

Tektronix
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Product Modification

040-0982-04

M45971, M60923
M63312, M71559

RACKMOUNT CONVERSION (OPT 10)

For TEKTRONIX® TM5006 Power Modules

Serial Numbers B010100 - Up

This modification kit provides parts and instructions for mounting a TM5006 Power Module in a standard 19-inch wide rack that has Universal, EIA, RETMA, or Western Electric hole spacing.

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21-JUN-1990
Supersedes: 040-0982-03

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KIT PARTS LIST:

Ckt. Number	Quantity	Part Number	Description
	1 ea		Assy, left cab. side consisting of:
	4 ea	210-0458-00	Nut, 8-32 X 0.344
	2 ea	211-0755-00	Screw, Mach. 10-32 X 0.5, PNH
	4 ea	212-0070-00	Screw, 8-32 X 0.312 FLH, 100°
	1/2 pr	351-0104-03	Track, Slide-out Section
	1 ea	367-0022-00	Handle, Bow, 4.579 L, Brs Crpl
	1 ea	390-1105-00	Cabinet, Side Rackmount
	1 ea		Assy, right cab. side consisting of:
	4 ea	210-0458-00	Nut, 8-32 X 0.344
	2 ea	211-0755-00	Screw, Mach. 10-32 X 0.5, PNH
	4 ea	212-0070-00	Screw, 8-32 X 0.312 FLH, 100°
	1/2 pr	351-0104-03	Track, Slide-out Section
	1 ea	367-0022-00	Handle, Bow, 4.579 L, Brs Crpl
	1 ea	390-1105-00	Cabinet, Side Rackmount
	1 ea	119-0147-00	Fan, Axial, 115V, 50-60Hz, 14W
	2 ea	210-1298-00	Washer, shird, 0.195 X 0.575
	2 ea	212-0567-00	Screw, 10-32 X 0.887 ovh
	4 ea	213-0183-00	Screw, Thrd fra, 6-20 X 0.5
	1 pr	351-0636-00	Track, Slide, Station. & intermed.

INSTRUCTIONS:**GENERAL INFORMATION**

The TM5006 Power Module is designed for mounting in a standard 19-inch wide rack that has Universal, EIA, RETMA, or Western Electric hole spacing.

The TM5006 Power Module will fit most 19-inch wide racks whose front and rear holes conform to Universal hole spacing. The slide-out tracks easily mount to the cabinet rack front and rear vertical mounting rails if the inside distance between the front and rear rails is within 10-9/16 inches to 24-3/8 inches. If the inside distance exceeds 24-3/8 inches, some means of support is required for the rear ends of the slide-out tracks (for example, make extensions for the rear mounting brackets).

At least 7 inches of vertical space is required to mount the Power Module in a rack.

The distance between the front rails must be at least 17-5/8 inches for a cabinet in which the front lip of the stationary section is mounted behind an untapped front rail as shown in Fig. 1A. If the front rails

are tapped, the stationary section is mounted in front of the front rail as shown in Fig. 1B. The dimension between the front rails should be at least 17-3/4 inches. These dimensions allow room on each side of the Power Module for the slide-out tracks to operate so the Power Module can move freely in and out of the rack.

For proper circulation of cooling air, allow at least a two-inch clearance between the rear of the Power Module and any enclosure on the rack. If it is sometimes necessary or desirable to operate the Power Module in the fully extended position, be certain to use cables that are long enough to reach the instrument.

- () 1. Remove the 6-32 x 0.625 inch screws that fasten the four cabinet cover retainers to the rear casting and remove the cabinet retainers.
- () 2. Remove the cabinet feet, the trim strips, and the flipstand.
- () 3. Remove the left and right cabinet sides.

REPLACE FAN AS FOLLOWS:

- () 4. Remove the two 6-32 x 2.0 inch pan head screws that fasten the top of the fan motor to the heat sink.
- () 5. Refer to the Maintenance section of your Instruction Manual and perform steps necessary to remove the rear panel and pull the panel out to gain access to the fan wiring.
- () 6. Unsolder the two gray wires from the fan motor, remove the two 6-32 x 0.625 inch screws and #6 nuts that fasten the bottom of the fan motor to the rear panel and remove the fan motor.
- () 7. Install the fan motor, from the kit, by reversing the procedure described in steps 4 through 6.
- () 8. Install the right-hand cabinet side assembly into the slots on the right side of the instrument and fasten it in place with two 6-20 x 0.5 inch thread forming screws.
- () 9. Install the left-hand cabinet side assembly into the slots on the left side of the instrument and fasten it in place with two 6-20 x 0.5 inch thread forming screws.
- () 10. Reinstall the four cabinet cover retainers, removed in step 1, and fasten them in place with the four screws removed in step 1.

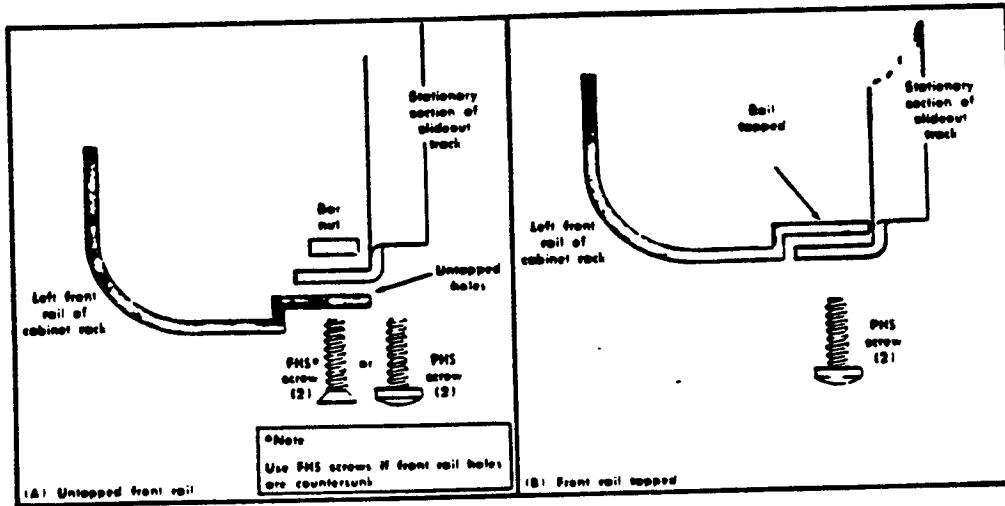


FIG. 1

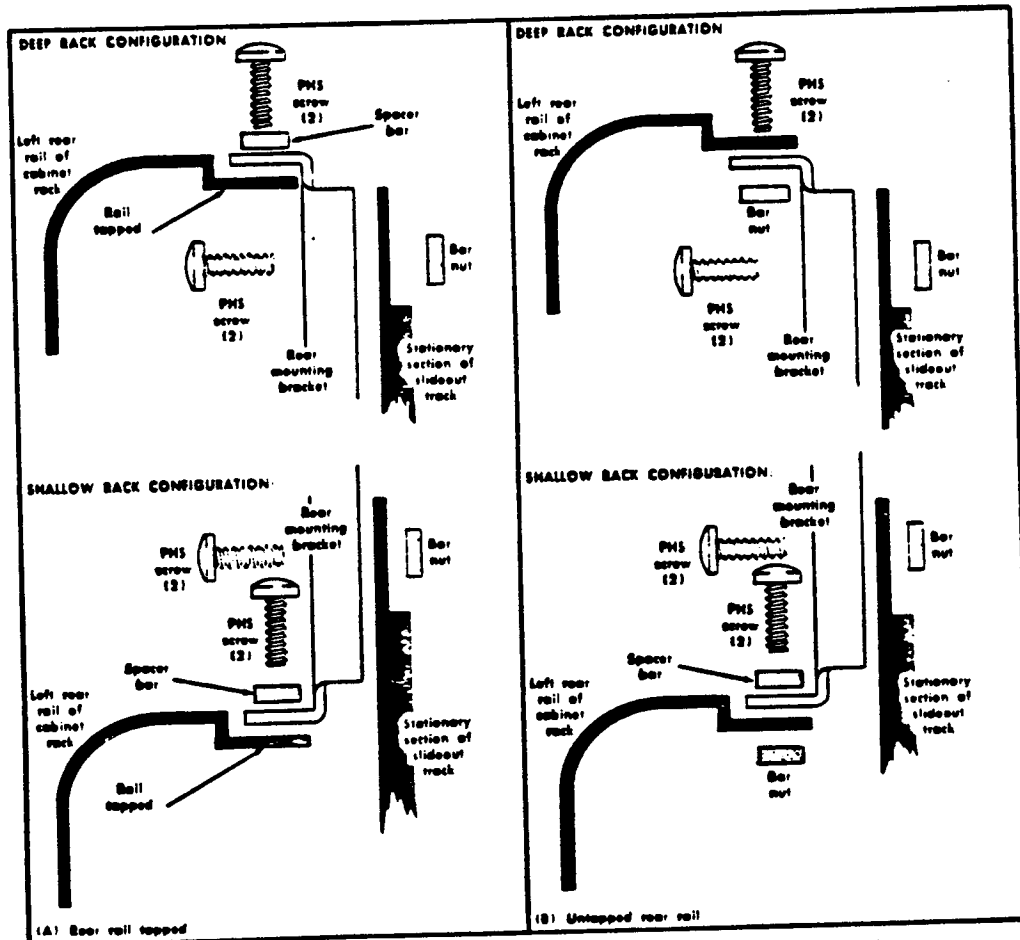


FIG. 2

INSTALLING THE SLIDE-OUT TRACKS

General Information

The slide-out tracks for the TM5006 consist of two assemblies, one for each side of the TM5006. Each assembly consists of three sections: A stationary section attaches to the front and rear rails of the rack, the chassis section attaches to the TM5006 and the intermediate section fits between the other two sections to allow the TM5006 to fully extend out of the rack. See Fig. 3 below.

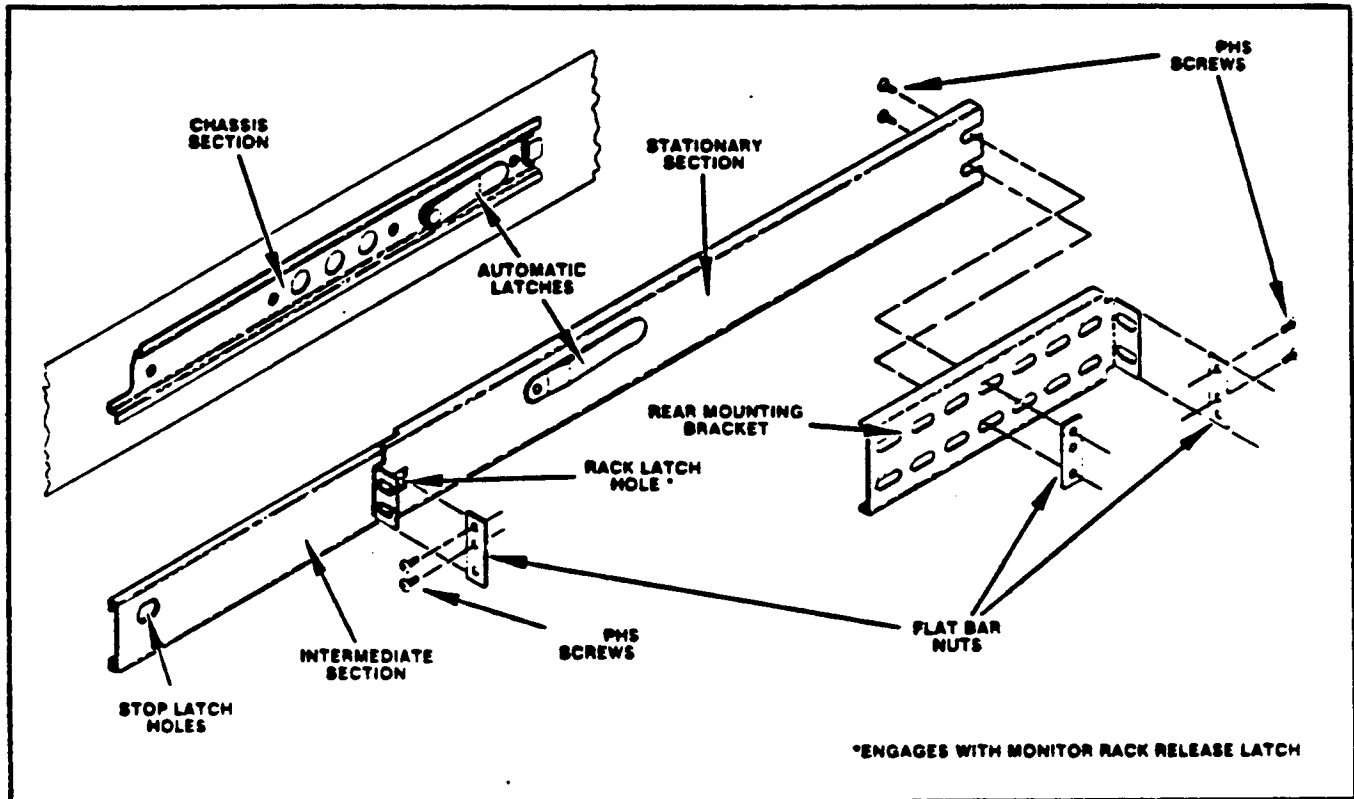


FIG. 3. RACKMOUNT SLIDE DETAIL. IF THE RACK HAS TAPPED HOLES, THE BAR NUTS ARE NOT REQUIRED.

The small hardware components included with the slide-out track assemblies are used to mount the tracks to the vertical rack rails meeting these requirements:

1. Front and rear rail holes must be large enough to allow inserting a 10-32 screw through the rail mounting hole if the rails are untapped (see Fig. 1A). OR
2. Front and rear rail holes must be tapped to accept a 10-32 screw if Fig. 1B mounting method is used.
3. Front and rear rail holes must be located on Universal spacing; that is, the sequence for the hole spacing is 1/2 inch, 5/8 inch, 5/8 inch, 1/2 inch, etc.

Because of the above variations, there will be some small parts left over. The stationary and intermediate sections for both sides of the rack are shipped as a matched set and should not be separated. The matched sets of both sides, including hardware, are marked 351-0636-00 on the package. To identify the assemblies, note that the automatic latch and intermediate section stop is located near the top of the matched set.

Mounting Procedure

Use the following procedure to mount both sides. See Fig. 1 for installation details.

WARNING

During rackmount installation, interchanging the left and right slide-out track assemblies defeats the extension stop (safety latch) feature of the tracks. Equipment could, when extended, come out of the slides and fall from the rack, possibly causing personal injury and equipment damage.

When mounting the supplied slide-out tracks, inspect both assemblies to find the LH (left hand) and RH (right hand) designations to determine correct placement. Install the LH assembly to your left side as you face the front of the rack and install the RH assembly to your right side.

1. To mount the TM5006 directly above or below another instrument in a cabinet rack, select the appropriate holes in the front rack rails for the stationary sections, using Fig. 4 as a guide.
2. Mount the stationary slide track sections to the front rack rails using either of these methods:
 - a. If the front flanges of the stationary sections are to be mounted behind the front rails (rails are countersunk or not tapped), mount the stationary sections as shown in Fig. 1A.
 - b. If the front flanges of the stationary sections are to be mounted in front of the front rails (rails are tapped for 10-32 screws), mount the stationary sections as shown in Fig. 1B. To provide increased bearing surface for the screw head to securely fasten the front flange to the rail, a flat washer (not supplied) may be added under the screw head. However, consider that when this mounting method is used, the front panel will not fit flush against the front rail because of the stationary section and washer thickness. If a flush fit is preferred, the method shown in Fig. 1A should be used.

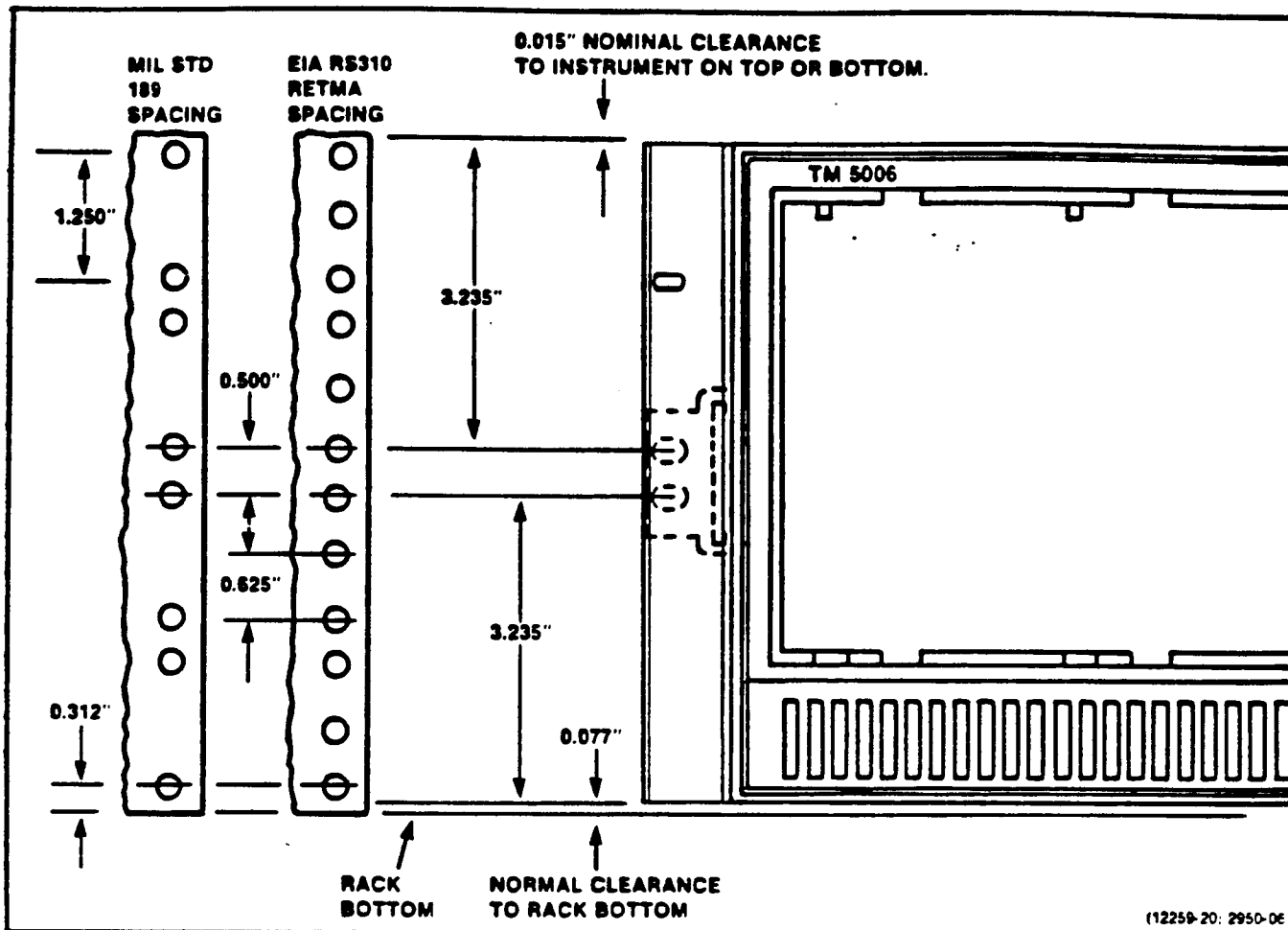


Fig. 4 - Standard Spacing and Clearances

3. Fasten the stationary slide-out sections to the rear rack rails, using either of these methods:
 - a. If the rear rack rail holes are tapped to accept 10-32 machine screws, mount the left stationary section with hardware provided as shown in Fig. 2A. Note that the rear mounting bracket can be installed either way so the slide-out tracks will fit a deep or shallow cabinet rack. Use Fig. 2A as a guide for mounting the left stationary section. Make sure the stationary sections are horizontally aligned so they are level and parallel with each other.
 - b. If the rear rack rail holes are not tapped to accept 10-32 machine screws, mount the left stationary section with hardware provided as shown in Fig. 2B. Note that the rear mounting bracket can be installed either way so the slide-out tracks will fit a deep or shallow cabinet rack. Use Fig. 2B as a guide for mounting the left stationary section. Make sure the stationary sections are horizontally aligned so they are level and parallel with each other.

To insert the instrument into the rack, refer to Fig. 5 below.

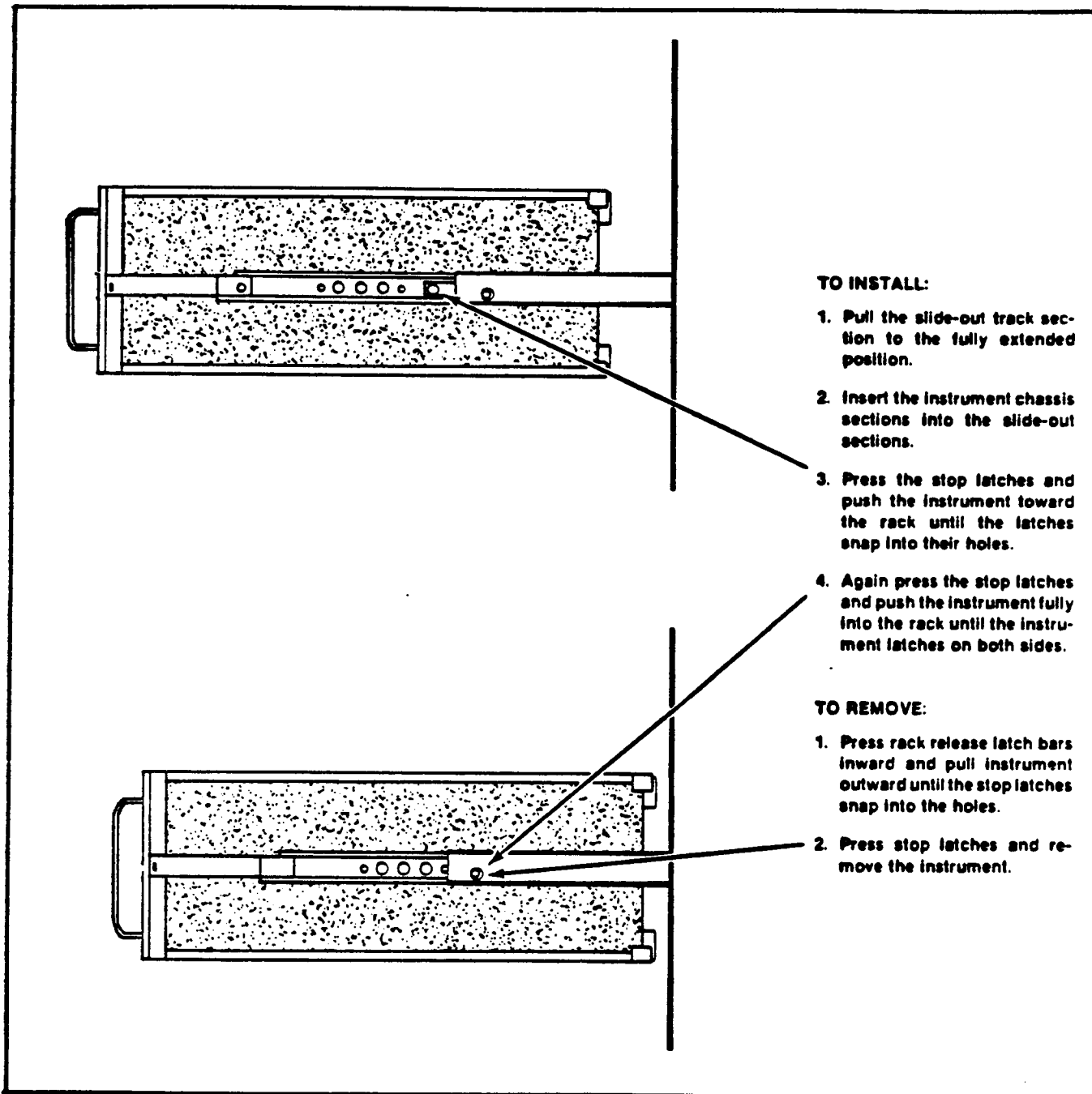


Fig. 5 - Removing and Installing TM5006 in Rack Slides

To adjust the slide-out tracks for smooth sliding action, loosen the screws used to join the stationary sections to the rails of the rack. Center the instrument, allowing the slide-out tracks to seek the proper width, then tighten the screws.

Maintenance

The slide-out tracks require no lubrication. The special, dark gray finish on the sliding parts is a permanent lubrication.

RH:rh

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