KALAMAZOO INDUSTRIES, INC.

Instruction Manual

K10B 10" Abrasive Chop Saw

Kalamazoo Industries, Inc.
6856 E K Ave
Kalamazoo, Michigan

1-800-592-2050
www.kalamazooind.com

1. Introduction

Thank you for choosing the Kalamazoo Industries K10B 10-Inch Industrial Abrasive Chop Saw. This powerful industrial machine is designed to deliver exceptional cutting performance for mild steel, rebar, pipe, and other ferrous materials.

The K10B features a robust 3HP TEFC motor delivering a spindle speed of 3450 RPM for clean, efficient cuts. Built with a cast iron base and trunnion, cast aluminum arm, and an industrial cam lock vise, this machine is engineered for durability and precision in demanding shop environments.

Please read this manual thoroughly before operating the equipment. Proper understanding of the machine's features, safety requirements, and maintenance procedures will ensure optimal performance and longevity.

1.1 Intended Use

The K10B is specifically designed for cutting ferrous metals and materials including:

- Low-carbon steel (bar stock, angle iron, flat stock)
- Structural steel
- Rebar
- Mild steel pipe

2. Safety Information

⚠ WARNING: TO REDUCE THE RISK OF FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS EQUIPMENT TO RAIN, LIQUID, OR MOISTURE.

Read all safety instructions before operating this equipment. Failure to follow safety guidelines may result in serious injury or death.

2.1 General Safety Precautions

1. Always wear appropriate personal protective equipment (PPE) including safety glasses, hearing protection, and work gloves.
2. Keep the work area clean and well-lit. Cluttered or dark areas invite accidents.
3. Do not operate the saw under the influence of drugs, alcohol, or medication that may impair judgment.
4. Keep bystanders at a safe distance from the operating machine.
5. Never leave the machine running unattended.
6. Ensure proper ventilation when cutting to avoid inhaling metal particles and fumes.
7. Disconnect power before changing wheels or performing maintenance.
8. Securely clamp all workpieces before cutting.

2.2 Electrical Safety

- Ensure proper grounding of the machine before operation.
- Verify voltage requirements match your facility's electrical supply (115V or 230V single phase, or 230V/460V three phase).
- Use only qualified electricians for electrical connections and repairs.
- Do not operate in wet or damp conditions.

2.3 Abrasive Wheel Safety

- Use only 10" abrasive cutoff wheels rated for 3450 RPM or higher.
- Inspect wheels for cracks, damage, or excessive wear before each use.
- Replace damaged or worn wheels immediately.
- Allow the wheel to reach full speed before beginning a cut.
- Select the appropriate wheel type for your specific material.

3. Technical Specifications

3.1 Motor and Performance

Specification	Value
Motor Power	3 HP TEFC
Spindle Speed	3450 RPM
Spindle Arbor	5/8 inch
Phase/Voltage Options	1PH 115V, 1PH 230V, 3PH 230V, or 3PH 460V

3.2 Cutting Capacity

Material Type	Maximum Capacity
Solid Round (Mild Steel)	1-1/2 inches
Pipe (Mild Steel)	2-1/2 inches

3.3 Construction

Component	Material/Type
Base	Cast Iron
Trunnion	Cast Iron
Arm	Cast Aluminum
Bearings	Sealed Ball Bearings
Switch	On/Off Toggle Switch 1PH/Rotary Switch 3PH
Vise System	Industrial Cam Lock with Cast Iron Front Jaw
Rear Fence	Adjustable Cast Iron
Wheel Guard	Steel and Aluminum Cutoff Wheel Guard
Spark Deflector	Steel
Wheel Size	10" diameter abrasive cutoff wheel (wheel not included)

3.4 Dimensions and Weight

Dimension	Measurement
Shipping Length	30 inches
Shipping Width	36 inches
Shipping Height	25 inches
Shipping Weight	150 lbs.

4. Features and Components

4.1 Key Features

The K10B incorporates several features designed for industrial performance and operator convenience:

Cast Iron Base and Trunnion
The base and trunnion are constructed from heavy-duty cast iron, providing exceptional stability, vibration dampening, and long-term durability.

Cast Aluminum Arm
The saw arm is made from cast aluminum, offering a balance of strength and lightweight operation for smooth, controlled cuts.

Industrial Cam Lock Vise
The cam lock vise provides quick, secure material clamping with a cast iron front jaw. The replaceable and repairable design ensures long service life. Adjustable work length stop and down stop enable precise positioning for repetitive cuts.

Adjustable Rear Cast Iron Fence
The adjustable rear fence provides additional support and alignment for accurate, square cuts.

TEFC Motor
The Totally Enclosed Fan Cooled (TEFC) motor provides reliable performance in dusty shop environments while maintaining optimal operating temperature.

Sealed Ball Bearings
High-quality sealed ball bearings ensure smooth operation and extended service life with minimal maintenance requirements.

Steel Spark Deflector
The steel spark deflector directs sparks and debris away from the operator for improved safety.

4.2 Available Options

- Steel Stand (Model 12-O): Provides a stable, ergonomic working height. Contact Kalamazoo Industries for pricing.
- KAB10N – 10" non-reinforced abrasive cutoff wheels (designed to cut mild steel)
- KAB10R – 10" reinforced abrasive cutoff wheels

5. Installation and Setup

5.1 Unpacking and Inspection

1. Carefully remove all packing materials and inspect the machine for shipping damage.
2. Verify all components are present according to the packing list.
3. Report any damage or missing items to Kalamazoo Industries immediately.
4. Remove any protective coatings from machined surfaces.

5.2 Location Requirements

- Place the machine on a level, stable surface capable of supporting the machine weight.
- Ensure adequate clearance around all sides for operation and maintenance.
- Provide adequate lighting and ventilation.
- Consider spark and debris management when positioning the machine.

5.3 Electrical Connection

CAUTION: Electrical connections must be performed by a qualified electrician in accordance with local electrical codes.

5. Verify the voltage requirements match your facility's power supply (115V or 230V single phase, or 230V/460V three phase).
6. Connect to an appropriately rated circuit with proper overcurrent protection.
7. Ensure proper grounding according to electrical code requirements.
8. Check motor rotation direction before operating. The wheel should rotate down and toward the workpiece.

5.4 Abrasive Wheel Installation

9. Disconnect power from the machine.
10. Verify the wheel is rated for at least 3450 RPM and is designed for the material you will be cutting.
11. Install the wheel on the 5/8" spindle arbor.
12. Secure with the flange and arbor nut, tightening firmly.
13. Reconnect power and verify proper wheel rotation.

6. Operation Instructions

6.1 Pre-Operation Checklist

- Inspect the abrasive wheel for damage, cracks, or excessive wear
- Verify the wheel is properly secured and rated for 3450 RPM
- Ensure the work area is clean and free of obstructions
- Put on required personal protective equipment

6.2 Cutting Procedure

14. Position the material in the vise, ensuring it is square to the wheel.
15. Adjust the work length stop for desired cut length if making repetitive cuts.
16. Engage the cam lock vise to securely clamp the material.
17. Turn on the machine using the toggle switch.
18. Allow the wheel to reach full operating speed (3450 RPM).
19. Lower the saw arm smoothly and steadily, applying consistent pressure.
20. Complete the cut and raise the saw arm to the full up position.
21. Turn off the machine and wait for the wheel to stop completely.
22. Release the cam lock vise and remove the workpiece.

6.3 Cutting Tips for Best Results

- Use consistent, moderate feed pressure; let the wheel do the work.
- Select the appropriate wheel type for your material.
- Support long materials adequately to prevent movement during cutting.
- Allow the wheel to clear debris naturally; do not force cuts.

7. Maintenance

7.1 Daily Maintenance

- Clean metal shavings, dust, and debris from the machine after each use
- Inspect the abrasive wheel for damage or wear
- Check cam lock vise operation and tighten if necessary

7.2 Weekly Maintenance

- Inspect V-belt for wear, cracks, or proper tension
- Check all fasteners for tightness

7.3 Monthly Maintenance

- Inspect bearings for noise or rough operation
- Clean motor housing to prevent dust accumulation and overheating
- Check wiring and electrical connections for wear or loose contacts
- Verify motor mounting hardware is secure

7.4 Wheel Replacement

Replace wheels when they show signs of wear (reduced diameter), visible damage, cracks, or chips. Follow the wheel installation procedure in Section 5.4.

8. Troubleshooting

Problem	Possible Cause	Solution
Motor will not start	Power disconnected	Check power supply and connections
	Faulty switch	Replace toggle switch
Excessive vibration	Loose wheel	Check arbor nut tightness
	Damaged wheel	Replace wheel
	Worn bearings	Replace spindle bearings
Poor cut quality	Worn wheel	Replace wheel
	Wrong wheel for material	Select appropriate wheel type
	Feed rate too fast	Reduce feed pressure
Wheel overheating	Excessive feed pressure	Reduce feed rate
	Improper wheel selection	Use wheel rated for material
Material slipping	Vise not tight	Increase vise pressure
	Worn vise jaw	Replace vise jaw
Belt slippage	Belt worn	Replace V-belt
	Improper tension	Adjust belt tension

9. Replacement Parts

Genuine Kalamazoo Industries replacement parts are kept in stock and shipped from Kalamazoo, Michigan. Using genuine parts ensures optimal machine performance and maintains warranty coverage.

9.1 Recommended Spare Parts

We recommend keeping the following parts on hand to minimize downtime:

Part Number	Description	Quantity
KAB10N	10" Non-Reinforced Abrasive Cutoff Wheels (Mild Steel)	10
KAB10R	10" Reinforced Abrasive Cutoff Wheels	10
702-002	K10B Spindle Assembly	1
486-007	3HP Motor for K10B	1

9.2 Ordering Parts

To order replacement parts, contact Kalamazoo Industries directly or visit the online parts store at www.kalamazooind.com. Have your machine model number (K10B) ready when ordering.

10. Warranty Information

10.1 Warranty Coverage

Parts warranty is guaranteed for one year from the original date of purchase by the original purchaser, covering defects in material or workmanship under normal use. This warranty covers the replacement of defective parts. Some exclusions may apply.

10.2 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 from improper electrical connection

10.3 Return Authorization

Obtain written authorization before returning any merchandise by contacting Customer Service at (269) 382-2050. Unauthorized returns may not be accepted.

11. Contact Information

KALAMAZOO INDUSTRIES, INC.

Kalamazoo, Michigan

Toll-Free: 1-800-592-2050
Local: (269) 382-2050
Website: www.kalamazooind.com

Office Hours: Monday – Friday, 8:00 AM – 4:30 PM EST

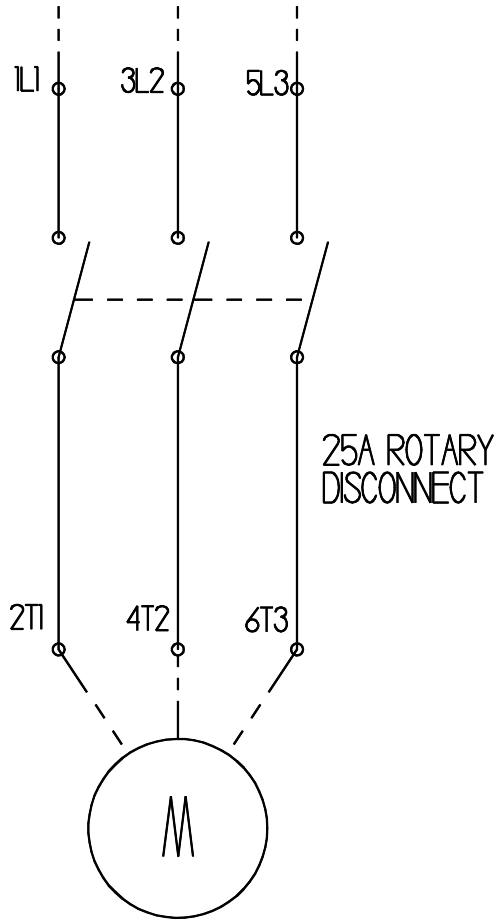
Online Resources

- Product Registration: www.kalamazooind.com/product-registration
- Parts Orders: www.kalamazooind.com/parts-by-category
- Technical Videos: www.kalamazooind.com/videos
- Contact Form: www.kalamazooind.com/contact-us

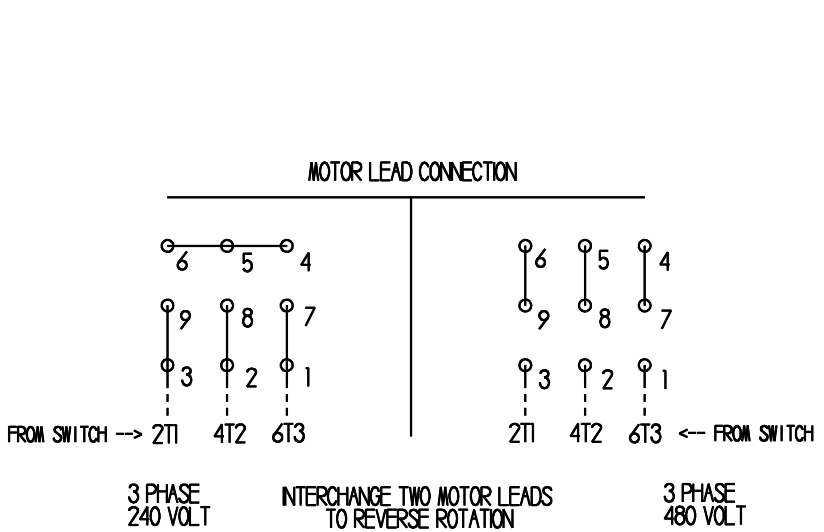
Thank you for choosing Kalamazoo Industries!

Made in the USA

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



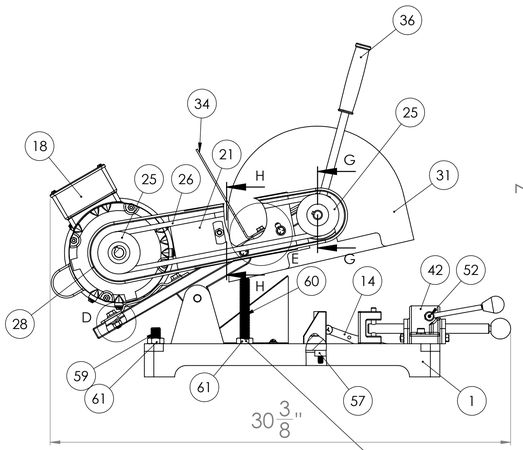
THREE PHASE MOTOR
DRIVE



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

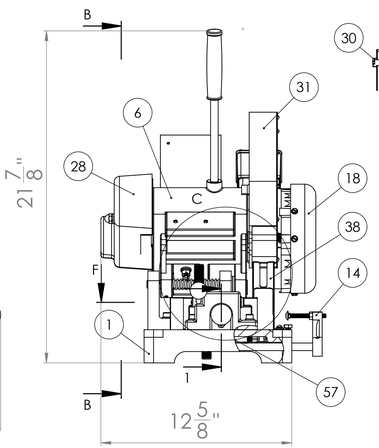
Y
X

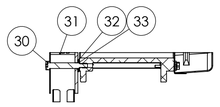
inch



SECTION B-B

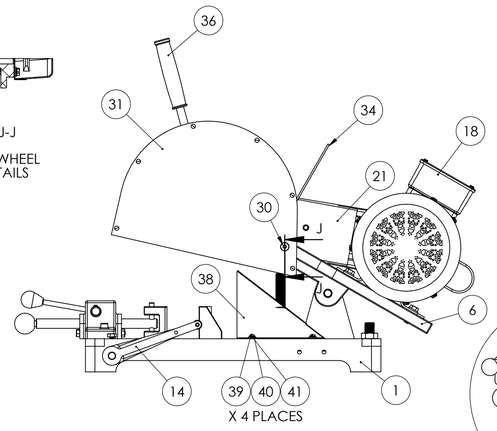
BOTH STOPS CAN BE ADJUSTED ACCORDING TO CUSTOMER REQUIREMENTS.



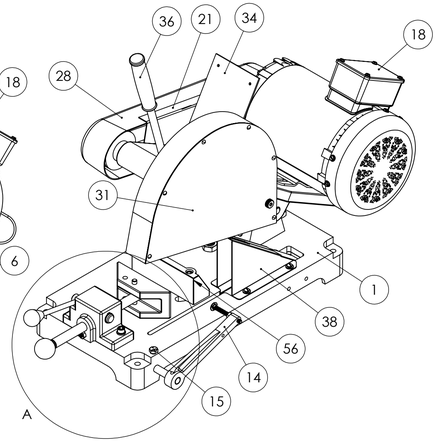


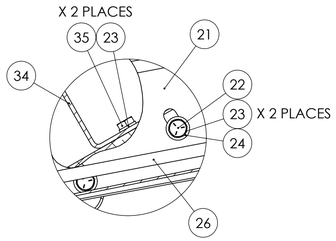
SECTION J-J

ATTACHING WHEEL GUARD DETAILS



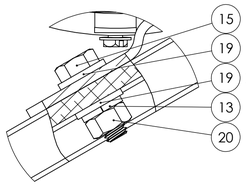
X 4 PLACES





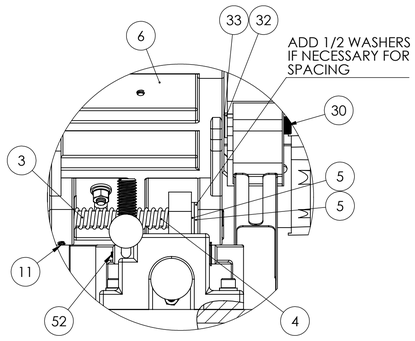
DETAIL E
SCALE 1 : 2

ATTACHMENT OF INNER BELT GUARD AND SWITCH BRACKET



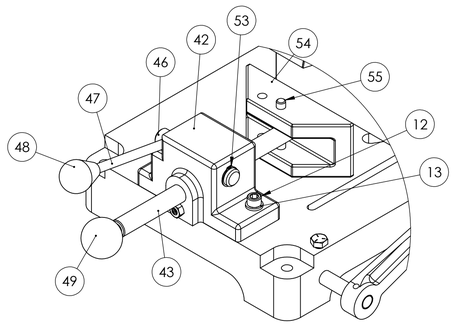
DETAIL D
SCALE 1 : 1

MOTOR MOUNT DETAILS

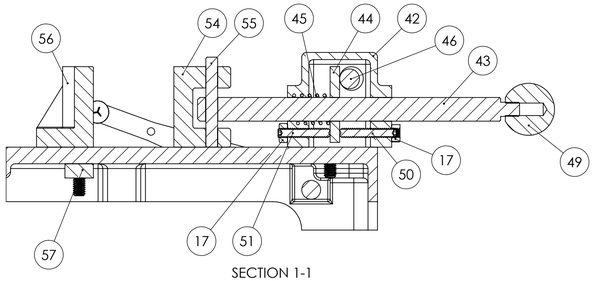


DETAIL C
SCALE 2 : 5

TRUNNION, TRUNNION PIN, AND SPRING DETAILS

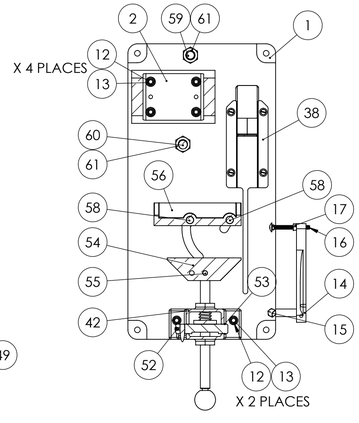


DETAIL A
SCALE 2 : 5



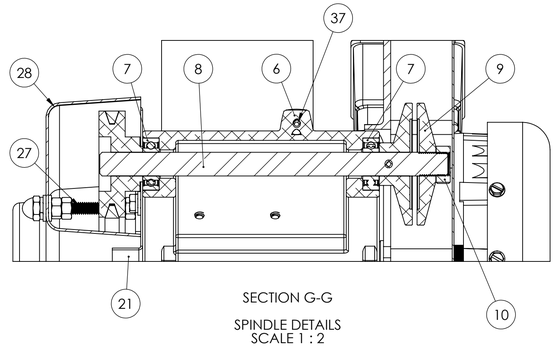
SECTION 1-1

INTERNAL VISE DETAILS
SCALE 1 : 2



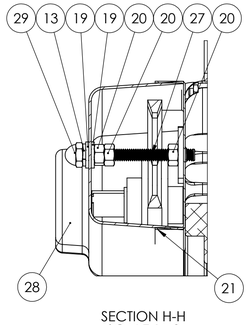
SECTION F-F

BASE LAYOUT



SECTION G-G

SPINDLE DETAILS
SCALE 1 : 2



SECTION H-H
SCALE 1 : 2

ATTACHING PLASTIC V-BELT GUARD

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	050-008	K10 BASE	1
2	041-006	TRUNNION BRACKET FOR K10	1
3	697-013	TENSION SPRING FOR 2FS, 2FS72, 2FSM, BG142, 2FS72M, K12-14B	1
4	562-004	TRUNNION PIN FOR K7B, K8B, K10B	1
5	UFWZ050	1/2 USS F/W Z	2
6	002-001	ALUMINUM SAW ARM FOR K7B, K8B, K10B (TAKES NEW 6202-2RS-1/2 BEARINGS	1
7	044-007	K10 BEARING	2
8	701-003	K10 SPINDLE W TIGHT FLANGE	1
9	292-008	LOOSE FLANGE FOR K10B AND 2SK7	1
10	537-023	SPINDLE NUT FOR K10B, K10SW, K10S, K10SF	1
11	SSKA025008	1/4-20 X 1/2 SOC SET KNURL PT.	1
12	SHCA031024	5/16-18 X 1-1/2 SHCS	6
13	SLWZ031	5/16 SPLIT L/W Z	10
14	709-002	WORK STOP FOR K10B	1
15	HHC5031016	5/16-18 X 1 HHCS GR5 Z	4
16	CRBZ025040	1/4-20 X 2-1/2 CARRIAGE BOLT	1
17	FHN5025	1/4-20 FHN GR5 Z	3
18	486-006	3 HP MOTOR FOR FOR K8B, K10B, KM10, BG260H AND S460W	1
19	UFWZ031	5/16 USS F/W Z	8
20	FHN5031	5/16-18 FHN GR5 ZINC	6
21	342-027	K10B INNER GUARD BELT BRACKET	1
22	HHC5025012	1/4-20 X 3/4 HHCS GR5 Z	2
23	SLWZ025	1/4 SPLIT L/W Z	4
24	UFWZ025	1/4 USS F/W Z	2
25	560-045	K10B, K10SW, KM10 PULLEY	2
26	051-003	V-BELT FOR K10, KM10, S6MW, S460W	1
27	RND-0.31-18 THRD RODX	3-1/4 INCHES OF 5/16-18 THREADED ROD	1
28	342-043	K10B, KM10 PLASTIC OUTER BELT GUARD	1
29	CPNZ031	5/16-18 CAP NUT NICKEL	1
30	SSBA031006	5/16 X 3/8 SOC SHOULDER BOLT	1
31	342-006	WHEEL GUARD FOR K10B SAWS	1
32	UFWZ037	3/8 USS F/W Z	1
33	BWWA031	5/16 BOWED SPRING WASHER 21/64	1
34	041-050	SWITCH BRACKET FOR K8B AND K10B	1
35	HHC5025008	1/4-20 X 1/2 HHCS GR5 Z	2
36	381-003	HANDLE W GRIP FOR K7B, K8B, K10B SAWS	1
37	SSKA025004	1/4-20 X 1/4 SOC SET KNURL PT.	1
38	342-008	GUARD, SPARK DEFLECTOR K10 WHEEL GUARD	1
39	SRMZ011008	10-24 X 1/2 SLT ROUND MS Z	4
40	MSWZ010	#10 M.S. F/W Z	4
41	SLWZ010	#10 SPLIT L/W Z	4
42	386-001	K10-16 VISE HOUSING	1
43	645-001	K10-16 SHORT VISE ROD	1
44	454-001	K10-16 VISE CAM PLATE	1
45	697-001	K10-16 VISE ROD SPRING	1
46	129-001	K10-16 VISE CAM	1
47	381-001	K10- 16 VISE HANDLE	1
48	441-002	K10-16 VISE LOCK HANDLE KNOB	1
49	441-001	K10- 16 VISE ROD KNOB	1
50	SSSA025024	1/4-20 X 1-1/2 SOC SET CUP PT.	1
51	SSSA025022	1/4-20 X 1-3/8 SOC SET CUP PT.	1
52	SSKA010004	10-24 X 1/4 SOC SET KNURL PT	1
53	641-016	RETAINING RING SHR-62 ST PA 5/8	1
54	431-001	FRONT VISE JAW K10, K14, KM14	1
55	562-001	VISE JAW PIN FOR K10B, K12B, K14B, KM16-18 VISE ASSEMBLIES	1
56	431-002	K10- 14 REAR VISE JAW	1
57	537-014	K10-14 FENCE NUT	1
58	SHCA031048	5/16-18 X 3 SHCS	2
59	RND-5/8-11 THRD RODX3.5	3 INCHES OF 5/8-11 THREADED ROD	1
60	RND-0.625-11 THRD RODX5.5	5-1/2 INCHES OF 5/8-11 THREADED ROD	1
61	FJNZ062	5/8-11 F H JAM NUT Z	2
	486-007/208	ALTERNATE 3HP, 3PH, 208V MOTOR	
	486-007	ALTERNATE 3HP, 3PH, 220/440V MOTOR	
	486-007/5	ALTERNATE 3HP, 3PH, 575V MOTOR	

UNLESS OTHERWISE SPECIFIED:

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

INTERPRET GEOMETRIC TOLERANCING PER:

MATERIAL

FINISH

NEXT ASSY | USED ON

APPLICATION

DO NOT SCALE DRAWING

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

KALAMAZOO INDUSTRIES, INC.

TITLE: MODEL K10 B

SIZE D | DWG. NO. K10 B | REV

SCALE: 1:5 | WEIGHT: | SHEET 1 OF 1