessary.
- 4 Valve unit (Part No. 8308) may be stuck. **IT IS IMPERATIVE TO REMOVE THE SAW FROM THE AIRLINE BEFORE COMMENCING THIS CHECK.** Remove the two hexagonal nuts, push out valve piston with a pencil, keeping note which end is top. Clean with oil only, NEVER USE ABRASIVE. Clean valve bore with oil, re-fit piston from top, keeping the seal at the top end. Tighten nuts and reconnect saw to air supply.

REPLACEMENT OF PISTON SEALS

- 1 Each seal consists of two rings, replacements must be fitted as follows:
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- 2 Place the elastic ring in the centre of the piston groove, ensuring it is not twisted
- 3 Fit the Stiffer sealing ring on top of the elastic ring, Use some green oil to ease its passage over the piston.
- 4 Fit the pistons into the bores using a ring compressor, with a coating of Cengar Green oil, and ensure they slide smoothly over the full travel range.

PIPE CUTTING WITH THE JSM

1. Fit the post into the appropriate side of the clamp, the cut line will be 50mm (2") away from the nearest side face of the foot.
2. Position the clamp on the pipe, with the chain around, and tighten with spanner provided.

Ensure that the clamp is perpendicular to pipe for a square cut. (Fig.1)

Fig. 1

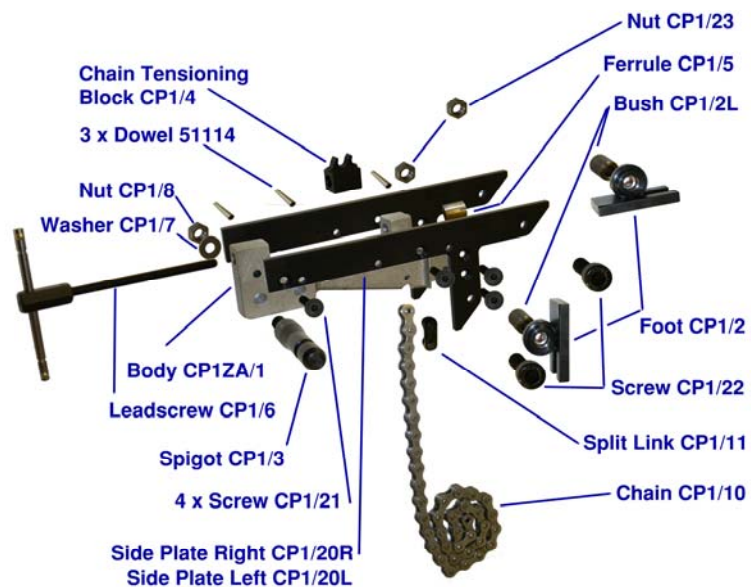


3. Fit the desired saw blade with the teeth uppermost
4. Mount the machine on to the post of the clamp, by pulling back the plunger on the top of the saw, and sliding onto the post until the plunger snaps back. Ensure the machine has locked on properly.
5. When mounted correctly, the blade should be under the pipe, such that the weight of the machine applies the cutting force to the blade. (Fig.2)
6. Start the machine, locking on the trigger, and gently bring the blade into contact with the work, gradually release the weight of the machine and allow the cut to take place without extra force.
7. If using a long blade for larger diameter pipes, the bow guide supplied can be used to ensure a straight cut is achieved. Once the blade has entered into the work enough to self support,

Fig. 2



Clamp CP 1ZA
Spares



NEVER

- 1 **NEVER** fit breakable “All-Hard” blades in Cengar saws, these can shatter causing injury to yourself and others.
- 2 **NEVER** operate saw without wearing safety glasses
- 3 **NEVER** operate saw whilst you, or others are near the saw blade, which can cause serious injury or trapping
- 4 **NEVER** use excessive force, this may increase vibration above safe levels
- 5 **NEVER** hold the Cengar saw in a vice by the body, this will distort the bores, rendering the tool inoperative.
- 6 **NEVER** screw nameplates to the body, as the screws may penetrate an airway or bore.
- 7 **NEVER** operate the Cengar saw without lubrication.
- 8 **NEVER** be tempted to clean internal parts with anything other than a clean lint free cloth, and M.S. Cleaner, or Cengar Green oil.
- 9 **NEVER** modify Cengar saws or use non Cengar parts, this will invalidate ATEX approval, and warranty.

ALWAYS

- 1 **ALWAYS** use Cengar green oil for best results. Keeping the saw clean and well oiled will give excellent reliability, and a long life.
- 2 **ALWAYS** use Cengar Bi-Metal Shatterproof blades, for safety, and best cutting performance
- 3 **ALWAYS** isolate the air supply when changing blades.
- 4 **ALWAYS** wear eye protection when using sawing machines.
- 5 **ALWAYS** keep the nosepiece abutted to the work to prevent excessive vibration
- 6 **ALWAYS** isolate the machine when not in use
- 7 **ALWAYS** keep others away from the saw blade to prevent injury or trapping

ACCESSORIES

Saw Blades



MJ 300	300 mm long x 25 mm blade, pitches 6, 8, 10, & 14
MJ 450	450 mm long x 25 mm blade, pitches 6, 8, 10, & 14

Other types available on request

Cengar Green Oil



GO 9107P	Cengar Green Oil 250 ml plastic bottles for all air tools
GO 9109	As above in 5 litre container
GO 9110	As above in 25 litre container

M.S. Cleaner

MS 9105	1 litre General purpose cleaning fluid for air tools.
MS 9125	50 ml. In a dropper bottle. - Enough for 10 tools Always use plenty of Cengar green oil afterwards.



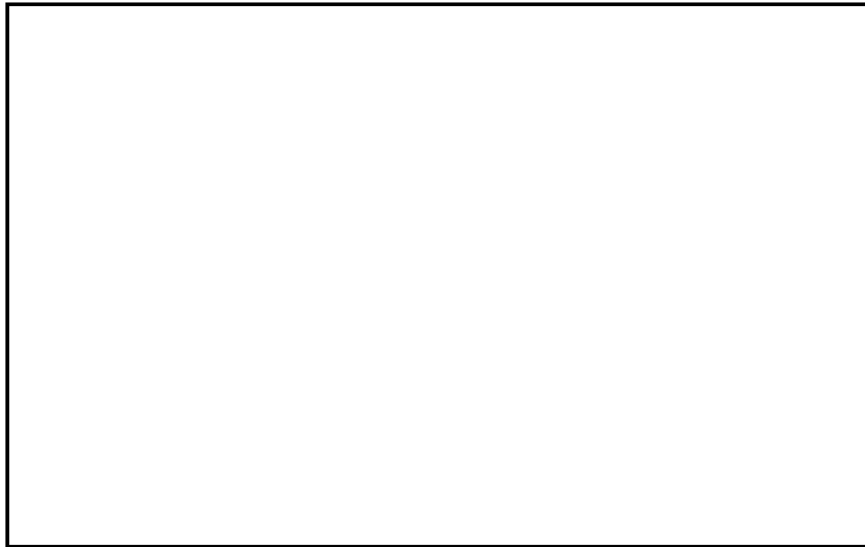
Pipe Clamp

CP 1ZA	Clamp to mount saw to sections
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SERVICE

We offer a full factory repair and refurbishment service for Cengar Saws, - normally within 5 working days. Quotations at no charge can be given before work is carried out.

DISTRIBUTOR ADDRESS



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