

SAFETY RULES MODEL KD-442 ELECTRIC SHEAR



**The KD-442 has a
DOUBLE INSULATED
power unit equipped with a
2 wire cord and
2 prong plug**



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GENERAL POWER TOOL SAFETY WARNINGS



WARNING Read all safety warnings and all instructions. Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.

Save all warnings and instructions for future reference.

The term "power tool" in the warnings refers to your mains-operated (corded) power tool or battery-operated (cordless) power tool.

1) Work area safety

- a) **Keep work area clean and well lit.** *Cluttered or dark areas invite accidents.*
- b) **Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust.** *Power tools create sparks which may ignite the dust or fumes..*
- c) **Keep children and bystanders away while operating a power tool.** *Distractions can cause you to lose control.*

2) Electrical safety

- a) **Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools.** *Unmodified plugs and matching outlets will reduce risk of electric shock.*
- b) **Avoid body contact with earthed or grounded surfaces such as pipes, radiators, ranges and refrigerators.** *There is an increased risk of electric shock if your body is earthed or grounded.*
- c) **Do not expose power tools to rain or wet conditions.** *Water entering a power tool will increase the risk of electric shock.*
- d) **Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts.** *Damaged or entangled cords increase the risk of electric shock.*
- e) **When operating a power tool outdoors, use an extension cord suitable for outdoor use.** *Use of a cord suitable for outdoor use reduces the risk of electric shock.*
- f) **If operating a power tool in a damp location is unavoidable, use a residential current device (RCD) protected supply.** *Use of an RCD reduces the risk of electric shock.*

3) Personal safety

- a) **Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication.** *A moment of inattention while operating power tools may result in serious personal injury.*
- b) **Use personal protective equipment. Always wear eye protection.** *Protective equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.*
- c) **Prevent unintentional starting. Ensure the switch is in the off-position before connecting to power source and/or battery pack.** *Carrying tools with your finger on the switch or energising power tools that have the switch on invites accidents.*
- d) **Remove any adjusting key or wrench before turning the power tool on.** *A wrench or key left attached to a rotating part of the power tool may result in personal injury.*
- e) **Do not overreach. Keep proper footing and balance at all times.** *This enables better control of the power tool in unexpected situations.*
- f) **Dress properly. Do not wear loose clothing or jewellery. Keep your hair, clothing and gloves away from moving parts.** *Loose clothes, jewelry or long hair can be caught in moving parts.*
- g) **If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used.** *Use of dust collection can reduce dust-related hazards.*

4) Power tool use and care

- a) **Do not force the power tool. Use the correct power tool for your application.** *The correct power tool will do the job better and safer at the rate for which it was designed.*
- b) **Do not use the power tool if the switch does not turn it on and off.** *Any power tool that cannot be controlled with the switch is dangerous and must be repaired.*
- c) **Disconnect the plug from the power source and/or the battery pack from the power tool before making any adjustments, changing accessories, or storing power tools.** *Such preventive measures reduce the risk of starting the power tool accidentally.*
- d) **Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool.** *Power tools are dangerous in the hands of untrained users.*
- e) **Maintain power tools. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tool's operation. If damaged, have the power tool repaired before use.** *Many accidents are caused by poorly maintained power tools.*
- f) **Keep cutting tools sharp and clean.** *Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.*
- g) **Use the power tool, accessories and tool bits etc. in accordance with these instructions. Taking into account the working conditions and the work to be performed.** *Use of the power tool for operations different from those intended could result in a hazardous situation.*

5) Service

- a) **Have your power tool serviced by a qualified repair person using only identical replacement parts.** *This will ensure that the safety of the power tool is maintained.*
- b) **For KD-442 and all double insulated tools: When servicing, use only identical replacement parts.**

SYMBOLS

The symbol on the Caution Label is mean to convey this message. Ne pas exposer a la pluie et ne pas utiliser dans les emplacements humides. Don't use power tools in damp or wet locations.



Definitions of Symbols

Class II Construction
(Double insulated motor) =



Underwriters Laboratory =



n_0 = No load speed

/min = Revolutions per minute

AC = Alternating current



Hz = Hertz

A = Amperes

V=Volts

Motor

Be sure your power supply agrees with nameplate marking. Use Alternating Current Only (50 to 60 Cycles), 120 volts. Voltage variation of more than 10% will cause loss of power and overheating. Motors are factory tested. If this shear does not operate, check the following: supply line for blown fuses; plug and receptacle for contact. This tool will stop when the brushes wear to a preset length. Damage to the motor is thus avoided.

FUNCTIONAL DESCRIPTION

Please read carefully all safety rules and operating instructions. The Model KD-442 Shear is recommended for CR sheet steel up to 16 gage. Secure work piece. To start cut, place side knives of shear slightly on the edge of the top side of the work piece to steady the tool and ready it for the cut. Depress the trigger switch and guide shear into the work. Do not force it. Avoid double thicknesses of material which exceed the 16 gage recommended capacity. For cutting within perimeter of work piece, drill a 1/2" diameter starting hole and follow instructions above. If resistance to tool develops or cutting becomes difficult, discontinue cutting and check the following: lubrication; thickness of material; sharpness of cutting blades.

OPERATION

Avoid Accidental Starting

Don't carry plugged-in tool with finger on switch. Be sure switch is OFF when plugging in. Use of any accessory with this power unit might increase the hazard. The tool should be used only for the purpose for which it is designed.

Plug

THE POLARIZED PLUG IS A SAFETY FEATURE. This tool is equipped with a polarized two wire AC line plug. The two wire polarized plug (having one blade wider than the other) will fit into the power outlet only one way. DO NOT DEFEAT THE SAFETY PURPOSE OF THE POLARIZED PLUG, by tampering with it. If the plug does not fit you should still be unable to fully insert the plug into the socket, you may find that a proper outlet is needed to meet today's electrical standards. An electrician will replace your outlet safely.

Extension Cords

Always check the extension cord and repair or replace if damaged.

Outdoor Use Extension Cords

When tool is used outdoors, use only extension cords marked W-A or W.

Stay Alert

Watch what you are doing, use common sense when operating a power tool. Do not use tool while tired or under the influence of drugs, alcohol or medication.

Check Damaged Parts

Before further use of the tool, a guard or other part that is damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment if moving parts, binding or moving parts, breakage of parts, mounting, and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced by an authorized service center unless otherwise indicated elsewhere in this instruction manual. Have defective switches replaced by authorized service center. Do not use tool if switch does not turn it on or off.

DO NOT OPERATE power tools in explosive atmospheres such as in the presence of flammable liquids, gases, or dust. Motors in these tools normally spark and sparks can possibly ignite fumes.

Read all instruction.

Save these instructions.

MAINTENANCE

When servicing, use only identical replacement parts. Tool may be cleaned and lubricated by the user, but any other servicing, including the changing of carbon brushes, should be performed by the manufacturer or any authorized representative or service station.

Cable

The cable or cord is the "life line" of your tool. Keep it clean by wiping it off occasionally. Keep it out of oils and greases. Coil it neatly when not in use and avoid dragging it across sharp surfaces or using it as a handle to lift the tool.

When using the tool at a considerable distance from power source, an extension cable of adequate size must be used to prevent loss of power and over-heating.

For extension cables up to 75 feet use number 18; for 100 feet use number 16; and for up to 200 feet use number 14 wire gage. If you are working with a 230 volt tool, cable lengths may be doubled using the same wire gage sizes as prescribed above for the 120 volt tool.

Lubrication

Always disconnect KD-440 Electric Shear from power source before lubricating.

Once every three months, depending upon usage, remove the shear Head from the power unit following the instructions given on the service sheet under the heading "Disassembly-To remove the shear head assembly (42-20) from the drive motor." Put a few drops of heavy oil on the Eccentric Bearing Assembly (40-24), so that it saturates the needle bearing (40-24- 2). Grease is even better if it can be forced or pressed into the needle bearing rollers. The outside surface of the Eccentric Bearing Ring (40-24-3) should also be greased.

Tools that have seen continuous use should also have the gear train lubricated periodically, preferably at the same time the eccentric bearing assembly is serviced. To lubricate the gears remove the screws that hold the gear case to the motor shell. Remove the gear case from the cover plate and wipe out the old grease with a cloth. Wash the gears and spindles with kerosene or cleaning fluid. Refill the gear case ONLY 1/3 FULL with a good standard gear grease. Never fill more than 1/3. The Ball bearing in the gear case is a closed type bearing. It has been permanently lubricated at the factory to last the life of the bearing. This bearing should NEVER be immersed in a solvent or cleaning fluid.

Adherence to these maintenance instructions will greatly increase the life of your Model KD-442 Electric Shear, so it will give you long and satisfactory service.



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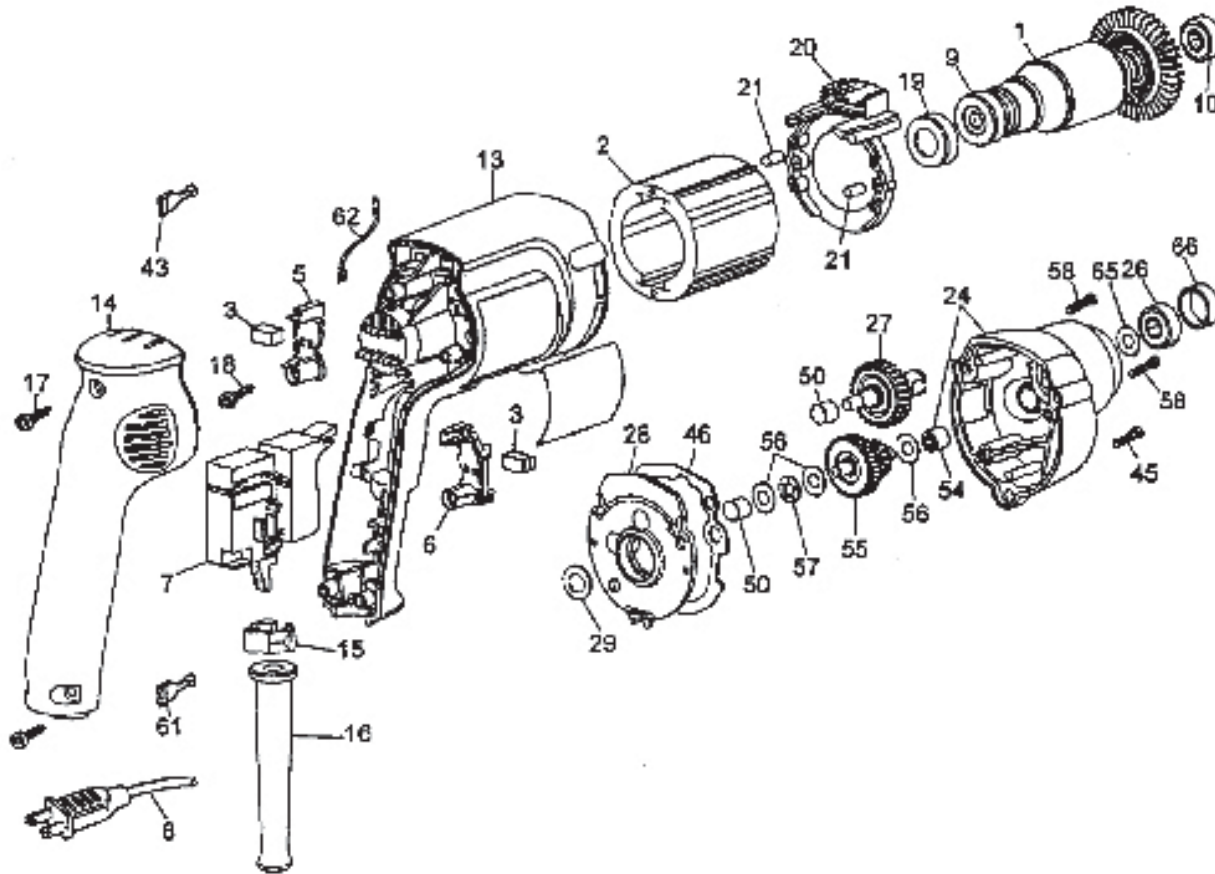
K12-405



Component Motor Unit Model 253-59

Used on KD-400, KD-480, KD-440, KD-441, KD-442, KD-1493 and KD-1495 Shears
KS-421, KS-423, KS-424, KS-426 and KSV-432 Saws

PARTS LIST



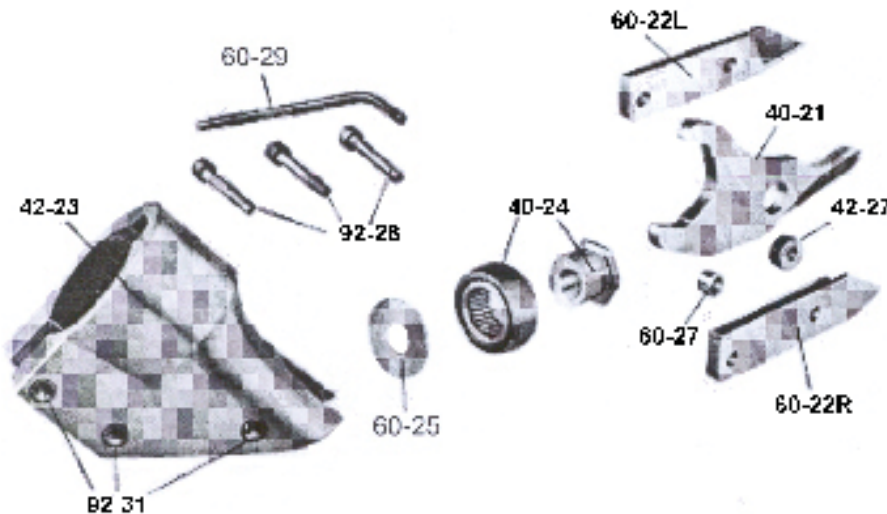
ITEM NO.	PART NO.	DESCRIPTION	REQ'D TOOL	ITEM NO.	PART NO.	DESCRIPTION	REQ'D TOOL
1	382299-01	Armature & Fan (6 Teeth)	1	*50	93128-00	Needle Bearing	2
2	176883-00	Field	1	*54	93129-00	Needle Bearing	1
3	176846-02	Brush	2	55	176731-00	Pinion & Gear (15/37 teeth)	1
5	176801-02	Left Brush Holder (gray)	1	56	176732-00	Thrust Washer	3
6	176800-02	Right Brush Holder (black)	1	57	143079-00	Thrust Washer	1
*7	176830-39	Switch	1	*58	330019-16	Screw	2
*7	621884-04	Switch	1	61	136086-08	Terminal	2
*8	330072-98	Cord & Plug (18-2SJ)	1	62	176860-00	Lead	1
*9	176950-00	Ball Bearing	1	65	449892-00	Washer	1
*10	176950-00	Ball Bearing	1	66	449368-00	Bearing Cap	1
13	396969-09	Field Case	1	*NOTES:			
14	176899-02	Handle Cover	1				
*15	176829-00	Cord Clamp	1	7	Use Switch 176830-39 for tools made before 11-25-2009 and 621884-04 on tools made after 11-25-2009.		
16	330005-01	Cord Protector	1	8, 15	Cord clamp should be positioned, so that 30mm of cord jacket extends above the clamp.		
*17	330019-13	Screw	3	9	Seal to face commutator. Press to the tubing on armature shaft.		
*18	176951-00	Screw	2	10	To remove from shaft, place bearing in vise and crush outer race. Remove all internal bearing components, so that the inner race is all that is left. Use SRT320, Small Bearing Separator, to clamp the inner race and press off. Bearing presses to shoulder.		
*19	389824-00	Cup	1	17, 45, 58	Torque to 18-23 inch-lbs.		
20	176811-01	Baffle	1	18	Torque to 13 inch-lbs.		
21	949638-02	Rubber Plug	2	19	Small diameter end to face commutator. Lightly lubricate before installing into field case.		
*24	388657-00	Gear Case	1	26	Press Bearing until seated completely in pocket. Rubber seal to face spindle and gear assembly.		
*26	330003-09	Ball Bearing	1	28	Includes 10 and 50.		
27	388668-00	Spindle & Gear	1	29	Press to bearing (item 10).		
*28	176650-00	Gear Case Cover	1	54	Press flush with surface facing spindle and gear assembly.		
*29	23813-00	Fiber Washer	1				
43	136086-02	Terminal	4				
*45	330019-14	Screw	1				
46	176655-00	Gasket	1				



INSTRUCTIONS FOR THE CARE OF THE KETT 42-20 SHEAR HEAD

CAUTION

**Disconnect Power Unit
Before Servicing Tool**



PARTS LIST

40-21	Center Blade
40-23	Shear Housing
40-24	Eccentric Bearing Assembly
42-27	Spacer Bushing
92-28	Cap Screw (3)
92-31	Knurled Insert (3)
60-22L	Side Knife, Left
60-22R	Side Knife, Right
60-25	Thin Washer, Large
60-27	Spacer Bushing
60-29	(150-4) Allen Wrench

DISASSEMBLY: To remove the shear head from the motor loosen three cap screws (92-28). Remove shear head from motor by pulling head firmly forward. Slight tapping with a mallet may be required if head does not slide off easily.

To remove cutter blades from shear head remove three cap screws (92-28) from shear housing (42-23). Be careful not to lose rear spacer bushing (60-27) when removing the middle cap screw. Remove center blade (40-21) from shear housing by tapping blade gently rearward. Be careful not to lose spacer bushing (42-27) from hole in center blade. Side knives (60-22L and 60-22R) will now drop out of the shear housing.

To remove eccentric bearing assembly (40-24) from shaft use an appropriate wrench to loosen eccentric nut by turning counter clockwise.

ASSEMBLY: To install eccentric bearing assembly (40-24) onto shaft, make sure the large thin washer (60-25) is first inserted over the shaft. Screw eccentric bearing assembly on to shaft and tighten with appropriate wrench. Lubricate bearing with a good grade of bearing grease.

To install cutter blades into shear housing (42-23) place the side knives (60-22L and 60-22R) into position

in the shear housing (42-23). Insert center cap screw (92-28) through the side knives (60-22L and 60-22R) with rear spacer bushing (60-27) between them and start cap screw into thread just enough to hold blades in place. **DO NOT TIGHTEN.** Insert spacer bushing (42-27) into hole in center blade (40-21) and lubricate with Molybdenum Disulfide grease (264-2) or equivalent. Install center blade into shear housing by tapping blade gently forward using a drift to line up hole in center blade with forward holes in housing. Insert and tighten forward cap screw (92-28) making sure spacer bushing (42-27) in center blade stays in position. Apply Molybdenum Disulfide grease (264-2) or equivalent to clevis or yoke in center blade where it rides on the eccentric bearing assembly. Insert rear cap screw (92-28) into shear housing, but do not completely tighten.

To install shear head assembly onto drive motor make sure all cap screws (92-28) are loosened about three or four complete turns. Spread shear housing (42-23) slightly using a spreader (drift) near the rear cap screw (92-28). Place shear head onto unit, tap left side knife rearward as far as it will go, and tighten cap screws to 40-45 inch pounds. It may be necessary to gently tap the shear head into place if it does not readily slip onto the nose of the power unit.

WARNING: THE KETT TOOL CO. CANNOT ASSUME RESPONSIBILITY FOR DAMAGE TO OR MALFUNCTION OF A KETT SHEAR HEAD USED IN COMBINATION WITH ANY DRILL OTHER THAN THOSE REGULARLY SUPPLIED BY US.