OPERATOR'S MANUAL
JVM-836 Milling Machine

WMH TOOL GROUP
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Part No. M-690036
09/03—B

Warranty & Service

WMH Tool Group warrants every product it sells. If one of our tools needs service or repair, one of our Authorized Repair Stations located throughout the United States can give you quick service.

In most cases, any one of these WMH Tool Group Repair Stations can authorize warranty repair, assist you in obtaining parts, or perform routine maintenance and major repair on your JET, Performax, Powermatic or Wilton tools.

For the name of an Authorized Repair Station in your area, call 1-800-274-6848.

More Information

WMH Tool Group is consistently adding new products to the line. For complete, up-to-date product information, check with your local WMH Tool Group distributor or visit wmhtoolgroup.com.

Limited Warranty

WMH Tool Group (including JET, Performax, Powermatic and Wilton brands) 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 ALL PRODUCTS UNLESS SPECIFIED OTHERWISE. This warranty does not apply to defects due directly or indirectly to misuse, abuse, negligence or accidents, normal wear-and-tear, repair or alterations outside our facilities, or to a lack of maintenance.

WMH TOOL GROUP 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 MERCHANTIBILITY 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. WMH TOOL GROUP 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 Repair Station designated by our office. Proof of purchase date and an explanation of the complaint must accompany the merchandise. If our inspection discloses a defect, WMH Tool Group 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 a refund. WMH Tool Group will return repaired product or replacement at our expense, but if it is determined there is no defect, or that the defect resulted from causes not within the scope of our warranty, then the user must bear the cost of storing and returning the product. This warranty gives you specific legal rights; you may also have other rights, which vary from state to state.

WMH Tool Group sells through distributors only. WMH Tool Group reserves the right to effect at any time, without prior notice, those alterations to parts, fittings, and accessory equipment which they may deem necessary for any reason whatsoever.

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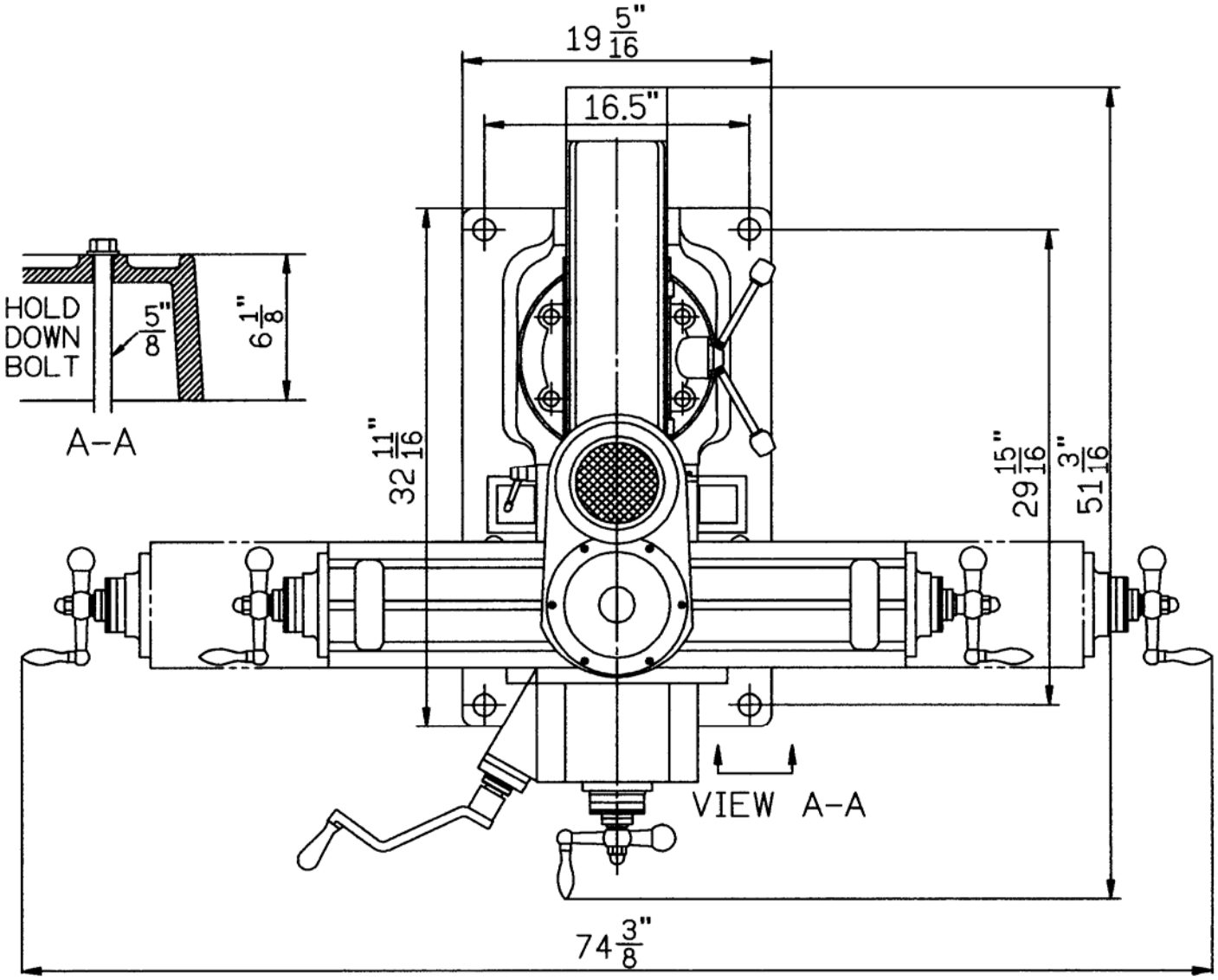
The specifications in this manual are given as general information and are not binding. JET Equipment & Tools reserves the right to effect, at any time and without prior notice, changes or alterations to parts, fittings, and accessory equipment deemed necessary for any reason whatsoever.

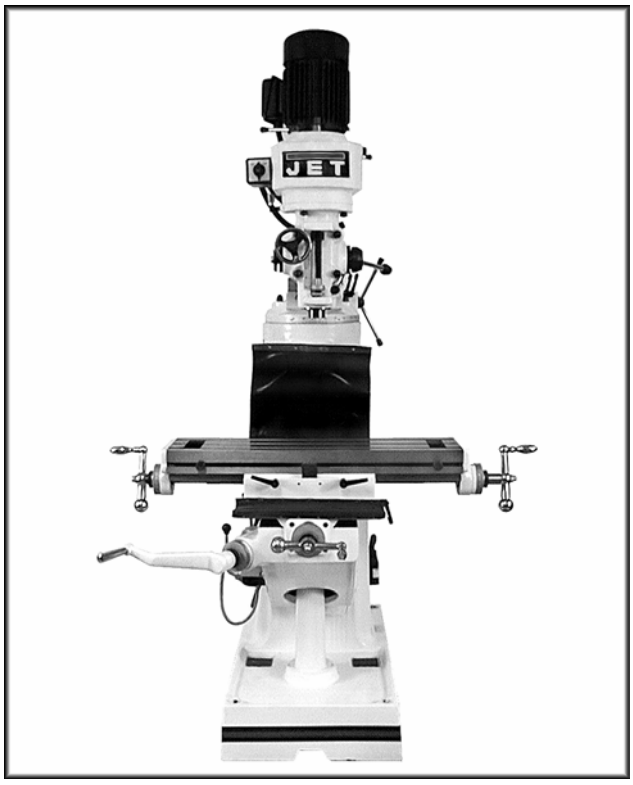
JVM-836 Installation Layout



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.

Rotating 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 rotate the head.

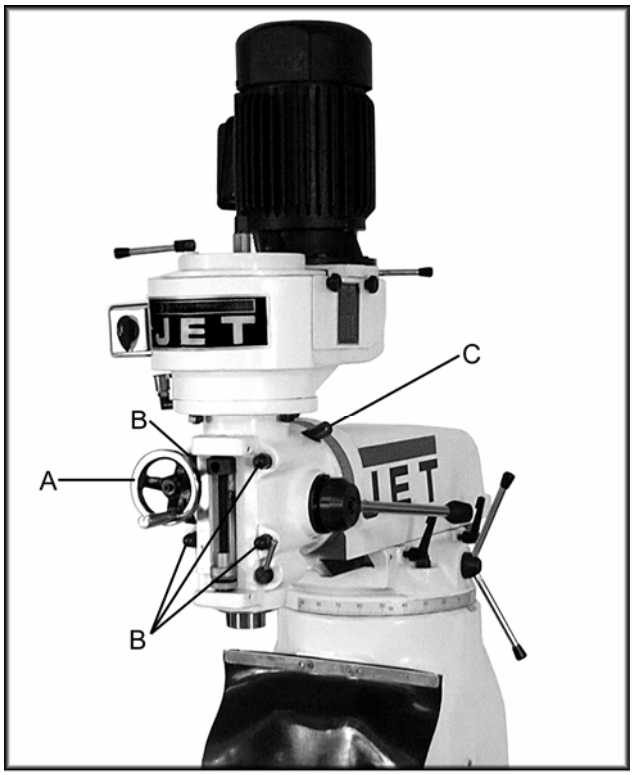


Fig. 1

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.

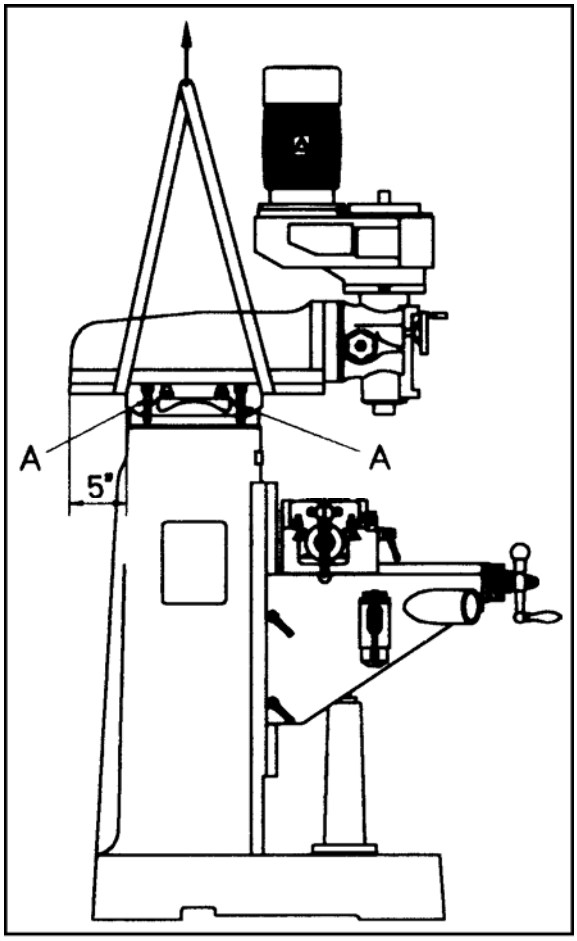


Fig. 2

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.

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.

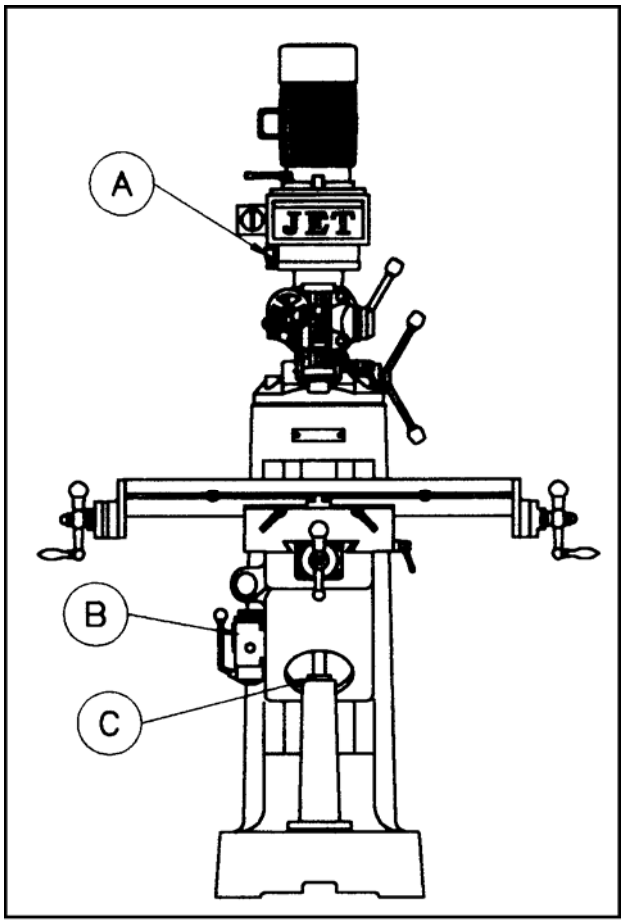


Fig. 3

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.

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.

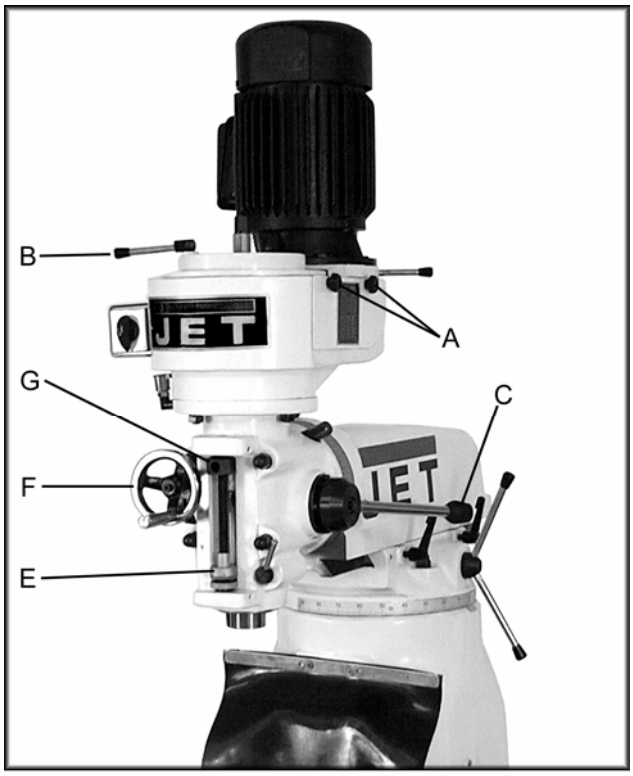


Fig. 4

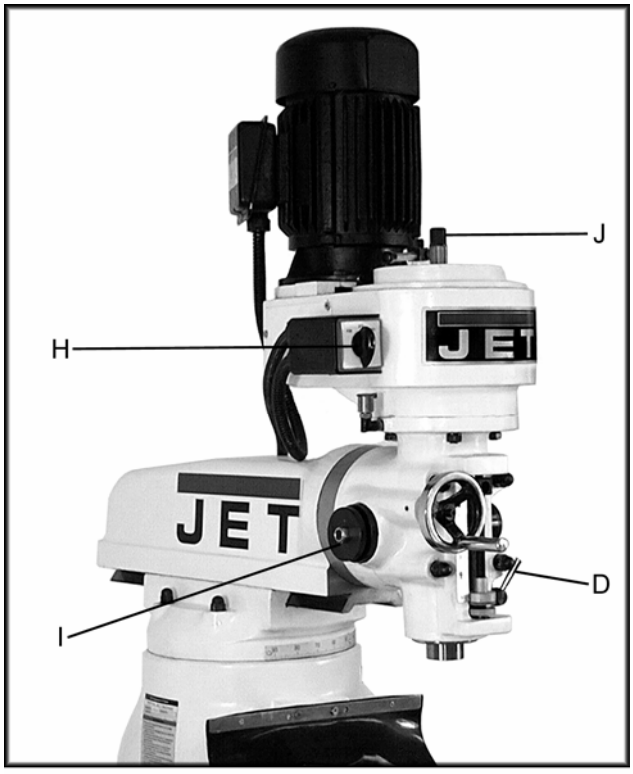


Fig. 5

K. **Longitudinal Movement** (K, Fig. 6) handles located on opposite ends of the table. This controls the X axis.

L. **Cross Movement** (L, Fig. 6) handle located directly in front of the machine. This controls the Y axis.

M. **Knee Handle** (M, Fig. 6) this raises the table up and down.

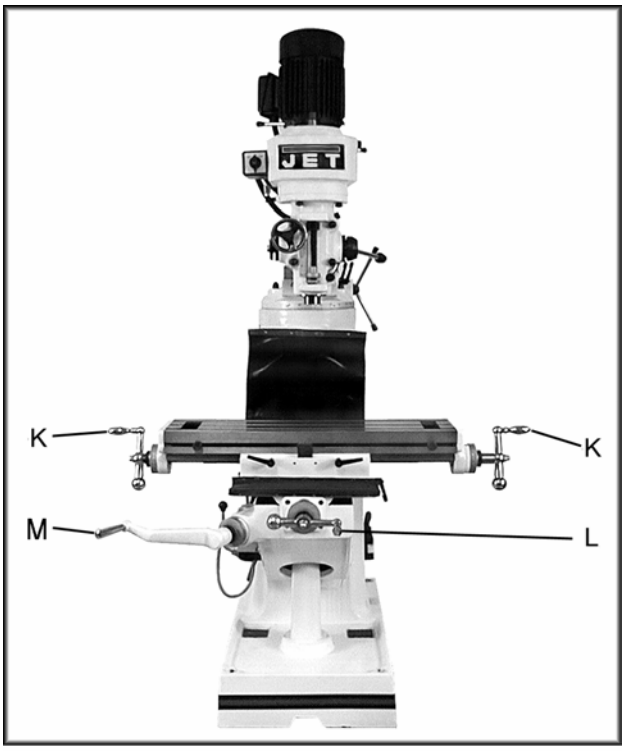


Fig. 6

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).

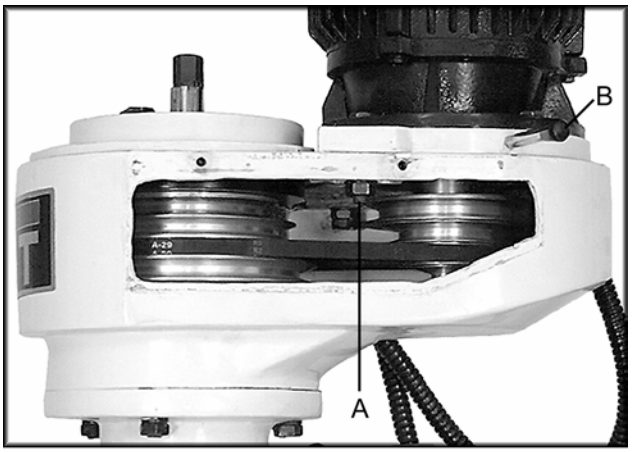


Fig. 7

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.

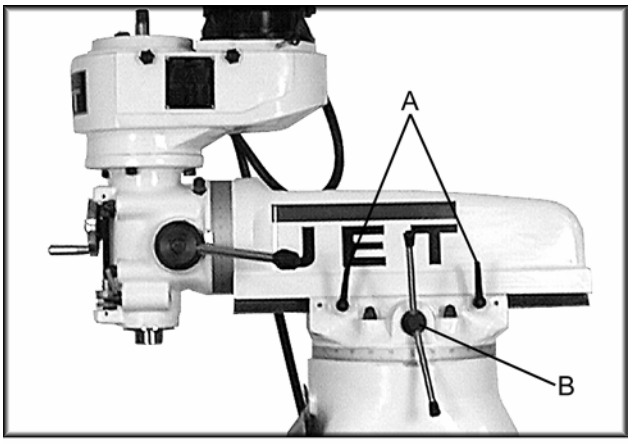


Fig. 8

Adjustments

1. **Knee Gib Adjustment** (#53, page 18) adjust gib screw (#18, page 18) 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, page 18) adjust gib screw (#18, page 18) found on the right side front of the carriage for proper travel and excess play.

3. **Table Gib Adjustment** (#45, page 18) adjust gib screw (#18, page 18) 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, page 18) adjust two set screws (#19, page 18) found on the side of the ram for proper travel.

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 90º to the table in the X axis.

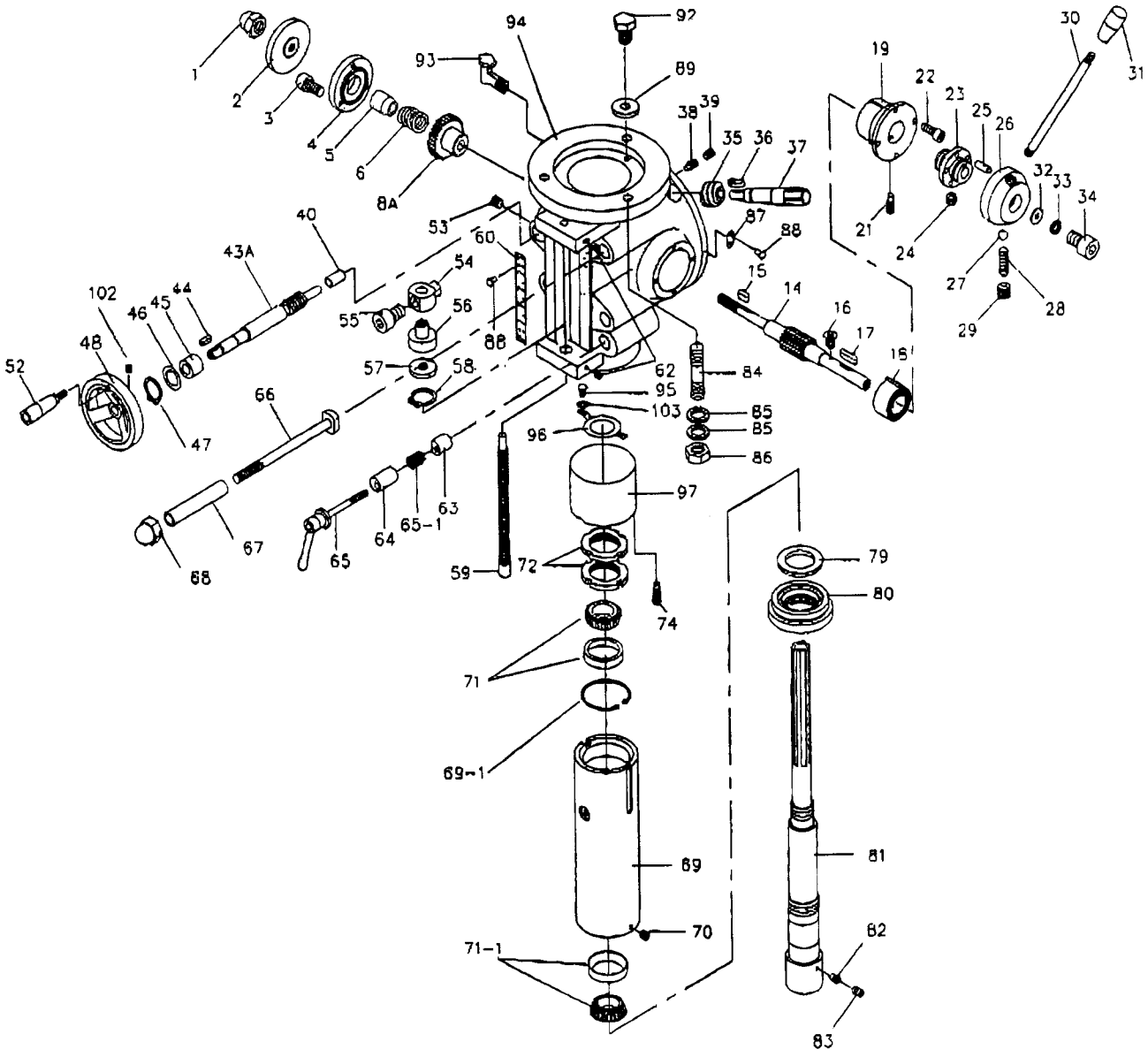
6. **Longitudinal and Crossfeed Adjustment -** if there is excessive backlash in the handle.

   a) Loosen hex socket head screw (#27, page 16).

   b) Turn feed screw nut (#26 or #29, page 16) to remove play.

   c) Tighten hex socket head screw.

Head Assembly

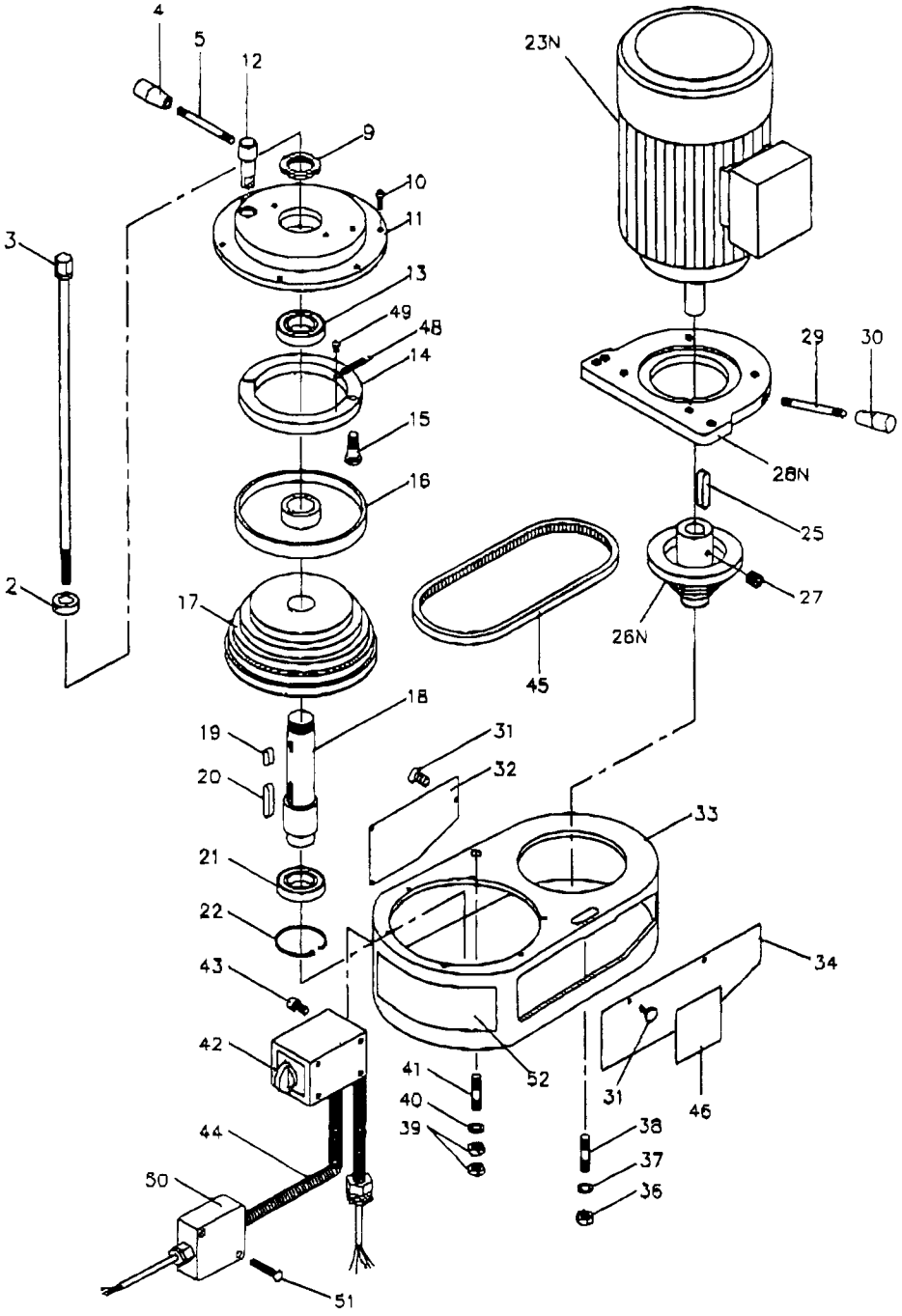


Head Assembly
Used with Serial Number 0050104 and Higher

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 (S/N: 307XXXX & lower)		1
8	JVM836-08T	Worm Gear (serial # 0040050 and higher)		1
8A	JVM836-08TN	Worm Gear (serial # 307XXXX and higher)		1
9	JVM836-09	Spring Washer (S/N: 307XXXX & lower)	M4	3
10	JVM836-10	Cross Head Screw (S/N: 307XXXX & lower)	M4x16	3
14	JVM836-14T	Shaft (serial # 0040050 and higher)		1
15	JVM836-15	Key	5x5x20	1
16	JVM836-16	Cross Flat Head Screw	M5x6	1
17	JVM836-17	Whitney Key		1
18	JVM836-18T	Volume Spring (serial # 0040050 and higher)		1
19	JVM836-19	Spring Bracket		1
21	JVM836-21	Full Dog Point Set Screw	M8x8	1
22	TS-1514021	Hex Socket Cap Screw	M6x15	4
23	JVM836-23	Transmission Sleeve		1
24	TS-1523031	Set Screw	M6x6	1
25	JVM836-25	Round Pin		1
26	JVM836-26T	Handle Base (serial # 0040050 and higher)		1
	JVM836-26TA	New Handle Assembly (Include: #26,30,31)		1
27	JVM836-27	Steel Ball	ϕ6	1
28	JVM836-28	Spring		1
29	TS-1524011	Set Screw	M8x8	1
30	JVM836-30T	Rocket Rod (serial # 0040050 and higher)		1
31	JVM836-31T	Knob (serial # 0040050 and higher)		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	JVM836-35T	Worm (serial # 0040050 and higher)		1
36	JVM836-36	Whitney Key	4x4x12	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	JVM836-40T	Bushing (serial # 0040050 and higher)		1
41	JVM836-41	Spring Pin (serial # 307XXXX and lower)	ϕ3x14	1
42	JVM836-42T	Worm (serial # 307XXXX and lower)		1
43	JVM836-43T	Shaft (serial # 0040050 and higher)		1
43A	JVM836-43TN	Shaft (serial # 307XXXX and higher)		1
44	JVM836-44	Flat Key	4x4x12	1
45	JVM836-45T	Bushing (serial # 0040050 and higher)		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	3/8"-24UNF	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-1523041	Set Screw	M6x12	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	JVM836-69T	Rack Sleeve (serial # 0040050 to 0050103)		1
	JVM836-69N	Rack Sleeve (serial # 0050104 and higher)		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	JVM836-72N	Jam Nut (serial # 0050104 and higher)		2
79	JVM836-79	Protection Ring		1
80	JVM836-80T	Protection Cover (serial # 0040050 and higher)		1
81	JVM836-81	Spindle Shaft		1
82	JVM836-82	Full Dog Point Set Screw	M5x6	1
83	TS-1522011	Set Screw	M5x6	1
84	JVM836-84	Stud	M12x50	3
85	JVM836-85	Spring Washer	M12	3
86	TS-1540081	Hex. Nut	M12	3
87	JVM836-87	Limit Plate		1
88	JVM836-88	Rivet	ϕ2	5
89	JVM836-89T	Stop Block (serial # 0040050 and higher)		1
90	TS-1523041	Set Screw	M6x12	1
93	JVM836-93	Oil Can	1/16" PS	1
94	JVM836-94T	Head Body (serial # 0040050 and higher)		1
95	JVM836-95	Cross Round Cap Screw	M5x6	2
96	JVM836-96	Plate		1
97	JVM836-97	Cover		1
102	JVM836-102	Set Screw	M5x6	1

Upper Head Assembly

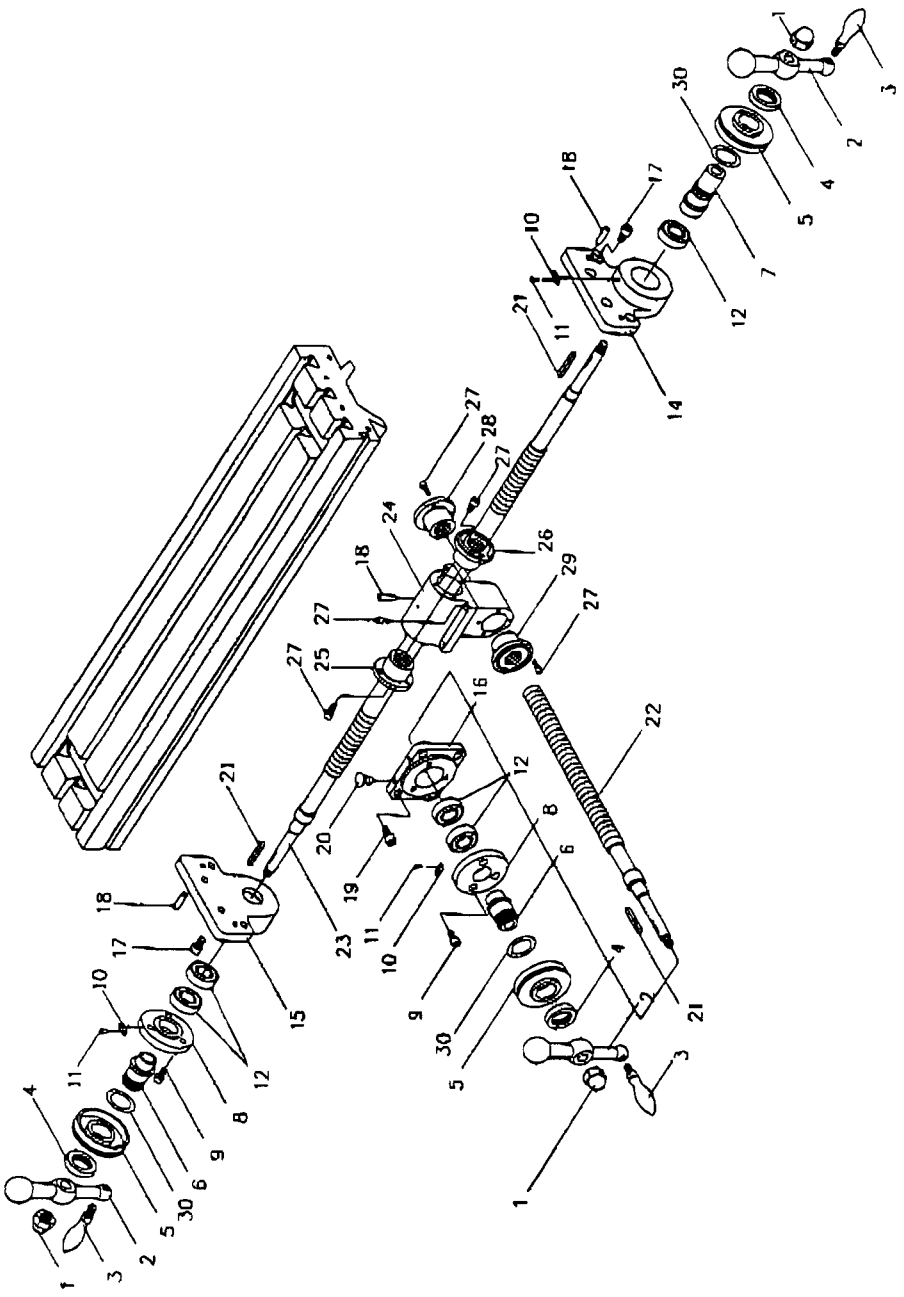


Upper Head Assembly

Index No.	Part No.	Description	Size	Qty.
2	VM-G22-1	Spacer		1
3	VM-G22	Draw Bar		1
4	VM-M3-1	Knob (serial # xxxx0049 and lower)		1
	VM-M3-1T	Knob (serial # 0040050 and higher)		1
5	VM-M3-3	Break Handle (serial # xxxx0049 and lower)		1
	VM-M3-3T	Break Handle (serial # 0040050 and higher)		1
9	VM-M11-1	Jam Nut		1
10	TS-1514021	Hex Socket Cap Screw	M6x16	6
11	VM-M4	Fixed Cover (serial # xxxx0049 and lower)		1
	VM-M4T	Fixed Cover (serial # 0040050 and higher)		1
12	VM-M3-5	Brake Rod (serial # xxxx0049 and lower)		1
	VM-M3-5T	Brake Rod (serial # 0040050 and higher)		1
13	BB-6007ZZ	Ball Bearing	6007ZZ	1
14	VM-M2	Brake (serial # xxxx0049 and lower)		1
	VM-M2T	Brake (serial # 0040050 and higher)		1
	VM-M2TA	Brake Assembly (Include #14,15,48,49)		1
15	VM-M1	Screw (serial # xxxx0049 and lower)		1
	VM-M1T	Screw (serial # 0040050 and higher)		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	BB-6007ZZ	Ball Bearing	6007ZZ	1
22	VM-M5	C-Retaining Ring	ϕ62	1
23	VM-M25C	Motor (serial # xxxx0049 and lower)	(1-1/2HP 1 PH)	1
	VM-M25C-3Ph	Motor (serial # xxxx0049 and lower)	(1-1/2HP 3 PH)	1
	VM-M25	Motor (from serial # 0040050 to 2110610)	(1-1/2HP 1 PH)	1
	VM-M25-3Ph	Motor (from serial # 0040050 to 2110610)	(1-1/2HP 3 PH)	1
	VM-M25N	Motor (serial # 2120611 and higher)	(1-1/2HP 1 PH)	1
	VM-M25N-3Ph	Motor (serial # 2120611 and higher)	(1-1/2HP 3 PH)	1
	VM-M25CS	Centrifugal Switch (Not Shown)		1
	VM-M25RC	Running Capacitor (Not Shown)	20uf/350VAC	1
	VM-M25SC	Starting Capacitor (Not Shown)	300MFD/250VAC	1
24	VM-M21	Hex. Head Screw	M10x25	4
25	VM-M25-1	Flat Key	8x7x36	1
26	VM-M19	Pulley (serial # 2110610 and lower)		1
	VM-M19N	Pulley (serial # 2120611 and higher)		1
27	TS-1524011	Set Screw	M8x8	1
28	VM-M20	Motor Cover (serial # xxxx0049 and lower)		1
	VM-M20T	Motor Cover (from S/N# 0040050 to 2110610)		1
	VM-M20TN	Motor Cover (serial # 2120611 and higher)		1
29	VM-M3	Rod (serial # xxxx0049 and lower)		1
	VM-M3T	Rod (serial # 0040050 and higher)		1
30	VM-M3-1	Knob (serial # xxxx0049 and lower)		1
	VM-M3-1T	Knob (serial # 0040050 and higher)		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	Plum Knob (serial # 0040049 & lower)		2
	JVM836-31B	Cross Flat Screw (serial # 0040050 & higher)	M6x6	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	M6x12	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-M26-1PH	Spindle Speed Chart		1
	VM-M26-3PH	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
52	JVM836-N01	JET label		1

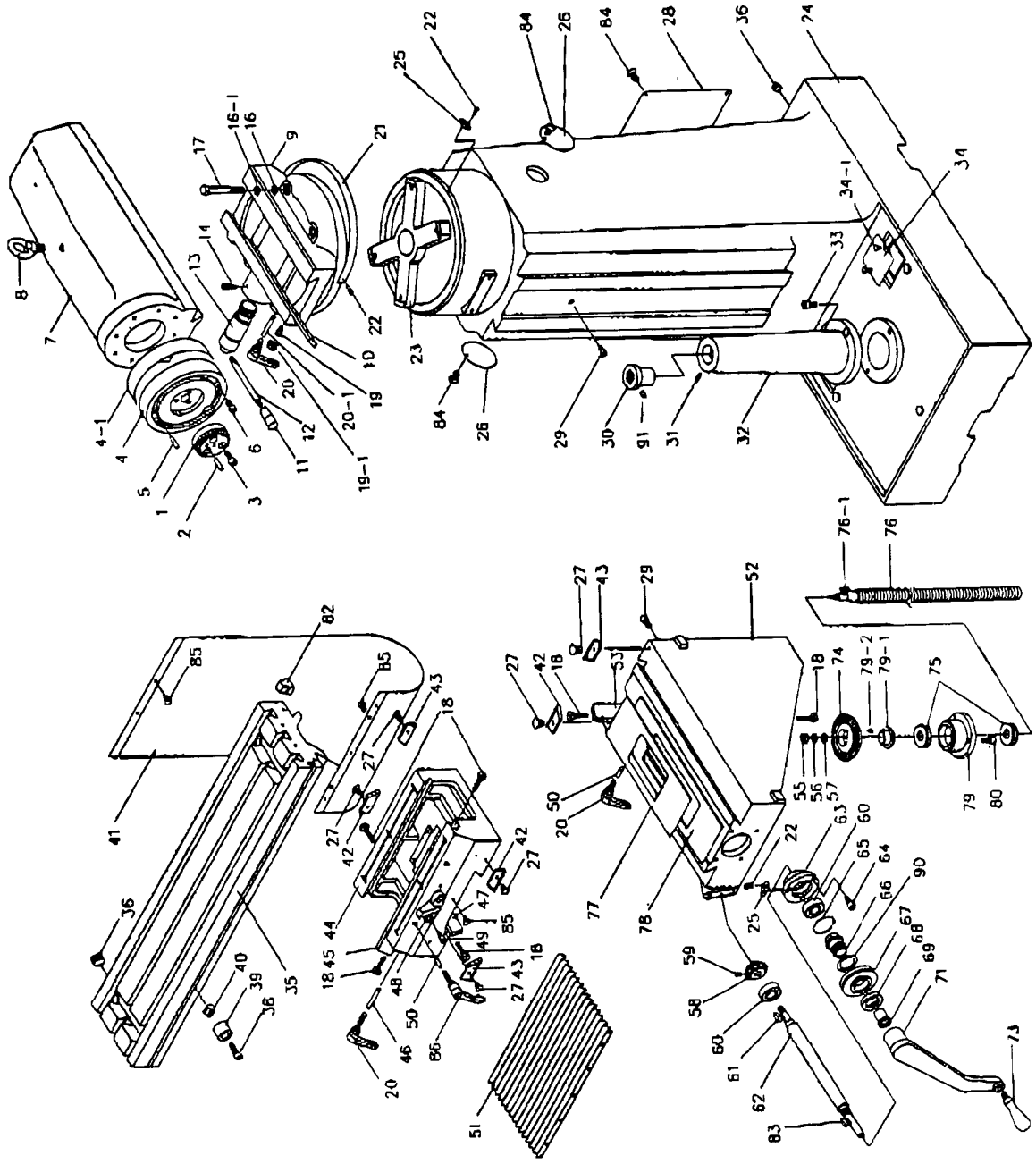
Leadscrew Assembly



Leadscrew Assembly

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 (serial # xxxx0049 and lower)		3
	VM-I3T	Knurled Nut (serial # 0040050 and higher)		3
5	VM-I5	Dial (serial # xxxx0049 and lower)		3
	VM-I5T	Dial (serial # 0040050 and higher)		3
6	VM-I24	Dial Holder (serial # xxxx0049 and lower)		2
	VM-I24T	Dial Holder (serial # 0040050 and higher)		2
	VM-I24TA	Dial Holder Assembly (Include #4,5,6,30)		1
7	VM-I6	Dial Holder (serial # xxxx0049 and lower)		1
	VM-I6T	Dial Holder (serial # 0040050 and higher)		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	BB-6204	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	ϕ8x130	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 (serial # 2010471 and lower)		1
22	VM-J16T	Lead Screw (serial # 2020472 and higher)		1
23	VM-I15	Lead Screw (serial # 2010471 and lower)		1
23	VM-I15T	Lead Screw (serial # 2020472 and higher)		1
24	VM-J28	Feed Nut Bracket		1
25	VM-J26-1	Feed Screw Nut (serial # 2010471 and lower)		1
25	VM-J26-1T	Feed Screw Nut (serial # 2020472 and higher)		1
26	VM-J26	Feed Screw Nut (serial # 2010471 and lower)		1
26	VM-J26T	Feed Screw Nut (serial # 2020472 and higher)		1
27	TS-1514021	Hex. Socket Screw	M6x16	14
28	VM-J25-1	Feed Screw Nut (serial # 2010471 and lower)		1
28	VM-J25-1T	Feed Screw Nut (serial # 2020472 and higher)		1
29	VM-J25	Feed Screw Nut (serial # 2010471 and lower)		1
29	VM-J25T	Feed Screw Nut (serial # 2020472 and higher)		1
30	JVM836-T30	Spacer		3

Base Assembly



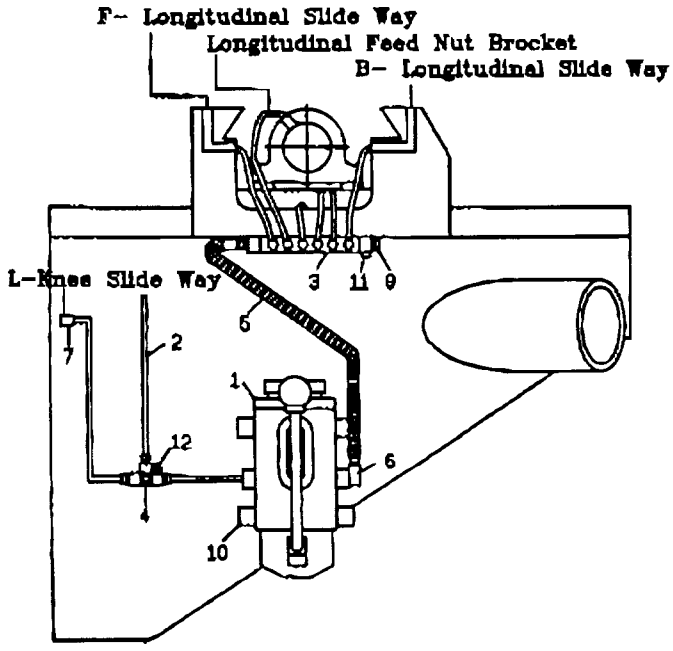
Base Assembly

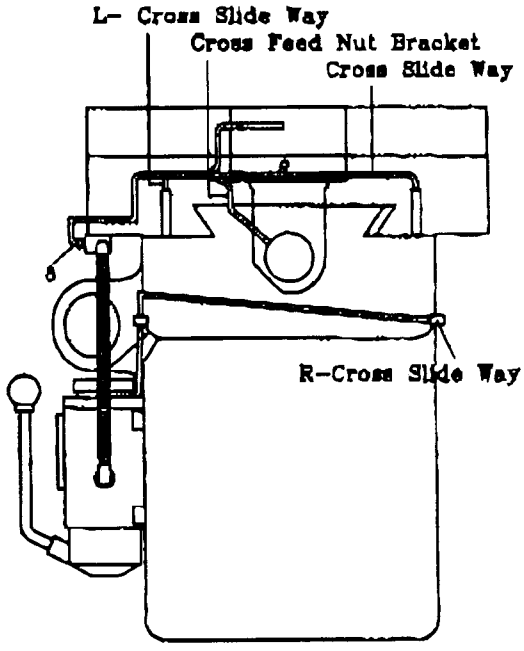
Index No.	Part No.	Description	Size	Qty.
1	VM-L11	Worm Gear (serial # xxxx0049 and lower)		1
	VM-L11T	Worm Gear (serial # 0040050 and higher)		1
2	VM-L13	Taper Pin	ϕ8x150	1
3	TS-1505031	Hex Socket Cap Screw	M10x25	3
4	VM-L10	Graduation Dial		1
4-1	VM-L10-1	Graduation Dial Plate		1
5	VM-L9	Taper Pin	ϕ8x130	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 (serial # xxxx0049 and lower)		1
	VM-L1-1T	Knob (serial # 0040050 and higher)		1
12	VM-L1	Handle (serial # xxxx0049 and lower)		1
	VM-L1T	Handle (serial # 0040050 and higher)		1
13	VM-L3	Pinion Shaft (serial # xxxx0049 and lower)		1
	VM-L3T	Pinion Shaft (serial # 0040050 and higher)		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 (serial # 0040063 & lower)	M12x105	4
	VM-K12N	Stud (serial # 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
20-1	VM-L4-1	Shoe		2
21	VM-L7	Graduated Scale		1
22	VM-L7-1	Rivet	ϕ2	7
23	VM-K11	Spider Arm		1
24	VM-K9	Base		1
25	VM-K17	Limit plate		2
26	VM-K5	Plate		2
27	JVM836-27B	Cross Flat Screw	M6x6	22
	JVM836-27BT	Cross Round Cap Screw	M5x12	6
28	VM-K13	Plate		1
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
34-1	VM-H34-1	Screw	M5x12	4
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	Table 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	1
56	VM-H19	Spring Washer	M12	1
57	TS-1550081	Flat Washer	M12	1
58	VM-H17	Straight Bevel Gear (ser # xxxx0049 & lower)	20T	1
	VM-H17T	Helical Bevel Gear (ser # 0040050 & higher)	18T	1
59	TS-1523031	Set Screw	M6x6	1
60	BB-6204	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	ϕ47	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 (serial # xxxx0049 and lower)		1
	VM-H24T	Helical Bevel Gear (serial # 0040050 and higher)		1
75	BB-6204	Ball Bearing (serial # 0070226 & lower)	6204	2
	BB-51104	Thrust Bearing (serial # 0080227 & higher)	51104	2
76	VM-H27	Elevating Screw		1
76-1	VM-H27-1	Bushing (serial # 0080227 & higher)		1
77	VM-J37-1	Upper Chip Guard		1
78	VM-J37	Lower Chip Guard		1
79	VM-H25	Bearing Housing (serial # 0070226 & lower)		1
	VM-H25T	Bearing Housing (serial # 0080227 & higher)		1
79-1	VM-H25-1	Adapter (serial # 0040050 and higher)		1
79-2	JVM836-B79-2	Key (serial # 0040050 and higher)	5x5x10	1
80	TS-1514031	Hex Socket Cap Screw	M6x20	3
81	JVM836-B81	C-Clip (serial # 0070226 & lower)	S47	1
82	VM-I39	Rubber T-Nut		6
83	JVM836-B83	Key	3x3x28	1
84	JVM836-B84	Cross Round Cap Screw	M6x10	6
85	JVM836-B85	Cross Round Cap Screw	M6x12	7
86	JVM836-B86	Lock Handle	M10x20	2
89	JVM836-B89	Spacer (serial # 0070226 & lower)		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





Wiring Diagram