OPERATION and MAINTENANCE
OF THE
KETT *Panel Master* KS-3AM SAW

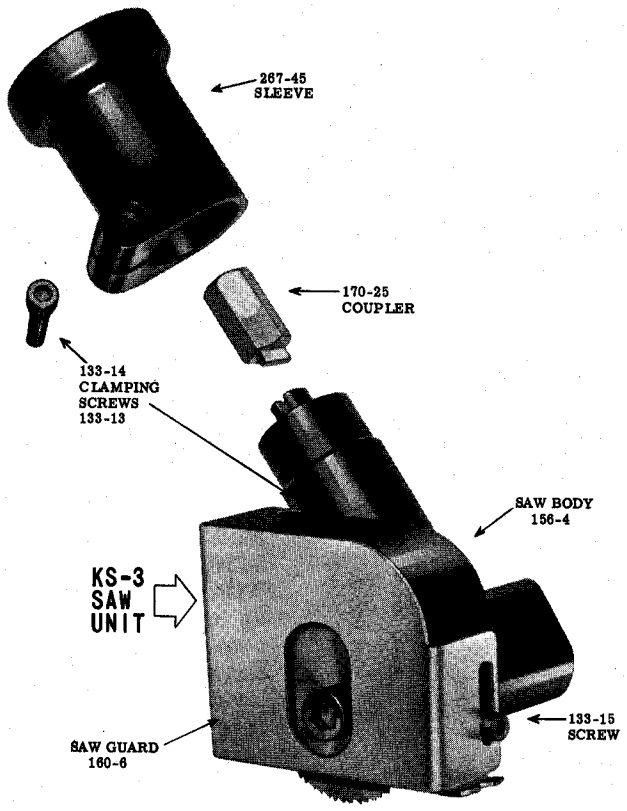
The KETT Panel Master Saw is designed expressly for cutting and trimming panels and sheet-like materials. Using the 2" diameter blades furnished with the tool as standard equipment it has a cutting capacity up to 16 gauge in mild steel, 1/8" in brass and 3/16" in aluminum. Larger blades 2-1/2" in diameter are available giving it a 5/8" capacity in Plywood, Pressed Board, Metal Laminated Curtain Wall Panels as Alliance Wall, Color Wall, Mirawal, Proc-Lin-Ply, Chalkboard, and similar products. It excels in cutting fibre glass reinforced phenolics and polyesters, and sheet plastics and plastic laminates.

ADJUSTMENTS

To adjust the angle of the saw body 156-4, on the KS-3 Saw Unit, loosen clamping screw 133-13, turn saw body to desired position, being careful to keep the saw blade centered in the slot and in line with the Vee sight of the saw guard 160-6, and tighten the screw.

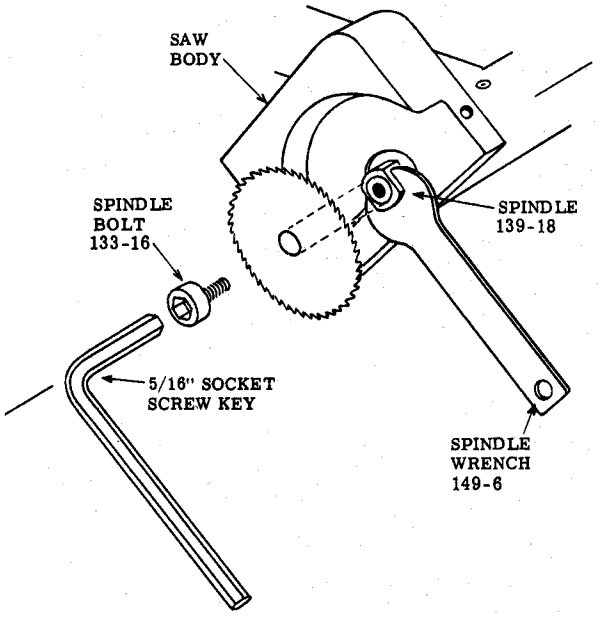
To adjust the angle of the KS-3 Saw Unit in relation to the motor, loosen clamping screw 133-14, twist saw unit to desired position, being careful to keep it at the same depth in sleeve 267-45, so as not to disengage coupler 170-25, and tighten screw.

To adjust for cutting depth, loosen screws 133-15 on front and rear of saw body, raise or lower saw guard as necessary until blade is properly exposed to desired distance, and tighten. Ordinarily the saw should be extended approximately 1/16" more than the thickness of the material being cut. When cutting through a panel supported by ribs or other understructure that should be unmolested, extend blade to the same distance as the measured thickness of the material being cut.



REPLACING BLADES

To replace blade on Panel-Master Saw, first remove screws 133-15, from front and rear of sawguard and slide guard off the saw body. Insert open end spindle wrench 149-6 behind the blade and span the flats on the spindle part no. 139-18. Insert the 5/16" socket key 150-5 into the hex socket of the spindle bolt 133-16, loosen and remove both bolt and blade.



You will note the blade, which has a 7/16" bore, slips over the spindle and seats itself against the shoulder. This design provides for more concentricity resulting in smoother, faster and more accurate cutting. Slip the blade over the spindle, seat it against the shoulder, replace the spindle bolt and pull up tight.

PRECAUTION BEFORE REPLACING BLADES

BE CERTAIN THERE IS NO OIL OR GREASE OR ANY PARTICLES OF ANY KIND ON THE FACE OF THE SPINDLE, ON THE SHOULDER OF THE SPINDLE OR ON EITHER SIDE OF THE BLADE. BE CERTAIN TO WIPE CLEAN ALL THESE PARTS. FAILURE TO FOLLOW THIS PRECAUTION WILL RESULT IN THE BLADE SLIPPING OR STANDING STATIONERY ON THE SPINDLE WHEN THE SAW IS IN OPERATION.

BE CERTAIN TO INSERT THE BLADE SO THE TEETH POINT FORWARD

CARE OF THE MOTOR

Motors are packed with lubricant to give 300 hours service. At the end of this period the gear case and the armature bearings should be checked and more added if necessary.

A HOT MOTOR IS A SIGN OF TROUBLE. It can easily lead to a burnt out armature. STOP THE TOOL AND DETERMINE THE CAUSE. Overheating is due to overloading beyond capacity; low voltage, due to faulty connections or light gage extensions; poor ventilation thru motor case; or bad brushes. IT IS GOOD PRACTICE TO CHECK BRUSHES EVERY TWO WEEKS. CHIPPED BRUSHES OR BRUSHES SHORTER THAN 3/8" SHOULD BE REPLACED.

The green ground wire connection on the cord at the plug is there for your own safety. Please use it. It is especially important that the tool be grounded when there is dampness present.

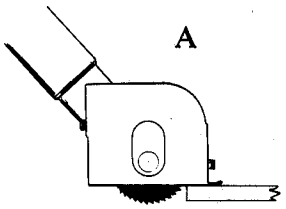
IT IS GOOD PRACTICE TO ALWAYS CHECK THE LINE VOLTAGE BEFORE PLUGGING IN YOUR SAW.

CARE OF THE KETT SAW

A light, compact unit such as the KETT Saw necessarily has small gears and shafts. Extremely rugged for its size, the KETT Saw is more than adequate for normal use. However, as with all fine tools, care is essential for long life and best performance. Skillful operation depends on a certain amount of practice, easily acquired, but very important. The saw spindle and gears should be lubricated after every 25 to 30 hours use, injecting a light cup grease into the grease opening covered by screw plug 181-2. Two ounce tubes are available from stock. Specify 264-1 two ounce tube Non-Fluid Oil.

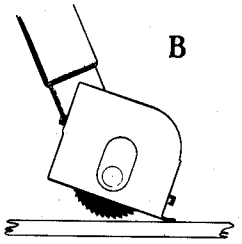
CUTTING WITH THE KETT SAW

FEED BLADE INTO MATERIAL GRADUALLY TO AVOID SUDDEN STRAIN. WHEN BLADE STARTS CUTTING, IT IS BETTER TO "CROWD" THE RATE OF FEED TO ATTAIN A STEADY CUTTING SPEED RATHER THAN TO HOLD BACK. WHERE CONDITIONS PERMIT, BLADE LIFE CAN BE EXTENDED THROUGH THE USE OF A LUBRICANT SUCH AS CUTTING OIL, WAX OR TALLOW. IT IS RECOMMENDED TO PRACTICE CUTTING WITH THE KETT SAW ON SCRAP MATERIAL UNTIL KNACK OF USING TOOL IS ACQUIRED.



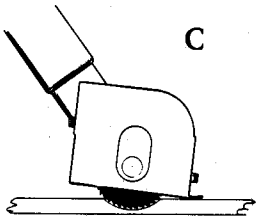
STARTING CUT FROM EDGE OF MATERIAL (See cut A)

Start motor and lock switch in "on" position. Place tool at edge of material with front of shoe only resting on material. Make sure tool is held with shoe flat and level with surface of material. Point tool in direction of cut lining up scribed line in vee sight on saw guard. Slowly force tool forward until blade starts to cut, gradually increasing pressure until blade is cutting full depth. Then increase pressure until tool moves forward at a uniform rate depending on material being cut. Do not jerk or thrust tool.



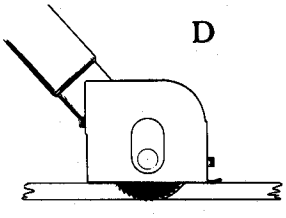
STARTING PLUNGE CUT IN CENTER OF SHEET

ALWAYS USE A SHARP BLADE. THIS IS THE MOST DIFFICULT OPERATION AND INSTRUCTIONS SHOULD BE CAREFULLY FOLLOWED.
With motor locked "on", place toe of guide shoe against material with back of shoe raised as in "B". Then applying pressure downward and forward, gradually lower back edge of shoe until blade starts to cut (see "C") then continue lowering blade further until shoe is flat against material as in "D". Then push saw along making sure shoe is kept flat and level against material. In this operation, blade is continually kept moving forward while it is being forced downward into the material. If this is not done, the heel of the blade will catch on the top of the material at the back of the cut and will forcibly eject the saw. IT IS BETTER TO "CROWD" THE TOOL IN THE CUT THAN TO HOLD BACK. "Dwelling" in the cut will materially reduce the life of the saw blade.



CONTINUING THE CUT

Make sure the shoe stays flat against material being cut. If not kept flat, blade may fail to penetrate or may be pinched and broken. The shoe is designed to keep chips from getting under and marring the work. If the saw guard does seem to mar the surface of the material being cut, this can be overcome by either running the cut on the reverse side of the material or by covering the section to be cut with a pressure sensitive tape, then running the saw over and cutting thru the tape.



STOPPING THE CUT AND REMOVING THE SAW

Bring the saw up to the ending point of the cut, hold firmly, shut off power and let it coast to a full stop. Then lift the saw from the cut. NEVER BACK UP THE TOOL IN THE CUT WITH THE POWER ON. THIS IS THE MOST FREQUENT CAUSE OF BROKEN BLADES AND CAN RESULT IN MORE SERIOUS DAMAGE TO THE TOOL.

GUARANTEE

Every tool has been carefully inspected before shipment and we guarantee to correct any defect due to faulty material or workmanship. Our obligation assumed under this guarantee is limited to making replacement of any part or parts returned to us at our factory or to our authorized service stations, transportation charges prepaid, which prove to our satisfaction upon examination to have been defective and have not been missused or carelessly handled. We reserve the right to decline responsibility where repairs have been made or attempted by others. This guarantee is in lieu of any other liability on our tools or parts and no one is authorized to make any other guarantee or to issue any additional liability on behalf of the Kett Tool Company.

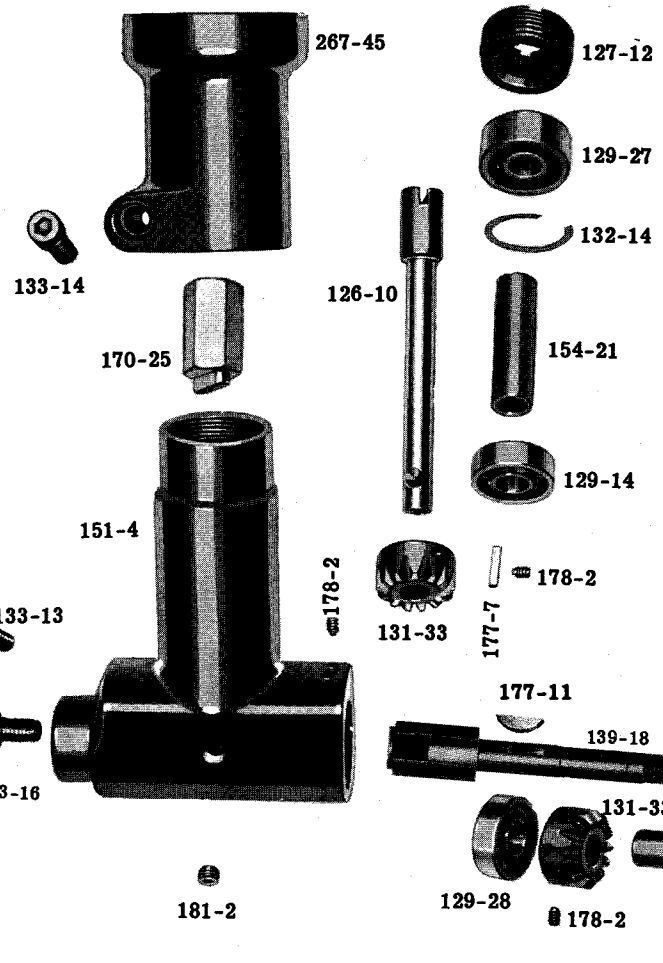
IMPORTANT: YOU MUST FILL OUT AND MAIL CARD OR GUARANTEE IS VOID.

COMPONENT PARTS OF KS-3 SAW UNIT

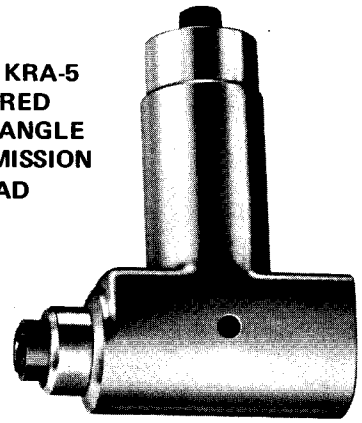
REPLACING THE 170-25 COUPLER

The coupler (170-25) is considered expendable. This part is actually a safety valve or a shear pin designed to break under severe strain or sudden impact so as to prevent serious damage to the more costly hardened and ground shafts, gears and bearings within the tool.

To replace a broken coupler first remove the 267-45 sleeve from the motor. This sleeve has a left hand thread so it must be turned in a clockwise direction to be removed. The coupler has a right hand thread requiring backing off in a counter clockwise direction. Fit a box wrench over the coupler. Extend the wrench horizontally and give it a sharp rap with a hammer using the inertia of the gear train as resistance to break the hold of the coupler on the spindle. Several raps may be necessary to break it loose.

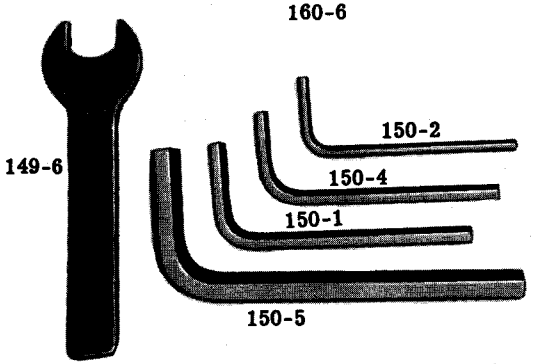


100-7 KRA-5 GEARED RIGHT ANGLE TRANSMISSION HEAD



BLADES AVAILABLE

Dia		Teeth		Bore
2"	x	22	x	7/16"
2"	x	30	x	7/16"
2"	x	44	x	7/16"
2"	x	60	x	7/16"
2"	x	80	x	7/16"
2½"	x	44	x	7/16"
2½"	x	60	x	7/16"
2½"	x	80	x	7/16"
2½"	x	100	x	7/16"



PART NO.	DESCRIPTION
126-10	Input Spindle
127-12	Retaining Screw
127-13	Retaining Screw
129-14	Ball Bearing
129-27	Ball Bearing
129-28	Ball Bearing
131-33	Mitre Gear
132-14	Shim
133-13	Clamping Screw
133-14	Clamping Screw
133-15	Saw Guard Screw

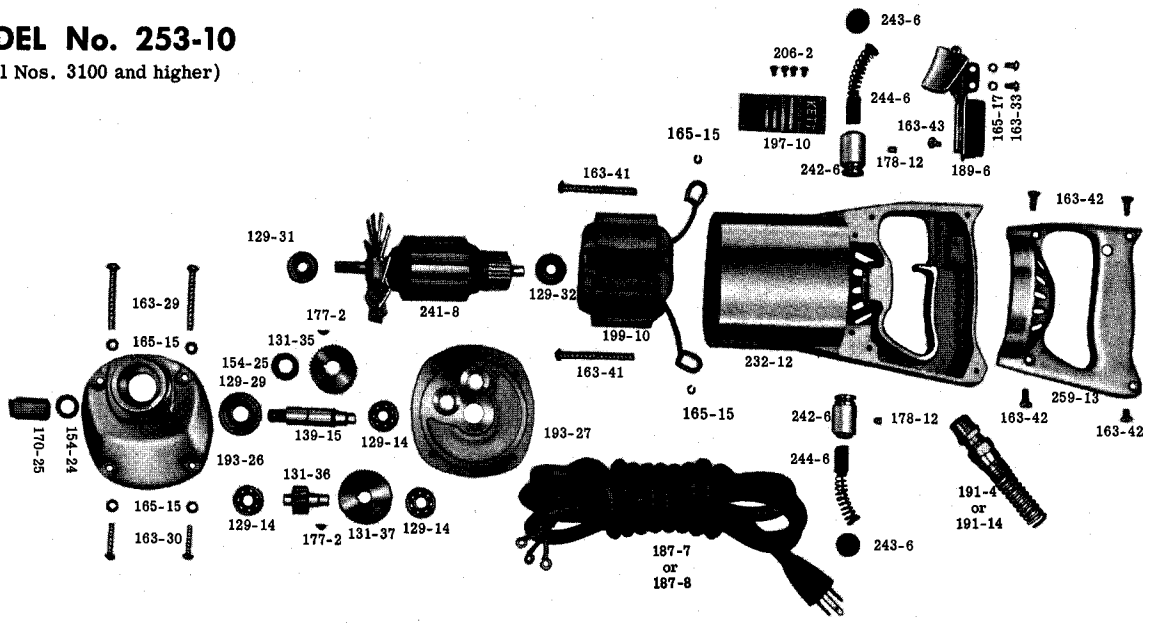
PART NO.	DESCRIPTION
133-16	Spindle Bolt
138- 7	Jam Nut
139-18	Output Spindle
149- 6	Spindle Wrench
150- 1	3/16 Socket Key
150- 2	1/8 Socket Key
150- 4	5/32 Socket Key
150- 5	5/16 Socket Key
151- 4	Housing
154-20	Sleeve
154-21	Sleeve

PART NO.	DESCRIPTION
156- 4	Saw Body
160- 6	Saw Guard
170-25	Safety Shear Coupler
177- 7	Square Key
177-11	Woodruff Key
178- 2	Socket Head Set Screw
181- 2	Screw Plug
264- 1	Two Ounce Tube Grease
267-45	Sleeve

COMPONENT PARTS OF 3/8 CAPACITY AC/DC POWER UNIT

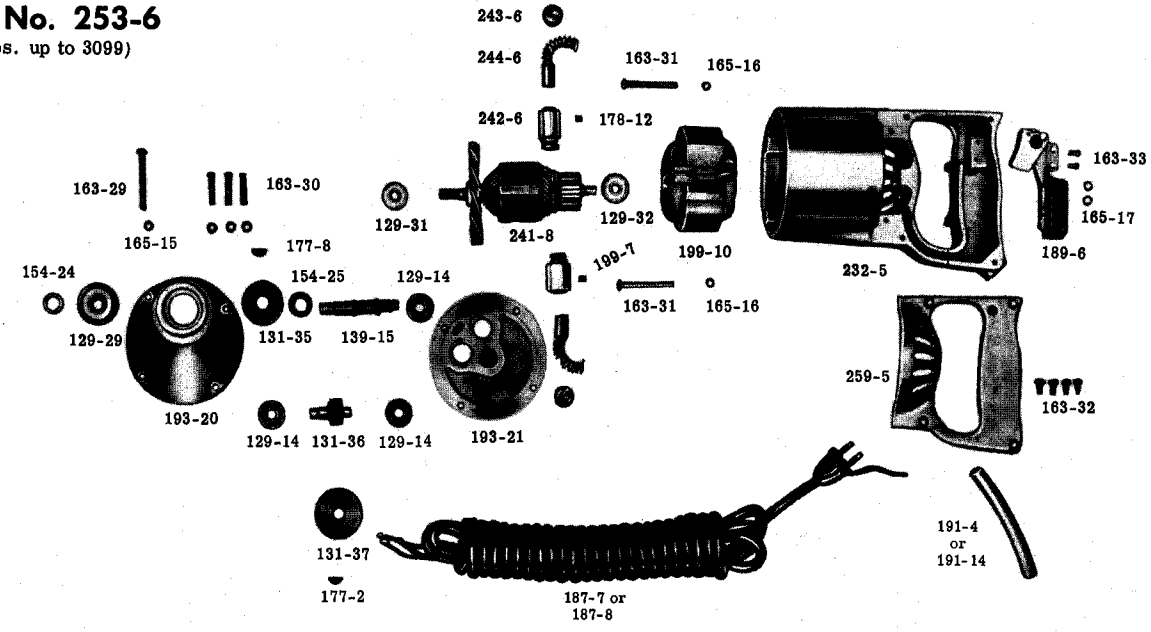
MODEL No. 253-10

(Serial Nos. 3100 and higher)



MODEL No. 253-6

(Serial Nos. up to 3099)



Part No.	Description	Part No.	Description	Part No.	Description
129-14	Ball Bearing	163-43*	Binding Head Screw	197-6	Name Plate
129-29	Front Spindle Bearing	165-15	Split Lock Washer	197-10*	Name Plate
129-31	Front Armature Bearing	165-16	Lock Washer	199-8	Field - 230 Volts
129-32	Rear Armature Bearing	165-17	Lock Washer	199-10	Field - 115 Volts
131-35	Spindle Gear	170-25	Coupler	206-2*	Drive Screw
131-36	Intermediate Pinion	177-2	Pinion Key	206-3	Drive Screw
131-37	Intermediate Gear	177-8	Spindle Key	232-5	Motor Case
139-15	Spindle	178-12	Brush Holder Screw	232-12*	Motor Case
154-24	Spacer	187-7	Electric Cord (.402 Dia.) & Plug	241-8	Armature - 115 Volts
154-25	Gear Spacer	187-8	Electric Cord (.328 Dia.) & Plug	241-9	Armature - 230 Volts
163-29	Gear Case Screw	189-6	Switch	242-6	Brush Holder
163-30	Gear Case Screw	191-4	Strain Reliever (3/8" Thread)	243-6	Brush Cap
163-31	Field Assembly Screw	191-14	Strain Reliever (1/4" Thread)	244-6	Brush & Spring Assembly
163-32	Switch Cover Screw	193-20	Gear Case	259-5	Switch Cover
163-33	Switch Screw	193-21	Gear Plate	259-13*	Switch Cover
163-41*	Field Assembly Screw	193-26*	Gear Case		
163-42*	Switch Cover Screw	193-27*	Gear Plate		

*The Asterisk (*) following a part number indicates that part is used only in tools bearing serial numbers 3100 and higher - Power Unit Model #253-10.