

# **JET**

**EQUIPMENT & TOOLS**

## **OPERATOR'S MANUAL**

### **JVM-836 Milling Machine**



**JET EQUIPMENT & TOOLS, INC.**

A WMH Company

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**M-690036 5/00**

# Important Information

**1-YEAR  
LIMITED WARRANTY**

**JET offers a one-year limited  
warranty on this product**

## REPLACEMENT PARTS

Replacement parts for this tool are available directly from JET Equipment & Tools. To place an order, call 1-800-274-6848. Please have the following information ready:

1. Visa, MasterCard, or Discover Card number
2. Expiration date
3. Part number listed within this manual
4. Shipping address other than a Post Office box.

## REPLACEMENT PART WARRANTY

JET Equipment & Tools makes every effort to assure that parts meet high quality and durability standards and warrants to the original retail consumer/purchaser of our parts that each such part(s) to be free from defects in materials and workmanship for a period of thirty (30) days from the date of purchase.

## PROOF OF PURCHASE

Please retain your dated sales receipt as proof of purchase to validate the warranty period.

## LIMITED TOOL AND EQUIPMENT WARRANTY

JET makes every effort to assure that its products meet high quality and durability standards and warrants to the original retail consumer/purchaser of our products that each product be free from defects in materials and workmanship as follows: 1 YEAR LIMITED WARRANTY ON THIS JET PRODUCT. Warranty does not apply to defects due directly or indirectly to misuse, abuse, negligence or accidents, repairs or alterations outside our facilities or to a lack of maintenance. JET LIMITS ALL IMPLIED WARRANTIES TO THE PERIOD SPECIFIED ABOVE FROM THE DATE THE PRODUCT WAS PURCHASED AT RETAIL. EXCEPT AS STATED HEREIN, ANY IMPLIED WARRANTIES OR MERCHANTABILITY AND FITNESS ARE EXCLUDED. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG THE IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU. JET SHALL IN NO EVENT BE LIABLE FOR DEATH, INJURIES TO PERSONS OR PROPERTY OR FOR INCIDENTAL, CONTINGENT, SPECIAL OR CONSEQUENTIAL DAMAGES ARISING FROM THE USE OF OUR PRODUCTS. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU. To take advantage of this warranty, the product or part must be returned for examination, postage prepaid, to an authorized service station designated by our Auburn office. Proof of purchase date and an explanation of the complaint must accompany the merchandise. If our inspection discloses a defect, JET will either repair or replace the product or refund the purchase price, if we cannot readily and quickly provide a repair or replacement, if you are willing to accept such refund. JET will return repaired product or replacement at JET's expense, but if it is determined there is no defect, or that the defect resulted from causes not within the scope of JET's warranty, then the user must bear the cost of storing and returning the product. This warranty gives you specific legal rights, and you have other rights, which vary, from state to state.



 **WARNING**

1. **Read and understand the entire instruction manual before attempting set-up or operation of this machine.**
2. Always wear approved safety glasses/face shields while using this machine.
3. Make certain the machine is properly grounded.
4. Before operating the machine, remove tie, rings, watches, other jewelry, and roll up sleeves above the elbows. Remove all loose clothing and confine long hair. Do **not** wear gloves.
5. Keep the floor around the machine clean and free of scrap material, oil and grease.
6. Keep machine guards in place at all times when the machine is in use. If removed for maintenance purposes, use extreme caution and replace the guards immediately.
7. Do **not** over reach. Maintain a balanced stance at all times so that you do not fall or lean against blades or other moving parts.
8. Make all machine adjustments or maintenance with the machine unplugged from the power source.
9. Use the right tool. Don't force a tool or attachment to do a job which it was not designed for.
10. Replace warning labels if they become obscured or removed.
11. Make certain the motor switch is in the **OFF** position before connecting the machine to the power supply.
12. Give your work undivided attention. Looking around, carrying on a conversation, and "horse-play" are careless acts that can result in serious injury.
13. Keep visitors a safe distance from the work area.
14. Use recommended accessories; improper accessories may be hazardous.
15. Keep hands away from all moving parts (belts, cutters, gears, etc.).
16. Never operate this machine under the influence of alcohol or drugs.
17. Read and understand all warnings posted on the machine.
18. This manual is intended to familiarize you with the technical aspects of this milling machine. It is not, nor was it intended to be, a training manual.
19. This machine is designed and intended for use by properly trained and experienced personnel only. If you are not familiar with the proper safe use of milling machines, do not use this machine until proper training and knowledge has been obtained.
20. Failure to comply with all of these warnings may cause serious injury.

## Specifications

## JVM-836

Stock Number .....	690036 JVM-836-1
Stock Number .....	690038 JVM-836-3
Spindle Taper .....	R-8
Diameter of Quill (in) .....	3-3/8
Number of Spindle Speeds .....	(5) JVM-836-1
Number of Spindle Speeds .....	(10) JVM-836-3
Range of Spindle Speeds (rpm) .....	240-1,550 JVM-836-1
Range of Spindle Speeds (rpm) .....	120-1,550 JVM-836-3
Spindle Travel (in) .....	5
Collet Capacity (in) .....	1/8-7/8
Head Movement .....	90° L and R
Maximum Travel of Ram (in) .....	10-1/2
Maximum Distance Spindle to Table (in) .....	13-3/4
Minimum Distance Spindle to Column (in) .....	5-1/4
Maximum Distance Spindle to Column (in) .....	15-3/4
Maximum Longitudinal Table Travel (in) .....	24
Maximum Cross Table Travel (in) .....	9-1/2
Maximum Knee Table Travel (in) .....	14
Size of Table (in) .....	7-7/8 x 36
T-Slot (number) Size (in) .....	(3) 5/8
T-Slot Centers (in) .....	2-1/2
Motor (JVM-836-1) .....	1-1/2 HP, 1Ph 115/230V ..... prewired 115V
Motor (JVM-836-3) .....	1-1/2 HP, 3Ph 2 Speed ..... 230V Only
Floor Space Required (LxWxH/in) .....	55 x 52 x 77
Net Weight (approx.) .....	1474 Lbs.

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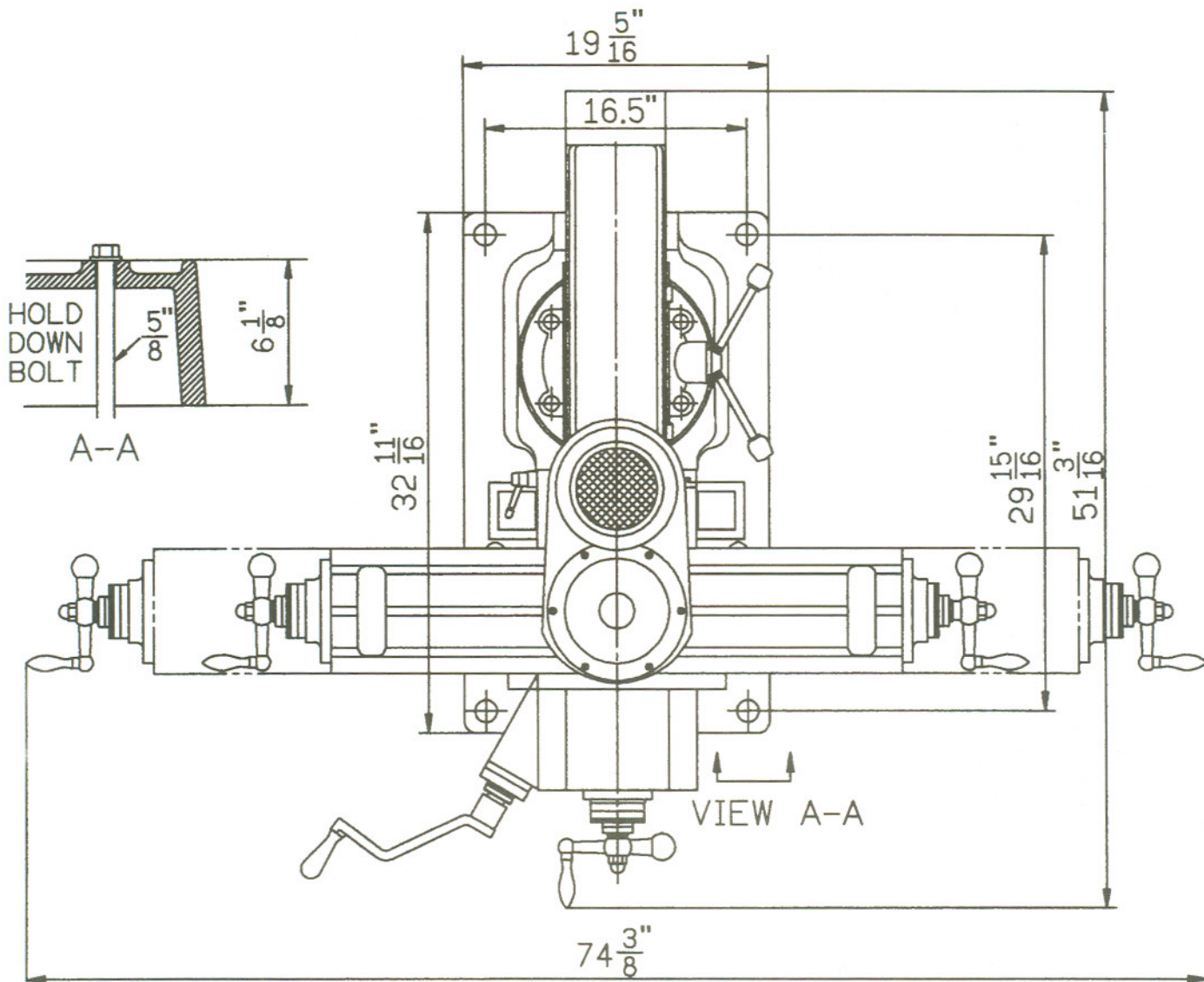
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The specifications in this manual are given as general information and are not binding. JET Equipment & Tools reserves the right to effect, at any time and without prior notice, changes or alterations to parts, fittings, and accessory equipment deemed necessary for any reason whatsoever.



# JVM-836 Installation Layout



## Shipping Container Contents

1. Mill
1. Flat Way Cover (rear)
1. Accordion Way Cover (front)
1. Knee Crank
1. Drawbar
  
1. Tool Box:
  1. Hex Wrench Set (1.5 - 10mm)
  1. 17/19mm Combination Wrench
  1. #2 Cross Point Screw Driver
  1. #2 Flat Blade Screw Driver
  1. Oil Can
  1. Handwheel
  1. Adjustable Wrench
  5. Handles for Handwheels
  1. Operator's Manual
  1. Warranty Card

## Unpacking and Clean-Up

1. Finish removing the sides and top of the crate. Leave the mill bolted to the skid until it is ready to be moved to its final location.
2. Clean all rust protected surfaces with kerosene or a light solvent. Do not use gasoline, paint thinner, or lacquer thinner. These will damage painted surfaces.
3. Cover all machined surfaces with a film of light machine tool oil to inhibit rust.
4. Remove wood block from below the knee.

## Raising the Head

1. Remove handwheel (A, Fig. 1).
2. Loosen four cap nuts (B, Fig.1) with a ½ turn to unlock the head. **Do not** remove these nuts unless you are prepared to remove the head.
3. Use a 19mm socket and breaker bar on adjusting nut (C, Fig. 1) to raise the head.

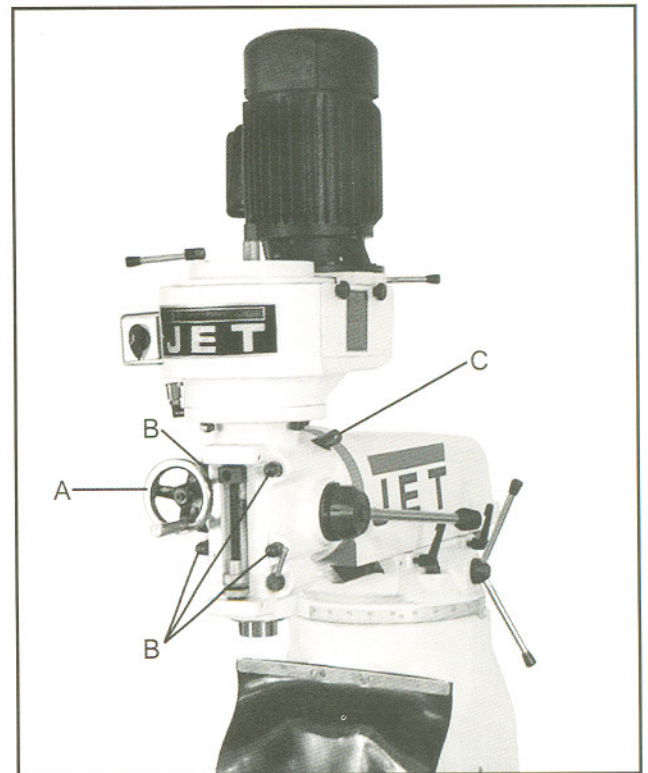
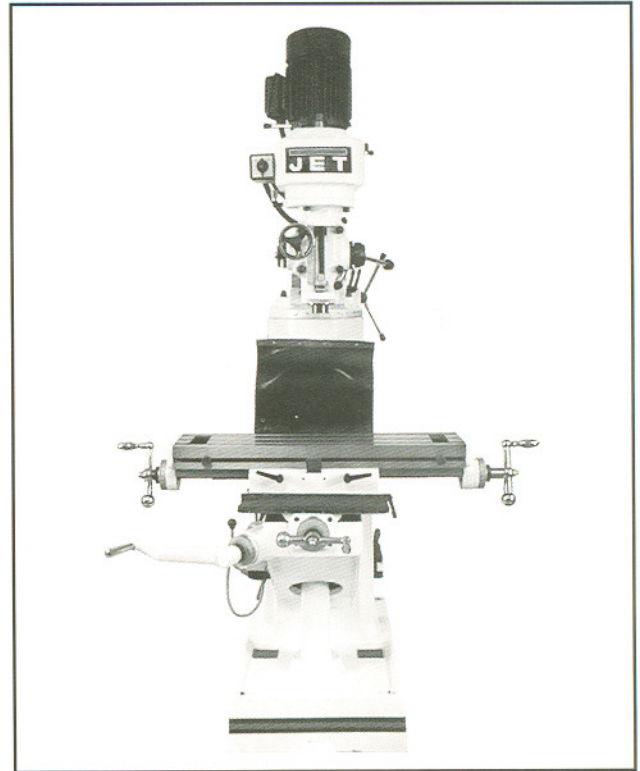


Fig. 1



## Site Preparation

### CAUTION!

**Mill must be supported equally under all four corners. Failure to comply may cause the column to twist and put a bind in the bedways.**

The mill must be placed on an even surface and bolted to the floor. Anchor bolts of sufficient size and length must be fastened to the floor according to the footprint of the mill. See Installation Layout page 4.

## Lifting the Mill

### ⚠WARNING

**Keep people a safe distance away from the milling machine while it is being moved. Failure to comply may cause serious injury!**

Lift the mill with appropriate sized lifting straps. Follow the diagram in Fig. 2 for the proper position of the straps under the ram.

**Note:** the position of the ram, and that the table has been moved against the column. Tighten ram locking bolts (A, Fig. 2) before lifting.

Carefully lift the mill. Move into position over the anchor bolts. Lower the mill onto the anchor bolts. Check for level, and secure with washers and anchor bolt nuts.

Check the mill for level with a machinist's level placed on the table. Mill must be level back to front and side to side. Shim if necessary, but remember that the mill must be supported equally at all four corners. Check for level before tightening the anchor bolt nuts and after tightening them. Adjust as necessary.

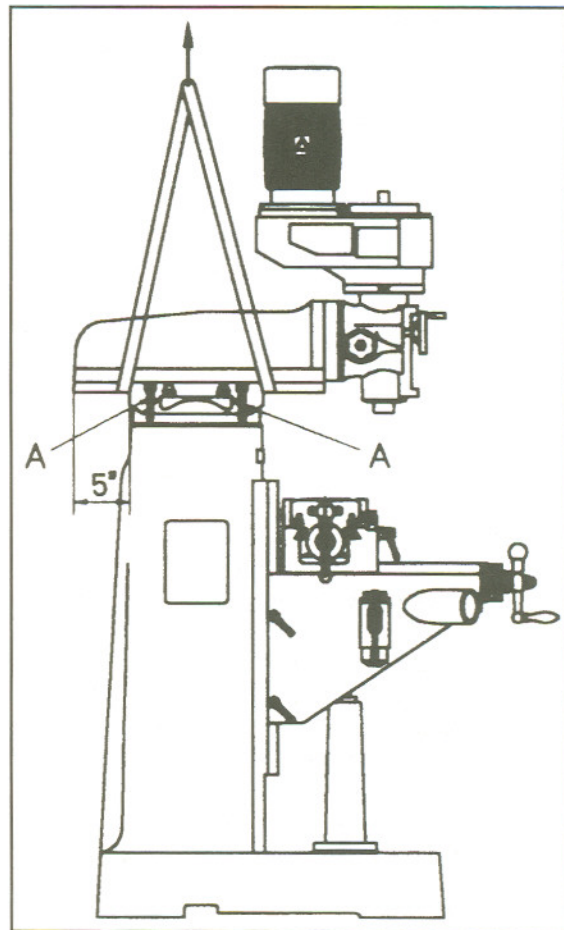


Fig. 2

## Lubrication

### CAUTION!

**Do not operate the mill before lubricating the machine fully. Failure to comply may cause damage to the machine.**

Reference Fig. 3 for parts of the mill to lubricate:

- A. Spindle Bearings - fill oil cup once daily with Mobil DTE® Oil Light.
- B. Oil Pump - fill reservoir as needed by removing cap on top of tank and filling with Mobil Vactra Oil No. 2. Pump oil with release handle once for every hour of operation. Way surfaces and leadscrews are lubricated in this manner.
- C. Knee Leadscrew - lubricate with Mobilith® AW2 once a week.

## Electrical Connections

### ⚠ WARNING

**All electrical connections must be made by a qualified electrician! Failure to comply may cause serious injury!**

The JVM-836-3 Mill is rated 1-1/2HP, 3Ph, 230V only. The JVM-836-1 Mill is rated at 1-1/2HP, 1Ph 115/230V and comes from the factory prewired at 115V.

Confirm power at the site matches power requirements of the mill before connecting to the power source.

To change from 115V to 230V operation (JVM-836-1 only), remove the junction box cover on the motor and change the wires according to the diagram found on the inside of the cover.

The mill must be properly grounded.

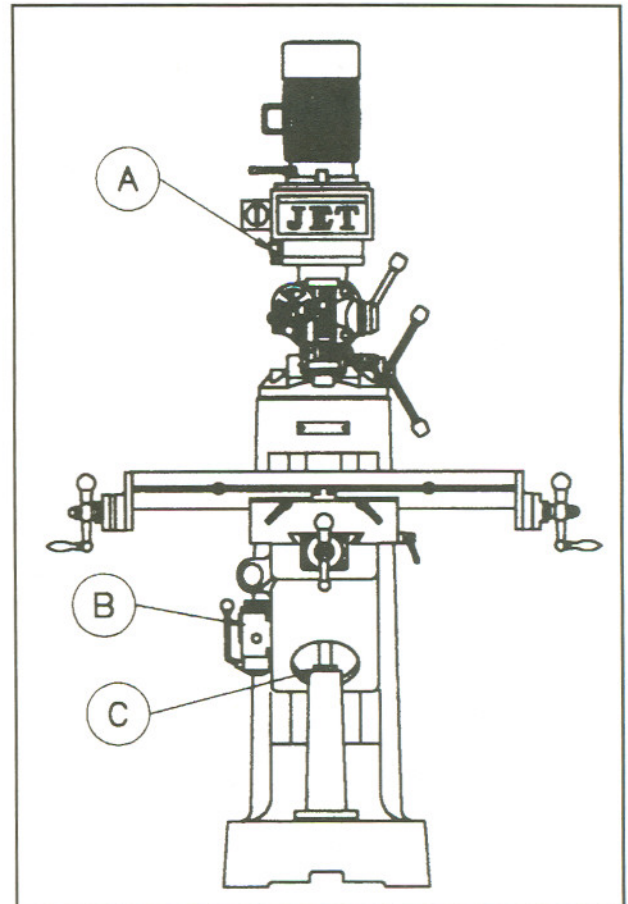


Fig. 3



## Controls

- A. **Belt Cover Lock Knobs** (A, Fig. 4) located on the right side of the head. Loosen and remove belt cover to change belt position on the pulleys.
- B. **Spindle Brake** (B, Fig. 4) located on left side of the head. Move in either direction to stop spindle once power has been turned off.
- C. **Quill Feed Handle** (C, Fig. 4) located on the right side of the head. Rotate counter-clockwise to lower spindle. Return spring will retract the spindle automatically once the handle is released.
- D. **Quill Lock** (D, Fig. 5) located on the right side of the head. Rotate the handle clockwise to lock the quill in a desired position. Rotate the handle counter-clockwise to release.
- E. **Micrometer Adjusting Nut** (E, Fig. 4) located on the front of the head. Use for setting specific spindle depth.
- F. **Manual Fine Feed** (F, Fig. 4) located on the left side of the head. Must engage fine feed (I, Fig. 5) for handwheel to function.
- G. **Quill Stop** (G, Fig. 4) located on the front of the head. Used in conjunction with micrometer adjusting nut for predetermined depth.
- H. **Reversing Switch** (H, Fig. 5) located on the left side of the head. Switches rotation of spindle. For 3 Ph motor there is an additional low and high-speed option.
- I. **Fine Feed Engagement** (I, Fig. 5) located on the left side of the head. Turn clockwise until tight. This engages the manual fine feed.
- J. **Draw Bar** (J, Fig. 5) located on the top of the head. This is used to tighten a R-8 collet or R-8 tool into the quill. Tighten draw bar enough to hold tool securely during milling operations.

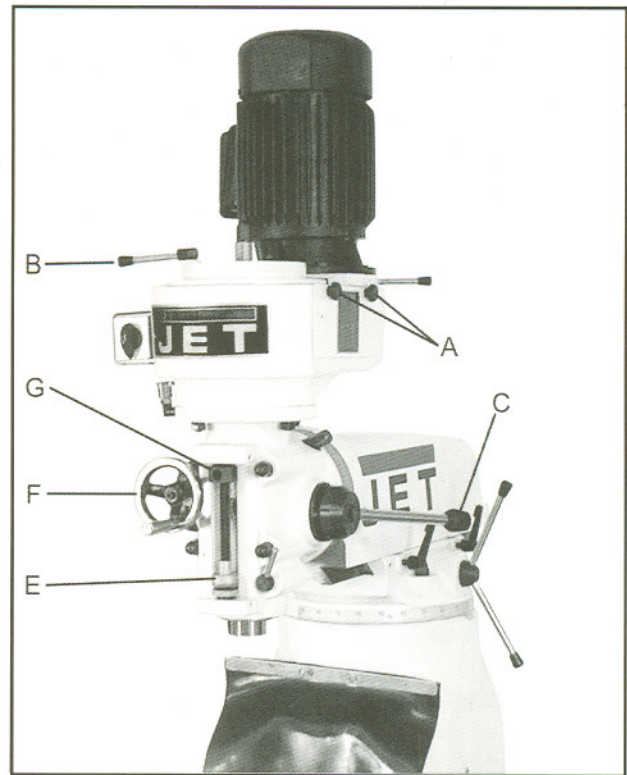


Fig. 4

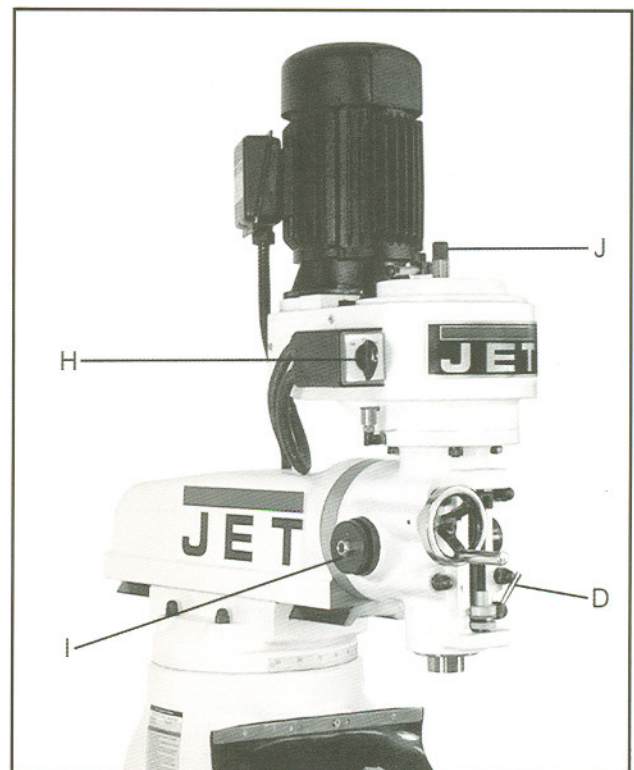


Fig. 5

- K. **Longitudinal Movement** (J, Fig. 6) handles located on opposite ends of the table. This controls the X axis.
- L. **Cross Movement** (K, Fig. 6) handle located directly in front of the machine. This controls the Y axis.
- M. **Knee Handle** (L, Fig. 6) this raises the table up and down.

### Changing Speeds

1. Unscrew two knobs (A, Fig. 4) and remove belt cover.
2. Loosen hex nut (A, Fig. 7).
3. Take the tension off the belt by moving handle (B, Fig. 7).
4. Use the RPM chart, located on the back of the belt cover, to place the belt in the desired position.
5. Place tension on the belt by moving handle.
6. Tighten hex nut.
7. Always replace the belt cover!

**Note:** The 3 Ph motor has an additional low and high-speed setting (H, Fig.5).

### Position of Ram

**CAUTION!**  
Care should be taken to lock ram securely after setting.

Ram can be moved by loosening two handles (A, Fig. 8), and turning handle (B, Fig. 8) to desired position.

**Note:** It is recommended while doing heavy milling work the head should be left as close to face of turret as possible. Maximum rigidity is then obtained.

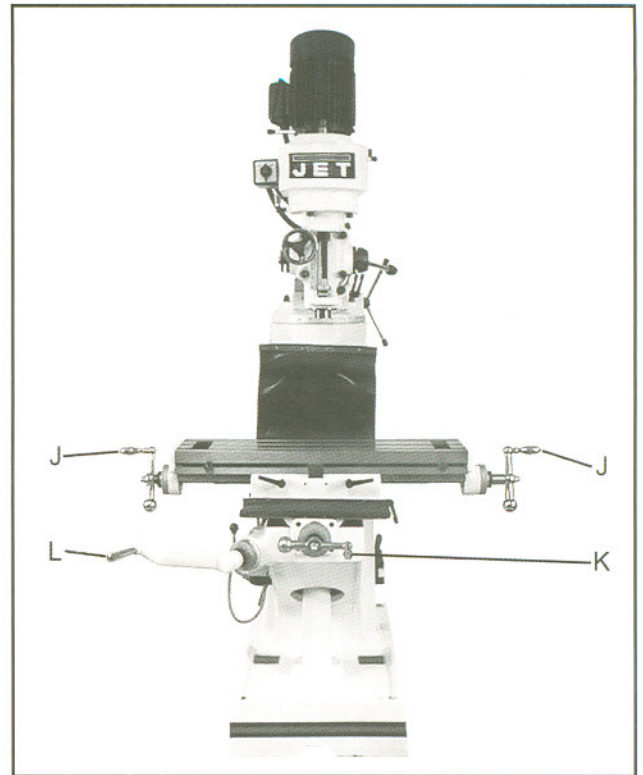


Fig. 6

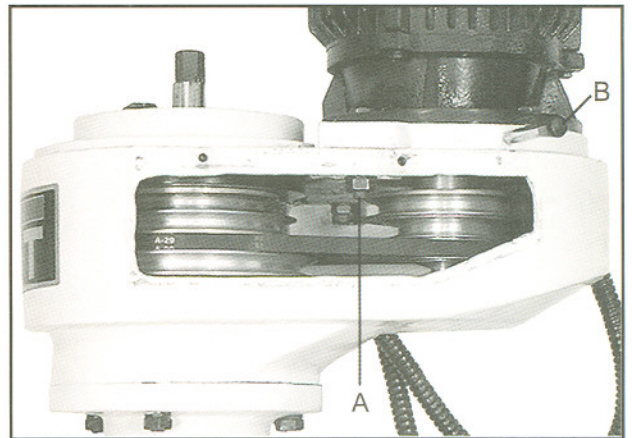


Fig. 7

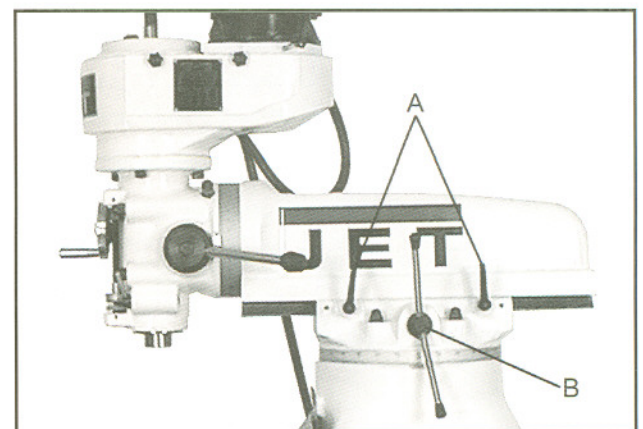


Fig. 8



## Adjustments

1. **Knee Gib Adjustment** (#53, pages 21 & 23 of the parts list and breakdown) adjust gib screw (#18, pages 21 & 22) below wiper on the left side of the knee for proper travel and excess play.

**Note:** when adjusting the gibs always start with the knee. Adjust the saddle second, and adjust the table last.

2. **Saddle Gib Adjustment** (#47, pages 21 & 23 of the parts list and breakdown) adjust gib screw (#18, pages 21 & 22) found on the right side front of the carriage for proper travel and excess play.

3. **Table Gib Adjustment** (#45, pages 21 & 23 of the parts list and breakdown) adjust gib screw (#18, pages 21 & 22) found on the left side of the table toward the front of the carriage for proper travel and excess play.

4. **Ram Ware Plate** (#10, pages 21 & 22 of the parts list and breakdown) loosen two hex nuts (#19-1, pages 21 & 22) adjust two set screws (#19, pages 21 & 22) found on the side of the ram for proper travel. Tighten hex nuts.

5. **Head Alignment** the scales on the ram adapter and head rotation are guides only. Close tolerance work will require the use of a dial indicator to make sure the head is 90° to the table in the X axis.

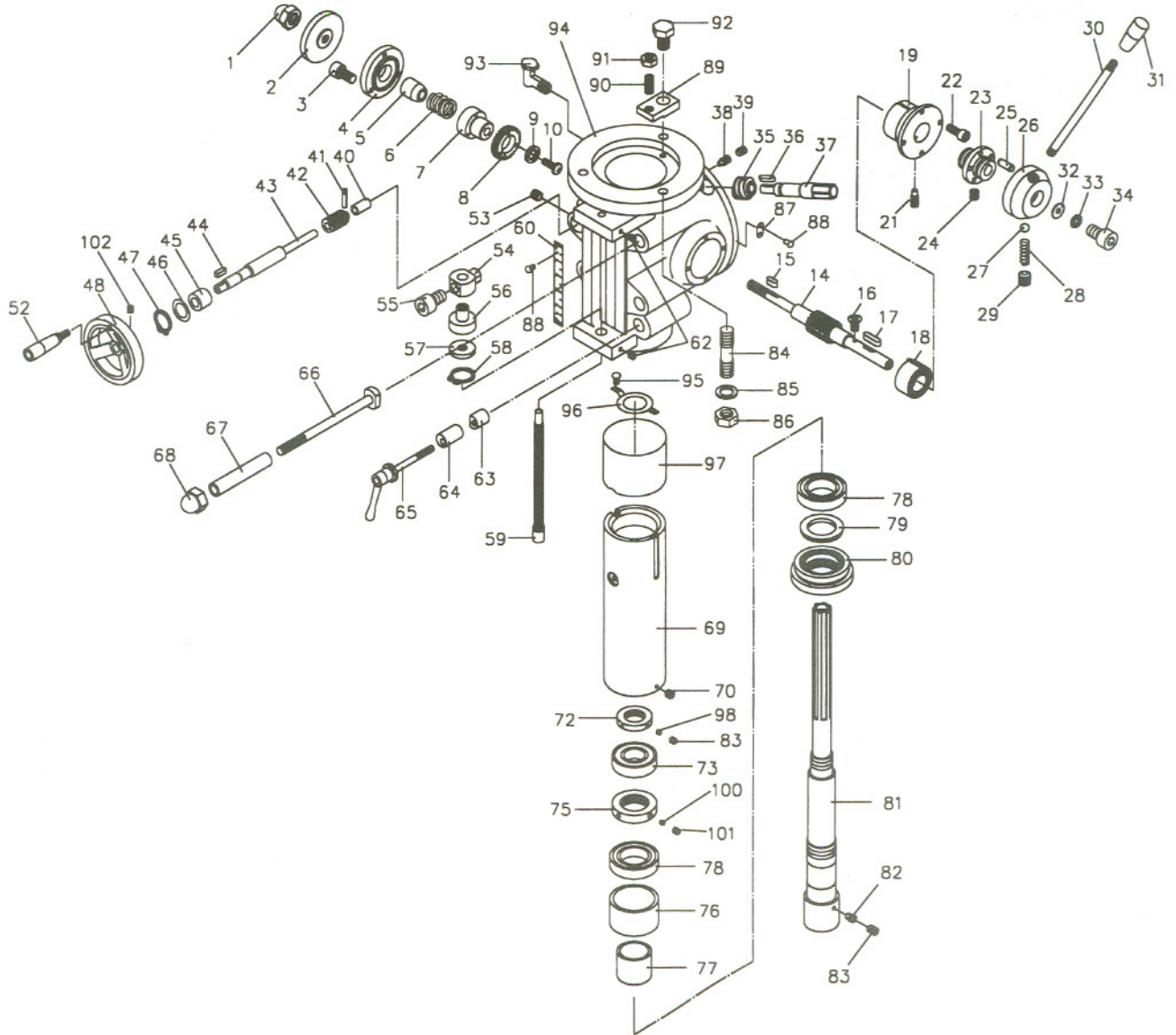
6. **Longitudinal and Crossfeed Adjustment** if there is excessive backlash in the handle.

- a) Loosen hex socket head screw (#27, pages 19 & 20 of the parts list and breakdown).

- b) Turn feed screw nut (#26 or #29, pages 19 & 20 of the parts list and breakdown) to remove play.

- c) Tighten hex socket head screw.

# Head Assembly





## Parts List for JVM-836

### Head Assembly

**Note:** Some index numbers in this parts list have two part numbers. If your milling machine has the serial number 0040050 and higher, use the part numbers ending with a "T". If your milling machine has the serial number xxx0049 and lower, use the part number without the letter "T".

Index No.	Part No.	Description	Size	Qty.
1	JVM836-01	Castle Nut	M12	1
2	JVM836-02	Lock Nut		1
3	TS-1523041	Hex Socket Cap Screw	M6x12	3
4	JVM836-04	Cover		1
5	JVM836-05	Taper Sleeve		1
6	JVM836-06	Spring		1
7	JVM836-07	Transmission Sleeve		1
8	JVM836-08	Worm Gear		1
	JVM836-08T	Worm Gear		1
9	JVM836-09	Spring Washer	M4	3
10	JVM836-10	Cross Round Head Screw	M4x16	3
14	JVM836-14	Shaft		1
	JVM836-14T	Shaft		1
15	JVM836-15	Key	5x5x20	1
16	JVM836-16	Cross Flat Head Screw	M5x6	1
17	JVM836-17	Whitney Key		1
18	JVM836-18	Volume Spring		1
	JVM836-18T	Volume Spring		1
19	JVM836-19	Spring Bracket		1
21	TS-1524011	Set Screw	M8x8	1
22	TS-1514021	Hex Socket Cap Screw	M6x15	4
23	JVM836-23	Transmission Sleeve		1
24	TS-1524011	Set Screw	M8x8	1
25	JVM836-25	Round Pin		1
26	JVM836-26	Handle Base		1
	JVM836-26T	Handle Base		1
	JVM836-26TA	New Handle Assembly (Include:#26,30,31)		1
27	JVM836-27	Steel Ball	Ø6	1
28	JVM836-28	Spring		1
29	TS-1524011	Set Screw	M8x8	1
30	JVM836-30	Rocket Rod		1
	JVM836-30T	Rocket Rod		1
31	JVM836-31	Knob		1
	JVM836-31T	Knob		1
32	JVM836-32	Flat Washer	M8	1
33	JVM836-33	Spring Washer	M8	1
34	JVM836-34	Hex Socket Cap Screw	M8x16	1
35	JVM836-35	Worm		1
	JVM836-35T	Worm		1
36	JVM836-36	Whitney Key	4x4x16	1
37	JVM836-37	Worm Shaft		1
38	JVM836-38	Full Dog Point Set Screw	M5x6	1
39	TS-1522011	Set Screw	M5x6	1
40	JVM836-40	Bushing		1

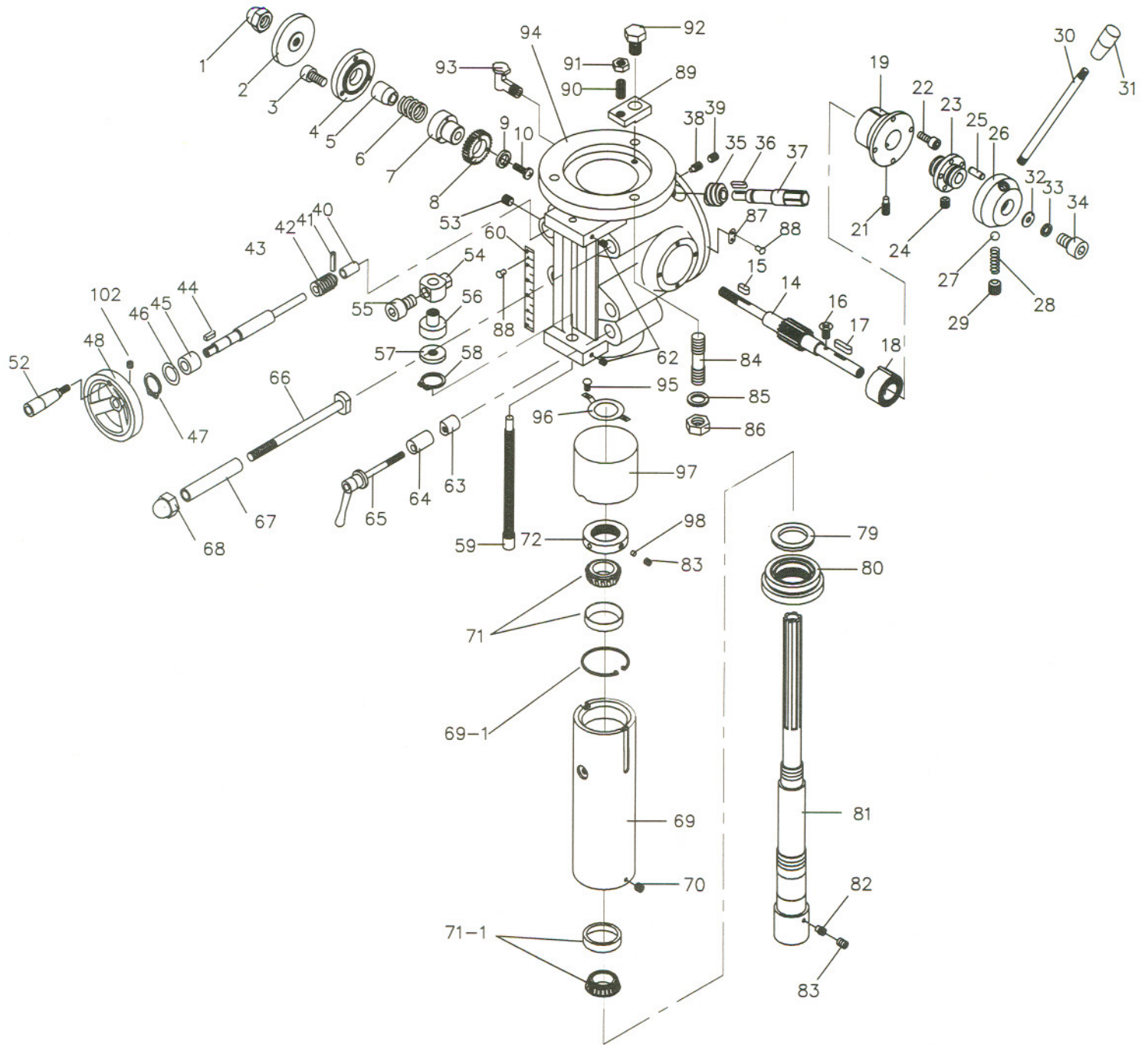


.....	JVM836-40T	Bushing		1
41	JVM836-41	Spring Pin	Ø3x14	1
42	JVM836-42	Worm		1
.....	JVM836-42T	Worm		1
43	JVM836-43	Shaft		1
.....	JVM836-43T	Shaft		1
44	JVM836-44	Flat Key	4x4x12	1
45	JVM836-45	Bushing		1
.....	JVM836-45T	Bushing		1
46	JVM836-46	Spacer		1
47	JVM836-47	C-Retaining Ring		1
48	JVM836-48	Wheel		1
52	JVM836-52	Hand Grip		1
53	TS-1523041	Set Screw	M6x10	1
54	JVM836-54	Locating Block		1
55	JVM836-55	Hex Socket Cap Screw	M8x12	1
56	JVM836-56	Graduated Ring		1
57	JVM836-57	Graduated Tight Nut		1
58	JVM836-58	C-Retaining Ring		1
59	JVM836-59	Screw		1
60	JVM836-60	Graduated Scale		1
62	TS-1524011	Set Screw	M8x8	2
63	JVM836-63	Tight Collar		1
64	JVM836-64	Tight Collar		1
65	JVM836-65	Flexible Handle		1
66	JVM836-66	T-Head Bolt		4
67	JVM836-67	Sleeve Pipe		4
68	JVM836-68	Castle Nut		4
69	JVM836-69	Rack Sleeve		1
.....	JVM836-69T	Rack Sleeve		1
70	JVM836-70	Cone point Set Screw	M5x5	1
72	JVM836-72	Nut		1
.....	JVM836-72T	Nut		1
.....	JVM836-72TA	Nut Assembly (Include #72,83,98)		1
73	BB6206	Ball Bearing	6206	1
74	JVM836-74	Cross Flat Head Screw	M5x10	1
75	JVM836-75	Nut		1
.....	JVM836-75T	Nut		1
.....	JVM836-75TA	Nut Assembly (Include #100,101)		1
76	JVM836-76	Spacer		1
77	JVM836-77	Spacer		1
78	ABB7008	Angular Ball Bearing	7008	2
79	JVM836-79	Protection Ring		1
80	JVM836-80	Protection Cover		1
.....	JVM836-80T	Protection Cover		1
81	JVM836-81	Spindle Shaft		1
82	JVM836-82	Full Dog Point Set Screw	M5x6	1
83	TS-1522011	Set Screw	M5x6	3
84	JVM836-84	Stud	M12x50	3
85	TS-1550081	Flat Washer	M12	3
86	TS-1540081	Hex. Nut	M12	3
87	JVM836-87	Limit Plate		1
88	JVM836-88	Rivet	Ø2	5
89	JVM836-89	Stop Block		1
90	TS-1523041	Set Screw	M6x12	1
91	TS-1540041	Hex. Nut	M6	1



92	..... TS-41490011	..... Hex. Screw	..... M8x12	..... 1
93	..... JVM836-93	..... Oil Can	..... 1/16"PS	..... 1
94	..... JVM836-94	..... Head Body	.....	..... 1
	..... JVM836-94T	..... Head Body	.....	..... 1
95	..... JVM836-95	..... Cross Round Cap Screw	..... M5x6	..... 2
96	..... JVM836-96	..... Plate	.....	..... 1
97	..... JVM836-97	..... Cover	.....	..... 1
98	..... JVM836-98	..... Aluminum Block	..... Ø4X3	..... 2
100	..... JVM836-100	..... Aluminum Block	..... Ø6X3	..... 2
101	..... JVM836-101	..... Set Screw	..... M8x8	..... 2
102	..... JVM836-102	..... Set Screw	..... M5x6	..... 1

**Head Assembly**  
Used with Serial Number 0050104 and Higher





## Head Assembly

### Used with Serial Number 0050104 and Higher

**Note:** Some index numbers in this parts list have two part numbers. If your milling machine has the serial number 0040050 and higher, use the part numbers ending with a "T". If your milling machine has the serial number xxx0049 and lower, use the part number without the letter "T".

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2	JVM836-02	Lock Nut		1
3	TS-1523041	Hex Socket Cap Screw	M6x12	3
4	JVM836-04	Cover		1
5	JVM836-05	Taper Sleeve		1
6	JVM836-06	Spring		1
7	JVM836-07	Transmission Sleeve		1
8	JVM836-08	Worm Gear		1
	JVM836-08T	Worm Gear		1
9	JVM836-09	Spring Washer	M4	3
10	JVM836-10	Cross Round Head Screw	M4x16	3
14	JVM836-14	Shaft		1
	JVM836-14T	Shaft		1
15	JVM836-15	Key	5x5x20	1
16	JVM836-16	Cross Flat Head Screw	M5x6	1
17	JVM836-17	Whitney Key		1
18	JVM836-18	Volume Spring		1
	JVM836-18T	Volume Spring		1
19	JVM836-19	Spring Bracket		1
21	TS-1524011	Set Screw	M8x8	1
22	TS-1514021	Hex Socket Cap Screw	M6x15	4
23	JVM836-23	Transmission Sleeve		1
24	TS-1524011	Set Screw	M8x8	1
25	JVM836-25	Round Pin		1
26	JVM836-26	Handle Base		1
	JVM836-26T	Handle Base		1
	JVM836-26TA	New Handle Assembly (Include:#26,30,31)		1
27	JVM836-27	Steel Ball	Ø6	1
28	JVM836-28	Spring		1
29	TS-1524011	Set Screw	M8x8	1
30	JVM836-30	Rocket Rod		1
	JVM836-30T	Rocket Rod		1
31	JVM836-31	Knob		1
	JVM836-31T	Knob		1
32	JVM836-32	Flat Washer	M8	1
33	JVM836-33	Spring Washer	M8	1
34	JVM836-34	Hex Socket Cap Screw	M8x16	1
35	JVM836-35	Worm		1
	JVM836-35T	Worm		1
36	JVM836-36	Whitney Key	4x4x16	1
37	JVM836-37	Worm Shaft		1
38	JVM836-38	Full Dog Point Set Screw	M5x6	1

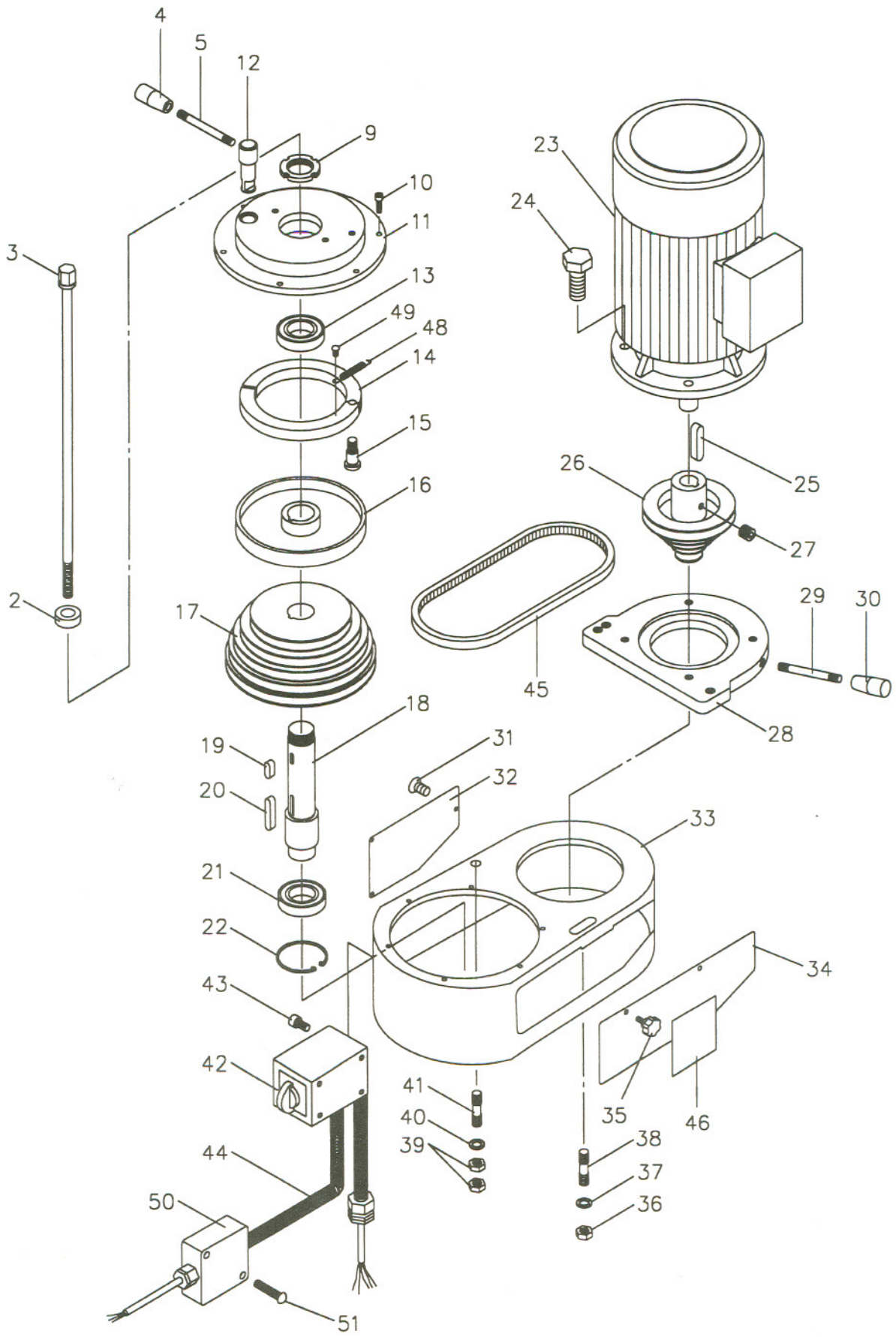


39	TS-1522011	Set Screw	M5x6	1
40	JVM836-40	Bushing		1
	JVM836-40T	Bushing		1
41	JVM836-41	Spring Pin	Ø3x14	1
42	JVM836-42	Worm		1
	JVM836-42T	Worm		1
43	JVM836-43	Shaft		1
	JVM836-43T	Shaft		1
44	JVM836-44	Flat Key	4x4x12	1
45	JVM836-45	Bushing		1
	JVM836-45T	Bushing		1
46	JVM836-46	Spacer		1
47	JVM836-47	C-Retaining Ring		1
48	JVM836-48	Wheel		1
52	JVM836-52	Hand Grip		1
53	TS-1523041	Set Screw	M6x10	1
54	JVM836-54	Locating Block		1
55	JVM836-55	Hex Socket Cap Screw	M8x12	1
56	JVM836-56	Graduated Ring		1
57	JVM836-57	Graduated Tight Nut		1
58	JVM836-58	C-Retaining Ring		1
59	JVM836-59	Screw		1
60	JVM836-60	Graduated Scale		1
62	TS-1524011	Set Screw	M8x8	2
63	JVM836-63	Tight Collar		1
64	JVM836-64	Tight Collar		1
65	JVM836-65	Flexible Handle		1
66	JVM836-66	T-Head Bolt		4
67	JVM836-67	Sleeve Pipe		4
68	JVM836-68	Castle Nut		4
69	JVM836-69	Rack Sleeve		1
	JVM836-69T	Rack Sleeve		1
69-1	JVM836-69T-1	C-Clip	R62	1
70	JVM836-70	Cone point Set Screw	M5x5	1
71	JVM836-71	Taper Roller Bearing	30206	1
71-1	JVM836-71-1	Taper Roller Bearing	32008	1
72	JVM836-72	Nut		1
	JVM836-72T	Nut		1
	JVM836-72TA	Nut Assembly (Include #72,83,98)		1
74	JVM836-74	Cross Flat Head Screw	M5x10	1
79	JVM836-79	Protection Ring		1
80	JVM836-80	Protection Cover		1
	JVM836-80T	Protection Cover		1
81	JVM836-81	Spindle Shaft		1
82	JVM836-82	Full Dog Point Set Screw	M5x6	1
83	TS-1522011	Set Screw	M5x6	3
84	JVM836-84	Stud	M12x50	3
85	TS-1550081	Flat Washer	M12	3
86	TS-1540081	Hex. Nut	M12	3
87	JVM836-87	Limit Plate		1
88	JVM836-88	Rivet	Ø2	5
89	JVM836-89	Stop Block		1
90	TS-1523041	Set Screw	M6x12	1
91	TS-1540041	Hex. Nut	M6	1
92	TS-41490011	Hex. Screw	M8x12	1
93	JVM836-93	Oil Can	1/16"PS	1



94	JVM836-94	Head Body	1
	JVM836-94T	Head Body	1
95	JVM836-95	Cross Round Cap Screw	M5x6 2
96	JVM836-96	Plate	1
97	JVM836-97	Cover	1
98	JVM836-98	Aluminum Block	Ø4X3 2
102	JVM836-102	Set Screw	M5x6 1

# Upper Head Assembly



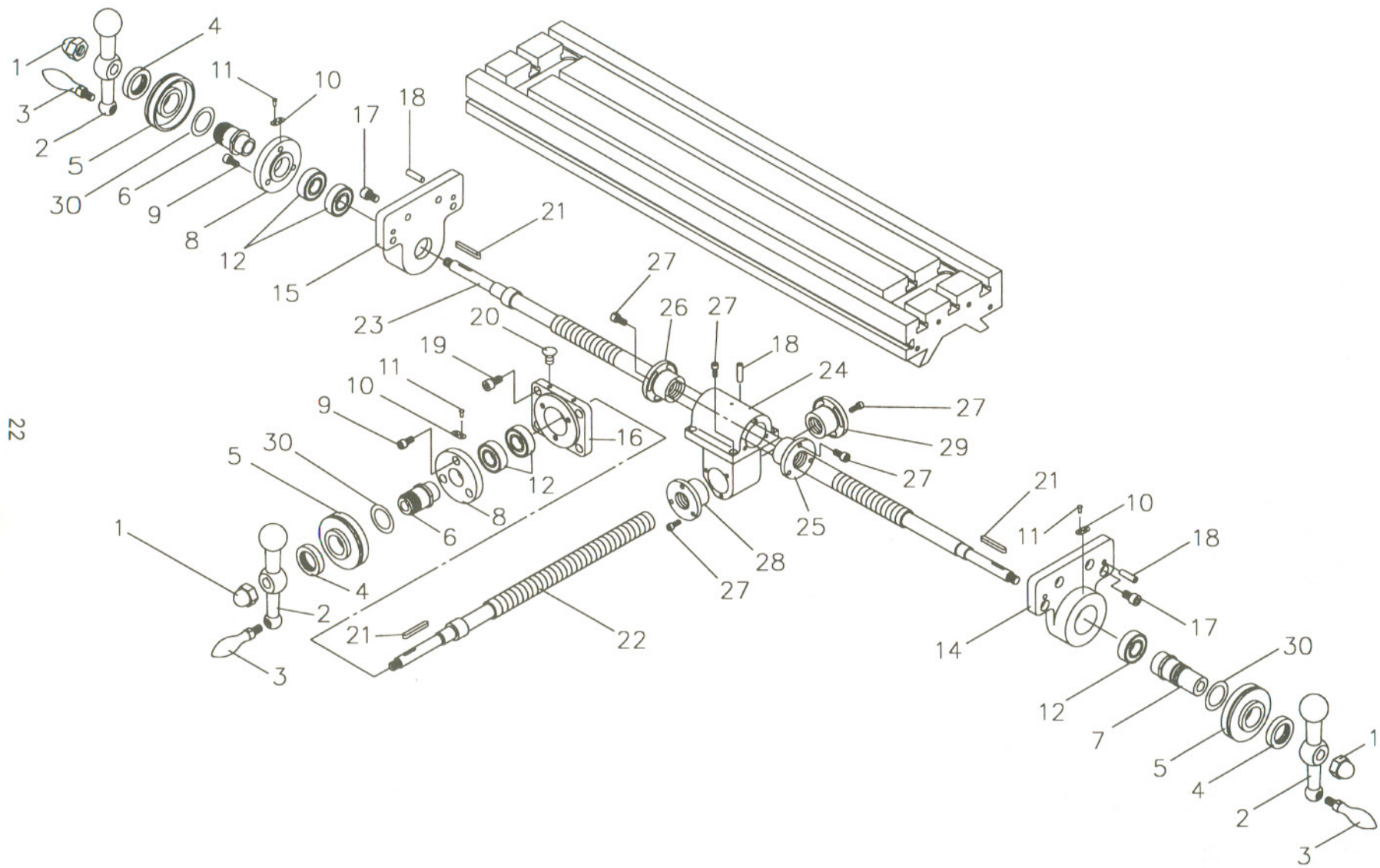
## Upper Head Assembly

**Note:** Some index numbers in this parts list have two part numbers. If your milling machine has the serial number 0040050 and higher, use the part numbers ending with a "T". If your milling machine has the serial number xxx0049 and lower, use the part number without the letter "T".

Index No.	Part No.	Description	Size	Qty.
2	VM-G22-1	Spacer		1
3	VM-G22	Draw Bar		1
4	VM-M3-1	Knob		1
	VM-M3-1T	Knob		1
5	VM-M3-3	Break Handle		1
	VM-M3-3T	Break Handle		1
9	VM-M11-1	Jam Nut		1
10	TS-1514021	Hex Socket Cap Screw	M6x16	6
11	VM-M4	Fixed Cover		1
	VM-M4T	Fixed Cover		1
12	VM-M3-5	Brake Rod		1
	VM-M3-5T	Brake Rod		1
13	BB6007ZZ	Ball Bearing	6007ZZ	1
14	VM-M2	Brake		1
	VM-M2T	Brake		1
	VM-M2TA	Brake Assembly (Include #14,15,48,49)		1
15	VM-M1	Screw		1
	VM-M1T	Screw		1
16	VM-M6	Brake Disc		1
17	VM-M8	Pulley		1
18	VM-M11	Spindle Shaft		1
19	VM-M7	Whitney Key	6x6x16	1
20	VM-M9	Whitney Key	6X6X32	1
21	BB6007ZZ	Ball Bearing	6007ZZ	1
22	VM-M5	C-Retaining Ring	Ø62	1
23	VM-M25	Motor	(1-1/2HP 1 PH)	1
	VM-M25-3Ph	Motor	(1-1/2HP 3 PH)	1
24	VM-M21	Hex. Head Screw	M10x25	4
25	VM-M25-1	Flat Key	8x7x36	1
26	VM-M19	Pulley		1
27	TS-1524011	Set Screw	M8x8	1
28	VM-M20	Motor Cover		1
	VM-M20T	Motor Cover		1
29	VM-M3	Rod		1
	VM-M3T	Rod		1
30	VM-M3-1	Knob		1
	VM-M3-1T	Knob		1
31	JVM836-31B	Cross Flat Head Screw	M6x6	3
32	VM-M12-2	Cover		1
33	VM-M12	Pulley Housing		1
34	VM-M12-1	Cover		1
35	VM-DM85	Screw		2
36	TS-1540081	Hex. Nut	M12	1
37	TS-1550081	Flat Washer	M12	1
38	VM-M23-1	Stud	M12x50	1



39	TS-1540081	Hex. Nut	M12	2
40	TS-1550081	Flat Washer	M12	1
41	VM-M23-1	Stud	M12x50	1
42	JVM836-42B	Switch Assembly (1Ph)		1
	JVM836-42-3Ph	Switch Assembly (3Ph)		1
43	JVM836-43B	Hex Socket Cap Screw	M6x8	4
44	JVM836-44B	Switch Cord (4C,1Ph)		1
	JVM836-44-3Ph	Switch Cord (6C,3Ph)		1
45	VB-A29	Belt	A29	1
46	VM-M26	Spindle Speed Chart		1
48	VM-M2-1	Spring		2
49	VM-M2-2	Cross Round Cap Screw		2
50	JVM836-U50	Plastic Electrical Box		1
51	JVM836-U51	Cross Round Cap Screw	M5x40L	2



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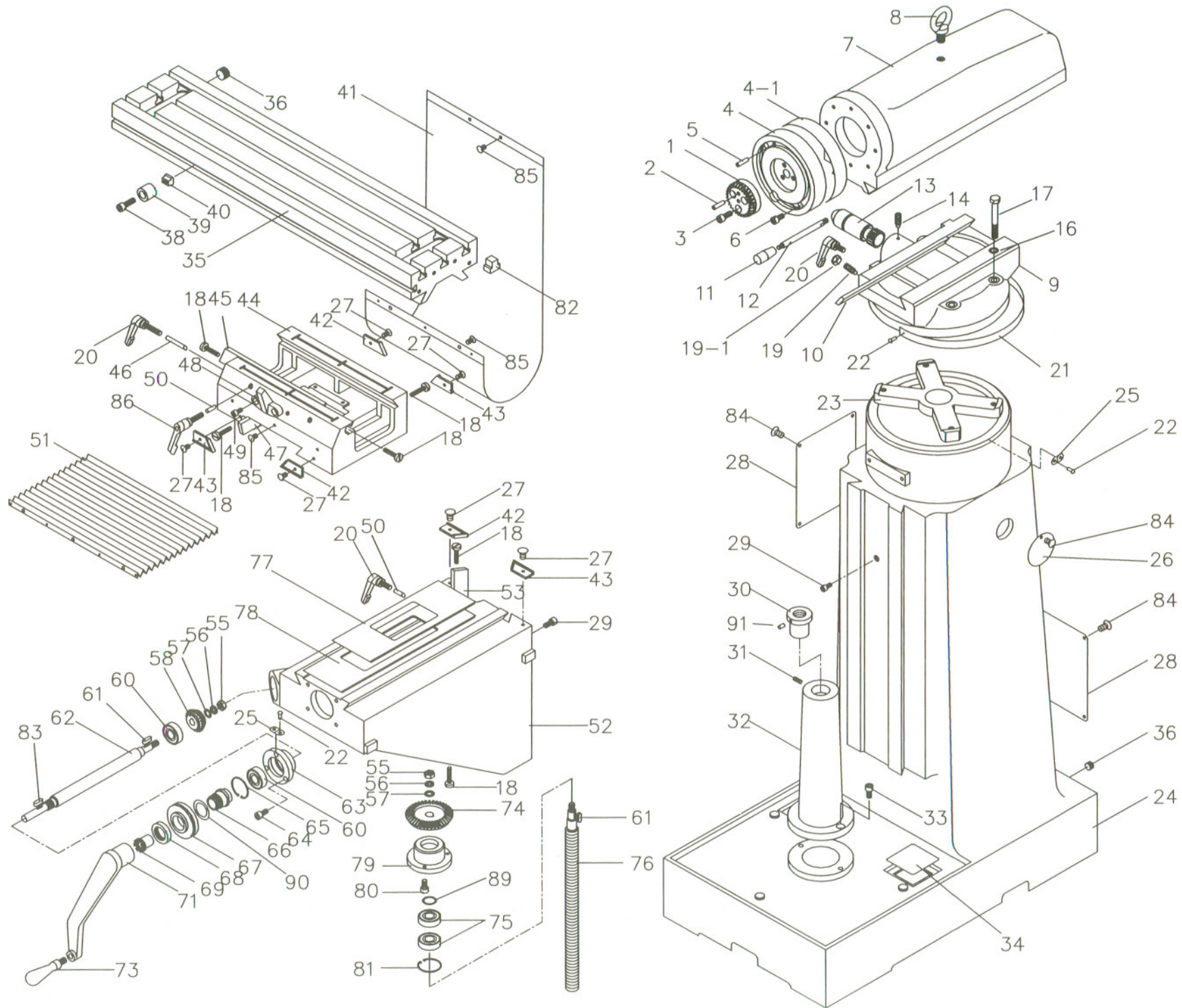
Leadscrew Assembly



## Lead screw Assembly

**Note:** Some index numbers in this parts list have two part numbers. If your milling machine has the serial number 0040050 and higher, use the part numbers ending with a "T". If your milling machine has the serial number xxx0049 and lower, use the part number without the letter "T".

Index No.	Part No.	Description	Size	Qty.
1	VM-I1	Castle Nut	M12	3
2	VM-I2	Handle		3
3	VM-I2-1	Ball Handle		3
4	VM-I3	Knurled Nut		3
	VM-I3T	Knurled Nut		3
5	VM-I5	Dial		3
	VM-I5T	Dial		3
6	VM-I24	Dial Holder		2
	VM-I24T	Dial Holder		2
	VM-I24TA	Dial Holder Assembly (Include #4,5,6,30)		1
7	VM-I6	Dial Holder		1
	VM-I6T	Dial Holder		1
	VM-I6TA	Dial Holder Assembly (Include #4,5,7,30)		1
8	VM-I8	Bearing Retaining Cover		2
9	TS-1515011	Hex Socket Cap Screw	M8x16	6
10	VM-M26	Limit Plate		3
11	VM-M26-1	River		6
12	BB6204	Ball Bearing	6204	5
14	VM-I14	Bearing Bracket		1
15	VM-I18	Bearing Bracket		1
16	VM-J11	Bearing Block		1
17	VM-I13	Hex. Socket Screw	M10x16	8
18	VM-I12	Taper Pin	Ø8x130	6
19	TS-1515021	Hex Socket Cap Screw	M8x20	4
20	JVM836-20B	Flat Screw	M6x6	2
21	VM-I4	Whitney Key	3x3x28	3
22	VM-J16	Lead Screw		1
23	VM-I15	Lead Screw		1
24	VM-J28	Feed Nut Bracket		1
25	VM-J26-1	Feed Screw Nut		1
26	VM-J26	Feed Screw Nut		1
27	TS-1514021	Hex. Socket Screw	M6x16	16
28	VM-J25-1	Feed Screw Nut		1
29	VM-J25	Feed Screw Nut		1
30	JVM836-T30	Spacer		3





## Base Assembly

**Note:** Some index numbers in this parts list have two part numbers. If your milling machine has the serial number 0040050 and higher, use the part numbers ending with a "T". If your milling machine has the serial number xxx0049 and lower, use the part number without the letter "T".

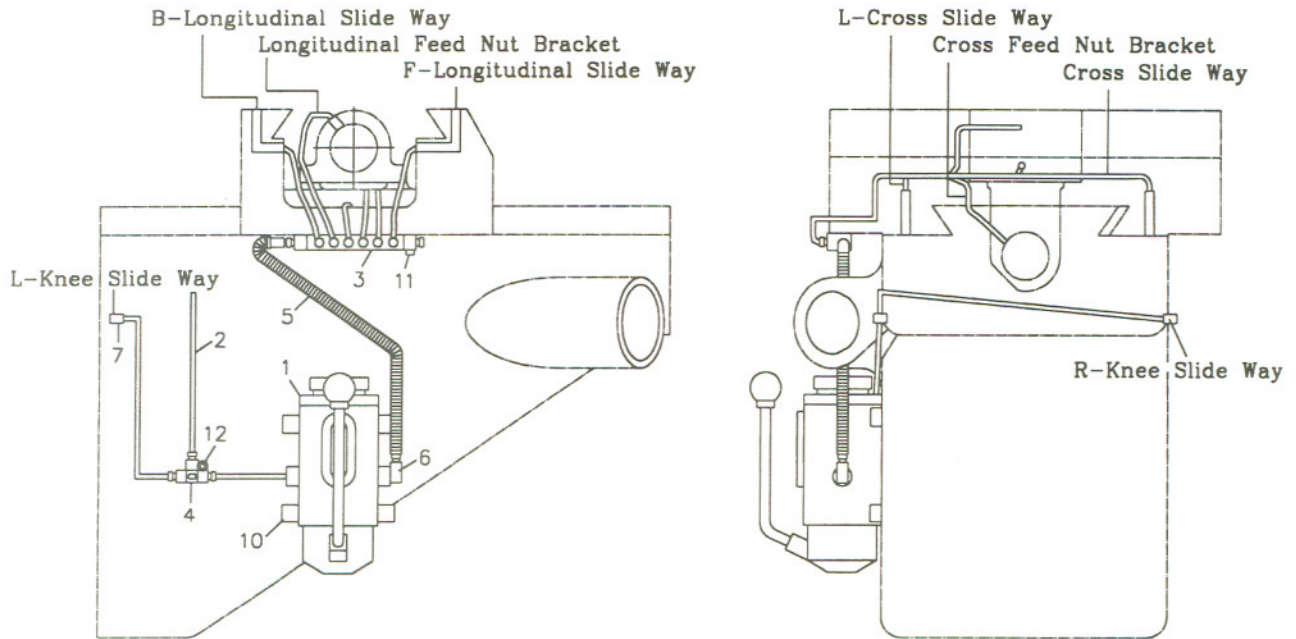
Index No.	Part No.	Description	Size	Qty.
1	VM-L11	Worm Gear		1
	VM-L11T	Worm Gear		1
2	VM-L13	Taper Pin	Ø8x150	1
3	TS-1505031	Hex Socket Cap Screw	M10x25	3
4	VM-L10	Graduation Dial		1
4-1	VM-L10-1	Graduation Dial Plate		1
5	VM-L9	Taper Pin	Ø8x130	2
6	TS-1515011	Hex Socket Cap Screw	M8x16	8
7	VM-L15	Ram		1
8	JVM836-08B	Eye Bolt	M16	1
9	VM-L6	Turret		1
10	VM-L5	Turret Gib		1
11	VM-L1-1	Knob		1
	VM-L1-1T	Knob		1
12	VM-L1	Handle		1
	VM-L1T	Handle		1
13	VM-L3	Pinion Shaft		1
	VM-L3T	Pinion Shaft		1
	VM-L3TA	Pinion Shaft Assembly (Include #11,12,13)		1
14	VM-L2	Full Dog Point Set Screw	M6x12	1
16	TS-1550081	Flat Washer	M12	4
17	VM-K12	Stud (S/N:0040063 & lower)	M12x105	4
	VM-K12N	Stud (S/N:0040064 & higher)	M12x115	4
18	JVM836-18B	Adjustable Screw		6
19	TS-1523021	Set Screw	M6x10	2
19-1	TS-1540041	Hex Nut	M6	2
20	VM-L4	Lock Handle	M10x40	5
21	VM-L7	Graduated Scale		1
22	VM-L7-1	Rivet	Ø2	7
23	VM-K11	Spider Arm		1
24	VM-K9	Base		1
25	VM-K17	Limit plate		2
26	VM-K5	Plate		1
27	JVM836-27B	Cross Flat Screw	M6x6	22
	JVM836-27BT	Cross Round Cap Screw	M5x12	6
28	VM-K13	Plate		2
29	JVM836-29	Hex. Socket Screw	M8x12	2
30	VM-H29	Elevating Nut		1
31	TS-1523051	Set Screw	M6x15	1
32	VM-H30	Elevation Screw Stand		1
33	VM-H30-1	Hex Socket Cap Screw	M10x30	2
34	VM-K2	Strainer Net		2
35	VM-I37	Table		1
36	VM-I40	Oil Plug	3/8"PT	2



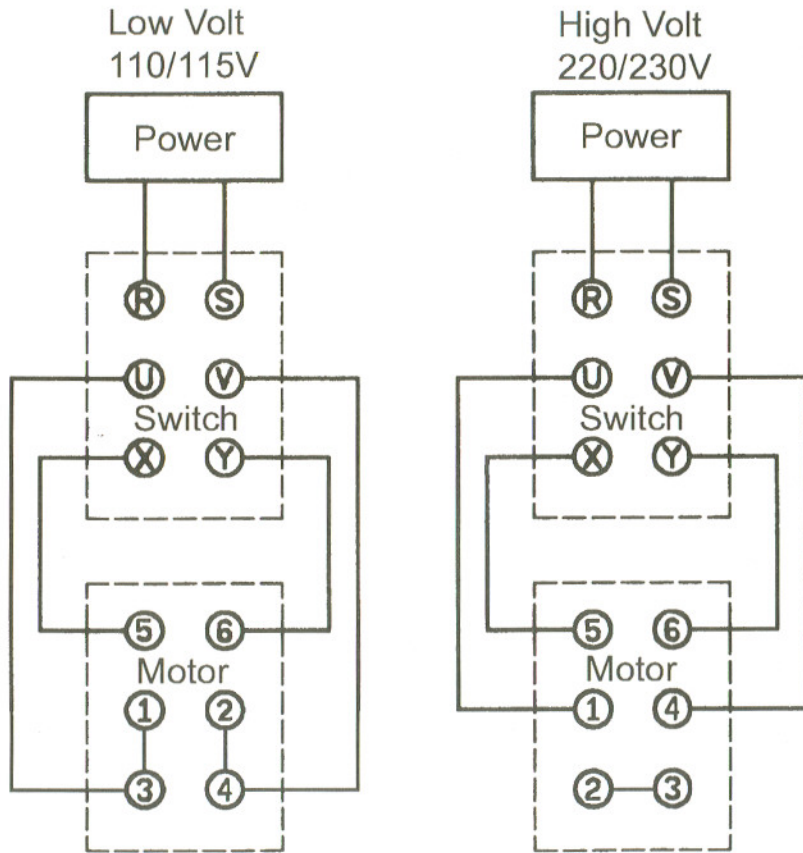
38	VM-I33-2	Hex. Socket Screw	M8x20	2
39	VM-I33	Stop Ring		2
40	VM-I33-1	T-Nut		2
41	VM-C-100	Dust Plastic		1
42	VM-H32	Wiper		3
43	VM-H32-1	Wiper		3
44	VM-J36	Saddle		1
45	VM-I32	Saddle Gib		1
46	VM-J39-1	Shoe		2
47	VM-J20	Saddle Gib		1
48	VM-J30	Table Stop Bracket		1
49	TS-1515021	Hex Socket Cap Screw	M8x20	2
50	VM-J29-1	Shoe		4
51	VM-C-101	Dust Plastic		1
52	VM-H35	Knee		1
53	VM-H34	Knee Gib		1
55	TS-1540081	Hex. Nut	M12	2
56	VM-H19	Spring Washer	M12	2
57	TS-1550081	Flat Washer	M12	2
58	VM-H17	Straight Bevel Gear		1
60	BB6204	Ball Bearing	6204	2
61	VM-H6	Whitney Key	5x5x16	3
62	VM-H12	Shaft		1
	VM-H12T	Shaft		1
63	VM-H11	Bearing Block		1
64	TS-1514021	Hex Socket Cap Screw	M6x16	3
65	VM-H7	C-Retaining Ring	Ø47	1
66	VM-H5	Dial Holder		1
	VM-H5T	Dial Holder		1
	VM-H5TA	Dial Holder Assembly (Include #66,67,68,69,71,90)		1
67	VM-H3	Dial		1
	VM-H3T	Dial		1
68	VM-H2	Knurled Nut		1
	VM-H2T	Knurled Nut		1
69	VM-H4	Clutch Insert		1
	VM-H4T	Clutch Insert		1
71	VM-H1	Hand Lever		1
	VM-H1T	Hand Lever		1
73	VM-H1-3	Hand Grip		1
74	VM-H24	Straight Bevel Gear		1
	VM-H24T	Straight Bevel Gear		1
75	BB6204	Ball Bearing	6204	2
76	VM-H27	Elevating Screw		1
77	VM-J37-1	Upper Chip Guard		1
78	VM-J37	Lower Chip Guard		1
79	VM-H25	Bearing Housing		1
80	TS-1514031	Hex Socket Cap Screw	M6x20	3
81	JVM836-B81	C-Clip	S47	1
82	VM-I39	Rubber T-Nut		6
83	JVM836-B83	Key	3x3x28	1
84	JVM836-B84	Cross Round Cap Screw	M6x10	9
85	JVM836-B85	Cross Round Cap Screw	M6x12	7
86	JVM836-B86	Lock Handle	M10x20	2
89	JVM836-B89	Spacer		1
90	JVM836-B90	Spacer		1
91	JVM836-B91	Oil Block	1/4"	1

## One Shot Lubrication System

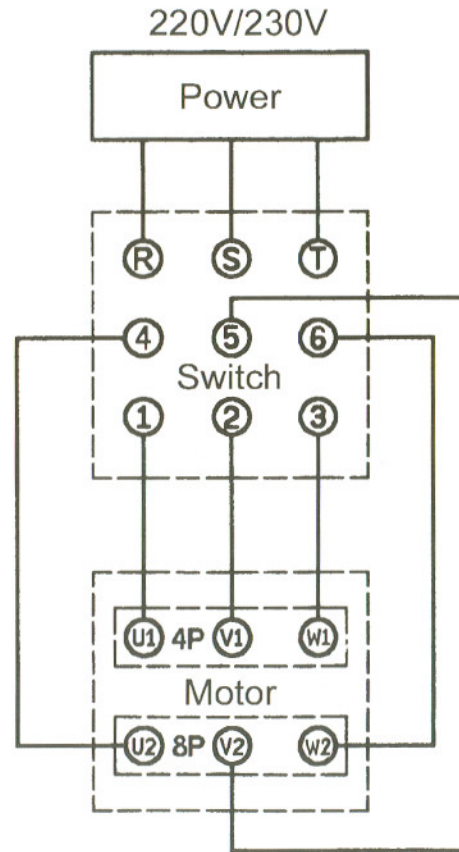
Index No.	Part No.	Description	Size	Qty.
1	JVM836-HP	Hand Oiling Pump		1
2	JVM836-ALMP	Aluminum Pipe		1
3	JVM836-DB	Oil Regulating Distributor		1
4	JVM836-TJ	T-Joint		1
5	JVM836-FST	Flexible Steel Tube		1
6	JVM836-CJ	Check Joint		2
7	JVM836-EJ	Elbow Joint		2
10	TS-1514021	Hex Socket Cap Screw	M6x16	4
11	TS-1503061	Hex Socket Cap Screw	M6x25	2
12	TS-1503061	Hex Socket Cap Screw	M6x25	1



Model No. JVM-836-1  
1 Phase Wiring Diagram



Model No. JVM-836-3  
3 Phase 4/8 Poles Wiring Diagram



Wiring Diagram







