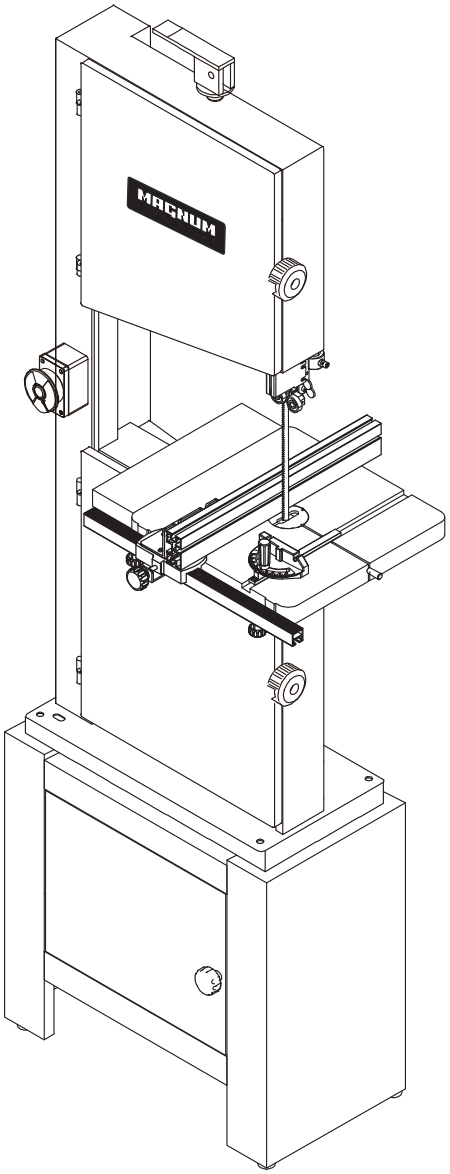
MAGNUM
INDUSTRIAL

MODEL NO.: MI-91400A



OPERATING MANUAL

RULES for SAFE OPERATION
MAGNUM INDUSTRIAL MI-91400A DELUXE 14” BAND SAW

To help ensure safe operation, please take a moment to learn the how to operate the machine and understand its applications and limitations, as well as potential hazards. KMS Tools and Equipment disclaims any real or implied warranty and holds itself harmless for any injury that may result from the improper use of its equipment.

• Do not operate the band saw when tired, distracted or under the effects of drugs, alcohol or any medication that impairs reflexes or alertness.

• Ensure your working area is well lit and free of debris.

• Keep children and visitors at a safe distance when the band saw is in operation. Do not permit them to operate the band saw.

• Prevent unauthorized or unsupervised use by child proofing and tamper proofing your shop and all machinery with locks, master electrical switches and switch keys.

• Stay alert! Give your work your undivided attention. Even a momentary distraction can lead to serious injury.

• Fine particulate dust is a carcinogen that can be hazardous to health. Work in a well-ventilated area and whenever possible use a dust collector. Wear face, eye, ear, respiratory and body protection devices.

• Do not wear loose clothing, gloves, bracelets, necklaces or other jewelry while the band saw is in operation.

• Remove adjusting wrenches, tools and other clutter from the machine and the table surface before using the machine.

• Keep hands well away from the blade and all moving parts. Use a brush, not hands, to clear away chips and dust.

• Adjust and position upper and lower blade guides before cutting. Upper blade guide should be adjusted to approximately 1/8” above the material to be cut.

• Adjust blade tension and tracking before cutting.

• Saw teeth must point down toward the table.

• Be sure that the blade reaches full operating speed before starting your cut.

• Always use a clean, properly sharpened blade. Dirty or dull blades are unsafe and can lead to accidents.

• Use suitable workpiece support if the workpiece does not have a flat surface.

• Hold material firmly against the table.

• Do not work on long stock without adequate support on the outfeed end of the table.

• If using a power feeder, stop the feeder before stopping the band saw.

• Do not push or force stock into the blade. The band saw will perform better and more safely when working at the rate for which it was designed.

• Avoid working from awkward or off balance positions. Do not overreach and keep both feet on floor.

• Keep guards in place and in working order. If a guard must be removed for maintenance or cleaning, properly reattach it before using the tool again.

• Never leave the machine unattended while it is running or with the power on.

• Never stand on machinery. Serious injury could result if the tool is tipped over or if the cutting tool is unintentionally contacted.

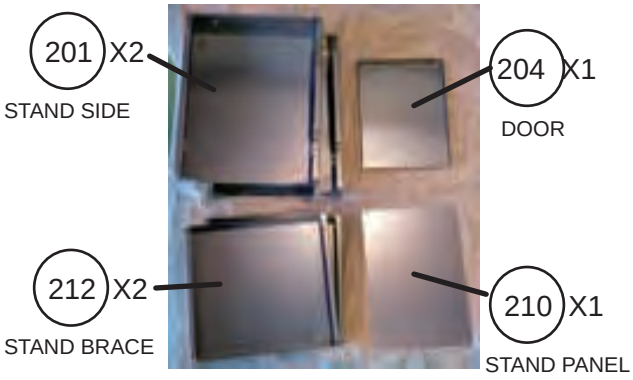
• Always disconnect the machine from the power source before servicing or changing accessories such as blades, or before performing any maintenance or cleaning, or if the machine will be left unattended.

• Ensure the switch is in the OFF position before plugging in the power cord.

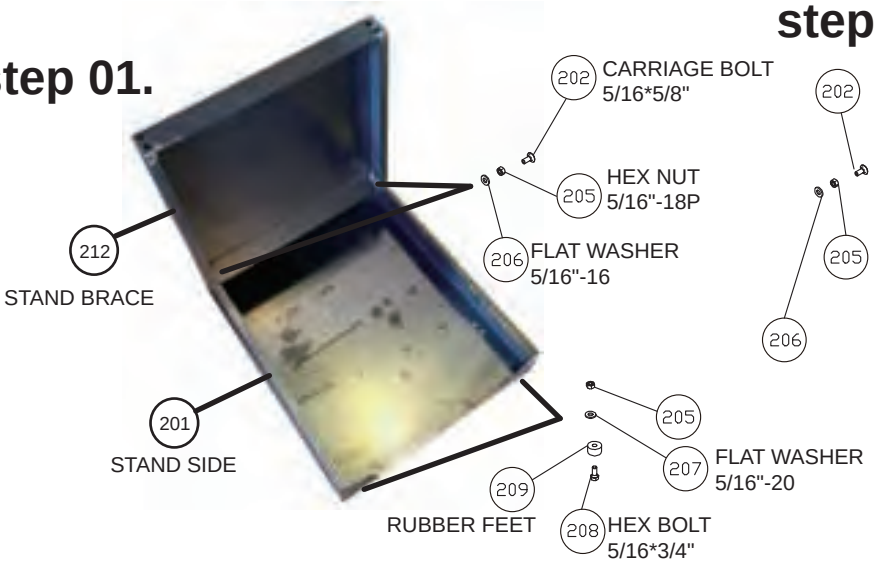
• Make sure the tool is properly grounded. If equipped with a three-prong plug it should be used with a three-pole receptacle. Never remove the third prong.

• Do not use this band saw for other than its intended use. If used for other purposes, KMS Tools and Equipment disclaims any real or implied warranty and holds itself harmless for any injury that may result from that use.

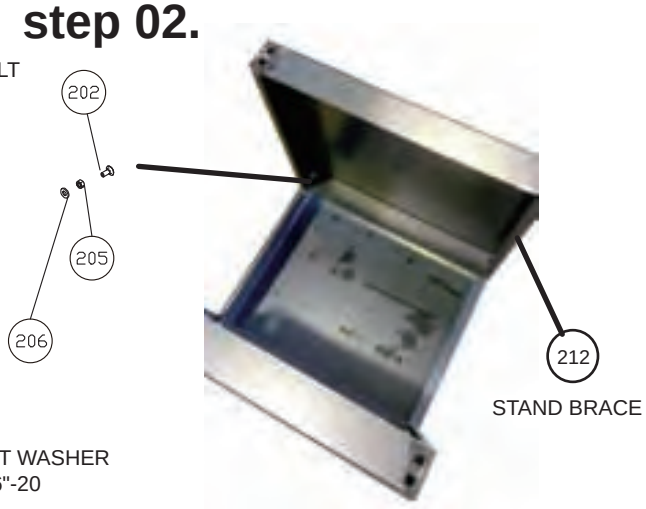
ASSEMBLY INSTRUCTIONS
MAGNUM INDUSTRIAL MI-91400A DELUXE 14” BAND SAW



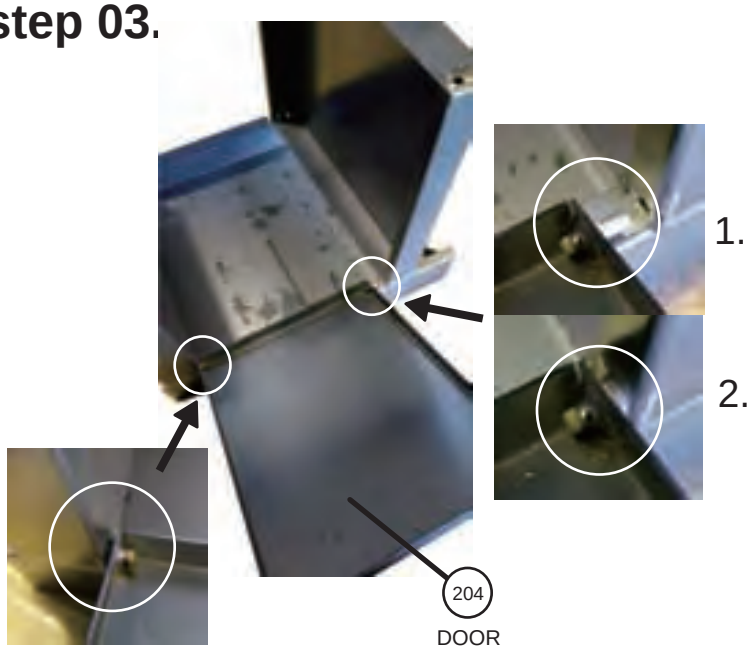
step 01.



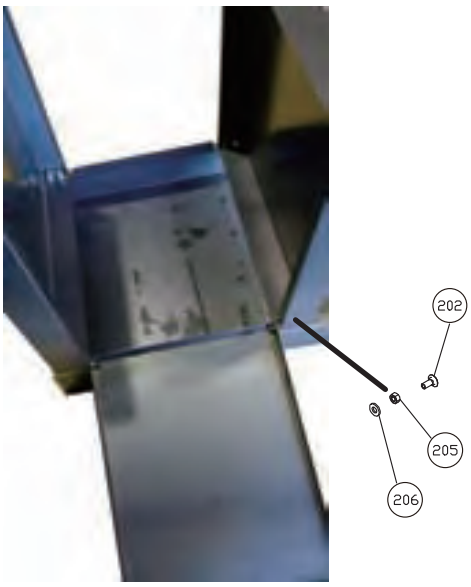
step 02.



step 03.

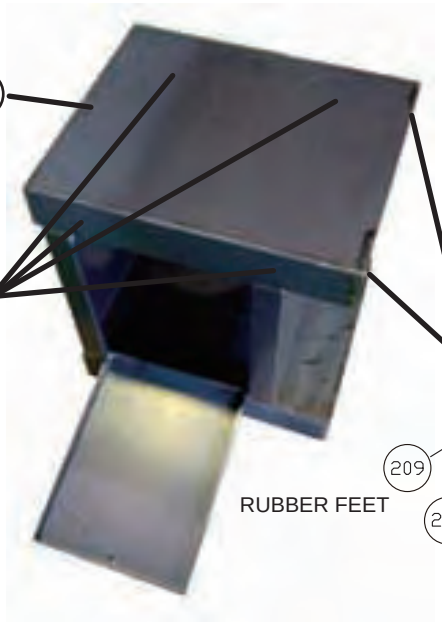


step 04.

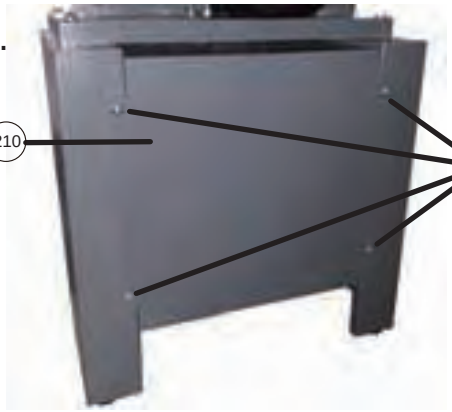


ASSEMBLY INSTRUCTIONS
MAGNUM INDUSTRIAL MI-91400A DELUXE 14” BAND SAW

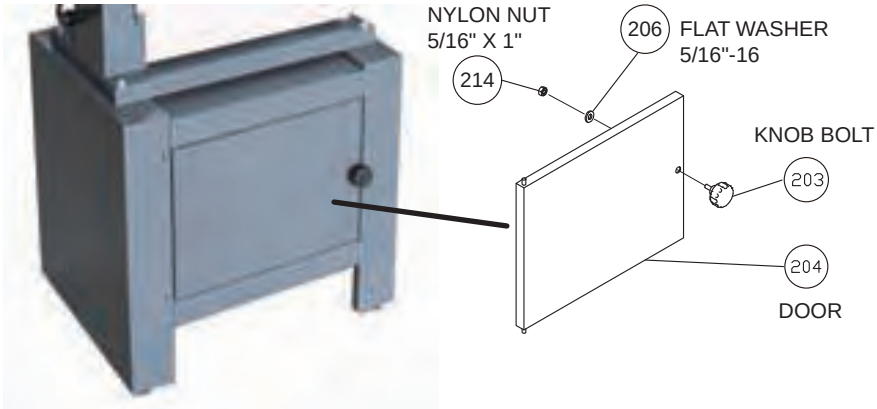
step 05.



step 06.



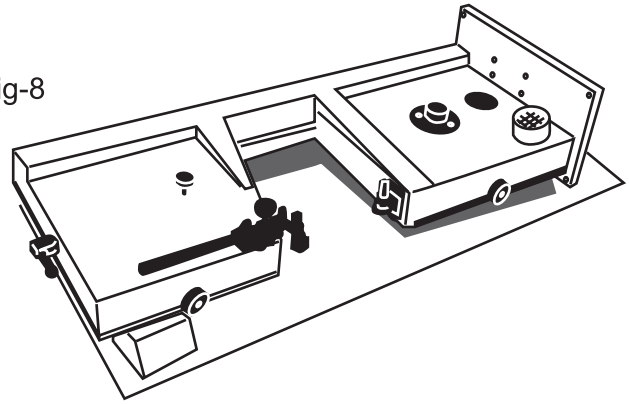
step 07



ASSEMBLY INSTRUCTIONS
MAGNUM INDUSTRIAL MI-91400A DELUXE 14” BAND SAW

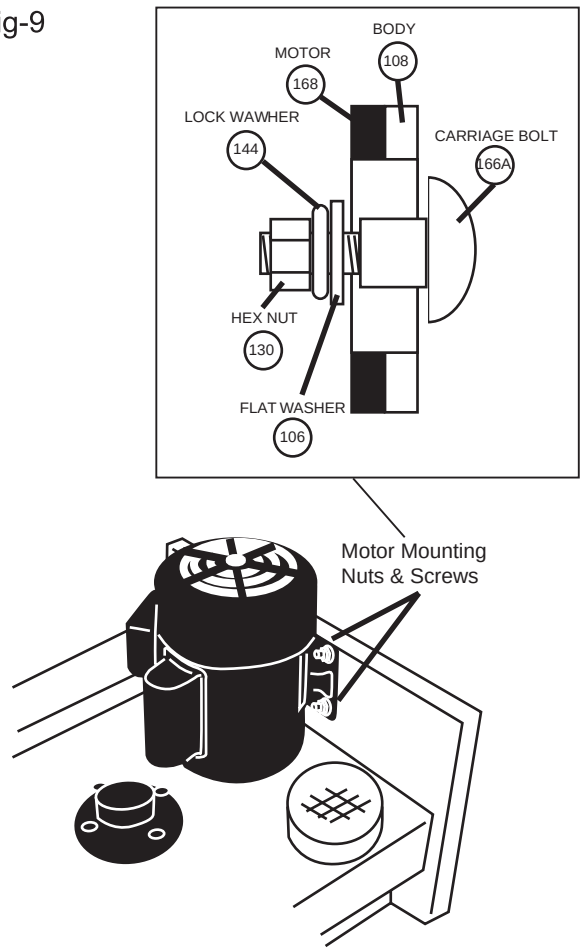
Take the band saw out of the box and lay it on its side on the floor with the motor mounting side up as shown in fig-8. You can place the carton on the floor under the band saw preventing it from getting scratched.

fig-8



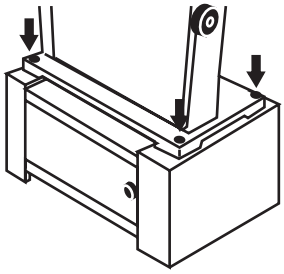
Position the motor on the band saw and carefully insert the motor pulley through the hole as shown in fig-9. Align the holes on the motor mounting bracket with the holes on the band saw base. Insert the carriage bolts from under the base through the holes, place washers, and tighten the nuts provided onto the carriage bolts. **Do not fully tighten the nuts at this time.**

fig-9



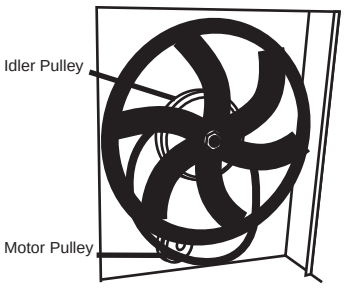
Place the stand and the band saw upright. Get the help of a friend or assistant and lift the machine and place it on the stand. Align the mounting holes on the machine with the holes on the stand and secure the machine on to the stand using washers and bolts provided. See fig-10.

fig-10



Open the lower cabinet door and position the V-belt onto one of the grooves on the idler pulley. Now pull the V-belt and position it onto the aligned groove on the motor pulley and tighten the motor mounting nuts shown in fig-11.

fig-11



Once the motor is mounted, connect the power coming from the motor to the power cord from the machine. Do not connect the machine to the power source at this time.

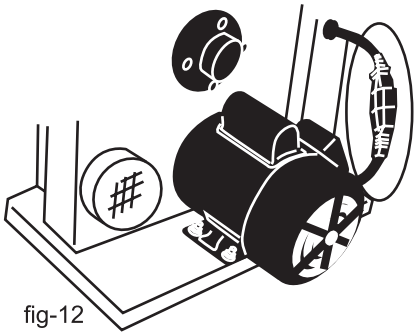


fig-12

NOTE:
MOTOR IS DUAL VOLTAGE 110/220 WHEN REWIRING FOR 220 FOLLOW THE WIRING DIAGRAM LOCATED ON BACK OF MOTOR COVER AND CHANGE PLUG END TO 220 VOLT PLUG AND YOU MUST CHANGE THERMAL RESET BUTTON WITH THIS PART #MI-91400-168-2 220 VOLT RESET BUTTON

ASSEMBLY INSTRUCTIONS
MAGNUM INDUSTRIAL MI-91400A DELUXE 14” BAND SAW

ATTACHING THE TABLE

The worktable mounts on a bracket.
This bracket can adjust from 0° to 45° to the right. These adjustments are easy to make with the angle scale and lock knobs.

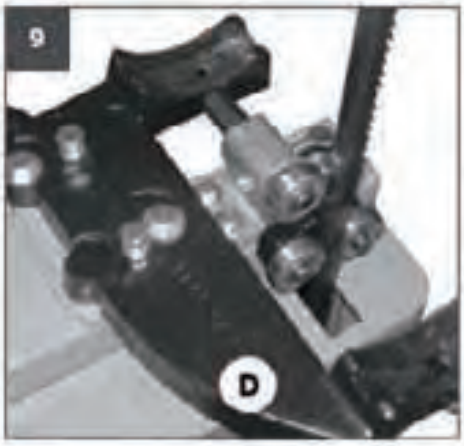
1. Remove the RED INSERT (A) from the centre of the table and the TABLE ALIGNMENT PIN (B) from the table slot. See Figure 7.

2. Turn the table right side up.Verify that the LONG BOLTS (C) in the centre of each trunnion are pointing down. See Figure 8.

3. Carefully position the table over the TABLE-TILT BRACKET (D), guiding the saw blade through the TABLE SLOT (E). See Figures 9 and 10.

FIGURE 7: TABLE INSTALLATION

Note: If the long bolts have moved out of position, have an assistant tap them into
place with a screwdriver.



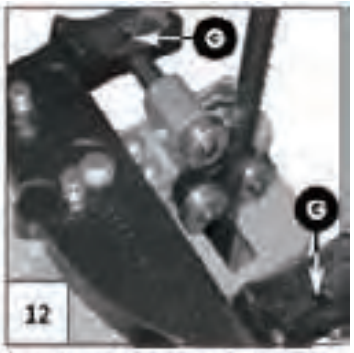
FIGURES 8, 9 and 10: TABLE INSTALLATION

ATTACHING THE TABLE CONTINUED

4. Rotate the table 1/4 turn counterclockwise so that the saw blade is now perpendicular to the TABLE SLOT (F). See Figure 11.

5. Gently lower the table onto the bracket so the LONG BOLTS (C) in the centre of the trunnions pass through the holes in the TABLE-TILT BRACKET (G). See Figure 12.

6. Thread the two small LOCK KNOBS (H) onto the LONG BOLTS (I) now protruding from the underside of the tabletilt bracket and tighten carefully. See Figure 13.



FIGURES 11 and 12: TABLE INSTALLATION

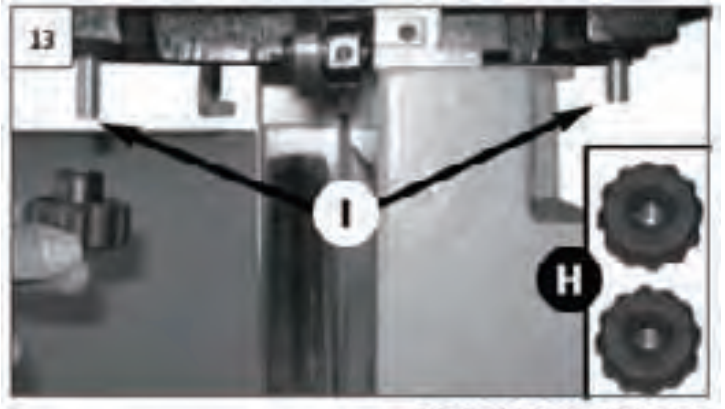


FIGURE 13: TABLE INSTALLATION

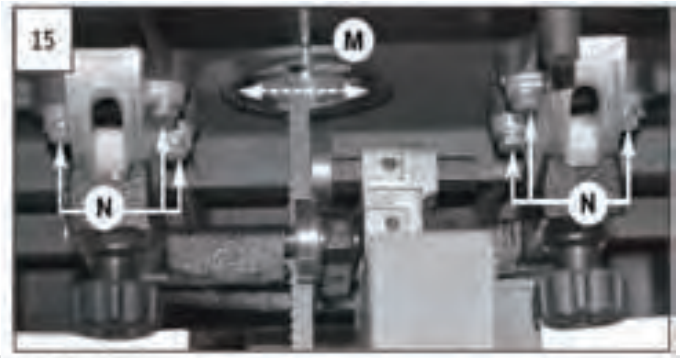
ASSEMBLY INSTRUCTIONS
MAGNUM INDUSTRIAL MI-91400A DELUXE 14” BAND SAW

7. Attach the TABLE TILT SUPPORT BRACKET (J) to the rear of the saw using the BIG LOCK KNOB (K) with the two FLAT WASHERS (L) already mounted on the frame. See Figure 14.

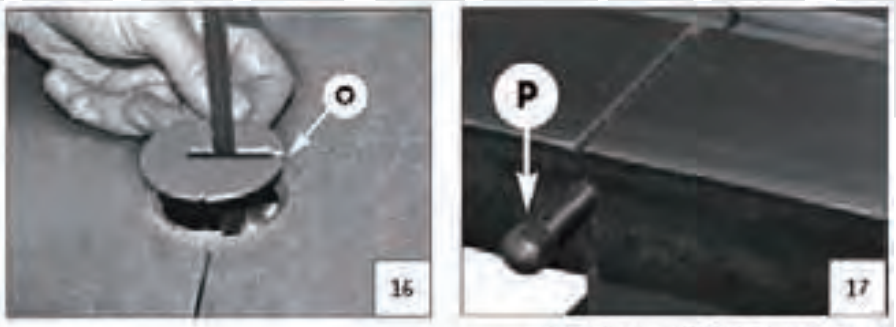
8. Make sure that the blade is centered in the TABLE OPENING (M). If the blade is not centered, slide the table back or forward until the blade is centered in the table opening. Then fully tighten the two LOCK KNOBS (H). See Figure 15.

9. Reinstall the insert into the centre of the table, with the opening in the SLOT (O) facing the rear of the saw. See Figure 16.

10. Reinstall the table alignment pin into the TABLE SLOT (P). See Figure 17.



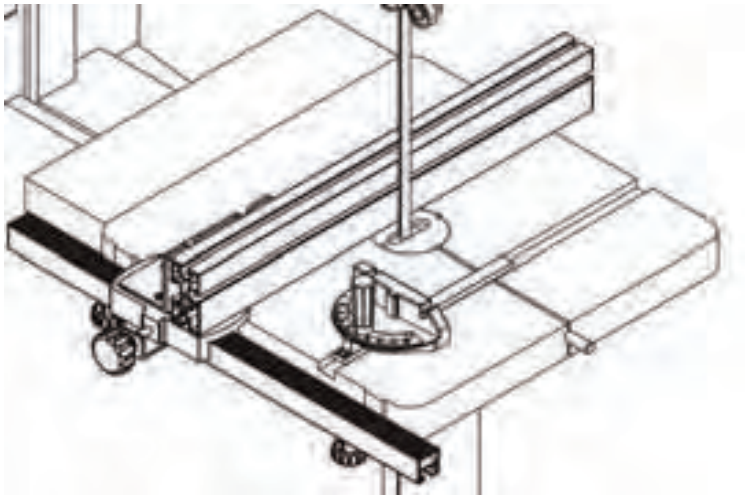
FIGURES 15 : TABLEINSTALLATION



FIGURES 16 and 17: TABLE INSTALLATION

WARNING!
Serious personal injury could occur if you connect the saw to the power source before you have completed the installation and assembly steps!

INSTALLING THE FENCE ASSEMBLY
The MI-91400 is equipped with a deluxe JS-fence and guide rail system. Follow all assembly and adjustment instructions in the manual supplied in the box with the fence.



BASIC ADJUSTMENTS
MAGNUM INDUSTRIAL MI-91400A DELUXE 14” BAND SAW

WARNING!
To avoid injury, ensure the power switch is OFF and the power cord is unplugged before adjusting the band saw.

TILTING THE TABLE
The table can tilt from 0° to 45° to the right to allow for bevel cutting. To set the table angle refer to the TABLE TILT ANGLE INDICATOR (A) located under the band saw table.

1. Loosen LOCK KNOBS (C) (See Figure 25) located under the band saw table.

2. Tilt the table to desired angle. Refer to the ANGLE INDICATOR (A).

3. Tighten the LOCK KNOBS to lock the table in position.

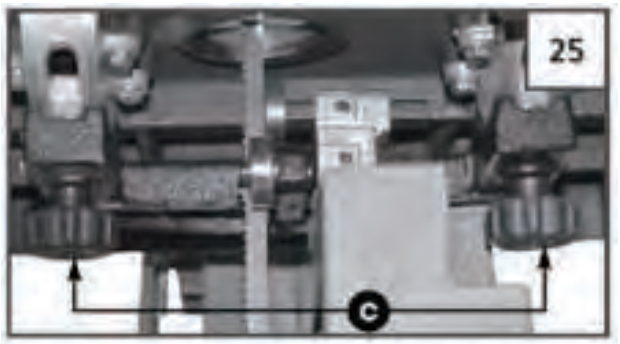


FIGURE 25: TABLE TILT ADJUSTMENT

ADJUSTING 90º TABLE STOP AND RE-ALIGNING ANGLE POINTER
To ensure accurate cuts, align the table so the angle pointer reads 0 when the table is set to 90°, the default position. Begin by setting the table-stop bolt:

1. Loosen LOCK KNOBS (C) and LOCK KNOB (B).

2. Place a COMBINATION SQUARE (D) flat on the table with the heel of the square flat against the SAW BLADE (E). See Figure 26.

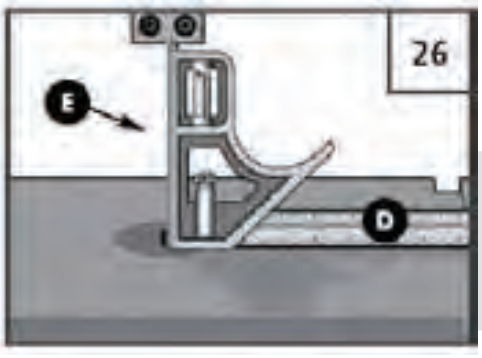
3. Level the table until it is exactly 90° to the blade, then tighten LOCK KNOBS.

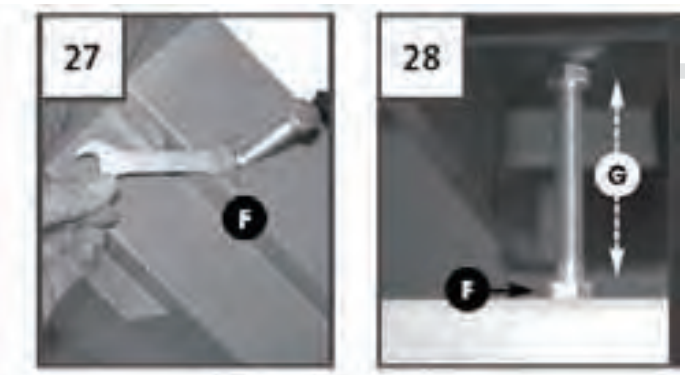
4. Using the supplied open-end wrench, loosen the JAM NUT (F) on the 90º table-stop bolt then adjust the height of the BOLT (G) until it touches the underside of the table as shown in Figure 28.

5. Loosen the LOCK KNOBS (B AND C) and make sure the table is resting on the table-stop bolt.

6. Check the square and make sure the table is still at 90° to the blade. If not, re-adjust the table-stop bolt.

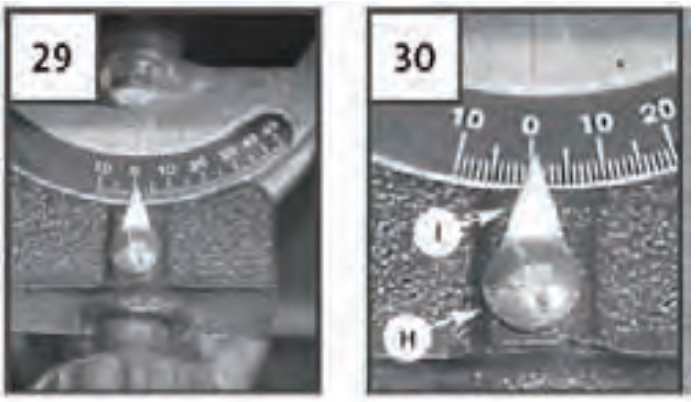
7. Re-tighten JAM NUT (F).





FIGURES 26, 27 and 28: ANGLE POINTER ADJUSTMENT

With the table set to 90º and the stop bolt at the correct height, check that the table tilt angle indicator pointer on the front trunnion is set to 0. See Figure 29.
To adjust the pointer, loosen the SCREW (H) on the pointer and align the POINTER (I) to 0 on the scale. Then re-tighten the screw to secure the pointer in place. See Figure 30. You will now be able to accurately return the table to the 90º position automatically without further adjustments and scale reading for any angle other than 0º will also be accurate.



FIGURES 29 and 30: ANGLE POINTER ADJUSTMENT

BASIC ADJUSTMENTS
MAGNUM INDUSTRIAL MI-91400A DELUXE 14” BAND SAW

WARNING!
To avoid injury, ensure the power switch is OFF and the power cord is unplugged before adjusting the band saw.

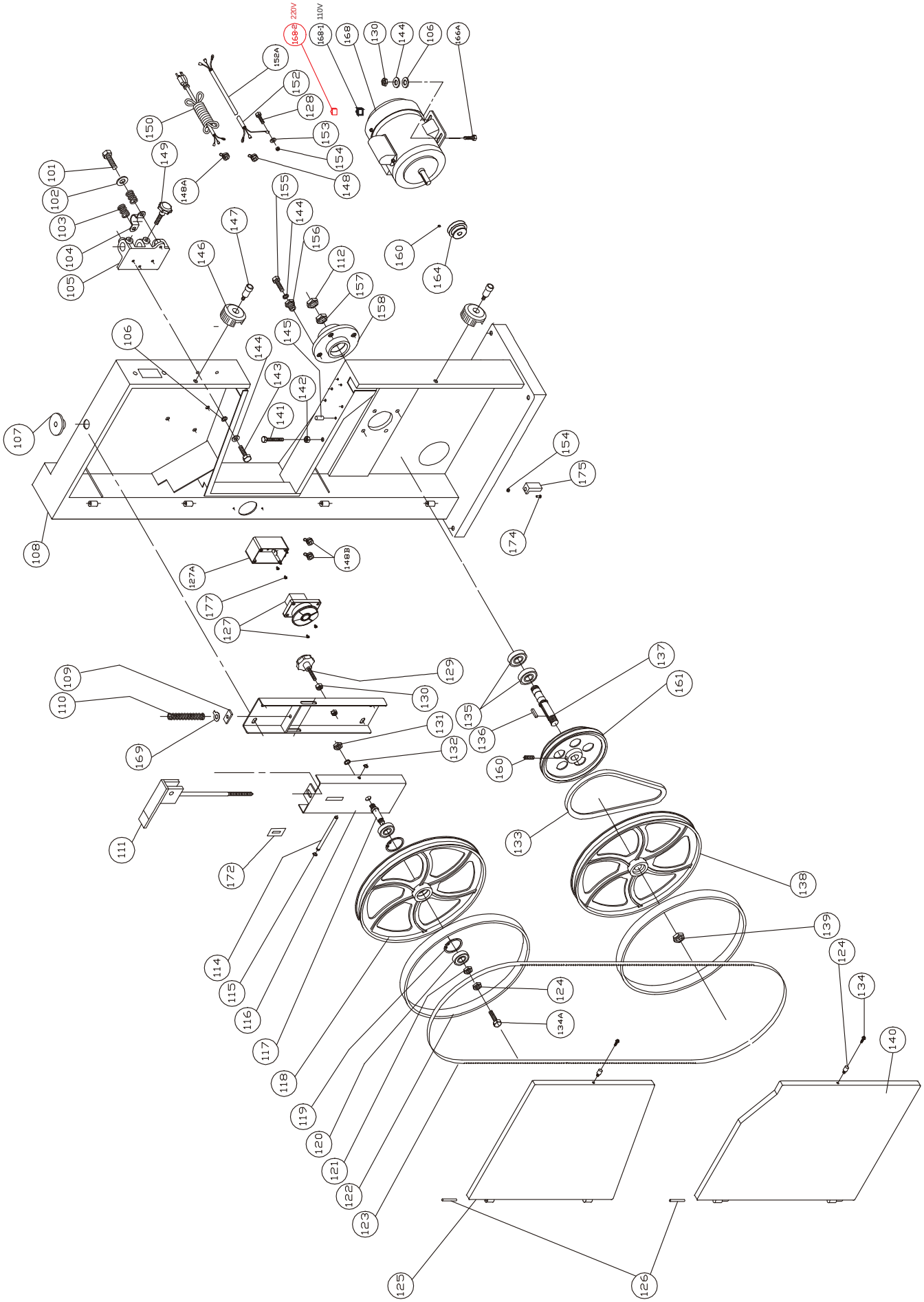
Adjust the positioning of the upper thrust bearing:
Note: Upper guide adjustment shown. Lower guides are similar. Adjusting the bearing or block is the same procedure. The difference will be the set dimension.

1. Disconnect the saw from the power source.
2. If not already done, adjust the blade tension and tracking.
3. Lower the blade guide assembly so that it is about 2” (50mm) above the table.
4. Loosen the set screw (A) to allow the guide block to slide side to side.
5. Place a feeler gauge between the bearing and the blade.
   a. Guide Bearing = 0.01”-0.02" (0.25-0.5mm)
   b. Ceramic Guides = 0.005”-0.007” (.127-.177mm)
6. Slide the block up to the feeler gauge and blade without deflecting the blade.
7. Hold the block in position and tighten the set screw (A).
8. Repeat the steps for the other side (B).
9. Recheck the gap between the blade and the guides taking note that the gap is equal on both sides and that the guide are not deflecting the blade.
10. Check that the guides are behind the blade teeth 1/64”-1/32” (mm).
11. If the guides are too close or far from the teeth, loosen set screw (D) and slide the entire guide assembly forward or aft until the front edge of the guide is within the set dimension behind the blade teeth.

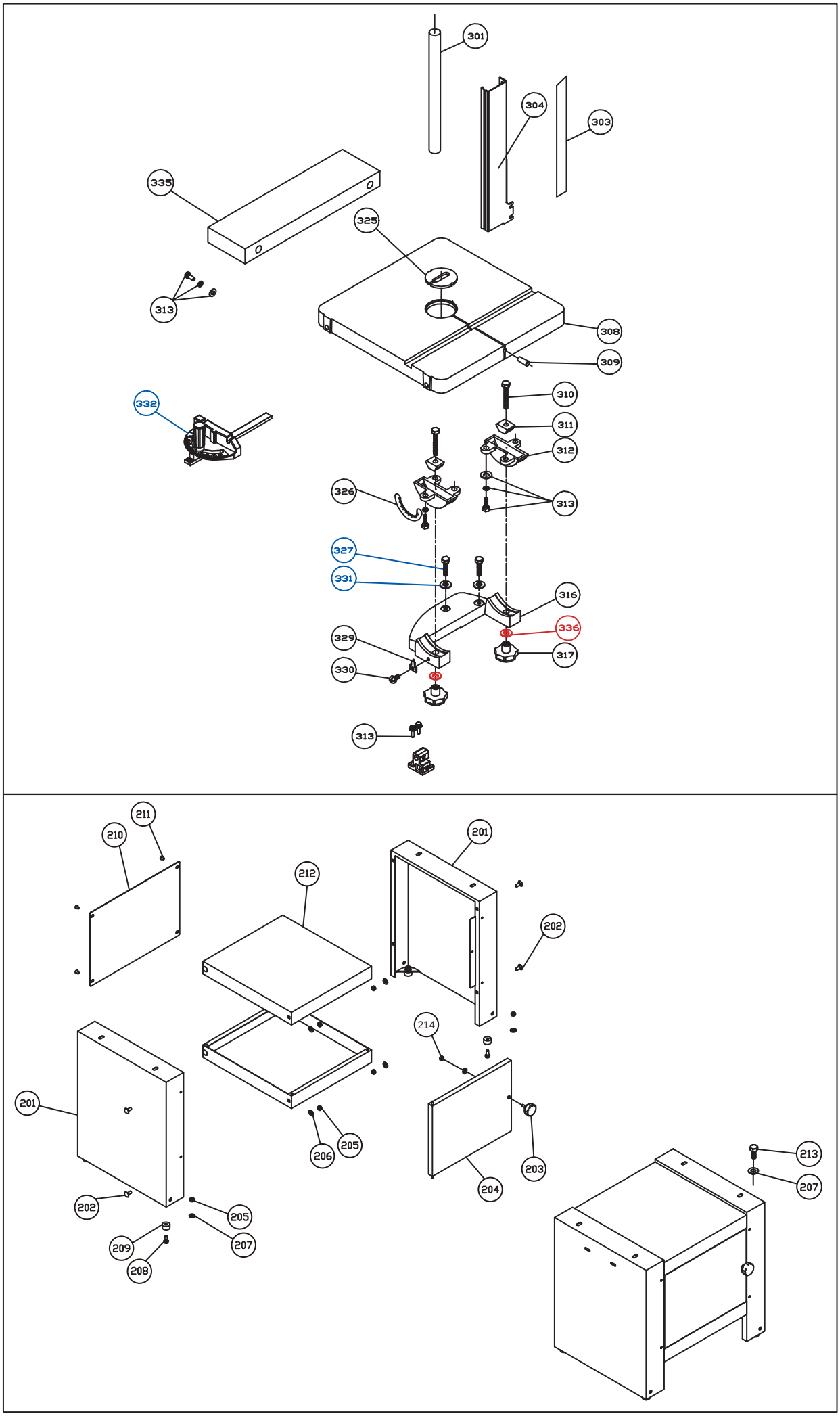
Thrust Bearing Adjustment
Note: Upper thrust bearing shown. Lower thrust bearing is similar.

1. Loosen the set screw (E) (hidden) to allow the thrust bearing block to slide side to side.
2. Slide the block to position the outer bearing cage just past the edge of the blade (F). You will just barely see the edge of the bearing side shield material.
3. Hold the block in position and tighten the set screw (E).
4. Loosen the set screw (G) and slide the bearing shaft forward or aft as needed until the edge of the bearing just touches the spine of the blade without deflecting the blade.
5. Hold the shaft in position and tighten the set screw (G).
6. Adjust the lower thrust bearing using the same steps.

PARTS LIST FOR MI-91400A



PARTS LIST FOR MI-91400A



PARTS LIST FOR MI-91400A

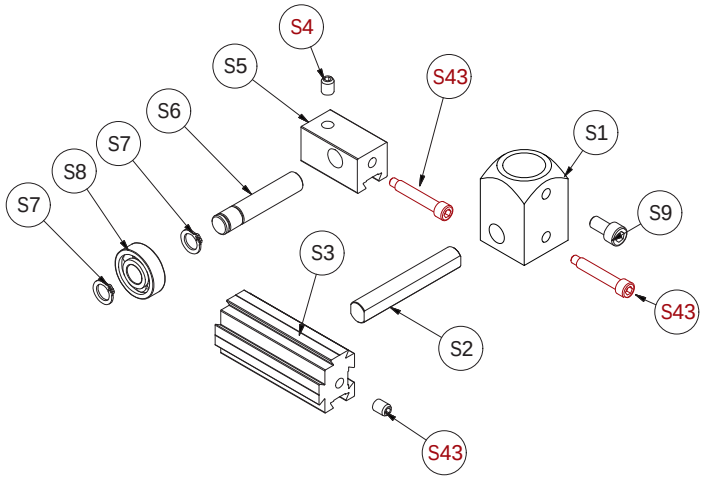
PART NO.	DESCRIPTION
MI-91400A-101	HEX BOLT_5/16-18P*1-1/4"
MI-91400A-102	FLAT WASHER_5/16"
MI-91400A-103	SPRING
MI-91400A-104	BRACKET
MI-91400A-105	BAR SETTING PLATE
MI-91400A-106	FLAT WASHER_5/16"-20 X 6
MI-91400A-107	SPECIAL WASHER
MI-91400A-108	BODY
MI-91400A-109	TOP WHEEL MOUNT NUT_3/8-16 (SPECIAL NUT)
MI-91400A-110	SPRING_4.2 X 76
MI-91400A-111	QUICK HANDLE BAR
MI-91400A-112	BEARING COVER
MI-91400A-114	HEX BOLT_M8*110mm
MI-91400A-115	NYLON NUT_M8-P1.25
MI-91400A-116	UPPER WHEEL BASE
MI-91400A-117	UPPER WHEEL SHAFT
MI-91400A-118	UPPER WHEEL
MI-91400A-119	INTERNAL RETAINING RING R35
MI-91400A-120	BEARING 6202ZZ
MI-91400A-121	FLAT WASHER_1/4-16*1.2mm
MI-91400A-122	TIRE RUBBER
MI-91400A-123	BLADE
MI-91400A-124	LOCK WASHER 1/4"
MI-91400A-125	UPPER WHEEL GUARD
MI-91400A-126	HINGE PIN
MI-91400A-127	CIRCULAR STOP PLANE SWITCH
MI-91400A-127A	SWITCH BOX
MI-91400A-128	PHILLIPS HEAD SCREW_3/16*3/4
MI-91400A-129	KNOB_5/16-18X2"
MI-91400A-130	HEX NUT_5/16"-18P X 4
MI-91400A-131	HEX NUT_1/2"-20P
MI-91400A-132	LOCK WASHER_1/2"
MI-91400A-133	BELT M28
MI-91400A-134A	HEX BOLT_1/4-20*1/2"
MI-91400A-134	CAP SCREW_1/4"-20P*3/8"
MI-91400A-135	BEARING
MI-91400A-136	KEY_5*5*35MM
MI-91400A-137	LOWER SHAFT
MI-91400A-138	LOWER WHEEL -CAST IRON
MI-91400A-139	HEX NUT (L.H.)_3/4"-16P
MI-91400A-140	LOWER WHEEL GUARD
MI-91400A-141	HEX BOLT_3/8*3-1/2" X 1
MI-91400A-142	HEX NUT_3/8"-16P X 1
MI-91400A-143	HEX BOLT_5/16*3/4"
MI-91400A-144	LOCK WAWHER_5/16" X 4
MI-91400A-145	PIN_6*16MM
MI-91400A-146	GUARD LOCKING KNOB
MI-91400A-147	SPECIAL HIGH CAP SCREW_7x19-1/4"
MI-91400A-148	STRAIN RELIEF
MI-91400A-148A	STRAIN RELIEF
MI-91400A-148B	STRAIN RELIEF
MI-91400A-149	KNOB BOLT_5/16"*1"
MI-91400A-150	CORD
MI-91400A-152	CORD

PART NO.	DESCRIPTION
MI-91400A-152A	CORD
MI-91400A-153	STAR WASHER_3/16"
MI-91400A-154	HEX NUT_3/16"
MI-91400A-155	HEX BOLT_5/16-18P*1-1/2"
MI-91400A-156	ADJUSTING SCREW
MI-91400A-157	HEX NUT_5/8"
MI-91400A-158	BEARING HOUSING
MI-91400A-160	SET SCREW_1/4-20P*1/4"
MI-91400A-161	BELT PULLEY V2.24.01 (WHEEL PULLEY)
MI-91400A-164	MOTOR PULLEY
MI-91400A-166A	CARRIAGE BOLT_ 5/16*1" X 4
MI-91400A-168	MOTOR
MI-91400A-168-1	RESET BUTTON 110V
MI-91400A-168-2	RESET BUTTON 220V
MI-91400A-169	BLADE TENSION POINTER
MI-91400A-172	TENSION LABLE
MI-91400A-174	SCREW
MI-91400A-175	BRUSH
MI-91400A-177	PHILLIPS HEAD SCREW_M4*20
MI-91400A-201	STAND SIDE
MI-91400A-202	CARRIAGE BOLT_5/16*5/8" X 8
MI-91400A-203	KNOB BOLT_5/16"*1" X 1
MI-91400A-204	DOOR
MI-91400A-205	HEX NUT_5/16"-18P X 16
MI-91400A-206	FLAT WASHER_5/16"-16 X 8
MI-91400A-207	FLAT WASHER_5/16"-20 X 13
MI-91400A-208	HEX BOLT_5/16*3/4" X 4
MI-91400A-209	RUBBER FEET
MI-91400A-210	STAND PANEL
MI-91400A-211	PHILLIPS FLAT HEAD SCREW_1/4*1/2" X 4
MI-91400A-212	STAND BRACE
MI-91400A-213	HEX BOLT_5/16*2" X 4
MI-91400A-214	NYLON NUT_5/16" X 1" X 1
MI-91400A-301	GUIDE POST
MI-91400A-303	SCALE
MI-91400A-304	BLADE COVER
MI-91400A-308	TALBE
MI-91400A-309	TAPERED PIN_6*38MM
MI-91400A-310	HEX BOLT_3/8-16P*2-1/2"
MI-91400A-311	TRUNNION CLAMPSHOE
MI-91400A-312	TRUNNION
MI-91400A-313	HEX BOLT_1/4-20P*3/4"
MI-91400A-316	TABLE BRACKET
MI-91400A-317	LOCK KNOB F/TABLE _3/8" X 2
MI-91400A-325	TABLE INSERT
MI-91400A-326	SCALE
MI-91400A-327	HEX BOLT-M8*35mm X 4
MI-91400A-329	POINTER
MI-91400A-330	PHILLIPS HEAD SCREW_3/16"-24P*1/4"
MI-91400A-331	HEX NUT 8MM-1.25P X 2
MI-91400A-332	MITER GAUGE
MI-91400A-335	EXTENSION TABLE
MI-91400A-336	FLAT WASHER 3/8"-19 X 2

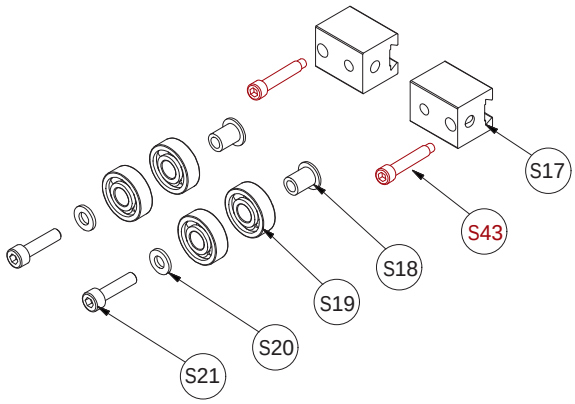
PARTS LIST FOR MI-91400A UPPER DELUXE BEARING GUIDE

PART NO.	DESCRIPTION	PART NO.	DESCRIPTION
MI-91400A-S1	SLEEVE	MI-91400A-S15	SLIDING BLOCK OF CERAMIC GUIDE
MI-91400A-S2	SHAFT	MI-91400A-S16	CERAMIC GUIDE
MI-91400A-S3	DOVETAIL BLOCK	MI-91400A-S17	SLIDING BLOCK - S
MI-91400A-S4	SET SCREW 1/4” x 1/4”	MI-91400A-S18	BUSHING
MI-91400A-S5	SLIDING BLOCK - L	MI-91400A-S19	BALL BEARING 608ZZ
MI-91400A-S6	BEARING SHAFT	MI-91400A-S20	FLAT WASHER 3/16-12
MI-91400A-S7	EXTERNAL RETAINING RING S10	MI-91400A-S21	SOCKET HEAD CAP SCREW M5*16mm
MI-91400A-S8	BALL BEARING 6000ZZ	MI-91400A-S43	CAP SCREW 1/4*1-1/2"
MI-91400A-S9	CAP SCREW 1/4” x 1/2”		

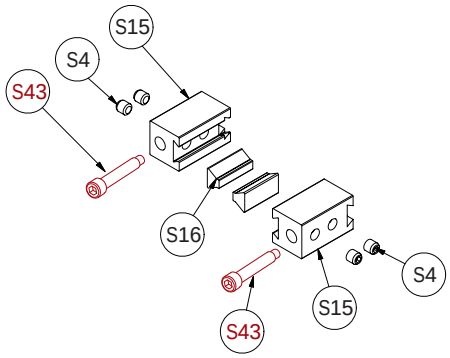
PARTS LIST FOR MI-91400A



BALL BEARINGS KIT



CERAMIC KIT - OPTIONAL(MI-99914)

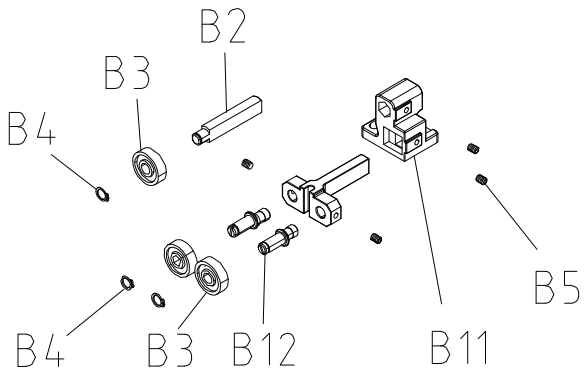


PARTS LIST FOR MI-91400A UPPER DELUXE BEARING GUIDE

PART NO.	DESCRIPTION	PART NO.	DESCRIPTION
MI-91400A-S1	SLEEVE	MI-91400A-S15	SLIDING BLOCK OF CERAMIC GUIDE
MI-91400A-S2	SHAFT	MI-91400A-S16	CERAMIC GUIDE
MI-91400A-S3	DOVETAIL BLOCK	MI-91400A-S17	SLIDING BLOCK - S
MI-91400A-S4	SET SCREW 1/4” x 1/4”	MI-91400A-S18	BUSHING
MI-91400A-S5	SLIDING BLOCK - L	MI-91400A-S19	BALL BEARING 608ZZ
MI-91400A-S6	BEARING SHAFT	MI-91400A-S20	FLAT WASHER 3/16-12
MI-91400A-S7	EXTERNAL RETAINING RING S10	MI-91400A-S21	SOCKET HEAD CAP SCREW M5*16mm
MI-91400A-S8	BALL BEARING 6000ZZ	MI-91400A-S43	CAP SCREW 1/4*1-1/2"
MI-91400A-S9	CAP SCREW 1/4” x 1/2”		

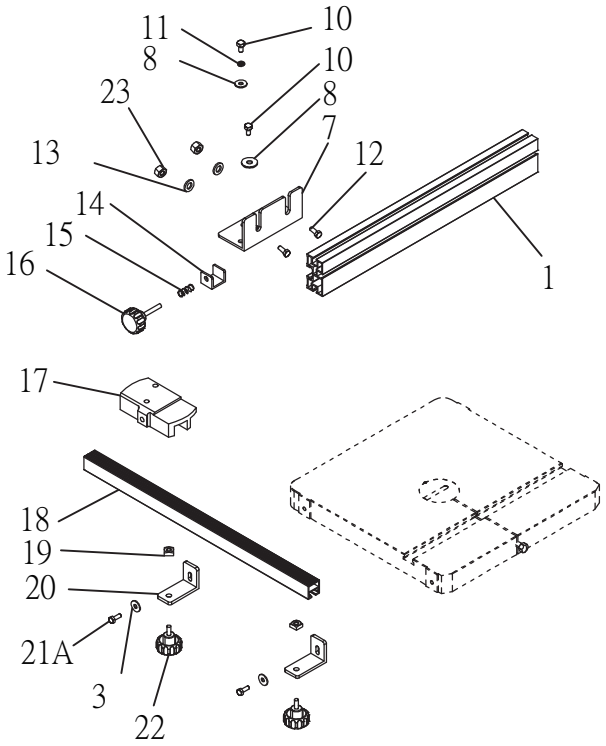
PARTS LIST FOR MI-91400A

LOWER BEARING GUIDE



PARTS LIST FOR MI-91400A LOWER BEARING GUIDE

PART NO.	DESCRIPTION	PART NO.	DESCRIPTION
MI-91400A-B2	SUPPORT BEARING SHAFT	MI-91400A-B5	SET SCREW
MI-91400A-B3	BEARING 6200ZZ	MI-91400A-B11	LOWER SUPPORT BRACKET
MI-91400A-B4	EXTERNAL RETAINING RING S10	MI-91400A-B12	BEARING SHAFT



PARTS LIST FOR MI-91400A

PART NO.	DESCRIPTION	PART NO.	DESCRIPTION
MI-91400A-JSF	JS-FENCE	MI-91400A-F15	SPRING
MI-91400A-F01	FENCE BODY	MI-91400A-F16	KNOB BOLT
MI-91400A-F03	FLAT WASHER_1/4-16*1.2mm X 2	MI-91400A-F17	FENCE HEAD
MI-91400A-F07	ANGLE BASE	MI-91400A-F18	REAR RAIL
MI-91400A-F08	FLAT WASHER 5/16"	MI-91400A-F19	SQUARE NUT_5/16" X 2
MI-91400A-F10	HEX BOLT 5/16*1/2"	MI-91400A-F20	BRACKET
MI-91400A-F11	LOCK WAWHER 5/16"	MI-91400A-F21A	HEX BOLT_1/4"*5/8" X 2
MI-91400A-F12	HEX BOLT 1/4"*5/8"	MI-91400A-F22	KNOB_5/16-18X5/8 X 2
MI-91400A-F13	FLAT WASHER 1/4"-25	MI-91400A-F23	HEX NUT_1/4"-20P
MI-91400A-F14	U TYPE PLATE		