



Instruction Manual

S612 & S612V Combination Sanders

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GENERAL POWER TOOL SAFETY WARNINGS



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

READ AND SAVE ALL WARNINGS AND INSTRUCTIONS FOR FUTURE REFERENCE

PRECAUTIONS

- Always wear safety glasses when operating power tools.
- Keep work area clean and well lit.
- Do not operate power tools in explosive atmospheres, such as the presence of flammable liquids, gases or dust.
- Keep children and bystanders away while operating a power tool.
- Keep long hair tied back or covered and never wear loose fitting clothing near a running machine.
- Additional precautions may be necessary when grinding materials that are flammable or have other hazardous properties. Consult manufacturer of materials for safe grinding and handling.

OPERATING INSTRUCTIONS

- Disconnect power before making any adjustments
- Abrasive belt rotation is counterclockwise. If the abrasive belt is lap spliced, be sure of correct rotation. Butt spliced belts are bi-directional.
- Belt tension is pre-set with tension spring (13) No belt tension adjustment is needed.
- Belt changing – disconnect power, open sander guard (38), loosen tracking knob (29), compress spring belt tension shaft (12) with tennsions release lever (15) . Remove belt and replace with new belt.
- Belt tracking – with power disconnected, rotate belt by and to center or “track” sanding belt. Rotate tracking knob up/down (29) to “track” the belt. Re-lock the tracking knob (29) to lock in belt tracking. Close box guard (38) and reconnect power.
- Examine the abrasive belt carefully before use. Never use an abrasive belt with a nicked or cut edge, crease, or handling damage.

Belt Sander Warranty, Return Policy, and Safety Guidelines

WARRANTY: All products are guaranteed for a period of one year to the original purchaser, against defects in material workmanship under normal use. Exclusions may apply.

RETURN POLICY: Authorization must be obtained BEFORE returning merchandise. Contact our customer service department at 269-382-2050 for a return authorization number. Include with your return a copy of your invoice or packing slip. Materials must be sent back prepaid unless otherwise indicated. All returns will be subject to a 10% restocking charge. No returns will be accepted after one year of the invoice date.

BELT SANDER SAFETY:

1. Read the operating instructions before running machine.
2. Always wear safety glasses or a full-face shield for protection.
3. Keep hands clear of the sanding area.
4. Never wear gloves or loose-fitting clothing when operating this machine.
5. Always keep hair tied back or covered.
6. Let machine rotation come to a full stop before changing belt.
7. Keep Safety guards in place. Do not alter guards or machine in any way. Any alterations to guards or machine could cause serious injury.
8. All belt sanders should be operated in a well-ventilated area. The dust created when some materials are sanded can be harmful. Dust masks are recommended as practical means of minimizing dust inhalation. Fumes from other sources can also cause fires when in contact with sanding sparks.
9. Sparks created by sanding should be directed downward and away from the face and body. **Do not grind near flammable material.**
10. Electric sanding machines are not intended for use in or near water. This includes an operator standing on a wet floor or working around containers of water or other conductive liquids.
11. If your unit is the S612V, make sure to thoroughly clean the inside of the vacuum system — including the filter — before switching materials. **Never mix different materials in the sanding area or within the dust collection system, as this can create contamination or safety**

Machine Overview – Kalamazoo S612 & S612V Combination Belt and Disc Sander

Description & Intended Use

The Kalamazoo Industries S612 and S612V Combination Sanders are heavy-duty, American-made belt and disc sanders designed for industrial applications where precision, performance, and reliability are essential. Each model combines a 6" x 48" belt sander and a 12" disc sander, offering versatility for a wide range of sanding, deburring, and finishing tasks.

The S612 model is ideal for general-purpose use in fabrication shops, machine shops, maintenance departments, and wood shops, providing smooth, consistent results across all types of materials — including metals, plastics, composites, and wood (not intended for use with water-based materials).

The S612V model builds on the same powerful design but features an integrated vacuum system for dust collection and cleaner operation. **This built-in system helps maintain air quality and reduces cleanup time, making it especially well-suited for high-volume or enclosed shop environments.**

Setup and Installation

- Uncrate the machine carefully and inspect for any shipping damage.
- Place the unit on a solid, level surface capable of supporting its weight.
- Ensure the power supply matches the motor voltage listed on the nameplate.
- Securely connect the electrical wiring according to local electrical codes.
- Check belt and disc alignment before operation.

Typical Applications

- Sanding and deburring and cleaning up machine parts
- Sanding and cleaning up aluminum castings
- Finishing welds, edges, and surfaces
- Shaping and smoothing plastic, composite, or wood components
- General purpose equipment for all fabrication and machine shops

Key Benefits

- Combination of belt and disc sander functions in one space-efficient unit
- Heavy-duty steel construction ensures long-lasting durability
- Adjustable work tables and platen for versatile setups
- Quick-change belt system minimizes downtime
- The S612V's built-in vacuum system enhances dust management and operator safety

Both models are designed for easy maintenance, operator comfort, and consistent results — making them essential tools for industrial shops looking to improve productivity and finish quality.

S612 & S612V Combination Sanders – Technical Specifications

The following table provides detailed technical specifications for the Kalamazoo Industries S612 and S612V Combination Sanders. The S612V includes an integrated vacuum system for dust collection and cleaner operation.

Specification	S612	S612V (with vacuum system)
Belt Size	6" x 48"	6" x 48"
Disc Diameter	12"	12"
Belt Speed	2800 SFPM	2800 SFPM
Disc Speed	2500 SFPM	2500 SFPM
Motor Options	3 HP, 1PH, 220V or 3 HP, 3-PH, 220/440V	3 HP, 1PH, 220V or 3 HP, 3PH, 220/440V
Switch Type	Magnetic push-button On/Off switch	Magnetic push-button On/Off switch
Platen	6.5" x 14" steel, reversible & replaceable	6.5" x 14" steel, reversible & replaceable
Work Table (Belt)	6" x 10" cast iron with slot for miter gauge	6" x 10" cast iron with slot for miter gauge
Work Table (Disc)	7.75" x 16.5" cast iron with slot for miter gauge	7.75" x 16.5" cast iron with slot for miter gauge
Sanding Positions	Multi-position (horizontal, vertical, and angled)	Multi-position (horizontal, vertical, and angled)
Drive System	Dual V-belt drive	Dual V-belt drive
Vacuum System	N/A	Integrated 100 CFM dust collector with replaceable filter
Construction	Heavy-duty steel base with access door for cleanout	Heavy-duty steel base with access door for vacuum cleanout
Approximate Shipping Weight	425 lbs	450 lbs (approx.)
Approximate Shipping Dimensions	45" L x 33" W x 70" H (approx.)	45" L x 33" W x 70" H (approx.)
Applications	Sanding, deburring, and finishing of metals, plastics, and wood	Sanding, deburring, and finishing of metals, plastics, and wood
Country of Origin	Made in the USA	Made in the USA

Maintenance Checklist – Kalamazoo Industries S612 & S612V Combination Sanders

Daily Maintenance

- Inspect sanding belt and disc for wear, damage, or loading; replace if needed.
- Ensure belt tracking is correct; adjust using the tracking knob if the belt drifts.
- Check that tensioning spring operates smoothly and keeps the belt tight.
- Wipe down all work surfaces, tables, and guards to remove dust and debris.
- Verify that safety guards and covers are secure and in place.
- Confirm switches and electrical cords are in good condition with no exposed wires.
- For the S612V, empty the dust collection bin and check for blockages in the hose.
- Do not mix different materials in the sanding or dust collection areas.

Weekly Maintenance

- Check and clean the belt and disc platens to ensure smooth sanding surfaces.
- Tighten any loose hardware, bolts, or screws on the base, motor mount, or guards.
- Inspect bearings for unusual noise or play during operation.
- Examine belt pulleys and drive belts for alignment and tension; adjust if needed.
- On the S612V, clean the vacuum housing and replace the filter if dust buildup is visible.

Monthly Maintenance

- Inspect the motor for overheating, vibration, or excessive noise.
- Check all electrical connections for tightness and wear.
- Clean inside the machine base and ensure the motor vents are free of dust.
- Inspect the work table tilt mechanism for smooth operation and tighten pivot hardware if loose.
- For S612V units, thoroughly clean the vacuum system, housing, and filter before changing materials.

Quarterly or As Needed

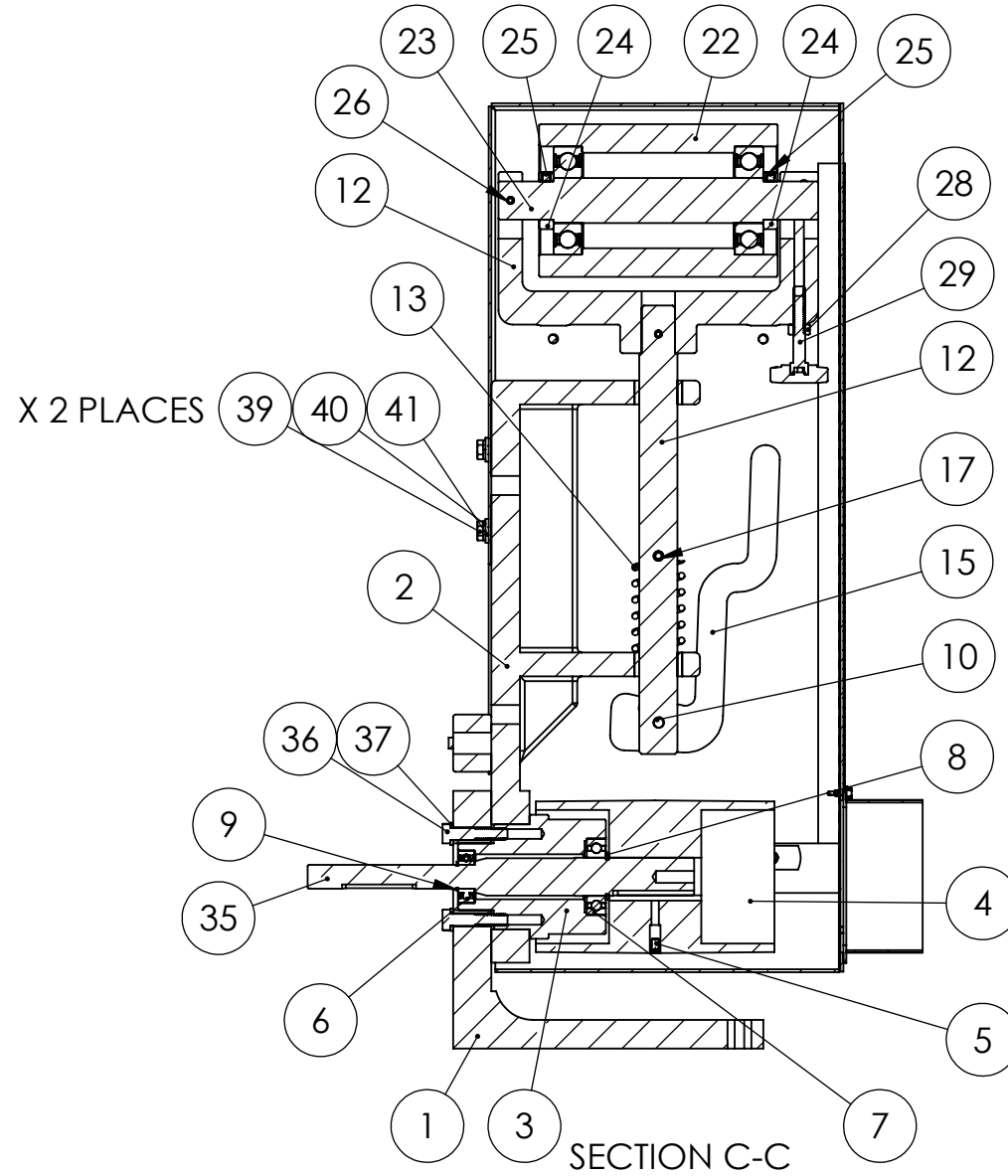
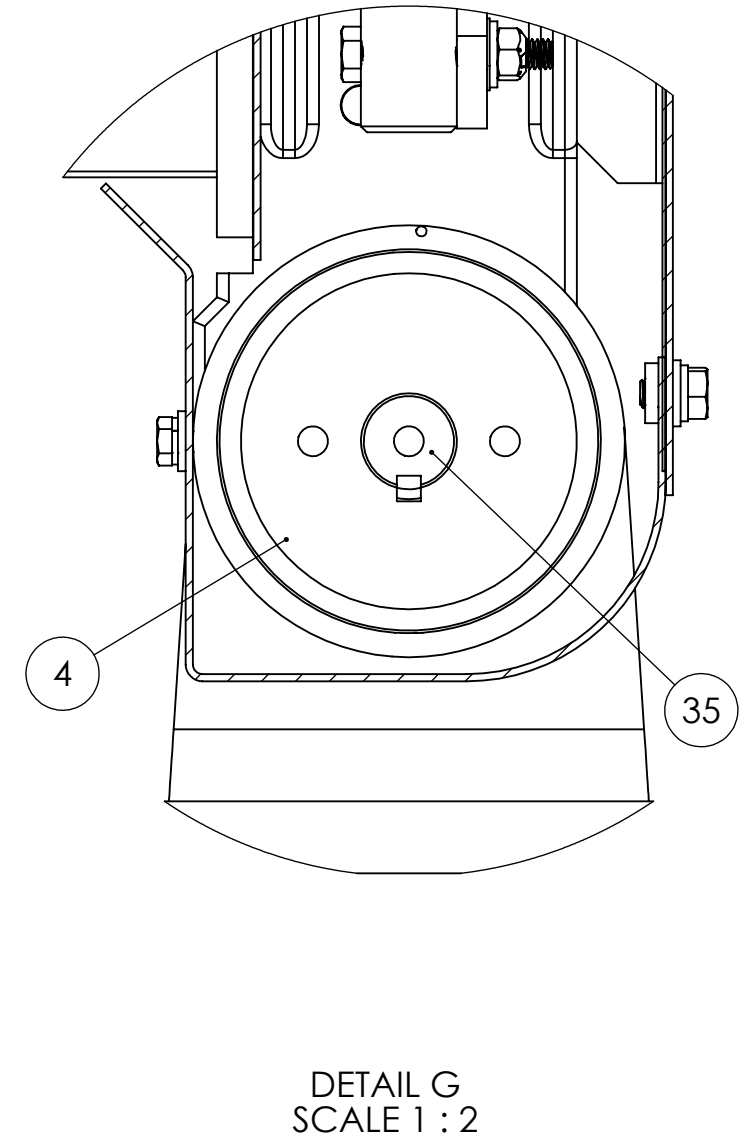
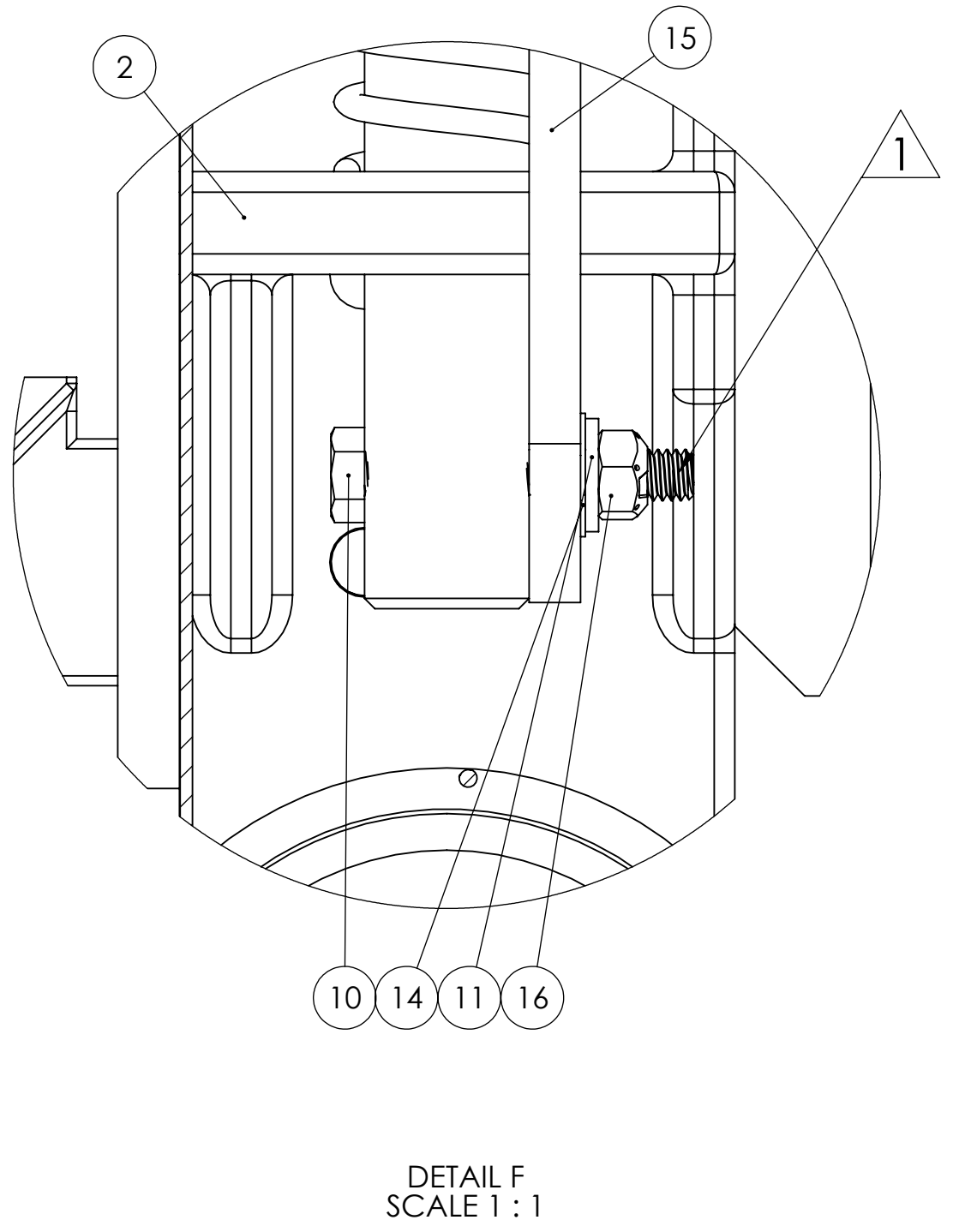
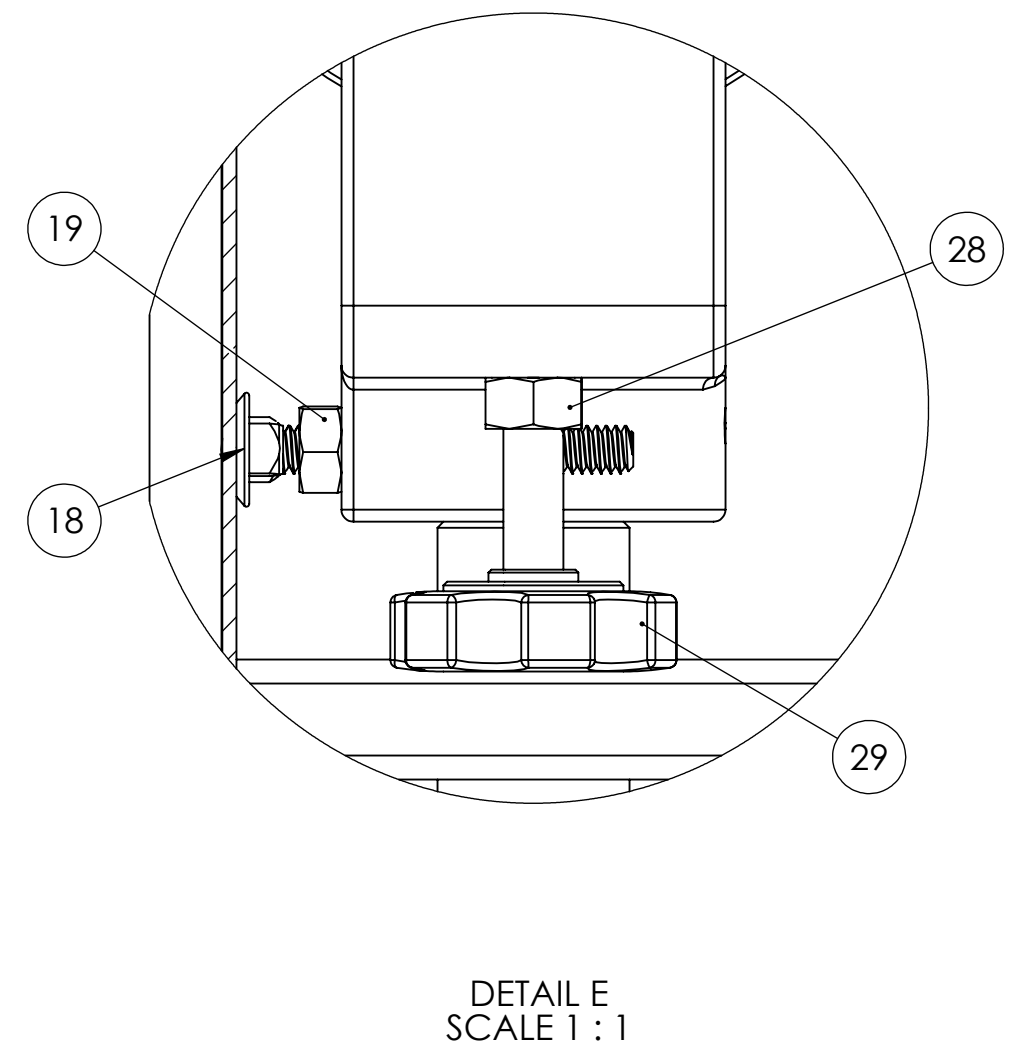
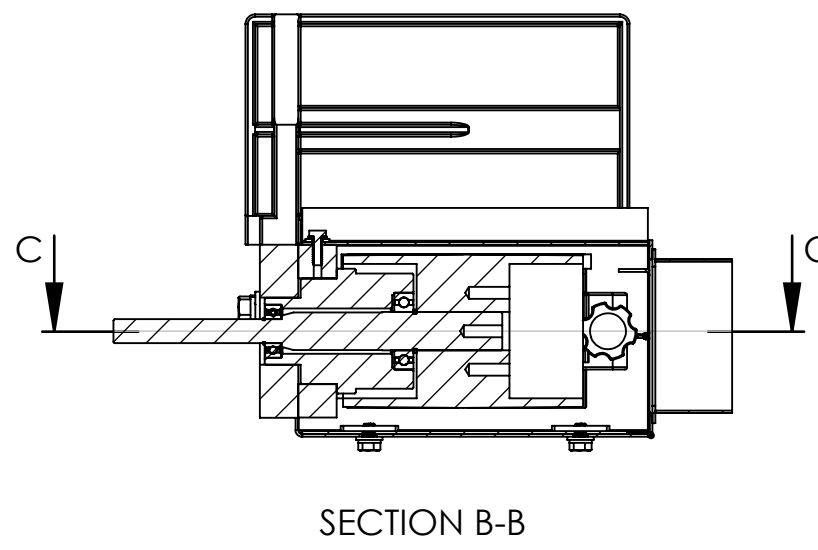
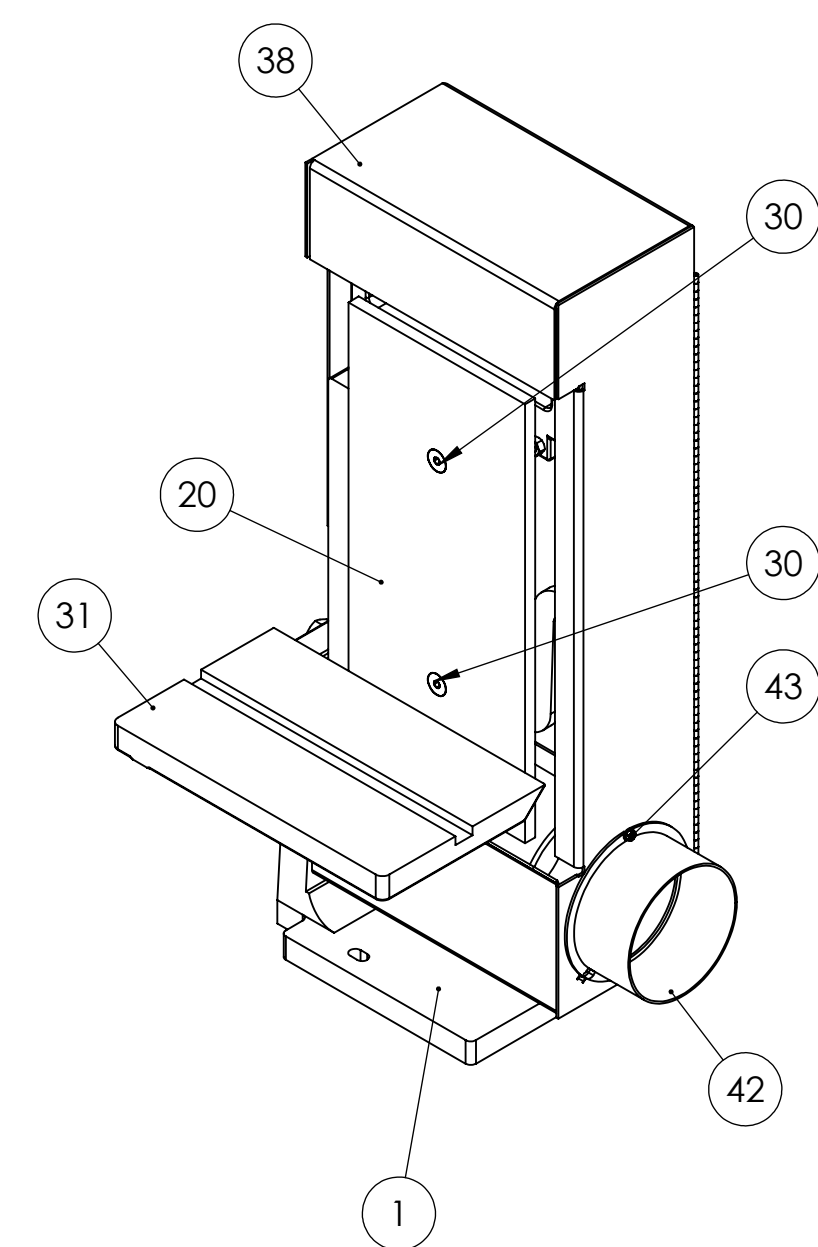
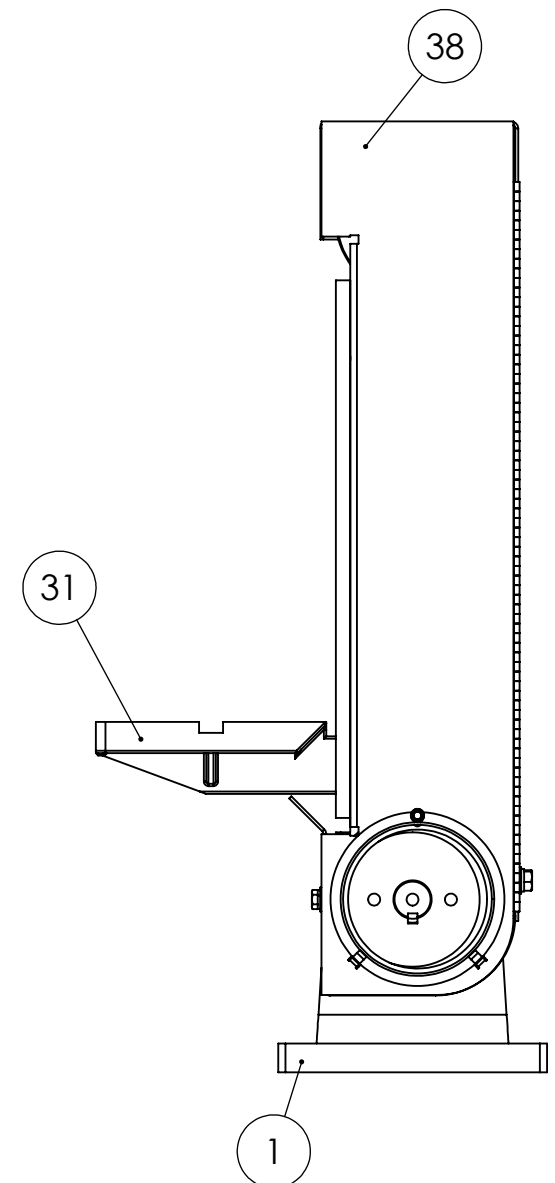
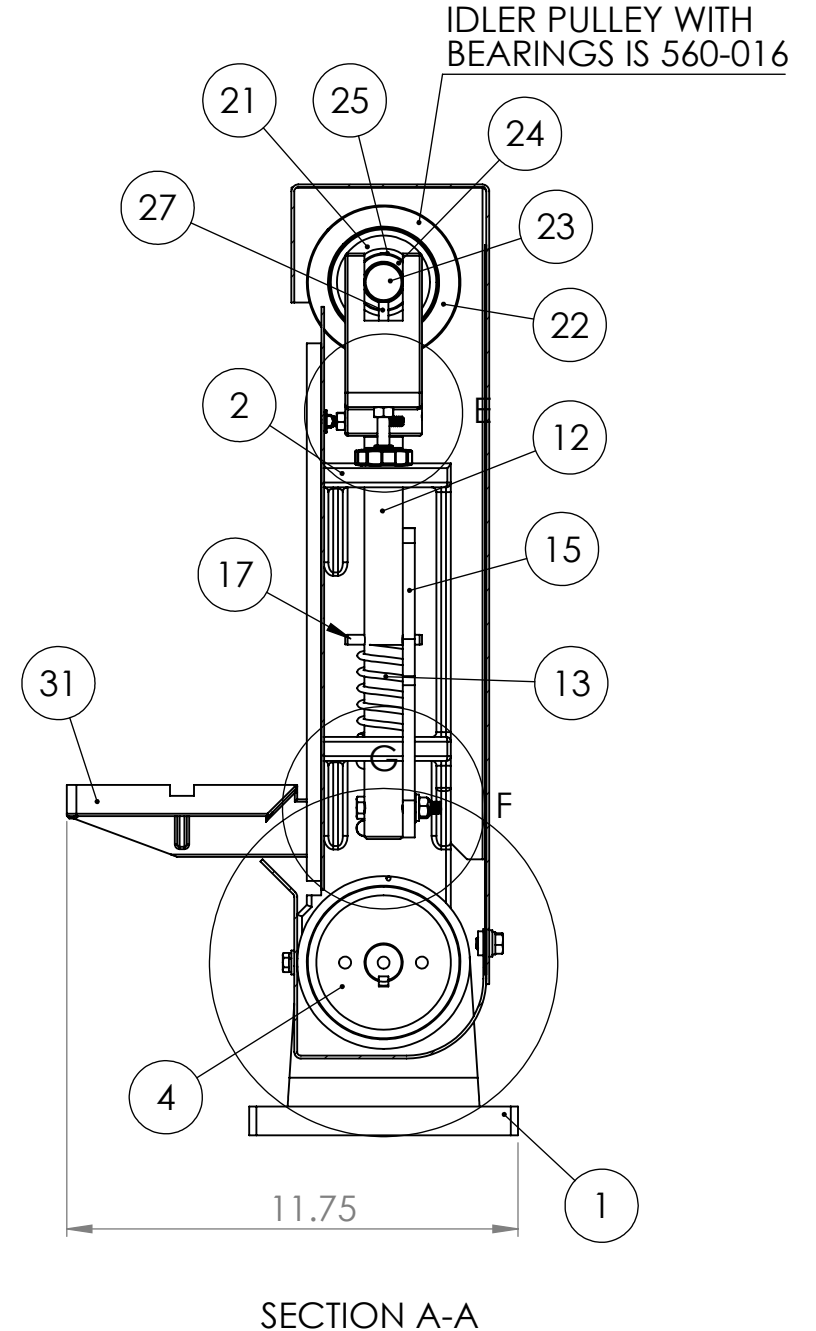
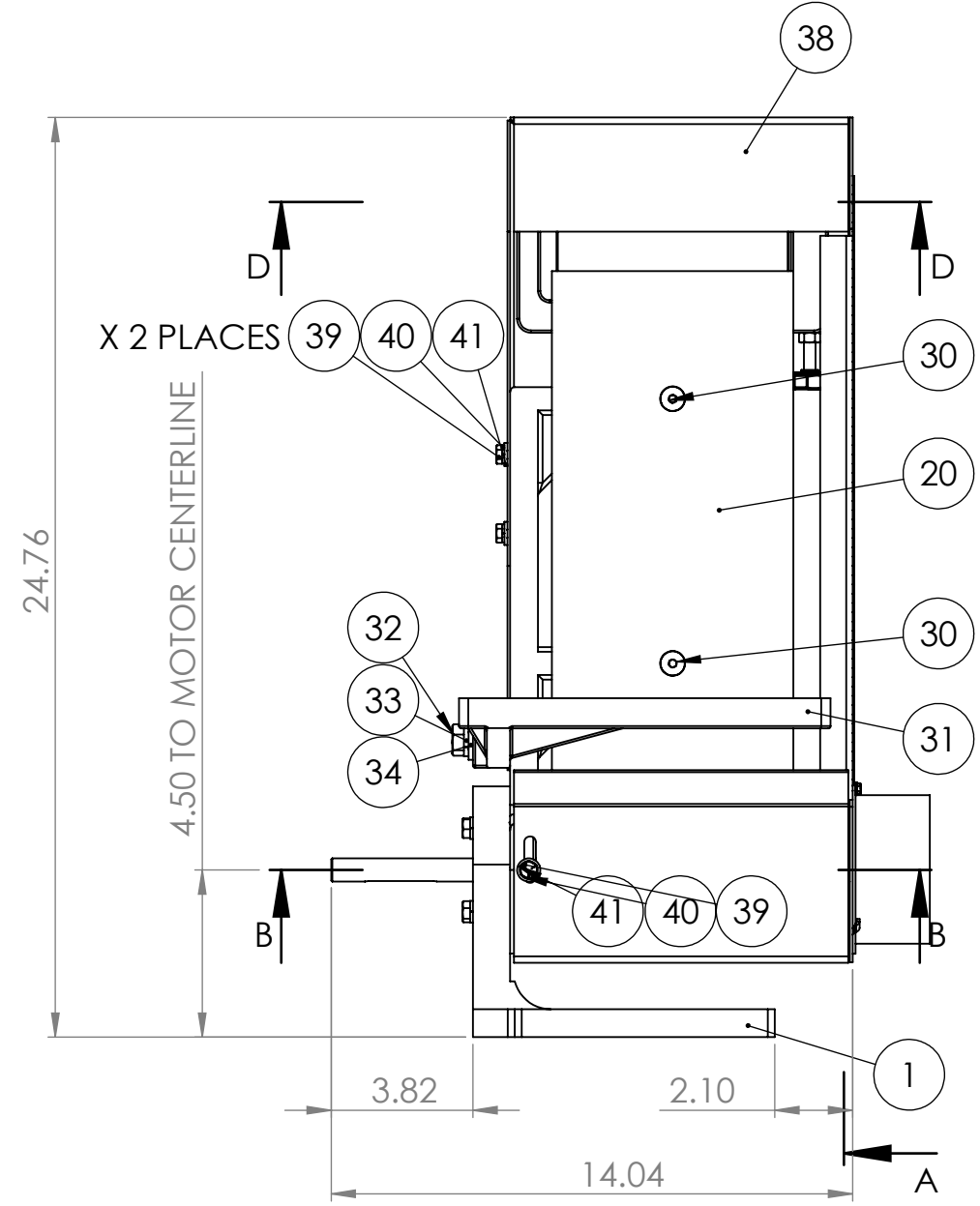
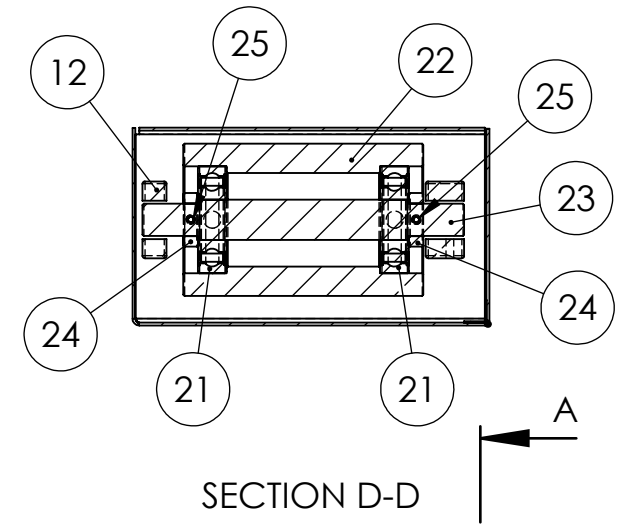
- Replace the sanding belt and disc if performance decreases or glazing occurs.
- Rebalance or replace the disc plate if excessive vibration occurs.
- Inspect and replace drive belts or bearings as required.
- For S612V models, replace the vacuum filter element as needed to maintain strong suction.

Additional Safety Reminders

- Always disconnect power before performing any maintenance or adjustments.
- Allow the machine to come to a complete stop before changing belts or discs.
- Only use dry materials — do not sand wet items or operate near water.
- Maintain a clean, well-ventilated workspace to prevent dust buildup and fire hazards.

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
B4	1	HARDWARE REPLACED. BOLT ORIENTATION REVERSED, FLAT WASHER REPLACED WITH LOCK WASHER, ADDED SPRING WASHER	4/4/2024	

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	050-025	CAST IRON BASE FOR S612V-S6MW	1
2	291-004	CAST IRON FRAME WITH BUSHINGS FOR S6 SERIES SANDERS	1
3	386-013	S6 BEARING HOUSING	1
4	560-015	S6 DRIVE PULLEY	1
5	SSHA025006	1/4-20 X 3/8 SOC SET 1/2 DOG	1
6	044-007	K10 BEARING	1
7	044-001	K12 BEARING	1
8	641-007	RETAINING RING 1" FOR S6, S460W, S612 DRIVE SPINDLE	1
9	641-016	RETAINING RING SHR-62 ST PA 5/8	1
10	HHT5031032	5/16-18x2 HEX HEAD TAP BOLT GR5 ZINC	1
11	UFWZ031	5/16 USS F/W Z	1
12	960-006YA	YOKE WITH TENSION SHAFT FOR S6 SANDERS	1
13	697-024	SPRING, TENSION FOR BG260, S460, S6M SANDERS, K12-14B SAW, KS390, KS490, KS690 BELT GRINDERS	1
14	BWWA031	5/16 BOWED SPRING WASHER 21/64	1
15	455-003	TENSION RELEASE LEVER FOR S6 SANDER HEADS	1
16	STNZ031	5/16-18 STOVER LOCK NUT ZINC-WAX	1
17	ROLA025024	1/4 X 1-1/2 ROLL PIN	1
18	CRBZ025032	1/4-20 X 2 CARRIAGE BOLT ZINC PLATED	2
19	FHN5025	1/4-20 FHN GR5 Z	2
20	563-002	PLATEN FOR S6M SANDERS	1
21	044-004	K20 SPINDLE BEARING	2
22	560-016-2	S6 IDLER PULLEY- NEW STYLE	1
23	701-019N	S6 IDLER SPINDLE- NEW STYLE	1
24	123-016	S6 IDLER PULLEY LOCK COLLAR	2
25	SSKA025004	1/4-20 X 1/4 SOC SET KNURL PT.	2
26	ROLA018032	3/16 X 2 ROLL PIN	1
27	562-018	TRACKING SCREW PIN FOR S6 SERIES SANDERS	1
28	FHN5031	5/16-18 FHN GR5 ZINC	1
29	441-014	TRACKING KNOB ASSEMBLY	1
30	FSCA031012	5/16-18 X 3/4 FSHCS	2
31	829-012	S6 WORK TABLE	1
32	HHC5050032	1/2-13 X 2 HHCS GR5 Z	1
33	SLWZ050	1/2 SPLIT L/W Z	1
34	SFWZ050	1/2 SAE F/W Z	1
35	701-025	SPINDLE, DRIVE FOR S612 SANDERS	1
36	HHC5031024	5/16-18 X 1-1/2 HHCS GR5 Z	2
37	SLWZ031	5/16 SPLIT L/W Z	2
38	342-069	6 INCH GUARD, FULL BOXED OSHA GUARD FOR S6M AND S612 SANDERS	1
39	HHC5025012	1/4-20 X 3/4 HHCS GR5 Z	3
40	SLWZ025	1/4 SPLIT L/W Z	3
41	UFWZ025	1/4 USS F/W Z	3
42	342-069B	4" ORIFACE W/ FLANGE FOR 6" SANDER GUARDS	1
43	HWTZ008008	#8 X 1/2 HWH TEKS Z	1



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UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL: ± ANGULAR: ±0.030 TWO PLACE DECIMAL: ±0.005 THREE PLACE DECIMAL: ±0.0005	DRAWN: _____ CHECKED: _____ ENG APPR: _____ MEG APPR: _____ Q.A. COMMENTS: _____	NAME: _____ DATE: _____		TITLE: S612 BELT SANDER SUBASSEMBLY
INTERPRET GEOMETRIC TOLERANCING PER: _____ MATERIAL: _____ FINISH: _____	APPLICATION: _____	DO NOT SCALE DRAWING		SIZE DWG. NO. D S612 BELT SANDER SUBASSEMBLY SCALE: 1:5 WEIGHT: _____ SHEET 1 OF 1

