



DAKE DRILL PRESS

Model Numbers: TB16, SB16, SB25, & SB32

INSTRUCTIONAL MANUAL



WARNING!

Read and understand all instructions and responsibilities before operating. Failure to follow safety instructions and labels could result in serious injury.

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customerservice@dakecorp.com



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DAKE STANDARD LIMITED WARRANTY

Finished Machines

Dake warrants to the original purchaser the finished machine manufactured or distributed by it to be free from defects in material and workmanship under normal use and service within 1 year (12 months) from the delivery date to the end user.

Parts

Dake warrants to the original purchaser the component part manufactured or distributed by it to be free from defects in material and workmanship under normal use and service within 30 days from the delivery date to the end user.

The standard limited warranty includes the replacement of the defective component part at no cost to the end user.

Sale of Service (Repairs)

Dake warrants to the original purchaser the component part repaired by Dake Corporation at the manufacturing facility to be free from defects in material and workmanship under normal use and service within 90 days from the return date to the end user, as it pertains to the repair work completed. The standard limited warranty includes repair of the defective component part, at no cost to the end user.

Warranty Process

Subject to the conditions hereinafter set forth, the manufacturer will repair or replace any portion of the product that proves defective in materials or workmanship. The manufacturer retains the sole right and option, after inspection, to determine whether to repair or replace defective equipment, parts or components. The manufacturer will assume ownership of any defective parts replaced under this warranty.

All requested warranty claims must be communicated to the distributor or representative responsible for the sale. Once communication has been initiated, Dake Customer Service must be contacted for approval:

Phone: (800) 937-3253

Email: customerservice@dakecorp.com

When contacting Dake, please have the following information readily available:

- Model #
- Serial #
- Sales Order #

Purchasers who notify Dake within the warranty period will be issued a Case number and/or a Return Material Authorization (RMA) number. If the item is to be returned per Dake's request, the RMA number must be clearly written on the exterior packaging. Any item shipped to Dake without an RMA will not be processed.



Warranty Exceptions:

The following conditions are not applicable to the standard limited warranty:

- (a) Part installation or machine service was not completed by a certified professional, and is not in accordance with applicable local codes, ordinances and good trade practices.
- (b) Defects or malfunctions resulting from improper installation or failure to operate or maintain the unit in accordance with the printed instructions provided.
- (c) Defects or malfunctions resulting from abuse, accident, neglect or damage outside of prepaid freight terms.
- (d) Normal maintenance service or preventative maintenance, and the parts used in connection with such service.
- (e) Units and parts which have been altered or repaired, other than by the manufacturer or as specifically authorized by the manufacturer.
- (f) Alterations made to the machine that were not previously approved by the manufacturer, or that are used for purposes other than the original design of the machine.



RETURN & REFUND POLICY

Thank you for purchasing from Dake! If you are not entirely satisfied with your purchase, we are here to help.

Returns

All Dake manufactured / distributed machines, parts and couplings include a 30-day return option. These policies are valid from the date of final shipment to the end user.

To be eligible for a return, the item must be unused and in the same condition as received.

All requested warranty claims must be communicated to the distributor or representative responsible for the sale. Once communication has been initiated, Dake Customer Service must be contacted for approval:

Phone: (800) 937-3253

Email: customerservice@dakecorp.com

Once the return request has been approved by Customer Service, a representative will supply a Return Material Authorization (RMA) number. The returned item must have the provided RMA number clearly marked on the outside packaging. Any item received without an RMA number clearly visible on the packaging will not be processed.

An RMA number can only be provided by the Dake Customer Service team and must be obtained prior to the return shipment.

Refunds

Once the item has been received and inspected for damages, a representative will notify the requestor referencing the provided RMA number.

If the return is approved, a refund will be issued to the original method of payment, less a 20% restocking fee. The restocking fee may be waived if an order is placed at the time of return with like-value merchandise.

Transportation costs are the responsibility of the end user and will not be credited upon return approval.

Any item that is returned after the initial 30 days or has excessive/obvious use will not be considered for a full refund.



SPECIFICATIONS

Model	TB-16	SB-16	SB-25	SB-32
Number	977100-1	977200-1	977300	977400-2
Voltage	120V	110V/220V	110V Single Phase, 220V 3-Phase	220V 3-Phase
Horsepower	1/2 HP	1/2 HP	2 HP	2 HP
Drill Type	Bench	Floor	Floor	Floor
Max. Drill Capacity	5/8"	5/8"	1"	1-1/4"
Spindle Taper	MT2	MT2	MT3	MT4
Spindle Travel	3-1/8"	3-1/8"	5"	5-1/4"
Max. Work Diameter	14-1/8"	14-1/8"	18"	18"
Speeds (Step Pulley)	9	9	9	9
Spindle Speed Range	240-3400 RPM	240-3400 RPM	270-2000 RPM	270-2290 RPM
Column Diameter	3-1/8"	3-1/8"	3-5/8"	4"
Table	11-3/4" x 11-3/4"	11-3/4" x 11-3/4"	13-3/4" x 13-3/4"	15-3/4" x 15-3/4"
Base	17-3/4" x 12-1/4"	19-5/8" x 12-1/2"	23-5/8" x 15"	23-5/8" x 15"
Spindle to Table	16-1/2"	28-1/2"	28-3/8"	26-1/8"
Spindle to Base	26-1/2"	49-1/4"	50"	50"
Overall Height	42-1/2"	64"	71"	71"
Weight	175 lbs.	230 lbs.	397 lbs.	483 lbs.

In the space provided record the serial number and model number of the machine. If contacting Dake this information must be provided to assist in identifying the specific machine.

Serial No.	
Model No.	
Date Purchased:	

SAFETY

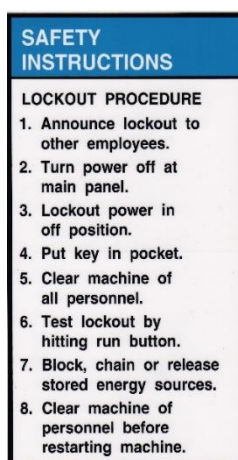
This is the safety alert symbol. When you see this symbol on your machine be alert to the potential for personal injury.

Carefully read all safety messages in these instructions and on your machine safety signs. Keep safety labels in good condition. Replace missing or damaged labels.

Employer is responsible to perform a hazard/PPE assessment before work activity.



Label Part No.
84395



Label Part No.
76462



Label Part No.
300168



Label Part No.
82199



WARNING: This product contains Nickel, a chemical known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov

Additional Safety Warnings:

- Operation of the drill press incorrectly, or on a dangerous fashion can result in serious injury or death, damage to the machine, it's components, or cutting tool.
- The drill press is designed for drilling and boring operations. Cautions is required when operating the drill press because it can be dangerous due to the high spindle rotation speed.
- Guards such as pully cover and chuck guard must be in place and in working condition to prevent hazard.
- Switch the power off before setting, inspecting, lubricating, cleaning, or changing the drill bit.
- Always wear eye protection.



- Do not wear gloves, neckties, necklaces, rings, or loose clothing. Non-slip footwear is recommended. Wear protective hair covering to contain long hair.
- To clamp work piece to brace against column to prevent material rotation.
- Using recommended speed for drill bit, and work piece material.
- Remove adjusting key and wrenches. Be in the habit of checking to see that keys and adjusting wrenches are removed from tool before turning the machine on.
- Keep work area clean. Cluttered areas and benches invite accidents.
- All visitors should be kept a safe distance from work area.
- Make workshop kid proof with padlocks, master switches, or by removing the starter key.
- Do not force tool. Machine will do a better and safer job at the rate for which it was designed.
- Use the right tool. Do not force the tool or use the machine to do a job for which it was not designed.
- Use recommended speed for drill accessories and workpiece material.
- Use a face or dust mask if cutting operation is dusty.
- Secure work. Use clamps or a vise to hold work, do not hold part with hands.
- Do not overreach. Keep proper footing and balance at all times.
- Maintain tool with care. Keep tools sharp and clean for best and safest performance.
- Disconnect drill press from power before servicing or changing accessories.
- Reduce the risk of accidental starting. Make sure switch is in off position before plugging in.
- Use recommended accessories. The use of improper accessories may cause risk of injury.
- Never stand on machine for risk of serious injury.
- Check for damaged parts. Before further use of machine, a guard or other part that is damaged should be replaced or repaired. Carefully check to determine that it will operate properly and perform its intended function. Check alignment of moving parts, binding of moving parts, breakage of parts, mountings, and any other conditions that affect its operation.
- Never leave tool running unattended. Turn power off. Do not leave machine until it comes to a complete stop.
- Adjust the table or depth stop to avoiding drilling into the table, shut off the power. Remove the drill bit or cutting tool, and clean the table before leaving the machine.
- Do not operate until completely assembled and installed according to the instructions.
- If any part of your drill press is malfunctioning, has been damaged, or broken do not operate until the part is properly repaired or replaced.
- Never place your fingers in positions where they could contact the drill or other cutting tool if the work piece should unexpectedly shift.
- Never perform any operation by moving the head or table with respect to one another. Do not switch machine on or start any operation before checking that the head and table lock



handle are clamped tight to the column, and head and table support collars are correctly positioned.

- Before switching the power on be sure the belt cover is down, and the bit is installed properly in the chuck.
- Lockout the motor switch when leaving the drill press. Don't perform layout, assembly, or setup work on the table while the cutting tools rotating.

Voltage Warning:

- Before connecting the machine to a power source know your incoming voltage.
- At power source with voltage greater than that specified for the machine can result in serious injury to the user and can damage the machine.
- Using a power source with voltage less than that of the machines rating can damage the motor and other components.
- If you are unsure of the voltage rating do not use the machine.

SET UP

UNCRATING AND INSTALLATION

1. Location of the drill press should be in a well-lit area with correct power supply and that will not interfere with other machines or operations.
2. Carefully uncrate machine and inspect all packing to make sure no parts are manuals are thrown out.
3. When transporting the machine please use caution. If using a sling have someone steady the machine while moving.
4. Install your drill press on a sturdy level floor surface, or workbench. The machine must be anchored to the floor or workbench securely, **the machine is top heavy.**
5. Connect appropriate power to the machine. Make sure circuit breakers are suitable for the machine. Consult local codes for proper installation of machine. Always route power cables in a safe manner away from traffic areas, damp areas, heat, and moving parts.
6. After installing the drill press, use the kerosene or degreasing product to clean off the anti-rust oil which was applied at the factory. Then wipe machined surfaces with a light coating of lubricant oil (way oil).
7. Check for damaged parts before further use of the machine. A guard or other part that is damaged should be replaced or repaired before use. Carefully check to determine that it will operate properly and perform its intended function. Check for alignment of moving parts and binding of moving parts. Breakage of parts or mountings and or any other conditions that could be affect its operation.



GROUNDING INSTRUCTIONS

In the event of a malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electrical shock. This machine is equipped with an electric cord that must be used with a matching outlet that is properly installed and grounded in accordance with all local codes and ordinances.

- Do not modify the plug provided. If it will not fit the outlet have the proper outlet installed by a qualified electrician.
- Improper connection of the equipment grounding can result in a risk of electrical shock. The conductor with insulation having an outer surface that is green with yellow stripes is equipment grounding conductor. If repair or replacement of the electric cord or plug is necessary, do not connect the equipment grounding conductor to a live terminal.
- Check with a qualified electrician or serviceman if the grounding instructions are not completely understood, or if in doubt as whether the machine is properly grounded.
- It is not recommended to use an extension cord on the machine. If one must be used, use only a grounded cord on the machine and length of run needed.
- Repaired or replace damaged or worn cords immediately.

OPERATION

DRILL/CHUCK INSTALLATION

1. Before inserting drill bits, chucks, or arbors always clean out the spindle hole and taper hole with a clean cloth.
2. Open chuck jaws completely by turning attached chuck key counter-clockwise until the jaws are fully opened.
3. To install the chuck to the arbor tightly, slide the chuck into the taper forcing it into the spindle with by handle.
4. Place a block of wood on the table then lower the spindle to contact the wood and press the chuck tightly into the spindle taper.
5. Install a taper shaft drill into the taper the same way as you would the chuck. If an adaptor is used it must fit the taper correctly and the bit must fit snug in the adaptor.

INSTALLATION OF DRILL BIT

A drill bit with a shaft of at least 1" long should be used to allow correct chuck jaw contact. If the shaft is under 1" do not insert bit as far into the chuck where it allows jaw contact with the drill flutes.

Center drill bit into the chuck and tighten the chuck securely with the chuck key.

Note: Always use sharp, straight bits. Never use bits with turned down shafts. Never exceed the maximum shaft diameter bit size for the machine.



TOOLING REMOVAL

1. Before removing the chuck or bit from the machine be sure the spindle has come to complete stop and power is off.
2. If needed rotate spindle by hand to align the spindle and quill openings.
3. Insert the wedge removal tool while supporting the tooling tap the wedge to remove the tooling.

TABLE HEIGHT ADJUSTMENT

1. Loosen the clamp bolt then adjusting the table with the bracket handle to desired work height.
2. Retighten the clamp securely when table is adjusted to desired height.

Note: Keep table adjustment rack clean from debris. Never attempt to move table with clamp bolt tightened.

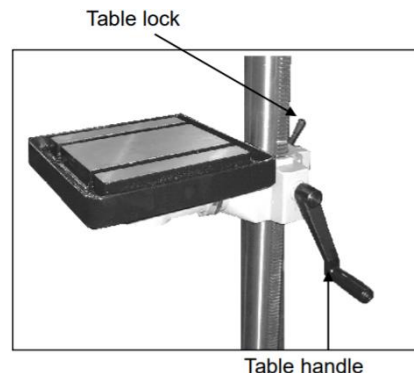
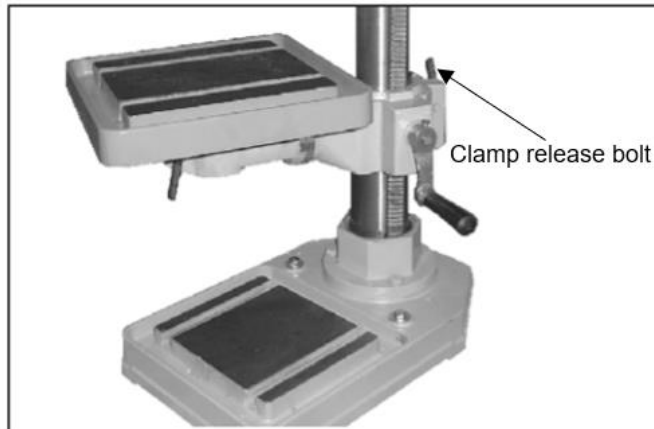


TABLE SWING ADJUSTMENT

1. To swing the table up to 360°, loosen the clamp release bolt and swing the table to the desired position.
2. After table is in the correct position, tighten clamp release bolt securely.

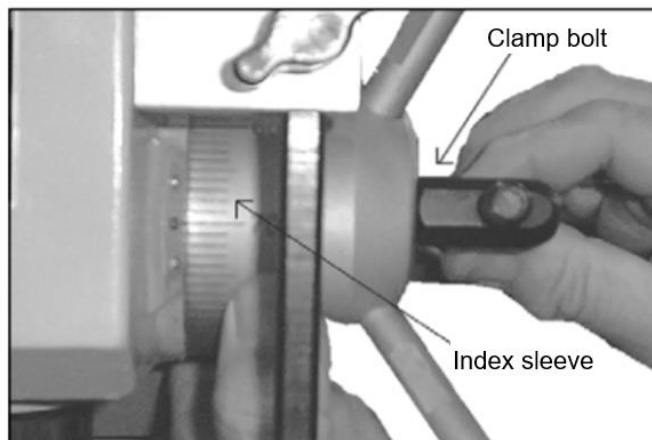
Note: Never swing the table if any material or fixturing is on it. Only adjust when table is free of loose articles.



FEED DEPTH ADJUSTMENT

1. Setting the feed depth adjustment is done by loosening the clamp bolt on the spindle depth index sleeve.
2. Rotate to desired length, and securely tighten the clamp bolt.


Note: Never make this adjustment while machine is running.



WORK HOLDING

When drilling directly on the table surface it is recommended that a piece of wood or plywood be clamped securely to the table under the work piece. This will minimize splintering or burring as the drill breaks through the work. It will minimize drill bit and table damage. Clamp work piece to the table whenever possible. The table has “T-slots” that allow for many different clamping configurations. When part cannot be affixed to the table a drill vise that is bolted to the table must be used to hold the work piece safely.

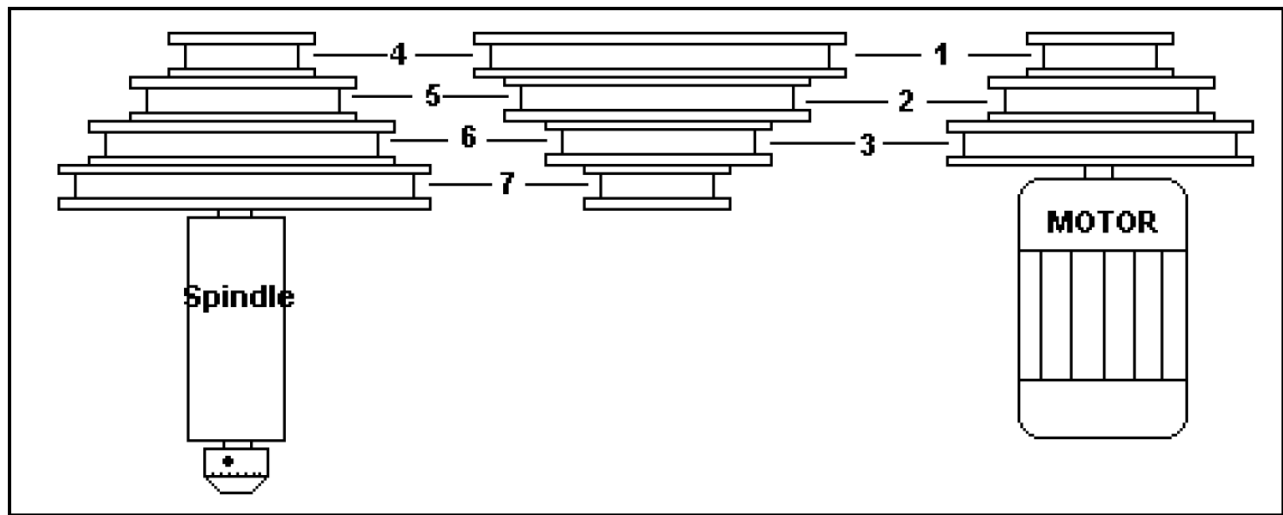
SPEED ADJUSTMENT

 **WARNING: Wait until the machine had come to a complete stop and power is disconnected before proceeding with changing the speed!**

1. Open the pulley cover to expose the pulleys and drive belts.
2. Loosen the tension lock handles.
3. Choose the proper speed for drilling operation, refer to “Speed Adjustment Guide”, next in this manual.
4. Move belt to the correct step pulleys for desired speed.
5. Push the motor backwards until proper blade tension is applied, about 1/2" of deflection, see illustration below.
6. Retighten belt tension lock handle.

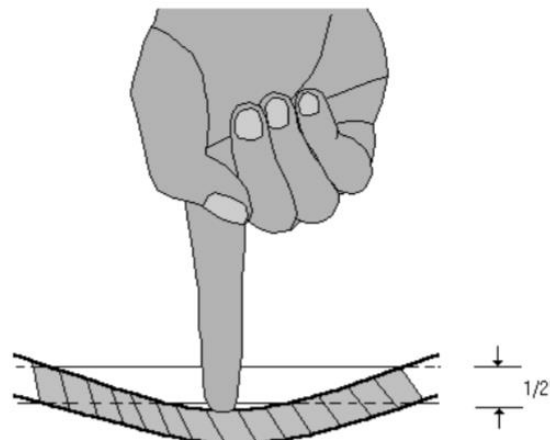
Note: If center pulley bracket does not move freely loosen spring loaded bolts 1/2 to 3/4 of a turn.

Speed Adjustment Guide:



Pulley Steps	TB-16 & SB-16	SB-25	SB-32
1 – 7	240 RPM	270 RPM	270 RPM
1 – 6	420 RPM	400 RPM	410 RPM
2 – 7	450 RPM	450 RPM	450 RPM
1 – 5	660 RPM	550 RPM	600 RPM
2 – 6	760 RPM	660 RPM	690 RPM
3 – 7	780 RPM	720 RPM	720 RPM
2 – 4	1980 RPM	1270 RPM	1410 RPM
3 – 5	2100 RPM	1460 RPM	1620 RPM
3 – 4	3400 RPM	2000 RPM	2290 RPM

Proper belt tension is approximately 10 lbs, or 1/2" of deflection.

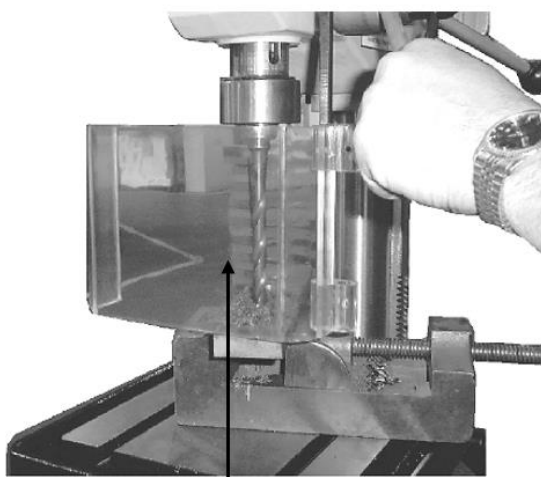


Proper drill speed for a given drill bit size:

		Material Type				
		Cast Steel	Tool Steel	Cast Iron	Mild Steel	Alum. & Copper
Drill Dia.		RPM				
TB-16 & SB-16	1/16"	2,445	3,665	4,890	6,110	12,225
	1/8"	1,220	1,831	2,445	3,055	6,110
	3/16"	815	1,220	1,630	2,035	4,075
	1/4"	610	915	1,220	1,530	3,055
	5/16"	490	735	980	1,220	2,445
	3/8"	405	610	815	1,020	2,035
	7/16"	350	525	700	870	1,745
	1/2"	305	460	610	765	1,530
	5/8"	245	365	490	610	1,220
SB-15	3/4"	205	305	405	510	1,020
	7/8"	174	261	348	435	762
	1"	153	229	306	382	668
SB-32	1-1/8"	136	204	272	340	595
	1-1/4"	122	167	244	306	535

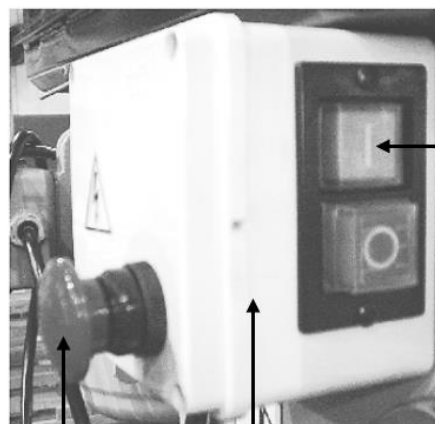
SAFETY FEATURES

CHUCK/CHIP GUARD



For operation safety, always use proper positioned chuck guard

CE CERTIFIED ELECTRONICS



Membrane covered ON/OFF push buttons

Emergency stop button

Low voltage, thermo protection

*Belt interlock not shown



MAINTENANCE

 **Before performing any maintenance ensure that the machine is LOCKED OUT and unplugged.**

Special maintenance operations must be carried out by skilled personnel. However, we advise contacting DAKE. The term special maintenance also covers resetting of protection/safety equipment and devices.

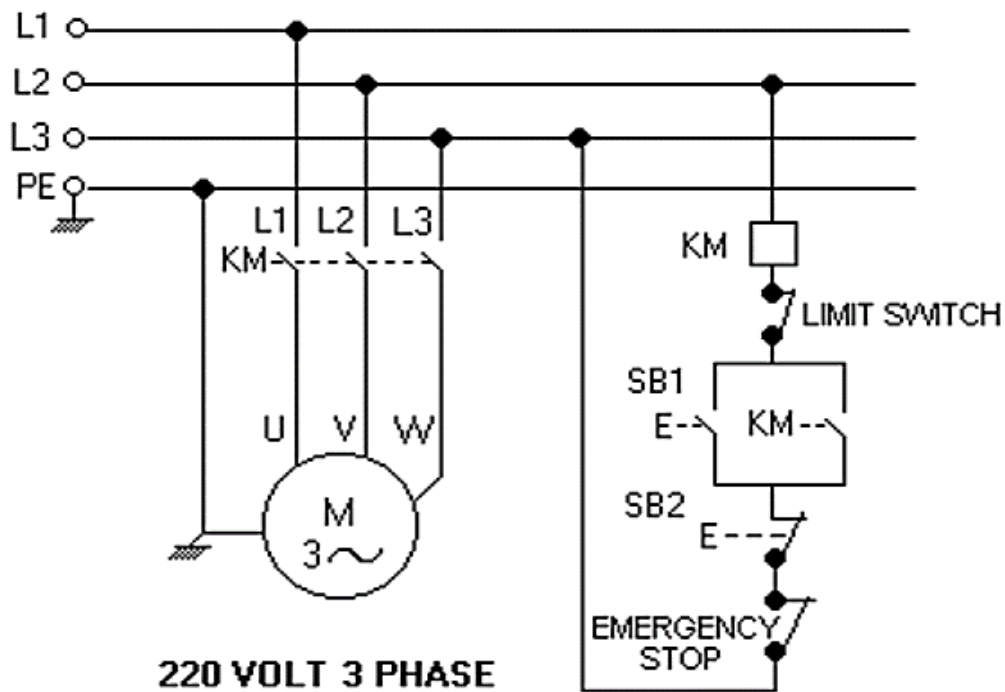
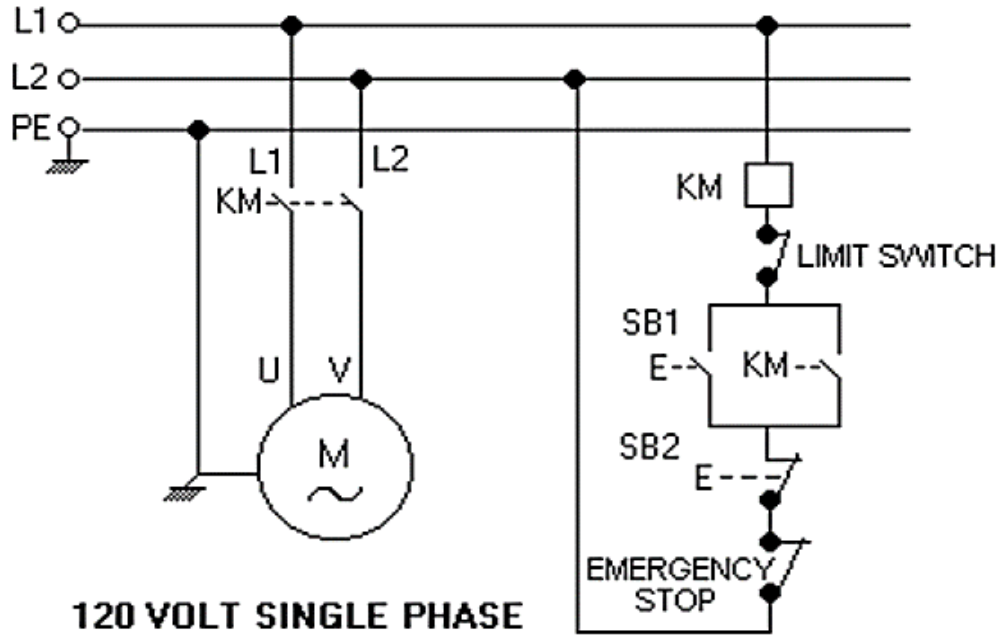
- On a regular basis, blow out any dust that may accumulate inside the motor (frequency depends on environment the machine is in).
- A coat of automotive wax needs to be applied to the table and column to help keep the surface clean.
- If the power cord is worn, cut, or damaged in any way have it replaced immediately.
- All ball bearings are packed with grease at the factory and require no further lubrication.
- Periodically lubricate the gear and rack table elevation mechanism, the spindle splines and rack (teeth on quill).
- After each use the machine should be cleaned.
- Weekly lubrication of all sliding or moving parts with light weight or way oil is recommended.



TROUBLESHOOTING

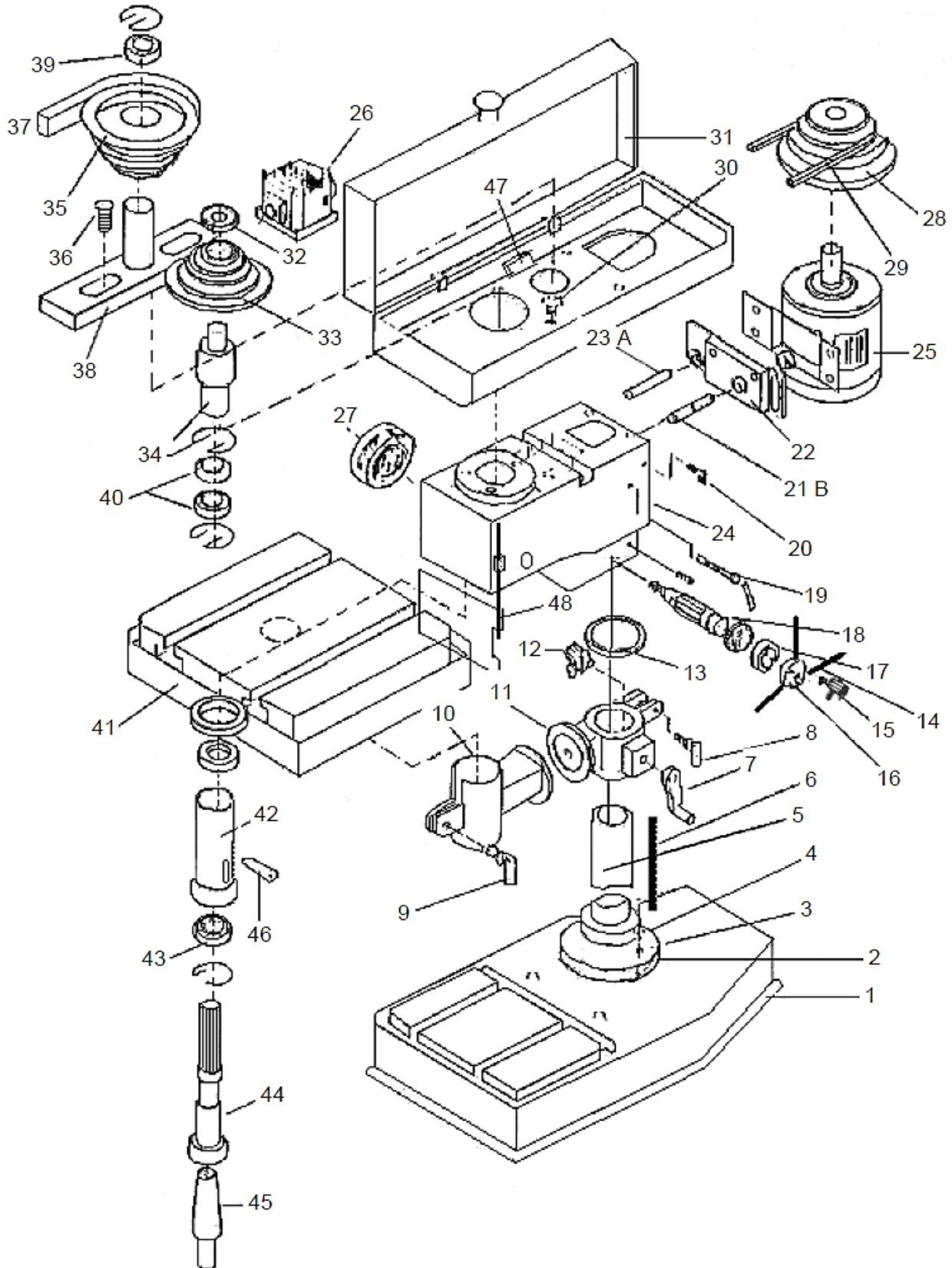
SYMPTOM	CAUSE	SOLUTION
Machine does not turn on	Machine not plugged in	Plug in to proper receptacle
	Frequency drive has an error	Clear error by turning drill off and back on
	Too long or not correct extension cord	Remove extension cord and plug directly in to receptacle
	Emergency stop button is activated	Deactivate emergency button
	Belt cover is open	Close belt cover
Noisy Operation	Incorrect belt tension	Adjust tension, see “Speed Adjustment” section of this manual
	Loose spindle or motor pulley	Check for wear or if pulley can be tightened
	Spindle bearing worn	Replace bearing
Chuck or quills fall out	Rust inhibitor, dirt, debris in or on quill or spindle taper	Clean chuck and quill
Spindle does not move up or down	Belt is broken or slipping	Check belt for damage and replace if needed. Check for proper belt tension, see “Speed Adjustment” section of this manual
	Debris in quill	Clean quill and teeth
	Feed depth adjustment is set	See “Feed Depth Adjustment” in this manual
Spindle does not rotate	Belt tension is too loose	Tighten belt tension, see “Speed Adjustment” section of this manual
	Belt is broken or worn	Replace belt
	Taper is slipping in spindle	Clean chuck and quill
	Motor is not rotating	Troubleshoot motor or contact DAKE

ELECTRICAL DIAGRAMS



EXPLODED VIEWS & PART LISTS

TB-16 & SB-16:





TB-16 & SB-16:

Item No.	Part Description	Model Number:	
		TB-16	SB-16
1	Base	301002	301001
2	Flange	301003	301004
3	Spring Washer (4x)	13mm	13mm
4	Screw (M13 x 16mm L)	300999	300999
5	Column	301005	301006
6	Rack	301007	301007
7	Handle	301008	301008
8	Clamp Bolt	301009	301009
9	Clamp Bolt	301010	301010
10	Table Arm	301011	301011
11	Table Bracket	301012	301012
12	Worm	301056	301056
13	Collar	301013	301013
14	Feed Handle (3x)	301014	301014
15	Lock Handle	301070	301070
15A	Lock Screw	302818	302818
16	Feed Head	301016	301016
17	Spindle Scale	301017	301017
18	Feed Shaft	301018	301018
19	Belt Adjust Handle	301019	301019
20	Wing Bolt (M10 x 35mm L)	301077	301077
21	Road – B	301022	301022
22	Motor Plate	301021	301021
23	Road – A	301020	301020
24	Head	301023	301023
25	Motor	300993	300993
26	Switch	301024	301024
27	Spring & Cap Base	301025	301025
28	Motor Pulley	301026	301026
29	Belt A28	301027	301027
30	Screw (4x)	300998	300998
31	Pulley Cover	301028	301028
32	Insert Pulley Nut	301029	301029
33	Spindle Pully	301030	301030



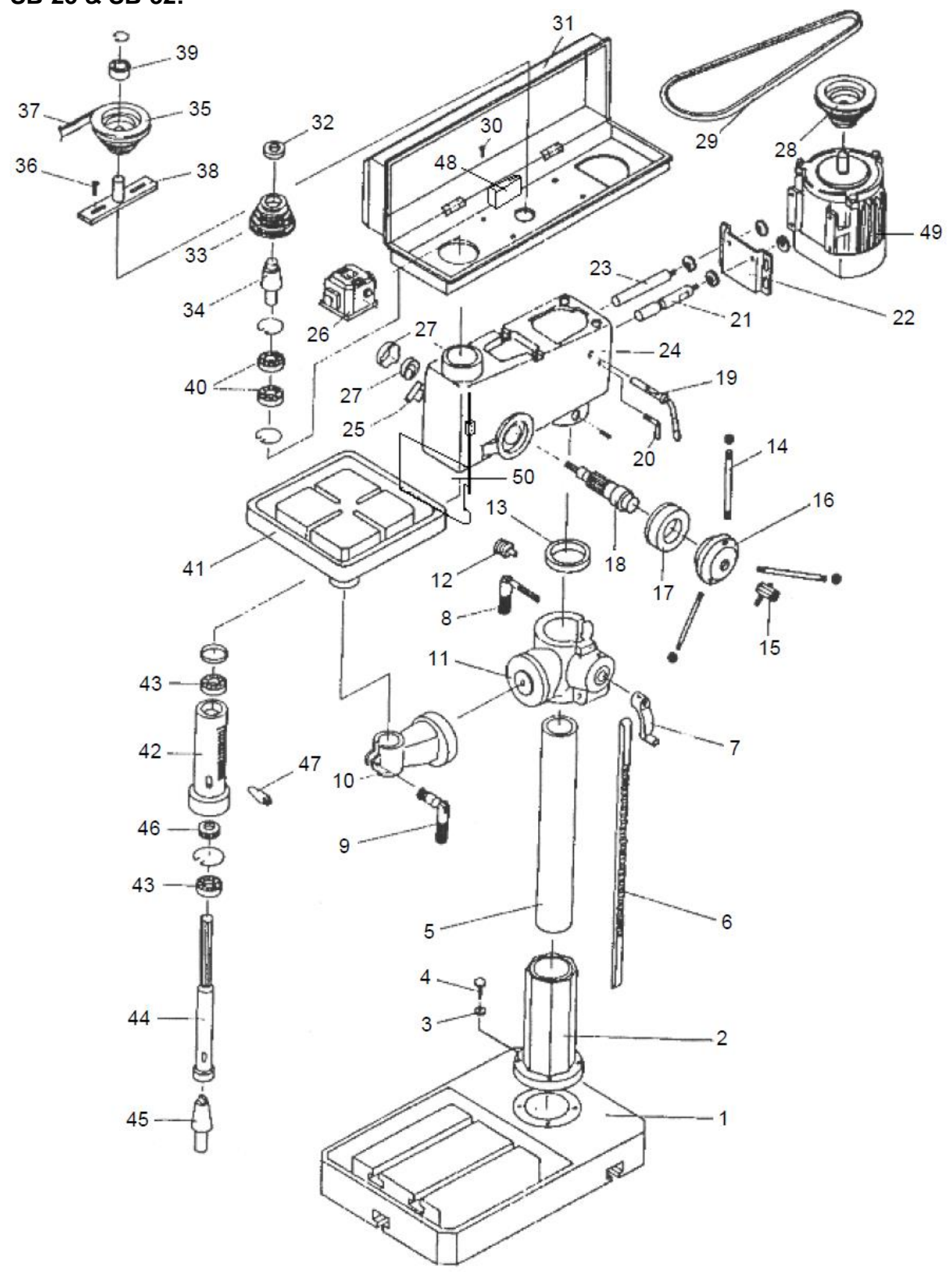
Item No.	Part Description	Model Number:	
		TB-16	SB-16
34	Insert Pulley Shaft	301031	301031
35	Middle Pulley	301032	301032
36	Screw & Spring (2x)	301033	301033
37	Belt A23	301093	301093
38	Middle Pulley Shaft	301034	301034
39	Bearing 6203Z	300987	300987
40	Bearing 6203Z	300987	300987
41	Table	301035	301035
42	Quill (1.85")	301036	301036
43	Bearing 6003Z	300988	300988
44	Spindle	301037	301037
45	Arbor	301038	301038
46	Wedge	301039	301039
47	Belt Cover Interlock Switch	300992	300992
48	Plexiglass Chuck Guard	300997	300997
N/A	Chuck (13mm)	301870	301870
N/A	Key (13mm)	301968	301968

Please contact factory for current prices.

ORDERING INFORMATION

Parts are available for direct purchase from Dake or through a distributor. When placing a parts order, you will need to provide the part number, name of part, and model number. All parts shipped F.O.B. Factory in Grand Haven, MI

SB-25 & SB-32:





SB-25 & SB-32:

Item No.	Part Description	Model Number:	
		SB-25	SB-32
1	Base	301040	301041
2	Flange	301042	301043
3	Spring Washer (4x)	13mm	13mm
4	Screw (M13 x 16mm L)	300999	300999
5	Column	301044	301045
6	Rack	301047	301046
7	Handle	301048	301048
8	Clamp Bolt	301049	301049
9	Clamp Bolt	301051	301051
10	Table Arm	301052	301053
11	Table Bracket	301055	301054
12	Worm	301056	301056
13	Collar	301057	301058
14	Feed Handle (3x)	301059	301059
15	Lock Handle	301070	301070
15A	Lock Screw	302818	302818
16	Feed Head	301069	301069
17	Spindle Scale	301071	301072
18	Feed Shaft	301073	301074
19	Belt Adjust Handle	301075	301076
20	Wing Bolt	301077	301078
21	Road – A	301079	301080
22	Motor Plate	301081	301081
23	Road – B	301082	301083
24	Head	301060	301084
25	Spring Base	N/A	N/A
26	Switch	301061	301062
27	Spring & Cap	301063	301064
28	Motor Pulley	301065	301065
29	Belt	301066	301066
30	Screw (4x)	300998	300998
31	Pulley Cover	301067	301068
32	Insert Pulley Nut	301085	301086



Item No.	Part Description	Model Number:	
		SB-25	SB-32
33	Spindle Pulley	301088	301087
34	Insert Pulley Shaft	302218	302217
35	Middle Pulley	301089	301090
36	Screw & Spring (2x)	301092	301092
37	Belt A23	301093	301093
38	Middle Pulley Shaft	301094	301094
39	Bearing 6203Z	300987	300987
40	Bearing 6203Z	300987	300987
41	Table	301095	301096
42	Quill	301098	301097
43	Bearing	300990	300990
43	Bearing	300989	300989
44	Spindle	301099	301100
45	Arbor	301101	301102
46	Seal	N/A	N/A
47	Wedge	301104	301103
48	Belt Cover Interlock Switch	300992	300992
49	Motor	300996	300994
50	Plexiglass Chuck Guard	300995	300995
N/A	Chuck (16mm)	301966	301966
N/A	Key (16mm)	301967	301967

Please contact factory for current prices.

ORDERING INFORMATION

Parts are available for direct purchase from Dake or through a distributor. When placing a parts order, you will need to provide the part number, name of part, and model number. All parts shipped F.O.B. Factory in Grand Haven, MI