

VANDERCOOK MANUAL



OPERATION MAINTENANCE

PARTS LIST



Vandercook Manual

Operation — Maintenance Parts List

MODEL NO. 11-B.L.

SERIAL NO. _____

Always be sure to give both the above Model and Serial Numbers when ordering parts or requesting information about this machine.



VANDERCOOK

DIVISION OF ILLINOIS TOOL WORKS INC.

3601 WEST TOUHY AVENUE • CHICAGO, ILLINOIS 60645

Sales / Service

Chicago, 60645
3601 W. Touhy Ave.
(312) RO 1-2100

Fairfield, N.J. 07006
387 Passaic Ave.
(201) 227-6515

Los Angeles, 90057
2411 W. 8th St.
(213) DU 8-9931

GUARANTEE

VANDERCOOK INKING ROLLERS

Vandercook Type "A" and Type "B" Inking Rollers are guaranteed against defects in materials or workmanship for a period of six months from date of shipment.

Rollers considered defective must be shipped prepaid to Vandercook Division Illinois Tool Works Inc., 3601 W. Touhy Ave., Chicago, Illinois 60645.

If rollers are judged defective, new replacement rollers will be shipped without charge other than transportation charges.



GUARANTEE
VANDERCOOK GRAPHIC EQUIPMENT

Vandercook Graphic Equipment is warranted to be free from defects in material and workmanship under normal use and service.

Parts found to be defective within 12 months from the date of shipment of the equipment to the original buyer will be repaired or replaced without charge with the following exceptions:

- 1 - Inking Rollers—six months from date of shipment.*
- 2 - Electric Motors and Electrical Controls Equipment—six months from date of shipment.*
- 3 - Warranty does not cover the cost of repairs made by others unless the repairs have been authorized by Vandercook Division Illinois Tool Works Inc.*

This warranty shall not apply to:

- 1 - Normal maintenance services—lubrication, cleaning, and periodic adjustments.*
- 2 - Cylinder packing.*
- 3 - Damage caused by improper installation.*
- 4 - Equipment subjected to misuse, accidents, negligence and lack of proper lubrication and maintenance.*
- 5 - Inking Rollers other than Vandercook Type "A" or "B".*

This warranty is in lieu of all other warranties expressed or implied.

We reserve the right to make changes in design or make additions to or improvements in our products without imposing any obligation upon ourselves to install them on previously manufactured products.



FOR BEST RESULTS, IT IS VERY IMPORTANT THAT THIS
EQUIPMENT BE KEPT CLEAN AND PROPERLY LUBRICATED.

VANDERCOOK 11 BLOCK LEVELLER

* * * * *

INSTRUCTIONS FOR INSTALLATION, OPERATION AND MAINTENANCE

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INSTALLATION

- 1 - Location - Place the Block Leveller on a firm foundation and locate so that the chip drawer at the rear of the machine may be removed.
- 2 - Leveling - Remove wood blocks each side of swinging head. Remove three jacks between rotary work table and base. See part sheet #160. Raise swinging head by turning height adjustment wheel, located at top center of machine. Move swinging head as far as it will go to the right. Open jaws by turning clamping handwheel, located at right front of base, to the left, and remove wood block from table. Wipe table clean. Install rubber pads under feet at base of machine. Place spirit level on the table and level the machine to within 1/16" in 30" by shimming under the rubber pads at the base of the machine. If desired, machine may be lagged to floor; however, machine is heavy enough so it will not move when setting on rigid floor.
- 3 - Electrical Connection - All power connections should be made in accordance with local electrical code. Note current specifications on identification tag attached to connecting wires. Power line connection is at right rear of machine next to the floor. Connect electrical circuit to power source. This machine is equipped with two motors and circuit is controlled and protected by safety thermal over-load switches. Operating Switch is actuated by foot pedal in front of machine.
- 4 - Cleaning - Wipe machine clean, using a small amount of kerosene.
- 5 - Lubrication - Refer to part sheets for lubrication instructions.

FUNCTION AND ADJUSTMENT

- 1 - Function - The Vandercook 11 Block Leveller is a precision machine tool for levelling and planing blocking material to accurate height. The chief functional parts are:
 - (a) Swinging cutter head with high-speed motor driven cutter, and micrometer height-adjustment mechanism.
 - (b) Motor-driven rotary work table with work-holding clamps.
 - (c) Cyclone chip and dust collecting system.

- 2 - Swinging Head - The head is supported on a vertical post and is manually operated by swinging the head from right to left over the rotary table. The cutter spindle is driven by the motor located at back of swinging head with V-Belt Drive.
- (a) To Attach and Remove Cutter. Move swinging head to right-hand position. A steel cap is located directly over cutter spindle at top of machine. Lift cap and turn over so that square hole in cap fits over the square top of the cutter spindle. With socket wrench provided, remove nut (left hand thread) at lower end of spindle. Clean cutter seat at lower end of spindle. Clean the seating face on cutter. Seat the cutter over the two dowel pins on seating face of spindle. Attach the nut, turning to the left, and tighten with socket wrench. Reverse the locking cap at top of machine to unlock the spindle. To remove the cutter, reverse the above operations.
- (b) Cutter Guard. The cutter guard is a flat aluminum disc threaded into the lower face of the swinging head and fitting around the cutter. It protects the cutter and aids in chip removal. A knurled flat-head screw is located between the cutter guard and the lower face of the swinging head. This screw locks the guard in position. To raise, lower or remove the cutter guard, loosen the locking screw and turn the guard to right or left as required. The face of the guard should be adjusted so that it will be approximately one-sixteenth inch above the cutting edge of the cutter. Lock guard in place with locking screw.
- (c) Height Adjustment. The height adjustment mechanism located at top center of swinging head is provided with a hand wheel for raising or lowering the cutter, and an adjustable ring calibrated in .001 inch readings. An adjustable block set in the center post has a vertical center line and also horizontal lines .050 of inch apart which is one revolution of the hand wheel. To set height, raise cutter to high position by turning the hand wheel counter-clockwise (See direction arrows on top of post). Place .918 gauge block on table. Move cutter directly over gauge block by swinging the head. Then, turn hand wheel clockwise, carefully lowering the cutter until the cutting edge of cutter comes into very light contact with the gauge block. Then, with hexagon wrench, loosen the two set screws on opposite sides of the calibrated ring and turn the ring so that the zero line coincides with the vertical center line. Tighten set screws in ring. Adjust center line block so that the long horizontal line is even with the top of the calibrated ring. The horizontal lines will keep track of the number of hand wheel revolutions. Raise cutter and remove gauge block. A trial cut should then be made at zero setting and the result checked on Plate Gauge. If further adjustment is necessary, raise or lower cutter by turning hand wheel until correct cut is obtained. Then reset calibrated ring to zero. Once the setting is made it will remain constant until the cutter is changed. The height adjustment must be reset each time a cutter is changed.

(d) V-Belt Drive. To adjust tension on V-Belt, remove rear section of top plate on swinging head. Motor is mounted on hinged mount with motor-mount locking nut opposite the hinged side of mount. Loosen the locking nut and increase tension by pressing back on the motor mount. Do not pull tension too tight. Then tighten locking nut and replace the top plate. To replace the belt, remove both top plates, loosen tension on belt and lift belt out. Put new belt in place over pulleys and reset tension. Replace the top plates.

3 - Rotary Work Table. The rotary work table is supported on a ball thrust-bearing 14-1/2" in diameter. It requires no adjusting or lubrication. The table is equipped with quick-acting clamping jaws, manually operated.

(a) Table Drive. The motor-driven table is rotated by a direct contact friction pulley on motor shaft. The friction pulley and contact surface of table must be kept clean and dry. If oil, grease or dirt accumulate, remove motor cover at right side of base and clean both the pulley and the contact surface of the table. The motor is mounted on hinged motor mount with a spring tension adjustment opposite the hinged side of mount. To increase tension, turn the adjusting screw to the right. Replace motor cover.

(b) Work Holding Clamps. - The clamps are operated by the hand wheel at the right front of machine base. To close jaws, turn the wheel clockwise. To open jaws, turn the wheel counter-clockwise. See direction arrows on hand wheel. Each clamp is provided with jaw-edge gripper bars, which are supported in sloped slots by compression springs. When light or neutral pressure is applied, the gripper bars hold the block firmly for planing but do not pull the work to table. As additional pressure is applied, the gripper bars move back into the slots and pull the block down tight against the table top. It is important to remember these two functions of the gripper bars, for when leveling a block, one side must be levelled with neutral pressure, then the block turned over and clamped so that the levelled side is pulled down to the table surface with hold-down pressure for the finishing cut.

4 - Chip Removal. The fan attached to the cutter spindle, just above the cutter, impels chips and dust through a channel to the Cyclone Separator in machine base. The chips accumulate in the drawer at base of machine. The drawer is removable from the rear of base. The chip drawer should be emptied daily to prevent clogging the Cyclone Separator. The Cyclone Separator is hooded with a cloth filter bag which catches the fine dust. The filter bag should be removed and cleaned each six months or as often as required. To remove the filter bag, take back plate off the machine base. Remove and clean bag thoroughly and replace.

PROCEDURE FOR PLANING WOOD BLOCKS

- 1 - To Start Machine - Pressing on the foot pedal releases the rotary table brake, disengages the clamp operating wheel and starts both cutter and table motors. Releasing the foot pedal shuts off the motors, applies the table brake and re-engages the clamp operating wheel.
- 2 - Size of Blocks - The maximum size of block which can be placed on this machine is 12-1/2 inches by 18-1/2 inches. Blocks over 12-1/2 inches by 18-1/2 inches can be made up by accurately sizing two or more smaller blocks, planing them to required height, and fastening them together with suitable fasteners. Glue, dowels or corrugated fasteners may be used.
- 3 - Leveling Blocks - Measure thickness of block and determine amount to be taken off to bring block to required height. Allow for rough and finishing cuts on both sides of block. Lay block on rotary table and clamp with neutral clamping. Set height adjustment for first cut. (Note: The rough cuts should not exceed .060 inches or approximately one-sixteenth inch. The finishing cuts should not exceed .005 inches.)
 - (a) Start machine by pressing on foot pedal.
 - (b) When table and cutter have gained full momentum, swing cutter across block slowly until it completes the cut and then swing back to right to clear the block. Lower height of cutter .002 to .005 inches and make finish cut. Block is now flat on one side.
 - (c) Loosen clamps. Turn block over and reclamp the block applying pressure on clamps to pull the block down tight against the surface of the table. (Note: Do not clamp large block too tight as it may spring up at the center.) Take required rough cuts to bring height of block to within approximately .005 inches of required finished height. Then set cutter to correct finish height and make the finishing cut. Block will then be flat on both sides, parallel and accurate in height. Release clamps and remove the block.
- 4 - Mounted Plates - Check the face of plate for levelness with straight edge. If face of plate is not level, or so badly warped that pull-down clamping will damage face, it should be remounted on new block. To level mounted plate, place the plate face down on the table and clamp tight with pull-down pressure. Make the planing cuts to required height. (Caution: Be sure surface of rotary table is kept clean and face free of chips. On plates with delicate faces such as halftones, or plates with large open areas with fine hairlines, it is sometimes advisable to place a sheet of paper between the cut and the surface of the work table to protect the edges. Add thickness of paper to height setting.)

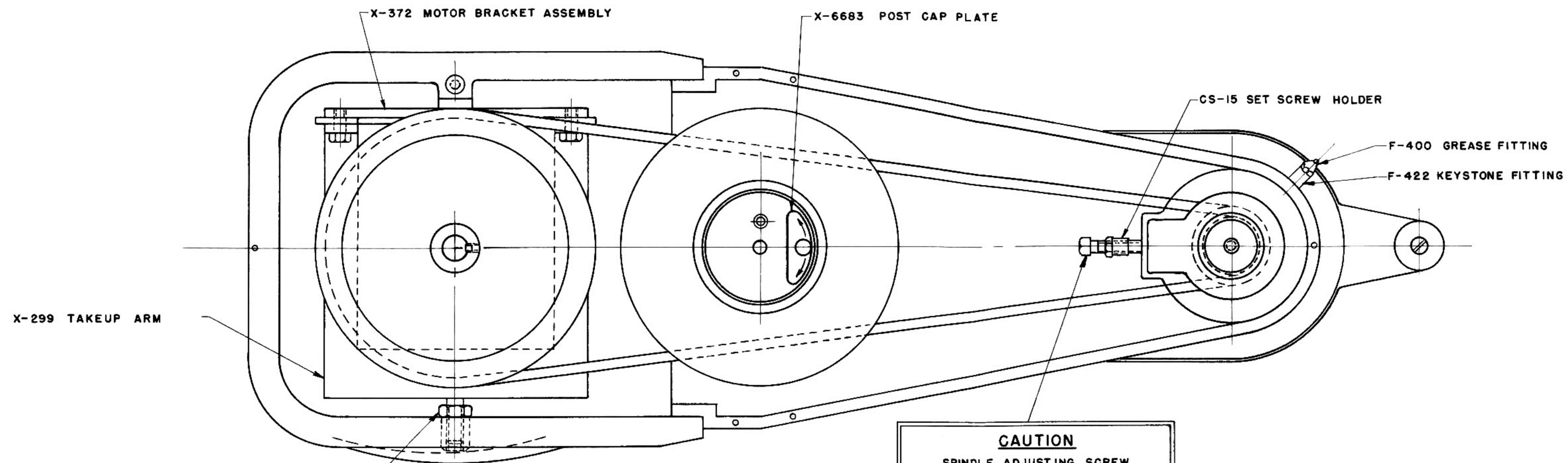
PROCEDURES FOR PLANING VANDERCOOK LITE-BASE

- 1 - Saw Lite-Base cast to a maximum size of 12-1/2" x 18-1/2".
- 2 - Clamp Lite-Base on the Block Leveller Table with neutral clamping pressure and the top side of the Base up. Take a deep enough rough cut to clean up the entire surface, (usually .010 below .918 setting will clean,) but not more than .050" in one cut. Follow this with a finish cut of .005" depth.
- 3 - Turn the Lite-Base over, being sure there are no chips on the table and clamp down tight. Take one or more roughing cuts - not over .050" depth for each cut - to bring Base within .010" of desired size. Remove .005" with final finish cut.
- 5 - Reclamp Base with top side up and remove .005", making the Base the desired thickness.

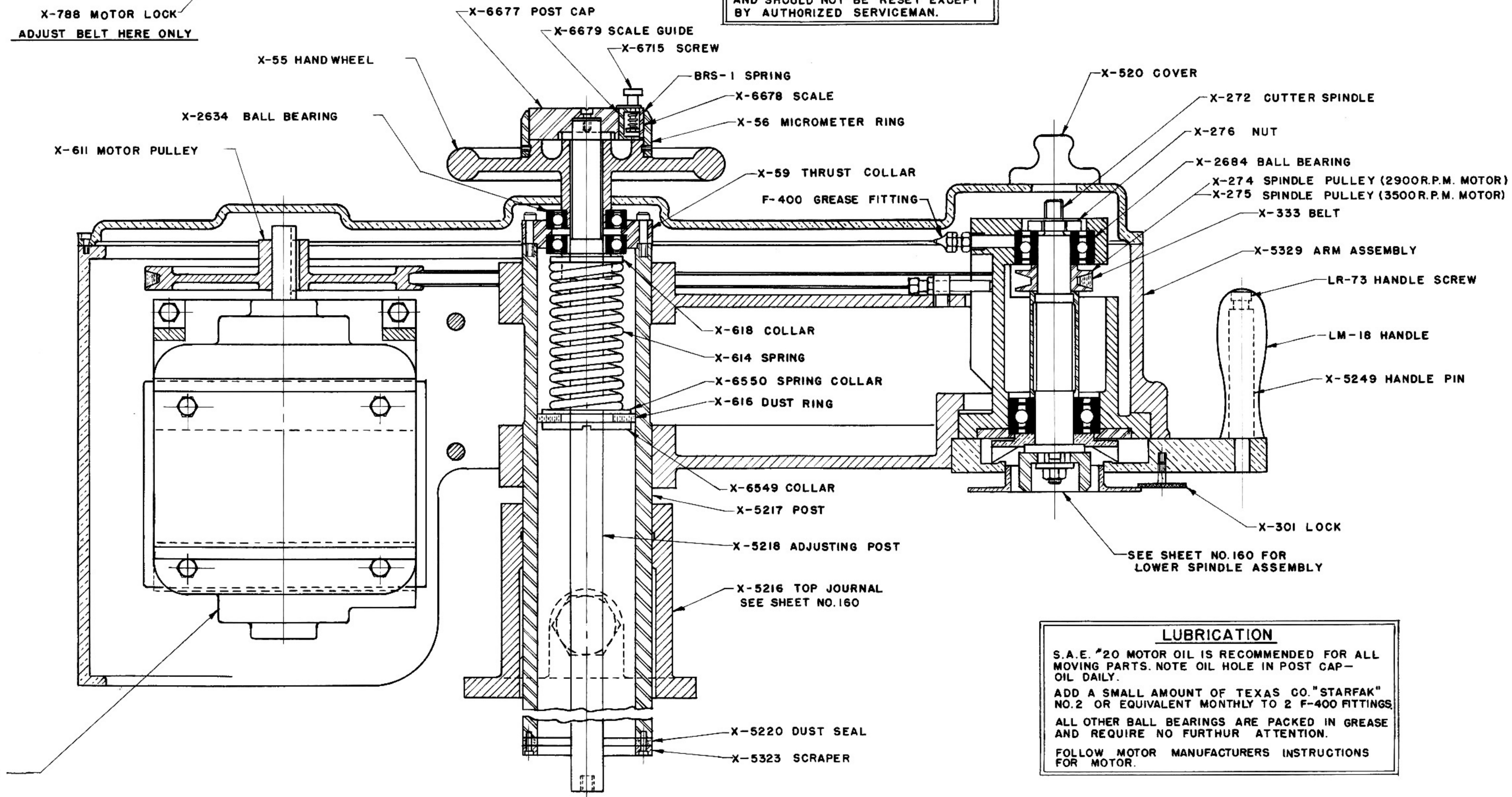
When planing smaller pieces of Lite-Base, it is possible to eliminate the last operation.

For the greatest accuracy, it is advisable to make the final finish cut on the bottom after the plates have been mounted. This will take care of a variation in thickness of the plates.

PART NO.	PRICE	P. U.	L. U.
BRS-1		13606	
CS-15			
F-400			
F-422			
LM-18			
LR-73			
X-55			
X-56			
X-59			
X-299			
X-301			
X-333			
X-372			
X-520			
X-611			
X-614			
X-616			
X-618			
X-788			
X-2634			
X-5216			
X-5217			
X-5218			
X-5220			
X-5249			
X-5323			
X-5329			
X-5332			
X-6549			
X-6550			
X-6677			
X-6678			
X-6679			
X-6683			
X-6715			



CAUTION
 SPINDLE ADJUSTING SCREW
 THIS SCREW IS SET AT THE FACTORY,
 AND SHOULD NOT BE RESET EXCEPT
 BY AUTHORIZED SERVICEMAN.



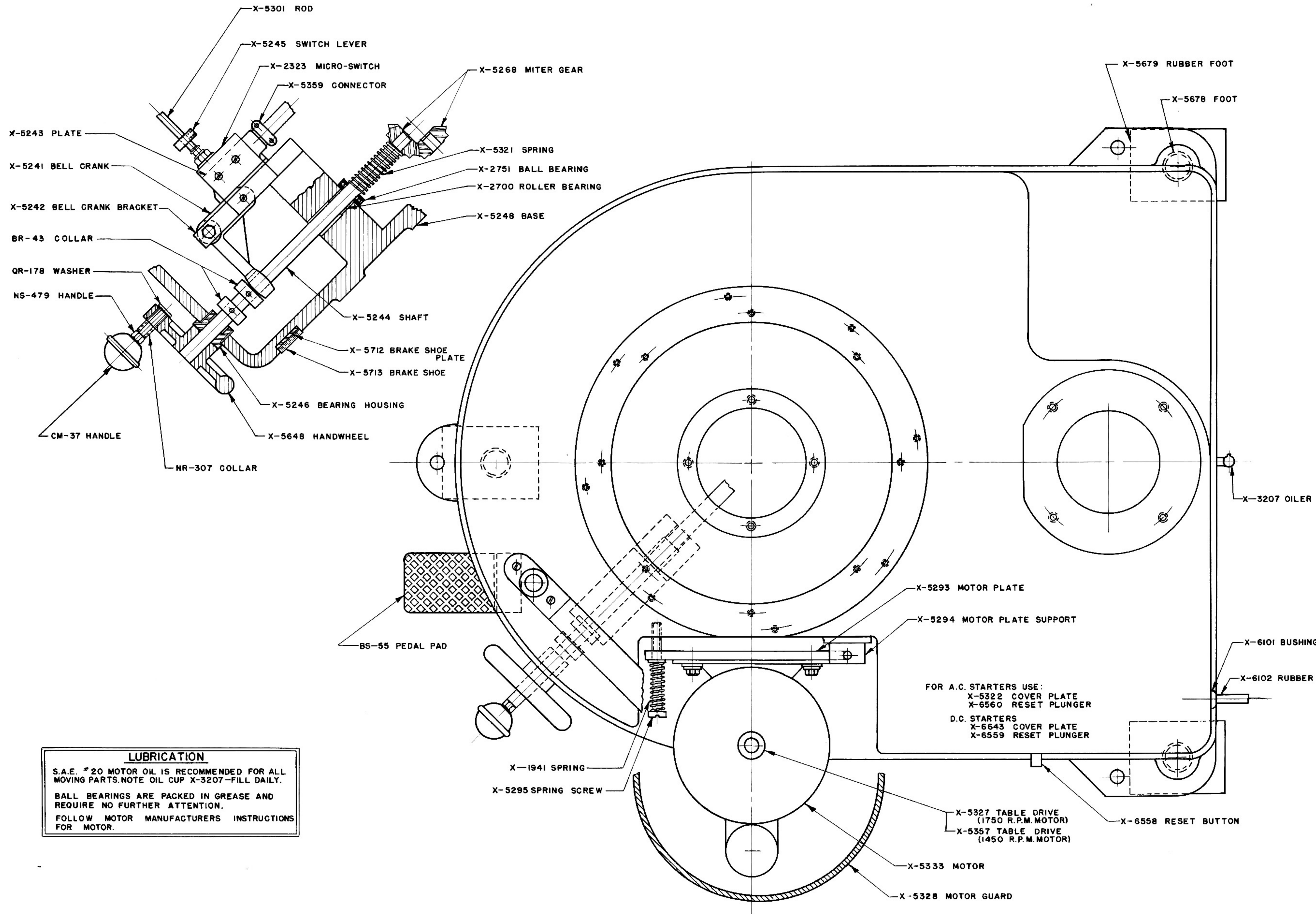
LUBRICATION
 S.A.E. #20 MOTOR OIL IS RECOMMENDED FOR ALL MOVING PARTS. NOTE OIL HOLE IN POST CAP—OIL DAILY.
 ADD A SMALL AMOUNT OF TEXAS CO. "STARFAK" NO. 2 OR EQUIVALENT MONTHLY TO 2 F-400 FITTINGS.
 ALL OTHER BALL BEARINGS ARE PACKED IN GREASE AND REQUIRE NO FURTHER ATTENTION.
 FOLLOW MOTOR MANUFACTURERS INSTRUCTIONS FOR MOTOR.

X-788 MOTOR LOCK
 ADJUST BELT HERE ONLY

X-299 TAKEUP ARM

X-5332 MOTOR

ARM ASSEMBLY
NO. II VANDERCOOK BLOCK LEVELLER



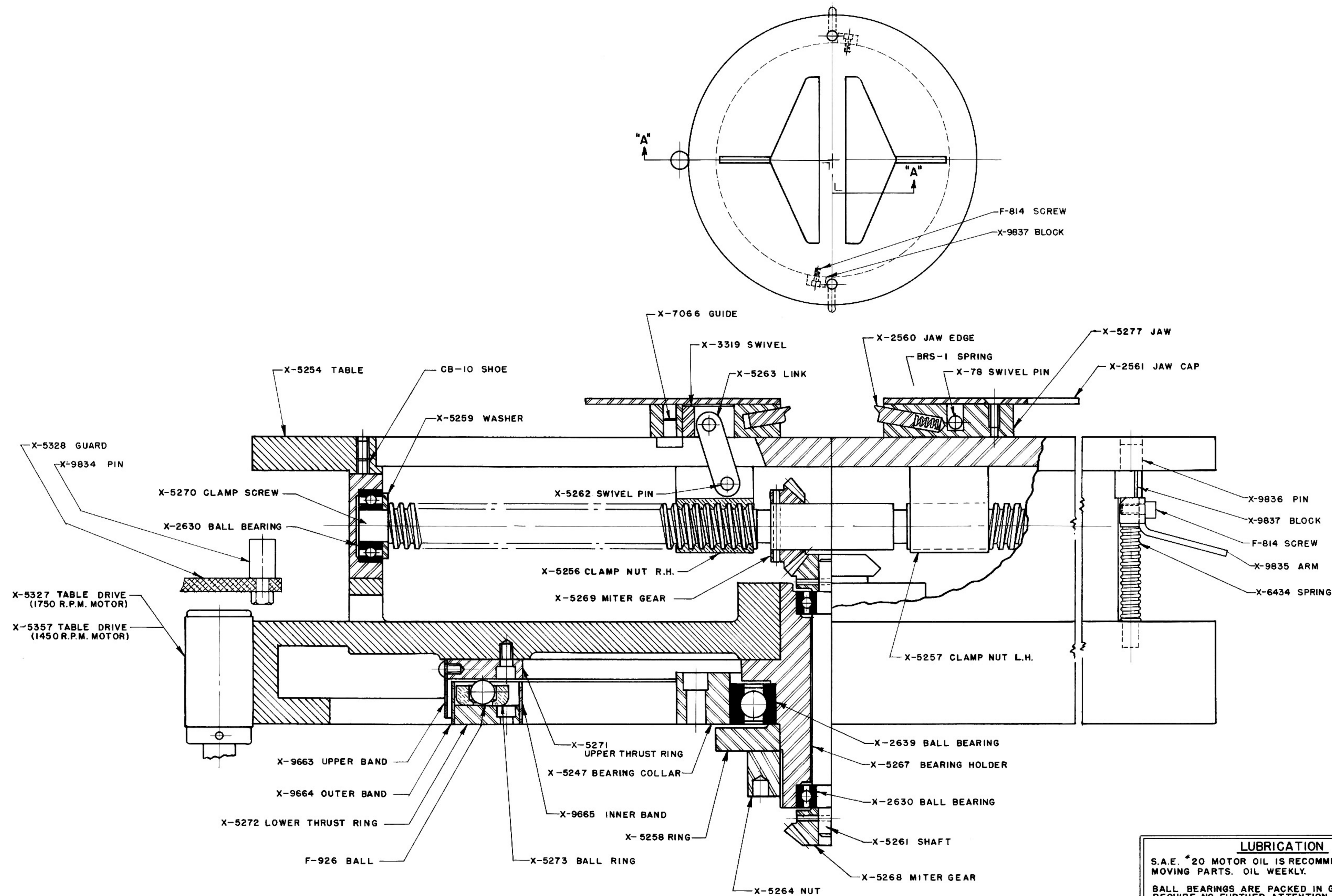
LUBRICATION
 S.A.E. #20 MOTOR OIL IS RECOMMENDED FOR ALL MOVING PARTS. NOTE OIL CUP X-3207-FILL DAILY.
 BALL BEARINGS ARE PACKED IN GREASE AND REQUIRE NO FURTHER ATTENTION.
 FOLLOW MOTOR MANUFACTURERS INSTRUCTIONS FOR MOTOR.

FOR A.C. STARTERS USE:
 X-5322 COVER PLATE
 X-6560 RESET PLUNGER
 D.C. STARTERS
 X-6643 COVER PLATE
 X-6559 RESET PLUNGER

PART NO.	PRICE	F. U.	L. U.
BR-43		13606	
BS-55			
CM-37			
NR-307			
NS-479			
QR-178			
X-1941			
X-2323			
X-2700			
X-2751			
X-3207			
X-5241			
X-5242			
X-5243			
X-5244			
X-5245			
X-5246			
X-5248			
X-5268			
X-5293			
X-5294			
X-5295			
X-5301			
X-5321			
X-5322			
X-5327			
X-5328			
X-5333			
X-5357			
X-5359			
X-5648			
X-5678			
X-5679			
X-5712			
X-5713			
X-6101			
X-6102			
X-6558			
X-6559			
X-6560			
X-6643			

BASE ASSEMBLY

NO. 11 VANDERCOOK BLOCK LEVELLER



PART NO.	PRICE	F. U.	L. U.
BRS-1		13606	
CB-10			
F-926			
X-78			
X-2560			
X-2561			
X-2630			
X-2639			
X-3319			
X-5247			
X-5254			
X-5256			
X-5257			
X-5258			
X-5259			
X-5261			
X-5262			
X-5263			
X-5264			
X-5266			
X-5267			
X-5268			
X-5269			
X-5270			
X-5271			
X-5272			
X-5273			
X-5277			
X-5327			
X-5357			
X-5328			
X-6434			
X-7066			
X-9663		16898	
X-9664		"	
X-9665		"	
X-9834		16890	
X-9835		"	
X-9836		"	
X-9837		"	
F-814		16890	

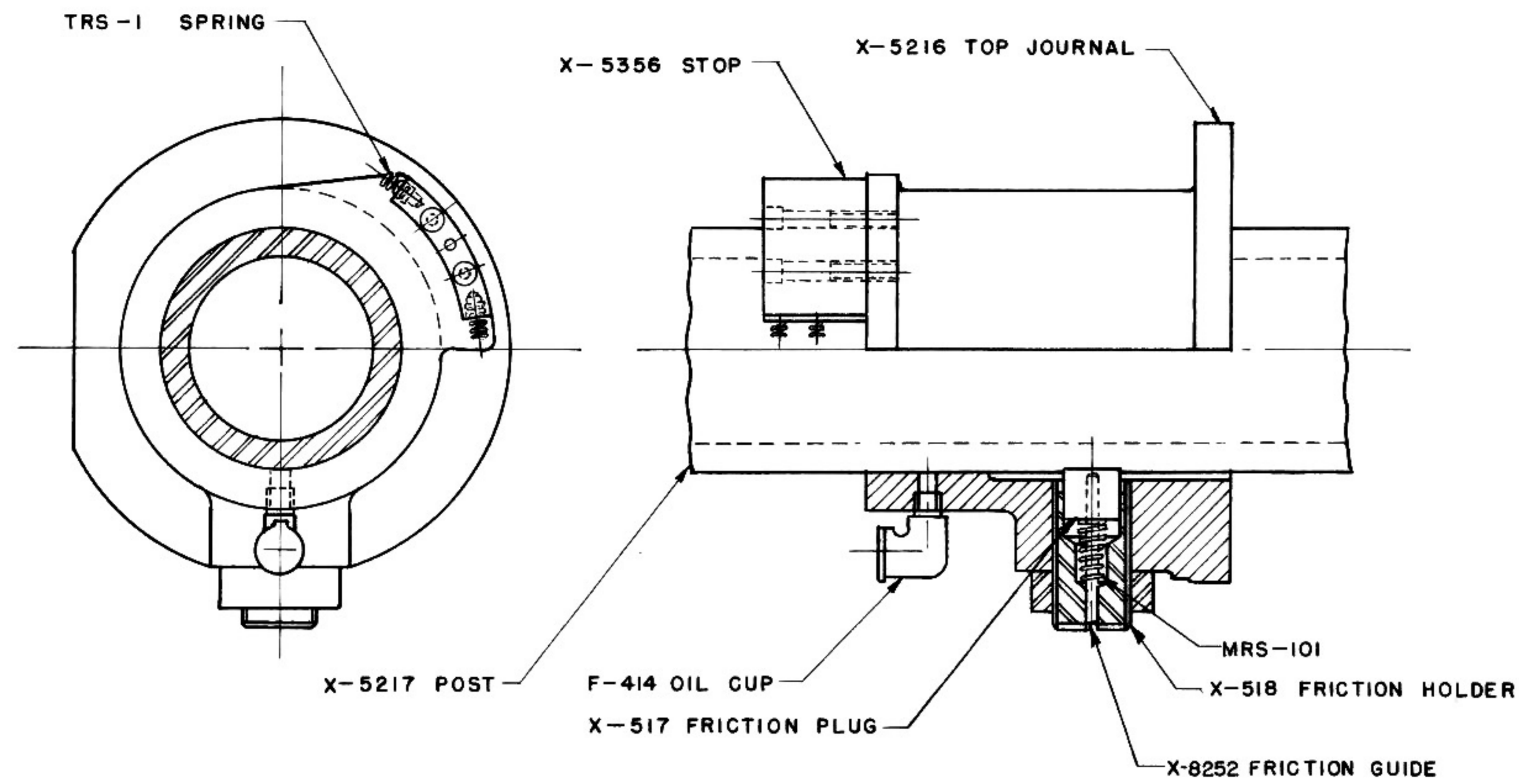
LUBRICATION

S.A.E. #20 MOTOR OIL IS RECOMMENDED FOR ALL MOVING PARTS. OIL WEEKLY.

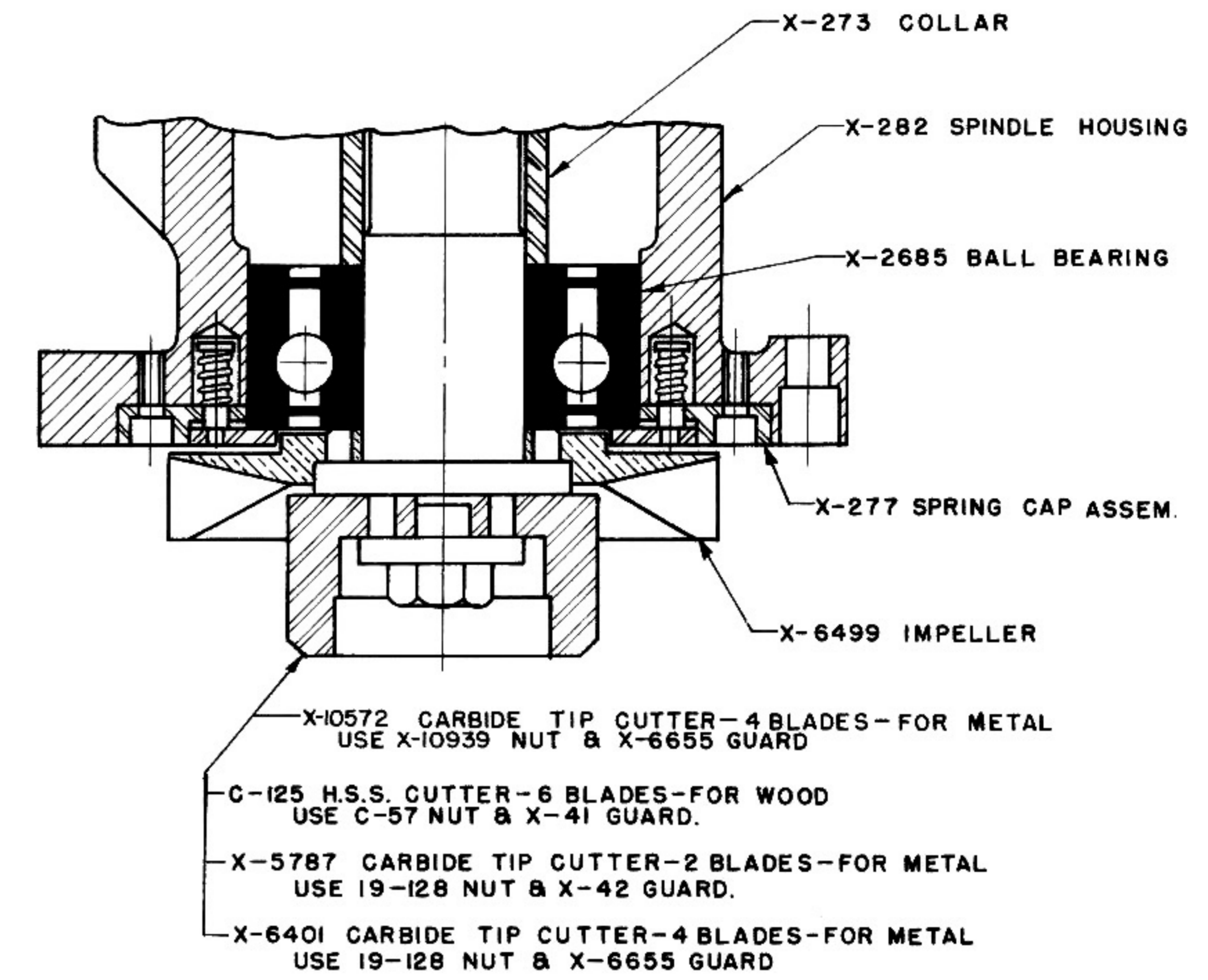
BALL BEARINGS ARE PACKED IN GREASE AND REQUIRE NO FURTHER ATTENTION.

TABLE ASSEMBLY
NO. II VANDERCOOK BLOCK LEVELLER

PART NO.	PRICE	F. U.	L. U.
F-414		13606	
MRS-101		"	
TRS-1		"	
X-517		"	
X-518		"	
X-5216		13606	
X-5217		"	
X-5356		"	
X-8252		15006	



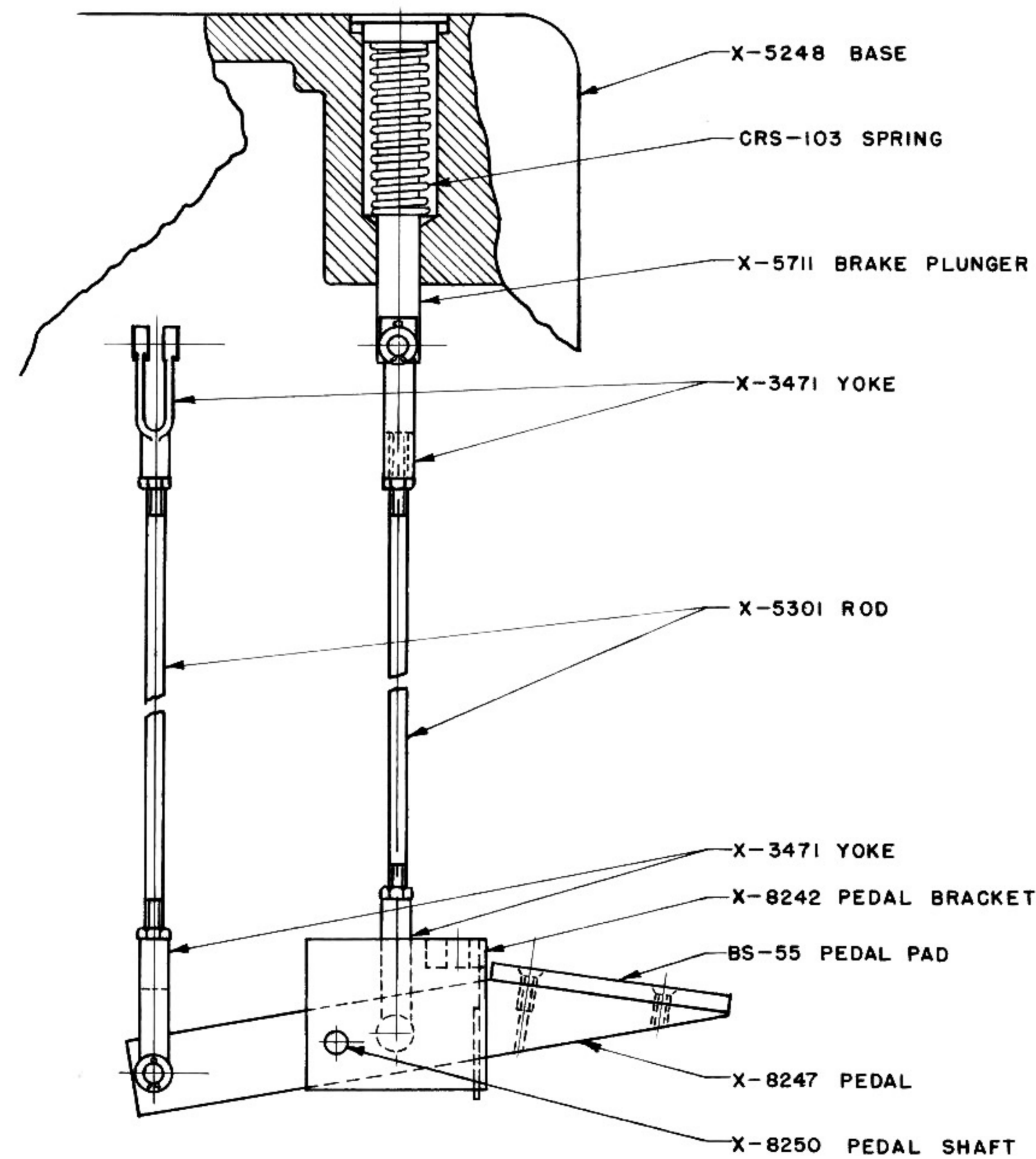
TOP JOURNAL ASSEMBLY



LOWER SPINDLE ASSEMBLY

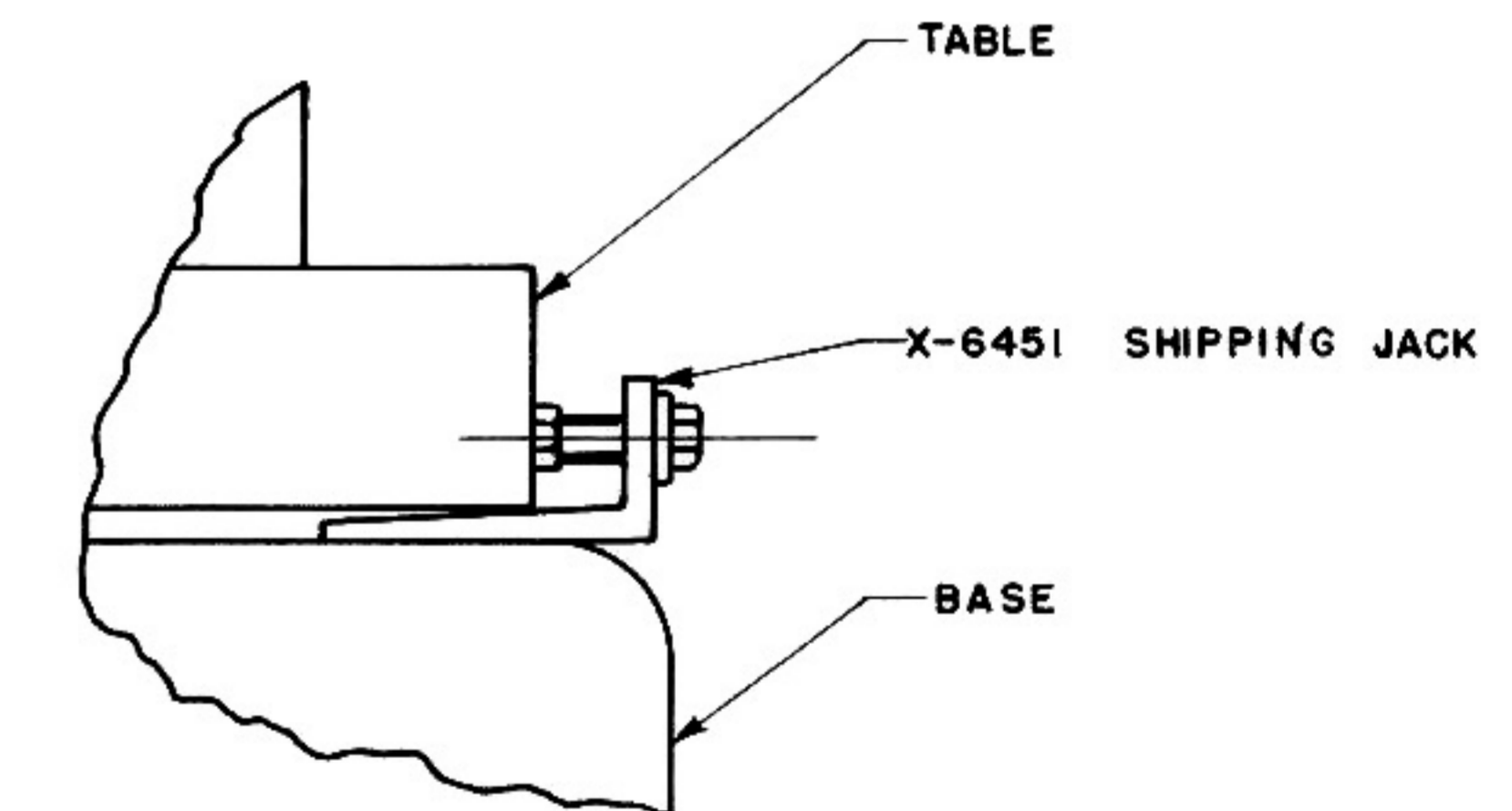
PART NO.	PRICE	F. U.	L. U.
19-128		13606	
C-57		"	
C-125		"	
X-273		"	
X-277		"	
X-282		"	
X-2685		"	
X-5787		"	
X-6401		"	
X-6499		"	
X-6655		"	
X-41		"	
X-42		"	
X-10572		"	
X-10939		"	

PART NO.	PRICE	F. U.	L. U.
BS-55		13606	
CRS-103		"	
X-3471		"	
X-8242		15124	
X-8247		"	
X-8250		"	
X-5248		13606	
X-5301		"	
X-5711		"	



PEDAL ASSEMBLY

LUBRICATION
 S.A.E. 20 MOTOR OIL IS RECOMMENDED FOR ALL MOVING PARTS. NOTE OIL CUP F-414-FILL DAILY.



CAUTION
 THREE OF THESE JACKS ARE USED TO PREVENT DAMAGE TO TABLE BEARING IN SHIPMENT.
REMOVE BEFORE OPERATING MACHINE.