KALAMAZOO INDUSTRIES, INC.

Instruction Manual

KM14HS

14 Inch High Speed Non-Ferrous Mitre Saw

Kalamazoo Industries, Inc.
6856 E K Ave • Kalamazoo, Michigan 49048
1-800-592-2050 • www.kalamazooind.com
Made in the USA • Est. 1960

1. Introduction

This manual must be read entirety prior to installation, commissioning, or operation of the equipment. Thorough familiarity with the unit's capabilities, safety requirements, and prescribed maintenance procedures are essential to safe operation and optimal performance.

CAUTION:
The KM14HS is designed for dry cutting of aluminum, brass, plastics, PVC, and similar non-ferrous materials with the correct high-speed carbide blade. Do not use abrasive wheels, damaged blades, or incorrect blade speeds. Always clamp the workpiece before cutting.

WARNING:
TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK, OR PERSONAL INJURY, ALL SAFETY INSTRUCTIONS MUST BE READ AND UNDERSTOOD BEFORE OPERATING THIS EQUIPMENT. Non-compliance may result in serious injury or death.

2. Safety Information

2.1 General Safety Precautions

- Wear approved eye protection, hearing protection, and task-appropriate respiratory protection whenever material or chip conditions require it.
- Keep the work area clean, dry, organized, and adequately illuminated at all times.
- Do not operate this equipment while fatigued or under the influence of drugs, alcohol, or medication that may impair judgment or reaction time.
- Disconnect power before performing blade changes, maintenance, adjustments, or service work.
- Never operate the saw without the retractable clamshell guard and belt guard properly installed.
- Keep hands, hair, jewelry, and loose clothing clear of the blade and all moving parts.
- Secure the workpiece firmly with the dual cam vises before each cut. Never hand-hold material in the cutting zone.
- Allow the blade to reach full operating speed before entering the cut and allow it to stop completely before clearing chips or removing cutoffs.
- Do not leave the machine running unattended.
- Keep unauthorized personnel clear of the operating area.
- **Do not** wear gloves while operating machine.

2.2 Electrical Safety

- The machine must be properly grounded in accordance with applicable electrical codes and facility practices.
- Confirm that supply voltage, phase, and motor rotation match the machine nameplate and wiring configuration before operation.
- All electrical installation and repair work must be performed by qualified personnel.
- Do not operate the machine if wiring, switches, or electrical components show signs of damage or overheating.

2.3 Blade and Cutting Safety

- Use only a properly rated 14” carbide blade intended for high-speed non-ferrous cutting on a 1” arbor.
- Inspect the blade before each use. Replace any blade that is cracked, missing teeth, warped, or otherwise damaged.
- Verify that the blade is mounted correctly, tightened securely, and rotates in the proper direction.
- Do not force the cut. Use steady feed pressure and let the blade do the work.
- Never cut ferrous materials, hardened steel, magnesium, or any material that is not approved for the machine and blade combination.

3. Installation and Setup

- Position the machine on a level surface with adequate clearance for material loading, mitre movement, and safe operator access.
- Anchor the saw as required by plant practice and verify that the table and base are stable before operation.
- Confirm correct electrical connection and motor rotation prior to installing production tooling.
- Install a correct 14” non-ferrous carbide blade on the 1” arbor and verify that the guards move freely through the full operating range.
- Inspect both cam vises, table lock, positive index pin, and adjustable stops for proper function before use.
- Set the required mitre angle, lock the table securely, and make a dry cycle check before the first cut.

4. Operating Instructions

- Verify that the work area is clear, the blade is in good condition, and the saw is configured for the required angle and material.
- Raise the saw head fully, place the workpiece against the fence, and clamp it securely using the dual cam vises.
- Start the machine using the magnetic on/off switch and allow the spindle to reach full speed.
- Lower the saw head smoothly into the material using controlled feed pressure. Do not twist or side-load the blade during the cut.
- Complete the cut, return the saw head to the raised position, and switch the machine off if the next cut will not follow immediately.
- Wait until the blade has completely stopped before removing cut parts, remnant stock, or chips from the cutting area.

For mitre cutting, use the positive index holes and locking pin for common angles and verify final alignment before production cutting. The front table lock must remain engaged during cutting operations.

5. Maintenance

- Disconnect and lock out power before any maintenance or inspection activity.
- Inspect blade condition frequently and replace dull or damaged blades immediately to maintain cut quality and reduce loading.
- Check both V-belts for wear, alignment, and proper tension. Tighten the belts as needed so there is approximately ¼" of squeeze between the top and bottom belt span. Replace belts in matched pairs when required.
- Keep the vise assemblies, table surface, guard pivots, and surrounding areas free of chips and buildup.
- Inspect spindle bearings, table bearings, bushings, locks, and stop mechanisms for wear or looseness.
- Verify that all fasteners, guards, and covers remain secure after service

6. Warranty Information

6.1 Warranty Coverage

All parts are warranted for one year from the original date of purchase to the original purchaser. This warranty covers the replacement of parts found to be defective in material or workmanship under normal use. Some exclusions may apply.

Warranty Exclusions

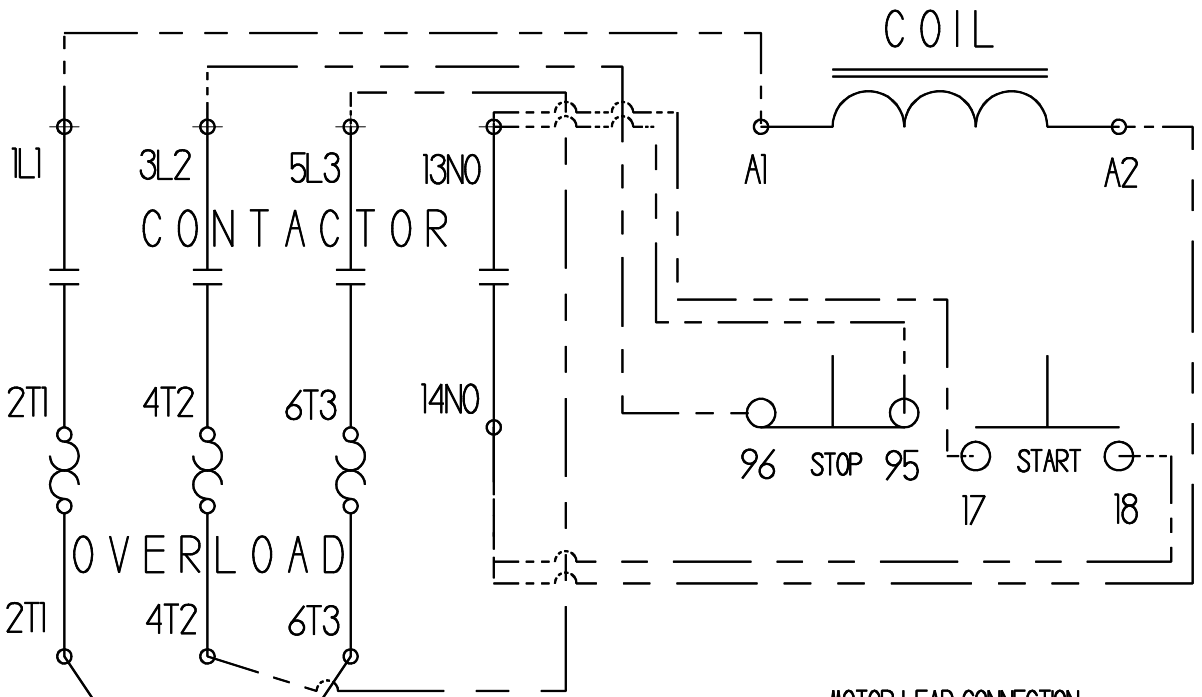
This warranty does not cover:

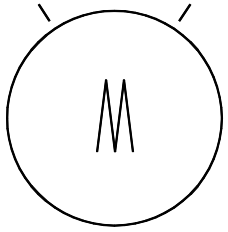
- Normal wear items including abrasive wheels, belts, and bearings.
- Damage resulting from misuse, abuse, or improper maintenance.
- Damage from cutting inappropriate materials.
- Modifications or alterations to the machine.
- Damage caused by improper electrical connection or voltage supply.
- Labor or installation costs.

6.2 Return Authorization

A Return Authorization (RA) number must be obtained before returning merchandise. Contact Customer Service at 1-800-592-2050 prior to return shipment. Return shipping costs are the responsibility of the customer. Credit issued upon inspection, and a restocking fee may apply in accordance with current company policy.

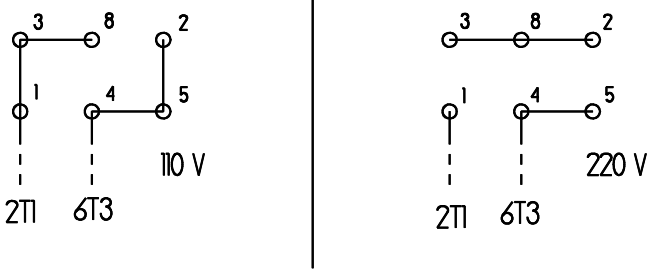
INCOMING LINE VOLTAGE
CONNECTS TO 1L1 AND 3L2





SINGLE PHASE MOTOR

MOTOR LEAD CONNECTION

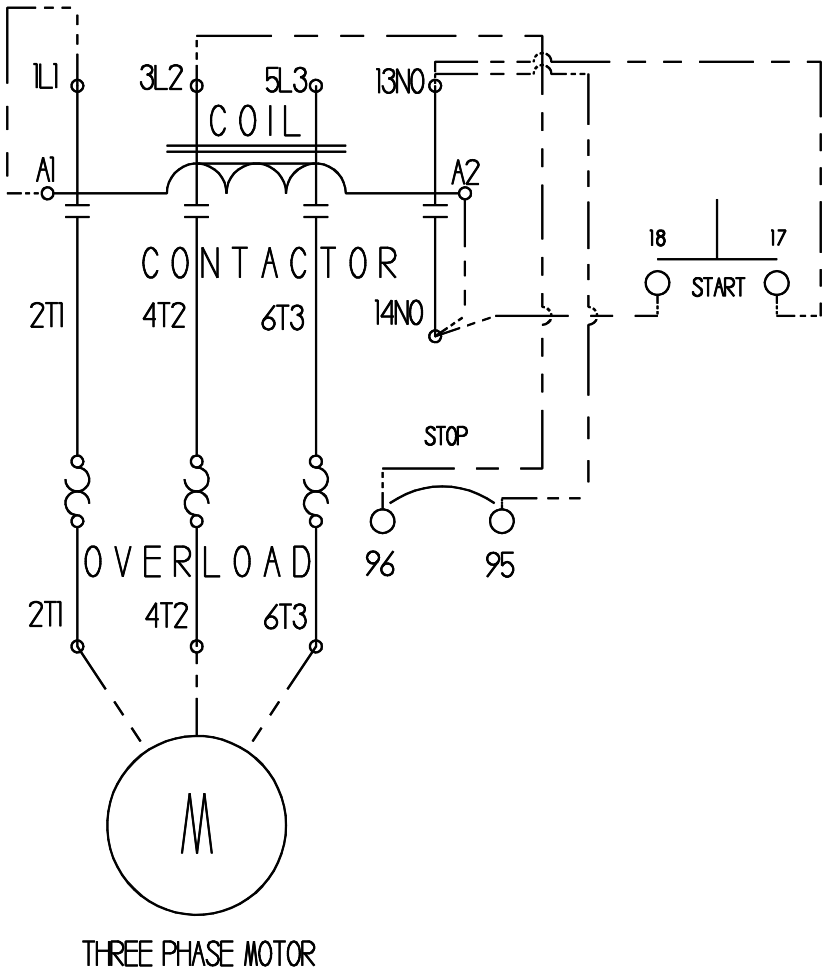


INTERCHANGE #5 AND #8 LEADS
TO REVERSE ROTATION

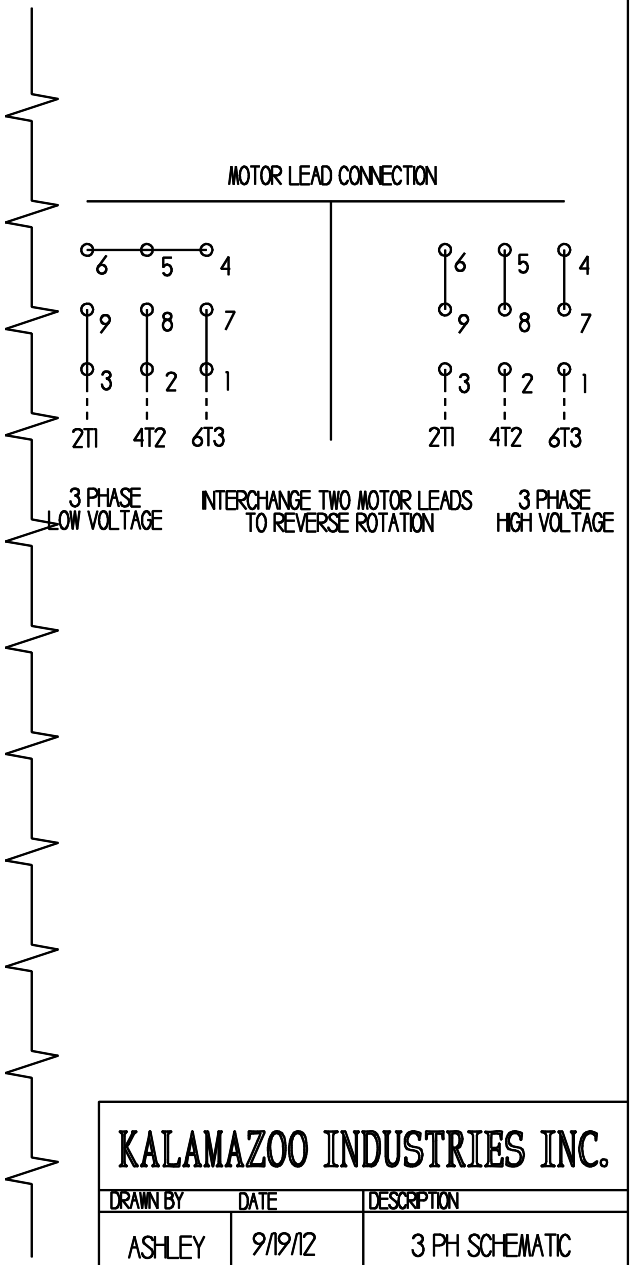
KALAMAZOO INDUSTRIES INC.		
DRAWN BY	DATE	DESCRIPTION
ASHLEY	08/22/12	1 PH SCHEMATIC
REVISED BY	DATE	PART #
MATERIAL		

inch

INCOMING LINE VOLTAGE
CONNECTS TO 1L1, 3L2, AND 5L3



THREE PHASE MOTOR



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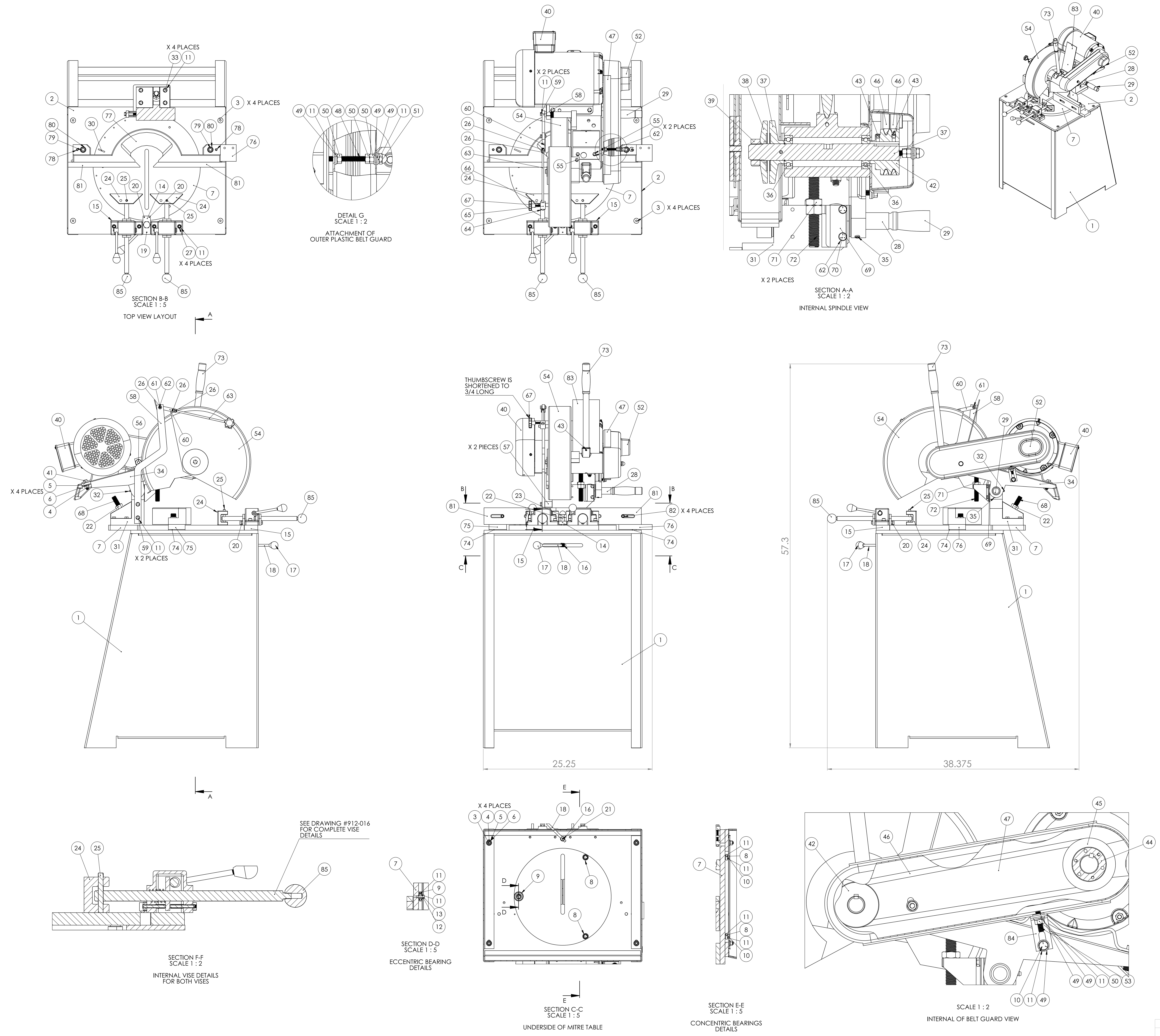
X

KALAMAZOO INDUSTRIES INC.		
DRAWN BY	DATE	DESCRIPTION
ASHLEY	9/19/12	3 PH SCHEMATIC
REVISED BY	DATE	PART #
MATERIAL		

inch



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	716-001	STAND FOR KM14	1
2	556-008	PLATE, SQUARE FOR KM10-14	1
3	FSCA037020	3/8-16 X 1-1/4 FSHCS	4
4	FHN5037	3/8-16 FHN GR5 Z	8
5	UFWZ037	3/8 USS F/W Z	8
6	SLWZ037	3/8 SPLIT L/W Z	8
7	556-084	PLATE, MITRE (ROUND TOP) FOR KM14HS	1
8	044-006	TABLE BEARING (38KDT) FOR KM10, KM14 MITRE SAWS	2
9	044-007	K10 BEARING	1
10	HHCS031012	5/16-18 X 3/4 HHCS GR5 Z	3
11	SLWZ031	5/16 SPLIT L/W Z	20
12	049-001	ECCENTRIC BUSHING FOR KM10 AND KM14 MITRE TOP	1
13	HHCS031016	5/16-18 X 1 HHCS GR5 Z	1
14	454-004	LOCK, TABLE MITRE FOR KM10, KM14	1
15	699-006	SPACER, VISE FOR KM14HS SERIES SAWS	1
16	696-013	SCREW, TABLE LOCK FOR KM14 MITRE SAW (5 LONG)	1
17	441-002	K10-16 VISE LOCK HANDLE KNOB	1
18	381-012	HANDLE, TABLE LOCK FOR KM14	1
19	RUDZ007008	#7 X 1/2 RD U-DRIVE SCREW Z	1
20	RHRA012008	1/8 ROUND HEAD RIVET	2
21	SSSA025006	1/4-20 X 3/8 SOC SET CUP PT	1
22	FHN5062	5/8-11 FHN GR5 Z	2
23	CPNZ062	5/8-11 CAP NUT Z	1
24	431-001	FRONT VISE JAW K10, K14, KM14	2
25	562-001	VISE JAW PIN FOR K10B, K12B, K14B, KM16-18 VISE ASSEMBLIES	2
26	FHN5025	1/4-20 FHN GR5 Z	3
27	SHCA031032	5/16-18 X 2 SHCS	4
28	562-039	PIN, TRUNNION FOR KM14SC AND KM14HS	1
29	347-003	HANDLE GRIP FOR K12 THRU K26 SAWS	1
30	562-020	TABLE INDEX PIN FOR KM14	1
31	831-022	TRUNNION ASSEMBLY FOR HSM14, HS14, K12-14MS	1
32	ZERK012000	1/8-27 X 11/16 STRT LUBE FITTING	1
33	HHCS031024	5/16-18 X 1-1/2 HHCS GR5 Z	4
34	002-002	K12- 14 SAW ARM	1
35	SSKA031006	5/16-18 X 3/8 SOC SET KNURL PT.	1
36	044-001	K12 BEARING	2
37	701-002HS	SPINDLE W TIGHT FLANGE (STEEL) FOR KM14HS, KM14SC, HSM14, HS14	1
38	292-020	LOOSE FLANGE (STEEL) FOR HSM14	1
39	537-026	L.H. SPINDLE NUT 1"-14 FOR K14, KM14	1
40	486-001	5 HP MOTOR FOR K12B, K14B, KM14, KM14HS & S6MS-SHP	1
41	HHCS037020	3/8-16 X 1-1/4 HHCS GR5 Z	4
42	560-001	K12- 14 SPINDLE PULLEY	1
43	SSKA025004	1/4-20 X 1/4 SOC SET KNURL PT.	3
44	049-022	MOTOR PULLEY BUSHING FOR K12B, K14B AND KM14	1
45	560-002	MOTOR PULLEY SHEAVE FOR K12-14B, K12-14W, K12-14MS AND KM14	1
46	051-006HS14	3V375 V-BELT (2 REQUIRED) FOR K12, K14, KM14 SAWS	2
47	342-086	K12-14 INNER BELT GUARD FOR PLASTIC GUARD	1
48	RND-0.31-18THRDX3.75	3-3/4 INCHES OF 5/16-18 THREADED ROD	1
49	UFWZ031	5/16 USS F/W Z	6
50	FHN5031	5/16-18 FHN GR5 ZINC	4
51	CPNZ031	5/16-18 CAP NUT NICKEL	1
52	342-004	K12-14 OUTER BELT GUARD/PLASTIC	1
53	HHCS031020	5/16-18 X 1-1/4 HHCS GR 5 Z	1
54	342-072	WHEEL GUARD ASSEMBLY FOR HSM14 AND HS 14	1
55	HHCS025008	1/4-20 X 1/2 HHCS GR5 Z	3
56	SSBA062044	5/8 X 2-3/4 SOC SHOULDER BOLT	1
57	699-032	SPACER, LEVER FOR HSM14	2
58	455-007	LEVER ASSEMBLY, WHEEL GUARD FOR HSM14	1
59	HHCS031032	5/16-18 X 2 HHCS GR5 Z	2
60	455-007BRACKET	TENSION BRACKET FOR HSM14 WHEEL GUARD LEVER ASSEMBLY	1
61	BSCA025012	1/4-20 X 3/4 BSHCS	1
62	SLWZ025	1/4 SPLIT L/W Z	5
63	455-007ROD	GUIDE ROD FOR K10 AND K14 SERIES CLAMSHELL WHEEL GUARD LEVER ASSEMBLY	1
64	ROLA012008	1/8 X 1/2 ROLL PIN	1
65	053-047	BLOCK, WHEEL GUARD FOR K10 AND K14 SERIES CLAMSHELL GUARD	1
66	SHCA025016	1/4-20 X 1 SHCS	1
67	441-015	9078-2500-1.00S 1/4 THUMBSCREW 1-1/2 DIA	1
68	RND-0.625-11THRDRODX3	3 INCHES OF 5/8-11 THREADED ROD	1
69	041-118	DOWN STOP BRACKET ASSEMBLY, FOR HS14	1
70	HHCS025012	1/4-20 X 3/4 HHCS GR5 Z	2
71	FJNZ062	5/8-11 F H JAM NUT Z	1
72	RND-0.625-11THRDRODX4.5	4-1/2 INCHES OF 5/8-11 THREADED ROD	1
73	381-002	HANDLE W GRIP FOR K12-14 SAWS	1
74	699-017	FENCE SPACER (RISER) FOR KM10, KM10HS, KM14, KM14HS 2 REQUIRED PER MACHINE	2
75	699-030	SPACER, (LEFT SIDE) FENCE FOR HSM14	1
76	699-031	SPACER, (RIGHT SIDE) FENCE FOR HSM14	1
77	293-017	FENCE FOR HSM14	1
78	ROLA031032	5/16 X 2 ROLL PIN	2
79	SHCA050040	1/2-13 X 2-1/2 SHCS	2
80	SLWZ050	1/2 SPLIT L/W Z	2
81	556-046	PLATE, FENCE (JAW) FOR HSM14	2
82	SHCA031024	5/16-18 X 1-1/2 SHCS	4
83	041-057	SWITCH BRACKET FOR K12-K14	1
84	342-086BRKT	K12-14 INNER BELT GUARD BRACKET	1
85	912-016	VISE ASSEMBLY K12-14W, KM10, KM14	2

UNLESS OTHERWISE SPECIFIED:

DIMENSIONS ARE IN INCHES
TOLERANCES:
FRACTIONAL ±
ANGULAR: MACH ± BEND ±
TWO PLACE DECIMAL ±
THREE PLACE DECIMAL ±

INTERPRET GEOMETRIC TOLERANCING PER:
MATERIAL
FINISH
DO NOT SCALE DRAWING

NEXT ASSY | USED ON
APPLICATION

	NAME	DATE
DRAWN		
CHECKED		
ENG APPR.		
MFG APPR.		
Q.A.		
COMMENTS:		

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KALAMAZOO INDUSTRIES, INC.

TITLE:

14" HIGH SPEED NON FERROUS MITRE SAW

SIZE E DWG. NO. KM14HS REV

SCALE: 1:10 WEIGHT: SHEET 1 OF 2