



User Instructions

PGM-IR Battery Replacement

Battery Replacement Kit for PAGMs

Order No.: 3015-5744/02

Print Spec: 10000005389 (F)

CR: 800000071026

 WARNING!

These instructions must be provided to users before use of the product and retained for ready reference by the user. Read this manual carefully before using or maintaining the device. The device will perform as designed only if it is used and maintained in accordance with the manufacturer's instructions. Otherwise, it could fail to perform as designed, and persons who rely on this device could sustain serious injury or death.

The warranties made by MSA with respect to the product are voided if the product is not installed and used in accordance with the instructions in this manual. Please protect yourself and your employees by following the instructions.

Please read and observe the WARNINGS and CAUTIONS inside. For additional information relative to use or repair, call 1-800-MSA-2222 during regular working hours.

For countries of Russian Federation, Republic of Kazakhstan and Republic of Belarus, the gas detector will be delivered with a passport document that includes valid approval information. On the CD with manual instruction attached to the gas detector the user will find the documents "Type Description" and "Test Method" - appendixes to Pattern Approval Certificate of Measuring instrument, valid in the countries of use.

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1 Scope

NOTE: Failure to comply with these instructions may void the warranty.

This instruction manual describes how to replace the battery in your PAGM infrared gas leak detector. It is assumed that the user is familiar with the device. Refer to the instructions for detailed operation and maintenance information for each PAGM model.

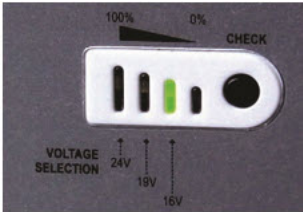
2 Items Required

- Original PAGM instruction manual
- Replacement Battery Kit (3015-5743)
- Rechargeable lithium-ion battery (colors may vary)
- Cable with 2.1 mm jack (for newer series PAGMs)
- Cable with 2.5 mm jack (marked in red, for older series PAGMs)
- Battery charger
- This instruction manual

NOTE: The 2.1 mm and 2.5 mm cables look very similar. For easy identification, the cable with the 2.5 mm plug is marked in red. Note that this cable is used for certain older series PAGMs.

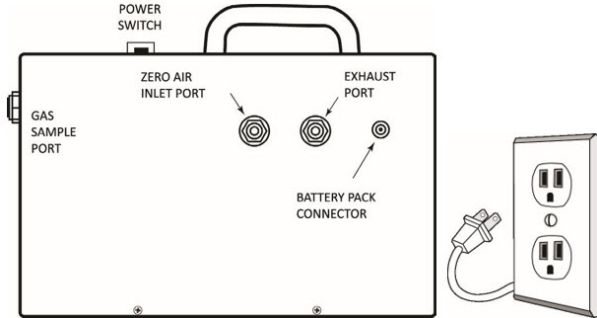
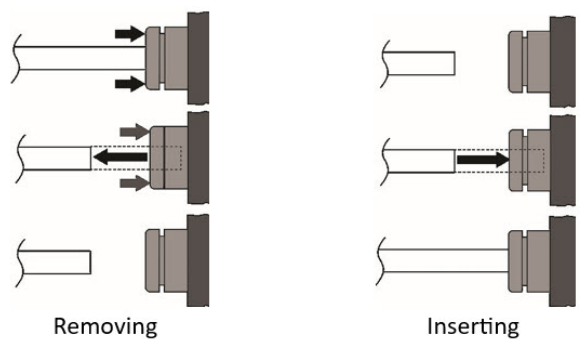
3 Charging the New Battery

The lithium-ion battery in your kit will likely be partially charged when you receive it. However, you should fully charge the battery prior to operating the PAGM.

Step	Charging the New Battery	
1	Plug the battery charger's AC plug to a standard 110/220 VAC 50/60 HZ AC power socket.	
2	Plug the power connector from the charger into the INPUT socket on the battery.	
3	The LED on the right will light up red. The remaining three LEDs will light up green and indicate the charge level of the battery. One green LED indicates 30-60% battery charge, two green LEDs indicate 60-90% battery charge, and all three green LEDs indicate a full charge. 	

4 Replacement Procedure

4.1 Preparation

Step	Preparation	
1	Fully charge your new replacement battery before beginning this procedure. (See previous instructions).	
2	Shut off the PAGM (see Power Switch location at right).	
3	If your old battery is plugged in for charging, unplug the power cord.	
4	Locate the following components on your PAGM: • Gas Sample Port • Zero Inlet Air Port (on certain models only) • Exhaust Port • Battery Pack Connector	
5	To simplify battery replacement: • Disconnect the probe from the gas sample port • Disconnect the exhaust tubing • Disconnect the zero air inlet tubing (if so equipped). To remove tubing from a push-to-connect (PTC) connector, push and hold the spring-loaded collar inwards, then simultaneously withdraw the tubing. To re-insert later, firmly push the appropriate tubing into the hole in the center of the connector until it seats in the connector.	

4.2 Removing the Old Battery

Step	Removing the Old Battery	
6	Open the soft case at the top of the PAGM unit by pulling apart the Velcro fasteners and folding back the soft case to expose the top of the PAGM enclosure. Locate the part number sticker (3015-xxxx). It can be found on the upper left corner of the PAGM case and begins with the number 3015. It is partially exposed in the figure at the right. NOTE: Your part number will assist in determining the size of the battery pack connector on your PAGM, and therefore the size of the battery cable to use (2.1 mm or 2.5 mm) later in this process (steps 9 through 11).	

4 Replacement Procedure

Step	Removing the Old Battery	
7	Separate the soft case from the side of the PAGM so you can see the battery pack connector. Carefully remove the power cable from the power connector by pulling it straight out from the side of the PAGM enclosure.	
8	Unzip the battery compartment to expose the old battery. Remove the old battery from the compartment. Carefully withdraw the top end of the battery cable out of the cutout in the soft case to remove it completely from the PAGM. Dispose of the old battery, charger, and cables according to your local rules and regulations for recycling. Installation of the new battery is simply the reverse of this process.	

4.3 Selecting the Appropriate Battery Cable

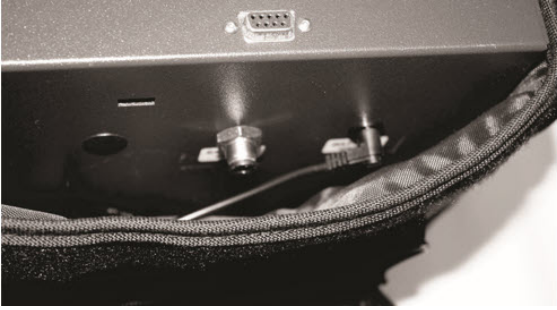
During its lifetime, the PAGM has had two unique battery pack connectors:

- one that supports a battery cable with a 2.5 mm jack
- one that supports a battery cable with a 2.1 mm jack

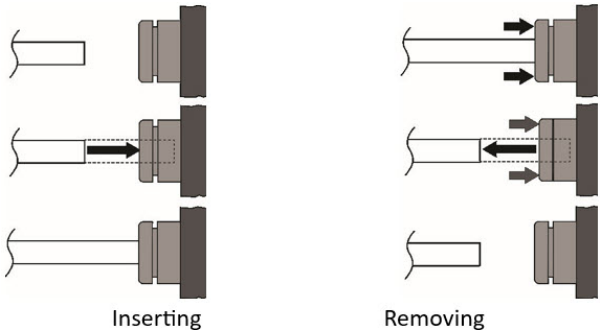
Your battery replacement kit includes both cables, however, you must determine which cable your PAGM requires. For most PAGMs, this determination can be made based on part number. However, in some cases, you may need to try both cables to determine which is appropriate. The following instructions step you through the determination process.

Step	Selecting the Appropriate Battery Cable
9	Compare your PAGM's part number (from earlier in this instruction) with part numbers 3015-5696 and 3015-5420. If your PAGM is neither 3015-5696 nor 3015-5420, then use the cable with the 2.1 mm jack. Discard the incorrect cable, then proceed to "Installing the New Battery."
10	For PAGM part number 3015-5420 (earlier model), use the cable with the 2.5 mm jack (marked in red). Discard the incorrect cable, then proceed to "Installing the New Battery."
11	For PAGM part number 3015-5696 (the transition model), first try the cable with the 2.1 mm jack (the cable without the red marking). If the 90-degree connector on this cable easily fits into the battery pack connector without excessive force, proceed to "Installing the New Battery." Otherwise, the instrument requires the 2.5 mm cable (with the red marking). Insert the 90-degree connector of the cable and verify that it easily fits into the battery pack connector without excessive force. Discard the incorrect cable, then proceed to "Installing the New Battery."

4.4 Installing the New Battery

Step	Installing the New Battery	
12	Ensure the battery voltage is set per Battery Pack User Guide 3015-5848 or the instruction label on the battery pack (i.e., the output voltage selection switch on the battery is set to the 16V position). Then, connect the battery cable to the battery. Be sure to connect the end of the cable with the straight plug, NOT the 90-degree angled plug.	
13	Place the battery in the pocket of the soft case.	
14	Feed the loose end of cable (with the 90-degree connector) through the hole in the soft case.	
15	Connect the 90-degree plug into the battery pack connector on the side of the PAGM enclosure.	
16	Loosely pack any excess cable into the battery pocket, being careful not to stress the connection points.	
17	Close the zipper on the battery pocket.	

4 Replacement Procedure

Step	Installing the New Battery	
18	Secure the top of the soft case using the Velcro connectors.	
19	Re-attach: - the probe from the gas sample port - the exhaust tubing - zero air inlet tubing (if so equipped) To insert tubing into a push-to-connect (PTC) connector, firmly push the appropriate tubing into the hole in the center of the connector until it seats in the connector. To remove, push and hold the spring-loaded collar inwards, then simultaneously withdraw the tubing.	 Inserting Removing

4.5 Validation

Step	Validation
20	Ensure that the battery is powered ON per the instruction label on the battery pack.
21	Turn on the PAGM by pressing the power switch.
22	Verify that the PAGM powers up. You should hear the pump turn on and see the lights on the top of the unit energize.