



BURR KING MFG. CO., INC

1220 Tamara Lane

Warsaw, MO 65355

www.burrrking.com

(660)438-8998 • 800-621-2748

Fax (660)438-8991

MODEL 562

INSTRUCTION MANUAL



MADE IN U.S.A.



BURR KING.

- GRINDERS
- BUFFERS
- VIBRATORY
- DISC GRINDERS

*Model 56100 shown
with optional pedestal*

BURR KING MODEL 562

THREE WHEEL GRINDER

**BURR KING MFG. CO., INC.**

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June, 2007

Burr King Manufacturing Company, Inc. warrants the below product to be free in material and workmanship. The period of warranty is 1 year (90 days for vibratory bowls of 20 quart and lesser volume) from the date of purchase. No warranty is provided for products that have been modified, abused, handled carelessly, where repairs have been made or attempted by others, or for freight damage. No warranty is provided for three phase electric motors, controllers, etc. when the motors, controllers are not protected by magnetic starters that were supplied and installed by Burr King Manufacturing Company, Inc. No other warranty, written or verbal is authorized by Burr King Manufacturing Company, Inc.

During the warranty period Burr King Manufacturing Company, Inc (or its authorized suppliers or agents) will replace or repair the below product without charge if the product is found by Burr King Manufacturing Company, Inc. to be defective. To receive warranty services you must contact Burr King Manufacturing Company, Inc. and receive authorization for warranty service. Unless otherwise authorized by Burr King Manufacturing Company, Inc. Products (see * below) must be returned to the factory to receive warranty service.

*Motors, speed controllers, and certain other accessories are warranted by their respective manufacturers. To receive warranty service on these items you must contact a brand label service center that supports the product in need of service. Burr King Manufacturing Company, Inc. will assist you in locating a service center.

For the first thirty days after purchase, and when Burr King Manufacturing Company, Inc. authorizes warranty service, we will pay normal and necessary surface freight charges both ways (except for items in *). After thirty days the customer is responsible for all freight charges. Where possible Burr King Manufacturing Company, Inc. may elect to make on site service and/or repairs necessary to return the product to serviceable condition.

To assure prompt warranty service it is necessary that you complete and return the below warranty information to Burr King Manufacturing Company, Inc. please **FAX** or **MAIL** at your convenience.

Product model: _____ Serial number: _____
Date Purchased: _____ Purchased from: _____
Address: _____ City: _____ State/Prov: _____ Postal code _____

Your company name: _____
Address: _____ City: _____ State/Prov: _____ Postal code _____
Phone: _____ Fax: _____ Email: _____
Your name: _____ Title: _____

How did you learn about Burr King products?

Trade show ___ Web ___ Industrial Distributor ___ Advertisement ___ Other _____ Which one: _____

What is the intended use of this product? _____

Please indicate the general work types performed at your company; check all that apply:

Fabrication ___ Machining ___ Casting ___ Molding ___ Welding ___ Finishing ___ Assembly ___ Research ___ Other ___

Please indicate the primary product focus of your company; check all that apply.

Aircraft/Missile ___ Automotive ___ Contract machine ___ Contract Fabrication ___ Agricultural ___ Maintenance ___ Recreational ___
Job shop ___ Foundry ___ Construction ___ Arts ___ Orthopedic ___ Dental ___ Medical ___ Other _____

Please tell us what we can do to improve our products:

May we contact you? Yes ___ No ___

Thank you for purchasing Burr King products!

**REGISTER ONLINE @
WWW.BURRKING.COM**



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August 29, 2007

LETTER OF AUTHENTICITY

This letter is to certify that all Burr King Belt grinders, Disc grinders, Polishing machines Vibra King Chambers and Bowls are manufactured and assembled in the United States of America.

(Tariff number 847990 criterion A)

Don Mac Carthy
President

See our catalog at www.burrking.com

contact us at info@burrking.com



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February 2005

OPERATOR, and OPERATING AREA SAFETY

Subject equipment includes Grinders, buffers, polishers, and other rotating equipment. Serious injury or death may occur if minimum safety precautions are not understood, and obeyed by operators and those other persons who may be in the immediate vicinity of the subject equipment. Persons who operate, or are in the immediate vicinity of the subject equipment must be properly trained in, and use, minimum safety precautions and procedures for such machinery.

Minimum safety requirements to operate, or work in the immediate vicinity subject equipment:

1. Read and understand all operating instructions, manuals, labels, and other information provided with the equipment.
2. Install the equipment according to manufacturer's instructions.
3. Securely bolt the equipment to a rigid, structurally sound mounting surface.
4. Use and wear proper eye and face protection.
5. Use and wear proper protection for the body, hands, fingers, feet, and legs.
6. Review and understand all machine guards, adjustments, and points of exposure to potential injury.
7. Do not remove, tamper with, or otherwise alter, equipment guards, and other safety features.
8. Insure the machine is adjusted, and remains adjusted according to manufacture's requirements.
9. Maintain the equipment in good operating condition.
10. Have another person who is knowledgeable in proper and safe operation of the subject equipment demonstrate proper and safe operation to all operators, and to those persons who might be in the immediate vicinity of the subject equipment.
11. Use work piece holding devices when ever possible that diminish the possibility that persons will come in contact with moving machine pieces, or spark/debris output from the machine.
12. Use spark and debris arresting apparatus. Such apparatus should be connected to the machine so as to contain dust and debris that is generated, and to suppress sparks thereby limiting human inhalation risk, and the risk of fire or explosion.
13. Use appropriate inhalation apparatus to protect person from ingestion and/or inhalation of sparks, debris, smoke, particulates, etc.
14. Avoid mixing different metals, alloys, and materials. To mix such materials might create a fire or explosion hazard.
15. Protect persons from work pieces, particulates, etc. that could be forcibly ejected from the machine. For example, a buffing wheel or grinding belt can "grab" a work piece while the work piece is being buffed, polished, ground, or otherwise conditioned, resulting in forcible ejection toward the operator or those in the vicinity of the machine. The use of leather aprons, gloves, and eye shields are examples of protective gear that may be effective. In general do not grind, buff, or otherwise engage the traveling belt, wheel, or disc surface with the work piece pointing into the direction from which the belt, wheel, or disc is traveling. However, if you choose to do so be aware the work piece may lodge in the traveling belt, wheel, or disc and be forcibly, and dangerously ejected.
16. Do not operate this machine if the gap (nip point) between a moving belt, wheel or disc and the work support surface exceeds 1/8 inch.
17. Do not operate this machine if the gap between the moving abrasive belt, disc or wheel and the adjacent face

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Continued from page 1

of the work rest (or table) will permit passage of the work piece through the gap (nip point). Note, however, that certain alloys such as titanium may create conditions where grinding debris can accumulate in a tight gap creating a potential fire hazard. **When in doubt consult with your safety officer.** Failure to observe this warning may result in the work piece or other item being caught in this gap, and/or being forcibly ejected. Failure to heed this warning may cause serious bodily harm to the operator and/or bystanders. **NEVER USE THIS EQUIPMENT IF YOU ARE NOT PROPERLY TRAINED IN ITS OPERATION and/or SAFE USE! IF IN DOUBT STOP and ASK FOR GUIDANCE!**

18. Never position the work rest table at an acute angle between the top of the work rest table and the moving belt or wheel. Doing so will create “nip point” that can cause serious injury should an operator body part become entangled (pulled into) the nip point created by this acute angle.

19. Do not operate the equipment, or allow others to operate the equipment without proper training in these and other rotating machinery safety requirements.

20. Do not perform maintenance on the equipment unless you are fully qualified to do so, and understand all necessary safety and operating requirements.

21. Do not leave the machine unattended while it is running.

22. Correct equipment or safety problems immediately. Do not operate the equipment when it requires maintenance, or correction.

23. Install and use high quality abrasive belts, wheels, discs, media, etc., as appropriate to your machine. Understand and follow the operating requirements provided by the manufacturer of these materials.

Rotational Speed Warning, Contact Wheels

Scope: Contact wheels manufactured by Burr King Manufacturing Company, Inc., which have rubber or urethane tires. Examples include but are not limited to stock codes 202, 302, 402, 502, 702, 802, 902, 1002, 1202 and variants. Variants have stock codes that begin with the base number; i.e. 802-S-55 is an 802 variant.

Users are warned not to exceed the below listed revolutions per minute (RPM) on the subject wheels. Failure to heed this warning may lead to tire de-bonding, fragmentation, or other mechanical failure. Such failures may cause serious personal injury to operators or bystanders, and/or cause property damage. All Burr King products are warranted for various time periods to be free of material and/or workmanship defects. Burr King Manufacturing Companies standard warranty policy is summarized as follows for contact wheels. 1 year from date of purchase if mounted on a Burr King machine purchased on the same date or 90 days if purchased as a spare or replacement part. Our warranty does not apply to wheels that are mounted on products not manufactured by Burr King Manufacturing Company, Inc. Users who mount Burr King manufactured contact wheels on product not manufactured by Burr King Manufacturing Company, Inc. do so at their own risk and assume all liability for having so mounted the contact wheel(s).

Remember good safety practice demands guarding to protect operators and bystanders from wheel failure and/or debris. Never use the subject contact wheels without proper guarding that meets commonly accepted safe practice. See OSHA, U/L, CSA, CE, ISO and other respected safety standards.

Stock code	
Contact Wheel	Maximum Safe RPM
202, 302	10000
402, 502, 702 802	4400
902, 1002	2200
1202	1600

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Occupational Noise Exposure

Burr King products produce levels of noise consistent with their intended purposes. The level and spectral content of noise produced is dependent on the product type, the degree that the product is maintained in proper operating condition, the abrasive/media and accessories used, the specific application, and the surrounding environment. Noise levels produced by various Burr King grinders and polishers, as measured at the Burr King factory, range from 80 to 93 decibels. Product operators and persons in the immediate product vicinity should be protected from excessive noise does levels as prescribed in OSHA regulation 29, piece 1910.95 titled "Occupational Noise Exposure".

ROTATING EQUIPMENT CAN BE DANGEROUS TO OPERATORS AND THOSE WHO MAY BE IN ITS IMMEDIATE OPERATING VICINITY. IT IS THE ABSOLUTE AND DIRECT RESPONSIBILITY OF PURCHASERS, MANAGERS, AND OPERATORS OF THIS EQUIPMENT TO UNDERSTAND AND OBEY THE FOREGOING MINIMUM OPERATING SAFETY REQUIREMENTS. IF YOU HAVE QUESTIONS OR SAFETY CONCERNS REGARDING OPERATING THE SUBJECT EQUIPMENT PLEASE CALL YOUR AUTHORIZED BURR KING DISTRIBUTOR, OR BURR KING MANUFACTURING AT 1-800-621-2748. YOUR SAFETY IS OUR FOREMOST CONCERN!

Burr King Manufacturing disclaims any and all responsibility for injuries, damage, loss of income, or other adverse consequence as might be incurred by purchasers, managers, and operators of this equipment.

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June 2007

Operating instructions for the Model 562 belt grinder

The model 562 belt grinder is a three wheel path belt grinder that use a 1 x 42 inch continuous loop abrasive belt. For maximum effectiveness, and operator safety use abrasive belts manufactured by well respected abrasive manufacturers.

- * Use abrasive belts that are the proper size and type for your machine.
- * Do not use abrasive belts that are old and excessively worn.
- * Do not use abrasive belts that use lap splice joints. This type of belt is prone to separate more easily. It also may tend to snag your work and create a safety hazard. It may also perform poorly.

Prior to operating the model 562 please take time to do the following:

1. Insure that you have received all of the items that you ordered. Compare the packing slip with your purchase order, and of course with the physical items received.
2. Verify that there is no obvious shipping damage. If shipping damage is discovered notify the freight carrier of your intention to file a freight damage claim. They will assist you.
3. Verify that the AC power that is identified on the machine as received matches the AC power that you intend to operate the machine with. Do not modify the machines wiring without first contacting your distributor or Burr King manufacturing.
4. Do not modify or defeat any AC wiring safety feature. In example, do not remove the grounding pin on the AC plug.
5. Verify that you have received a warranty card, parts lists, catalog, and Operator, and Operating Area Safety Instructions.
6. Complete the warranty card and return it to Burr King Manufacturing.
7. Verify that the various guards for the machine are in place and functional. See the parts list for the indicated part numbers.
 - a. The contact wheel guard and backup platen are mounted and adjusted such that the platen lightly touches the back of the abrasive belt (P/N 503, 504A).
 - b. The full safety guard is in place, closed and its door latch is functional such that it will securely hold the safety door closed (P/N 542A, 542B, 542D, and 542C)
 - c. If an internal grinding attachment is installed insure that all pinch guards are adjusted so as to guard the belt wheel entry points. This means that the pinch guards need to very close, but not touching the abrasive belt (P/N 1429, 2 places, see the internal grinding attachment parts list).

8. Prior to operating the model 562 read the Operator, and Operating Area Safety Instructions carefully. Insure that all persons who will operate the model 562, or who will work in the vicinity of the model 562 read, understand, and comply with these instructions.
9. Insure that the grinder is located in an area that provides clear access to the machine such that operators have clear and unobstructed access to the machine. The work place should be free from floor obstructions, trip points, and other faults that may reduce operator safety.
10. Burr King recommends that all three phase installations include a magnetic starter. Magnetic starters protect motors from “single phasing”, overheating, etc. thereby reducing the risk of damage to the equipment and/or fire hazard to your facility.
11. Insure that the model 562 AC power source is properly sized, and properly fused. You should consult a competent electrician, or you may call Burr King Manufacturing for guidance.

Functional operating instructions for the model 562 belt grinder

The model 562 was fully tested and verified to comply with requirements prior to shipping from the factory. No adjustments should be necessary. You should perform the following steps:

1. With the machine securely bolted to its table, pedestal, and/or floor point connect the AC power to its source.
2. Adjust the work support and work support arm (P/N 706, 405) to the desired position. Take care that the gap between the face of the abrasive belt and the work rest is at most 1/8 inch.
3. Insure that the abrasive belt is tensioned properly. To do this raise the tensioning handle (P/N 537G). You will hear mechanical clicks as the tensioning ratchet pawl (737F) moves. Generally, the belt will be adequately tensioned when you hear three to eight clicks. To reduce or release the belt tension slightly raise the tensioning handle (P/N 437A) then press the button (P/N 737B) in the center of the tensioning handle. Move the tensioning handle down slightly to reduce belt tension or all the way down to release belt tension.
4. Engage the motor by placing the ON/OFF switch to ON. The belt should rotate smoothly in a CCW direction about the machine wheel belt path. If either of these conditions are not met turn the machine OFF immediately.
 - a. If the abrasive belt does not remain centered on the contact wheel (P/N 502) while the belt is moving use the tracking adjustment (P/N 711) on the upper left side of the machine to track the belt. Turning this control CW to cause the belt to track to the left, conversely turn the control CCW to cause the belt to move to the right.
 - b. If the belt runs in reverse (up from the floor) you may correct this by changing the main drive motor rotation direction. **FIRST DISCONNECT THE MACHINE FROM ITS AC POWER SOURCE. A COMPETENT ELECTRICIAN SHOULD PERFORM ALL ELECTRICAL WORK ON THE MODEL 562.**
 - 1) Reversed the motor direction of a three phase motor by reversing any two legs of the input power lines.
 - 2) Reverse the motor direction of a single phase motor by reversing leads 5 and 8 found within the metal wiring box located on the motor, or as otherwise instructed on the actual motor label.
 - c. If the machine belt tensions, and tracks properly, but has excessive vibration turn the machine OFF and call the Burr King factory for assistance.

Maintenance for the model 562

FIRST DISCONNECT THE MACHINE FROM ITS AC POWER SOURCE.

- * Every thirty days apply light machine oil to the rear wheel support (P/N 435) to rear wheel handle (P/N 537G) interface. Two drops of oil is sufficient.
- * Every thirty days check the v-belt (P/N 429) tension. If you can hear the belt “slap” the v-belt guard (P/N 428) when the drive motor starts, the v-belt may require re-tensioning. Do this by loosening the four bolts (P/N 2) that secure the motor to the base (P/N 731) and slide the motor to the rear. Tighten the four bolts (P/N 2).
- * Daily vacuum or otherwise remove dust and debris build-up from the machine and the machine belt track.

There are no other maintenance actions required. All bearings are sealed for life and require no additional lubrication.

Remember for operator safety and the continued effectiveness of your model 562:

Do not defeat the safety guards and other safety provisions of the model 562.

Do not operate the model 562 with the safety guard open or the contact wheel guard/platen assembly (or internal grinding attachment) removed.

Do not reach inside the safety guards while the machine is running. To do so is hazardous.

Do not use fluids in your grinding process unless your model 562 is designed for liquid operation (NEMA 4, 4X). To do so may create an electrical safety hazard.

Do not use your model 562 to grind/polish explosive materials such unless it is equipped with explosion proof electrical devices and motor.

Do not mix alloys in your grinding. To do so may create an explosion hazard.

Do not use stone or vitreous wheels on the model 562. To do so will create an operator safety hazard.

Do use eye, hand, face, arm, leg, feet and body protection that is adequate to protect against flying debris, forcibly ejected work pieces, broken abrasive belts, etc.

Do train operators and others in safe operating practices.

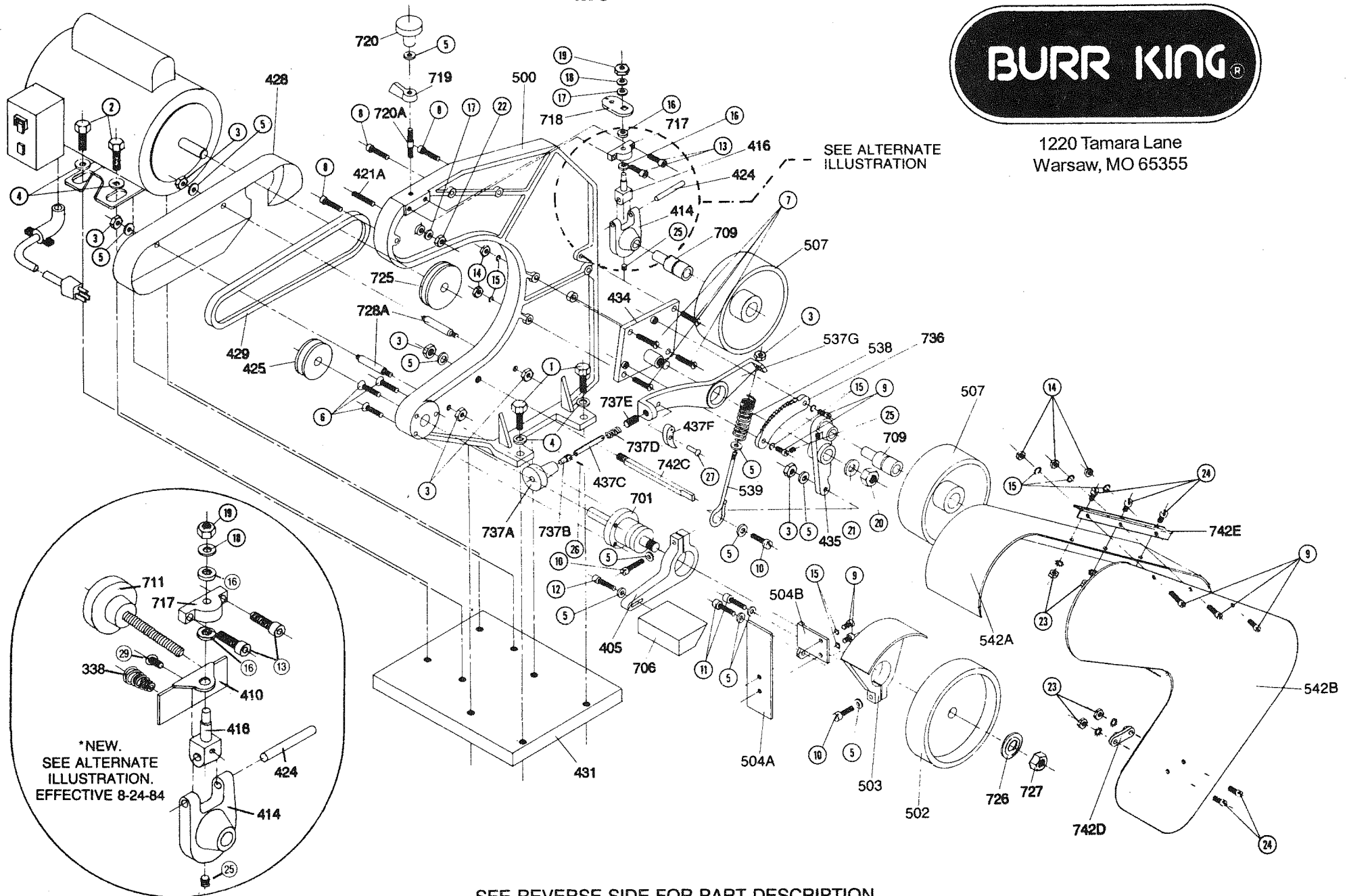
Post these or equivalent instructions such they are available for ready operator reference.

Burr King Manufacturing can help you with problem solutions, and/or answers to your questions. Please call your Burr King distributor first. If you can not reach satisfactory conclusion please call the Burr King factory, telephone 1-660-438-8998.

MODEL NO. 562

BURR KING®

1220 Tamara Lane
Warsaw, MO 65355



SEE REVERSE SIDE FOR PART DESCRIPTION

MODEL NO. 562

PART #	DESCRIPTION	QUANTITY
1	5/16-18 x 3/4 HH C/S BOLT	4
2	5/16-18 x 1/2 HH C/S BOLT	4
3	1/4-20 JAM NUT	7
4	5/16 USA WASHER	8
5	WASHER AN960-416	13
6	1/4-20 x 1 1/2 FILL HD M/S	3
7	10-24 x 1 1/2 FILL HD M/S	4
8	10-24 x 1 1/4 FILL HD M/S	4
9	10-24 x 1/2 FILL HD M/S	7
10	1/4-20 x 1 FILL HD M/S	3
11	1/4-20 x 3/4 FILL HD M/S	2
12	1/4-20 x 1 1/4 FILL HD M/S	1
13	10-24 x 3/4 SOC CAP SCREW	2
14	10-24 JAM NUT	11
15	#10 LOCK WASHER	11
16	WASHER AN960-716	2
17	WASHER AN960-616	2
18	WASHER AN960-516	1
19	5/16-24 ESNA NUT	1
20	1/2-20 ESNA NUT 21 NTE 080	1
21	1/2 WASHER	1
22	3/8-16 JAM NUT	1
23	6-32 KEP NUT	5
24	6-32 x 3/8 PAN HEAD M/S	5
25	5/16-18 x 3/8 SOC SET SCREW	2
26	3/32 x 3/8 ROLL PIN	1
27	#8 x 5/8 DRIVE SCREW	1
28	#0 x 1/4 DRIVE SCREW	1
29	10-32 x 1/2 BUTTON HD SOC SCREW	1

PART #	DESCRIPTION
500	MAIN PLATE
701	CONTACT WHEEL BEARING ASSEMBLY
502	CONTACT WHEEL
503	CONTACT WHEEL GUARD
504	BACKUP ASSEMBLY
504A	BACKUP PLATEN
504B	BACKUP BRACKET
405	WORKREST SUPPPORT
706	WORKREST
507	IDLER WHEEL
709	IDLER WHEEL BEARING
414	UPPER WHEEL BEARING SUPPORT
416	UPPER WHEEL SWIVEL
717	UPPER WHEEL SWIVEL HOLDER
718	UPPER WHEEL SWIVEL LINK
719	UPPER WHEEL ADJUSTING ECCENTRIC
720	UPPER WHEEL LOCKING KNOB
720A	UPPER WHEEL LOCKING KNOB STUD
421A	UPPER WHEEL ADJUSTING SET SCREW
424	PIN, UPPER WHEEL BEARING SUPPORT
425	V-PULLEY
726	OUTER WHEEL FLANGE
727	CONTACT WHEEL BEARING NUT
428	V-BELT GUARD
728A	V-BELT GUARD STUDS
429	V-BELT
725	MOTOR PULLEY
431	BASE
434	REAR WHEEL ASSEMBLY BASE
435	REAR WHEEL BEARING SUPPORT
736	REAR WHEEL SECTOR
537	REAR WHEEL HANDLE ASSEMBY COMPLETE
737A	REAR WHEEL HANDLE KNOB
737B	REAR WHEEL HANDLE BUTTON
437C	REAR WHEEL HANDLE STRIP
737D	REAR WHEEL HANDLE SPRING
737E	REAR WHEEL HANDLE PIPE NIPPLE
437F	REAR WHEEL HANDLE PAWL
537G	REAR WHEEL HANDLE
538	REAR WHEEL SPRING
539	REAR WHEEL SPRING GUIDE
542	SAFETY BELT GUARD COMPLETE
542A	SAFETY GUARD CASTING
542B	SAFETY GUARD DOOR
742L	SAFETY GUARD DOOR LATCH (MALE)
742D	SAFETY GUARD DOOR LATCH (FEMALE)
742E	SAFETY GUARD DOOR HINGE
*410	TRACKING BRACKET
*711	TRACKING KNOB
*338	TRACKING SPRING

*NEW. SEE ALTERNATE ILLUSTRATION. EFFECTIVE 8-24-84