

GENERAL INSTRUCTIONS FOR INSTALLING AND
ADJUSTING MODEL 28 COMPACT RECEIVE-ONLY
TYPING REPERFORATOR SET (VSL508** ROTR
SET IS INCLUDED)

1. GENERAL

a. The Model 28 Compact Receive-Only Typing Reperforator Set consists of the following basic units:

	<u>VSL508** Set</u>
(1) Typing Reperforator (LPR40)	LPR62
(2) Reperforator Base (LRB31)	LRB62
(3) Motor Unit (LMU24)	LMU56
(4) Cover (LRC205**)	LRC211**
(5) Sliding Base Assembly (174459)	174459

NOTE

The VSL508** ROTR Set is arranged for fully perforated tape and is equipped with a vacuum chad disposal feature. This set is shipped completely assembled except for the cover which is packaged separately.

b. The 174459 sliding base assembly permits installation of the set in cramped quarters which normally would not permit easy access to the unit for changing ribbon, replenishing tape, and maintenance. The Assembly provides for easy displacement or removal of the set. A locking cam is mounted on the upper base plate on each side of the slide to firmly secure the upper and lower base plates in the retracted position. Extension or full retraction of the upper plate requires clockwise and counterclockwise turning of the left and right cams, respectively. The upper base plate with set attached, is locked in the fully extended position by two latches underneath the upper slide track. To remove the set, the rear latch is released; to retract the set, the front latch is released.

c. If desired, the typing reperforator set (minus the sliding base assembly) may be placed on a desk top or other flat surface. The set is equipped with a three-speed gear shift mechanism. The automatic noninterfering "Letters" tape feed-out mechanism on the reperforator unit is factory-set to feed out 2.4" of "Letters" tape. Should some other setting be desired, refer to appropriate adjustment bulletin.

d. The double asterisk (**) denotes a suffix which designates the color of the paint finish. Unless otherwise indicated, all references to direction are made from the operator's position in front of the set. For parts ordering information refer to appropriate parts publication.

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2. INSTALLATION

NOTE

Unpack all components with care. Observe all caution labels and instructions. All bags and loose parts should be kept with their associated component until used in the installation. Remove and discard all shipping spacers and clamps. Activate the four vibration mounts by turning down (all the way) the 176085 self-locking nuts.

a. Remove the tape container from the base by removing the three mounting screws in the container itself and the two mounting screws used to secure the tape container to the control panel bracket. Lay the container in close proximity to the base unless it is desired to disconnect the cable from its terminals.

b. Install the motor unit on the motor mount casting as follows:

(1) Remove the front tape container bracket; however, note its position with reference to the motor mount casting so that it may be reassembled in the same position.

(2) Remove the 156964 pinion, 151346 screw, and 2191 lockwasher from the bag attached to the variable speed drive mechanism. Install the pinion on the motor shaft.

(3) Install the motor unit on the base using the four 151723 screws, 117535 flat washers and 2669 lockwashers found in the bag attached to the base; the pinion should be centered with respect to the vertical faces of the driven gear and perpendicular to its center line as gauged by eye. If the exhaust duct touches the motor mount casting, it is necessary to adjust its position; see EXHAUST DUCT adjustments under Paragraph 3 for adjusting procedure.

(4) Make the VARIABLE SPEED DRIVE MECHANISM adjustments as specified under Paragraph 3.

(5) Reassemble the front tape container bracket, removed in Paragraph 2.b.(1), to the motor mount casting in the same position from where it was removed. Reinstall the tape container using the mounting hardware removed in Paragraph 2.a.

c. Remove (and discard) the 162248 hub and associated hardware from the reperformator shaft. Remove the 176073 toothed pulley, 102465 screw, 2191 lockwasher and 7002 flat washer from the bag attached to the variable speed drive mechanism. Install the pulley on the reperformator shaft; do not tighten the mounting screw.

d. Remove the 176075 toothed belt from the bag attached to the variable speed drive mechanism and place it over the pulley on the reperformator unit. Make the Tape Container adjustment (Par. 3.c.) Place the unit on the base, about an inch to the left of its mounting holes. Move the unit to the right and simultaneously slip the belt over the pulley on the variable speed drive mechanism.

e. Loosen the screw that secures the small "L" bracket to the left front of the reperformer unit. Remove the 151631 screw, 2191 lockwasher, and 125015 flat washer from the bag attached to the reperformer base. Start the screw (with lockwasher and flat washer) through the "L" bracket and into the appropriate tapped hole in the base plate; do not tighten the screw.

f. Remove the three 156887 screws, 2669 lockwashers, and 3438 flat washers from the bag attached to the reperformer base. Start the three screws (with lockwashers and flat washers) through the reperformer unit mounting holes and into the appropriate tapped holes in the base plate; do not tighten the screws.

g. Take up the slack in the belt by moving the reperformer unit to the left and back. The belt should have just enough slack so that a pressure of 8 ± 1 oz. at the center should cause a deflection of $1/8 \pm 1/32$ ". The belt must not be tight. Tighten the three reperformer unit mounting screws.

h. Press the "L" bracket against the base plate and tighten the screw that secures the bracket to the reperformer unit. Tighten the screw that secures the "L" bracket to the base plate.

i. Position the pulley on the reperformer unit and on the variable speed drive mechanism so that the belt runs as close to the center of each pulley as possible. Tighten the screws.

j. Connect the 36-point connector and secure in position.

%NOTE

The following subparagraphs that are marked with a percent sign (%) pertain to installation of the 174459 sliding base assembly.

%k. Remove the four feet from the reperformer set. Discard the feet, flat washers, special nuts; retain other mounting hardware.

%l. With the four spacers uppermost, unlatch the upper plate by turning the two knobs. At the fully extended position, remove the upper plate by releasing the front latch beneath the upper slide track.

%m. Secure the lower plate of the sliding base assembly to its permanent location using screw-type fasteners in the holes provided or by welding. Any welding should be limited to the 12" dimension of the plate.

%n. Secure the upper plate of the sliding base assembly to the base of the reperformer set using the mounting hardware retained in Paragraph %k. Slip the set on the lower component of the sliding base assembly and secure in the extended position.

o. Refer to Paragraph 4 for Lubrication, Paragraph 5 for Wiring information and Paragraph 6 for Miscellaneous information.

p. Install the cover; secure by means of the latches on the cover and the strikers on the base.

%q. Return the reperformer set to the fully retracted position and lock in place.

3. ADJUSTMENTS

a. EXHAUST DUCTS

(1) The exhaust ducts should be centrally positioned about the motor exhaust ports. The motor leads should be centered in the left duct cutout. The ducts should be parallel with each other as gauged by eye. To adjust, position the ducts with their mounting screws friction tight. Tighten the screws.

(2) The top surface of each exhaust duct should be parallel to the horizontal surface of the motor bracket. To adjust, position the motor with the clamps on each side of the motor friction tight. Tighten the clamp mounting screws.

b. VARIABLE SPEED DRIVE MECHANISM

(1) There should be a barely perceptible amount of backlash between (at the closest point) the motor pinion and the gear on the variable speed drive mechanism. To adjust, position the drive mechanism with its mounting screws loosened. Tighten the screws.

(2) The gears should mesh fully when the speed selector lever is detented in the center position. To adjust, position the gear shift bracket with its mounting screws loosened. Tighten the screws.

c. TAPE CONTAINER --- There should be 1/16" to 1/8" clearance (at any point) between the reperformer unit and the tape container. To adjust, position the front tape container mounting bracket with its mounting screws loosened. Tighten the screws.

d. TAPE-OUT SWITCH --- The switch (located on the tape container) should operate when the roll of tape is reduced to 2-5/16" in diameter. To adjust, bend the lower prong of the switch lever as necessary.

e. LOW-TAPE SWITCH --- The base is not equipped with this switch (124999). However, provision has been made for its installation (above the tape-out switch) should it be desired to add this feature. The adjusting procedure is as follows:

The switch should operate when the roll of tape is reduced to 2-7/16" in diameter. To adjust, bend the upper prong of the switch lever as necessary. Check the Tape-Out Switch Adjustment.

f. CONTROL PANEL BRACKET --- There should be some to 3/32" clearance between the angular surface of the control panel bracket and the switch identification plate secured to the cover lid. To adjust, position the control panel bracket with its mounting screws loosened. Tighten the screws.

g. TAPE GUIDE --- There should be approximately 1/4" clearance between the long segment of the tape guide and the tape container. To adjust, position the tape guide with its mounting screws loosened. Tighten the screws.

h. VIBRATION MOUNT IMMOBILIZATION --- There should be no clearance between the top of the vibration mount and the bottom of the metal washer with no compression of the rubber. To adjust, turn the self-locking nut up until the requirement is met, after all components are mounted.

i. TAPE-OUT SWITCH LEVER SPRING --- It should require 1-1/2 to 2-1/2 ozs. to just open the normally closed switch. To check, hook the end of an 8 oz. scale under the tip of the lever and pull away from the switch until the switch closes, then allow the switch to open in order to check the requirement.

j. TAPE-OUT LEVER SPRING --- It should require 3/4 to 1-1/2 ozs. to just move the lever away from the core of the tape container reel. To check, hook the end of an 8 oz. scale over the end of the lever, at the surface that contacts the tape, and pull away from the core.

k. SLIDING BASE ASSEMBLY (174459) - Figure 1.

(1) Quick-Disconnect Latch - When the slide is in the fully retracted position, the locking cylinder should be firmly seated against the stop surface of the bottom plate. Also, there should be 0.002" to 0.012" endplay between the locking cylinder and the two mounting blocks. To adjust, position the two mounting blocks with their four mounting screws loosened. Tighten the screws.

(2) Stabilizing Bracket - Each of the four permanent stabilizing segments of the lower base plate should engage firmly each of the four adjustable stabilizing/stop plates of the upper base plate when the slide is in the fully retracted locked position. To adjust, loosen (friction tight) the two mounting screws that fasten each of the four stabilizing/stop plates to the upper base plate and position the four plates. Tighten the screws. Check to see that there is no rotation when the top and bottom plates are rotated toward each other without bending either of the plates.

(3) Quick-Disconnect Knob - There should be 3/32" to 9/64" clearance between the two knobs and the cover (LRC) when the knobs are in the open position. To adjust, position each of the knobs with its two set screws loosened. Tighten the set screws.

NOTE

The knob/locking cylinder assembly must snap into the locked position when the slide is pushed into the fully retracted position and the knobs are released.

l. COVER (LRC)

(1) Lid - All mating surfaces must be flush. To adjust, position the lid with the lid hinge nuts friction tight. Tighten the nuts.

(2) Handle/Trim - The handle should match the contour and the parting outline of the cover. To adjust, position the handle with its mounting screws friction tight. Tighten the nut on the short leg of the handle; tighten the remaining screws.

(3) Window - The observation window should match the contour of the cover lid and handle. To adjust, position the window with the window bracket nuts friction right. Tighten the nuts.

(4) Lid Latch - The lid should be held in place by the two bolts mounted and spring-loaded on the lower part of the cover. The latching bracket should be centered in the cutouts of the lower part of the cover, compatible with positive and smooth operation of the two bolts. To adjust, position the latching bracket with its mounting screws friction tight. Tighten the screws.

(5) Tape Guide Plate - The tape guide plate should fit flush against the handle when the lid is in the latched position. To adjust, position the tape guide plate with its mounting screws loosened. Tighten the screws.

(6) Cover Latch - There should be no clearance between the two latches on the cover and the two brackets on the base when the latches are in the cam-locked position. The latches should hang vertically as gauged by eye. To meet the first requirement, position each bracket w/latch with its mounting nuts loosened. Tighten the nuts. To meet the second requirement, position each bracket (on the base) with its mounting screws friction tight. Tighten the screws. Check the first requirement.

4. LUBRICATION (Use KS7470 Oil and KS7471 Grease)

a. MOTOR

(1) Six drops of oil in each of the two oil holes just prior to placing the motor in service, and again after every 750 hours of operating time, or every three months whichever occurs first. Avoid overlubrication.

(2) Apply a thin coat of grease to the motor shaft to prevent rust.

b. VARIABLE SPEED DRIVE MECHANISM AND MOTOR PINION

(1) Three drops of oil on the speed selecting lever pilot screw, the fork and slot connection of the speed selecting lever, and the speed selecting lever detent post.

(2) Apply a thin coat of grease to each of the gears and the motor pinion.

CAUTION

Do not lubricate the pulleys over which the belt rides.

c. SLIDING BASE ASSEMBLY (174459) - FIGURE 1

(1) Two or three drops of oil at each of the locking cylinder and mounting block bearing points.

(2) Apply a thin coat of grease to the flat, and its side edges, of each locking cylinder.

(3) Apply a thin coat of grease on all bearing and sliding surfaces of the slide.

d. BASE --- One drop of oil at each pivot point of the tape sensing lever, the switch lever, and each spring eye.

e. COVER --- Two or three drops of oil at each of the following places:

(1) Bearing surfaces between the locking bolts and their associated bracket.

(2) Pivot point and arm slot of the lid retaining arm.

(3) Cam portion of the cover latch.

(4) Latch cam.

5. WIRING --- Wire the set in accordance with the following information, caution note on Figure 2, and Wiring Diagrams 4353WD and 4354WD furnished with the LRB Base:

a. For 20 or 30 milliampere operation, or when a line relay is used, the selector magnets should be connected in series. For 60 milliampere operation the selector magnets should be connected in parallel.

b. The motor leads should be connected to terminals 8 and 9 of the upper terminal board.

c. Power connections (115 volt \pm 10% 60 cycle ac only) should be made to terminals 1 and 7 (grounded side) of the upper terminal board.

d. Signal line connections should be made to terminals 2 and 8 of the lower terminal board.

e. The backspace magnet leads are connected to terminal 9 of the bottom terminal board and terminal 8 of the upper terminal board.

NOTE

The backspace magnet armature on these sets is factory-positioned for ac operation. Should dc operation be desired, the armature must be removed and repositioned so that the side marked "C" faces the pole face of the magnet core.

f. Should the tape container be removed completely, reconnect to the upper terminal board as follows:

Green Wire to Terminal 3
Red Wire to Terminal 4

White Wire to Terminal 5
Black Wire to Terminal 6

6. MISCELLANEOUS INFORMATION

a. TAPE PATH --- The roll of tape should be inserted into the tape container such that the tape will feed from the left forward quadrant. Feed the tape in back of and under the retainer, through the tape guide, around the roller and into the perforator.

b. FOR FULLY PERFORATED TAPE UNITS --- Empty the chad container when putting a new roll of tape in the tape container

c. OBSERVATION WINDOW --- The plastic observation window should be cleaned as frequently as demanded by tape visibility requirements. Use a two percent solution of Liquid Joy in water or a two percent solution of ARQUAD A12 or 18. A dry cloth or tissue only should never be used as scratches and other surface impairments will result.

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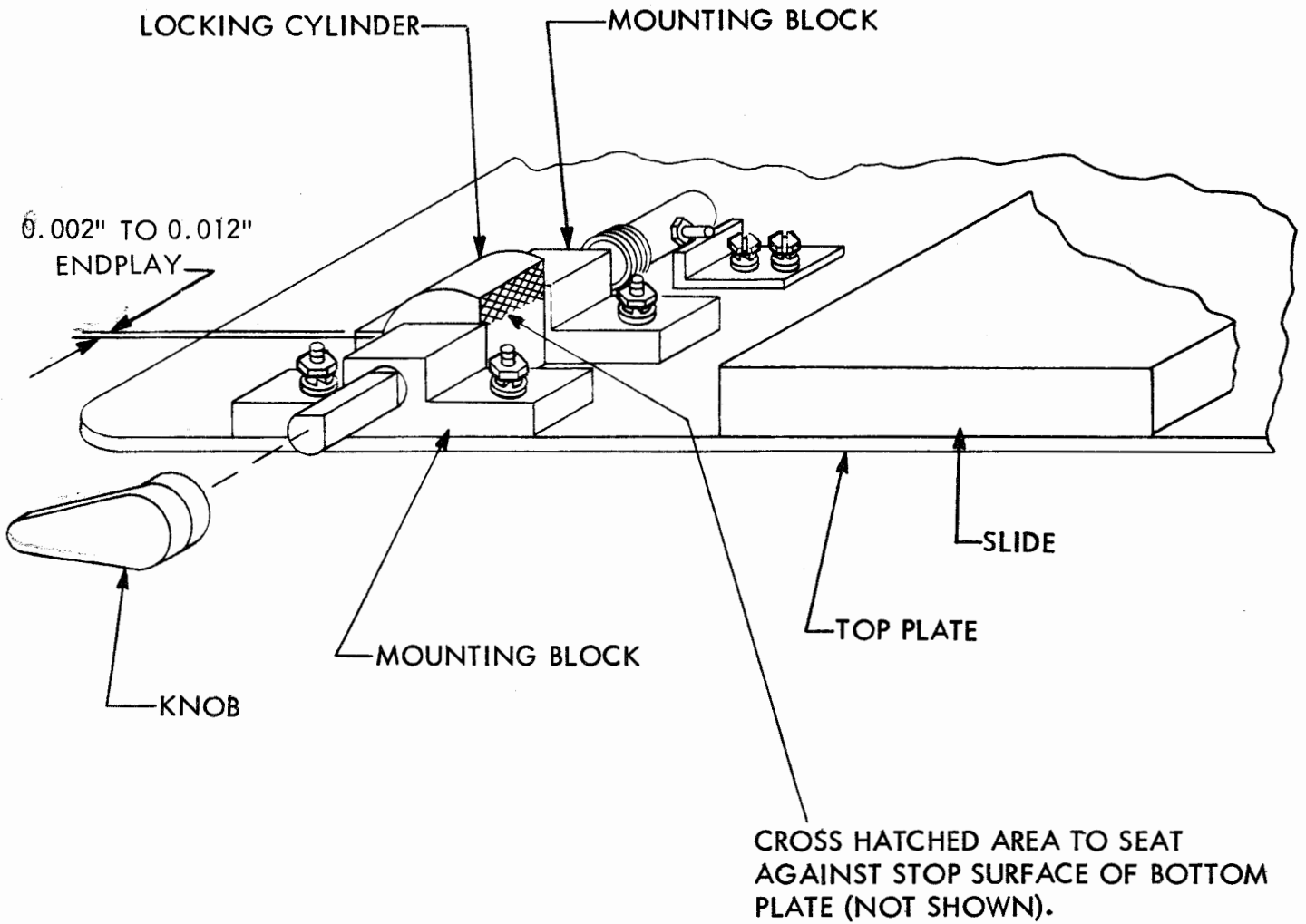


FIGURE 1. SLIDING BASE ASSEMBLY (174459)

SPECIAL CAUTION INSTRUCTION FOR
MODEL 28 SYNCHRONOUS MOTOR UNIT LMU24
OR LMU56

For reasons of safety maintain the
1/4 inch dimension shown on the figure
below.

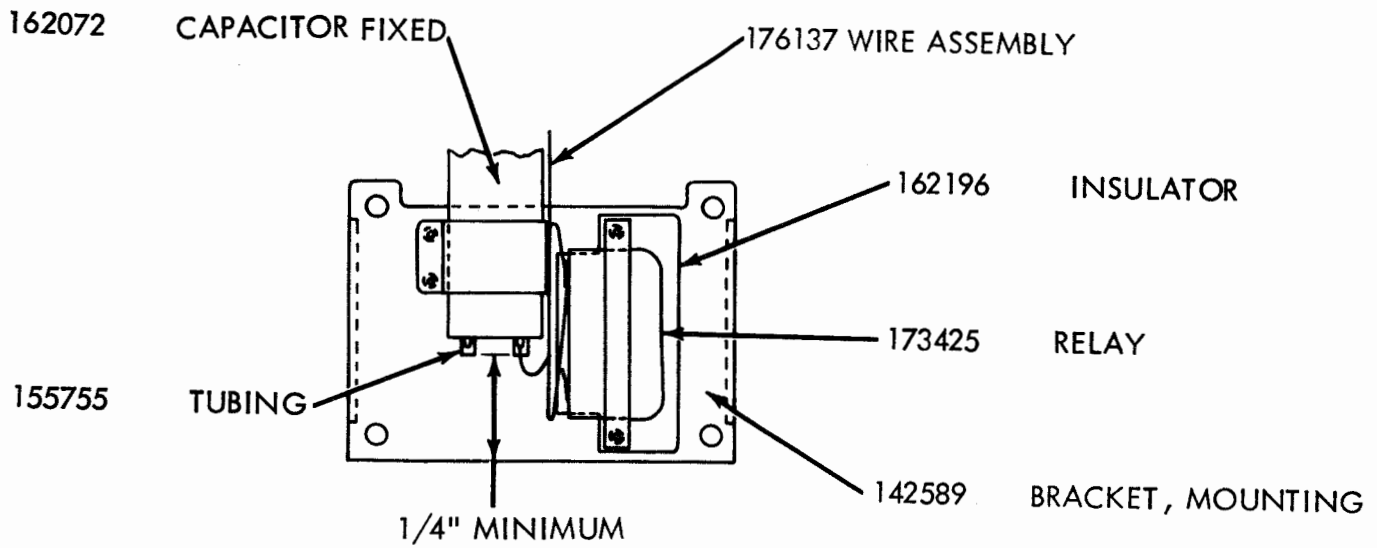


FIGURE 2