

Troubleshooting

- Beacon takes a reading every five minutes. If oil level drops or oil is replenished, make sure to wait **up to five minutes** for Beacon's status to change.
- If the lens is difficult to remove or attach:
 1. Make sure to grab and squeeze the lens at the provided grip point.
 2. Ensure the Alignment arrow is over the unlocked icon.
 3. Add silicone grease to the O-ring
- If the Sensor or CMP are leaking:
 1. Hand-tighten to ensure O-rings and gaskets are compressed
 2. Apply thread sealing paste to threads. **DO NOT** use Teflon Tape.
- If the Beacon does not flash during power up, check or replace the batteries.
- If the Beacon does not flash during sensor testing, check both M12 connections.
- If the Beacon does not stop flashing when the Sensor is submerged in oil, check the sensor for obstruction or bubbles by rotating the Sight Glass.

- NOTE:** The Sensor takes readings at preset intervals of up to 5 minutes.
- If one LED flashes at the bottom of the Beacon lens, the batteries are low and need to be replaced.
 - If you perform a battery check and observe the power-on flash sequence instead of the battery check sequence, do not assume the batteries are good. Wait one minute to see if the low battery alert turns on. If not, conduct the battery test again.



Scan to visit the Beacon Page



We love seeing pictures of our products in use! Tag us @LunetaLLC on social media.



If you have questions or are unhappy with your purchase, email us at: sales@luneta.com

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Warnings and Disclaimers

These disclaimers cover the Beacon Module, Oil Level Sensor, and Beacon Cable. For the CMP and Sensor Sight Glass, please refer to the instructions that came with them.

- Beacon does not replace visual oil level verification or daily inspections. Beacon is intended to complement your maintenance routine.
- Beacon contains an extremely strong magnet. Exercise caution to avoid being pinched.
- Do not touch the electronics board. A static shock could damage the components.
- The Luneta Beacon and Luneta Oil Level Sensor are to be used exclusively together and are not compatible with other sensors, modules, or control units.
- Do not submerge in water or place in a location that could become submerged in water.
- The Luneta Sensor cannot distinguish between different fluid types, such as oil and water.
- The Luneta Sensor cannot distinguish between different fluid states such as liquid and foam.
- Do not install the Beacon Module or the sensor on a machine with excessive vibration. Excessive vibration could detach the batteries.
- Do not use batteries other than Energizer Ultimate Lithium AA batteries (L91).
- Do not install the sensor on anything other than a Luneta CMP with an upgraded Sensor Sight Glass.
- Do not install on a moving vehicle.
- Do not use on moving machine surfaces or machines exposed to shock or fluid surge conditions.
- Install the Beacon Module a safe distance away from moving machine parts, vehicles, and foot traffic.
- Do not install on machines with oil temperatures outside the range of -40°F to 140°F (-40°C to 60°C).
- Do not install on machines with ambient temperatures outside the range of -40°F to 140°F (-40°C to 60°C).
- Do not install the CMP and Luneta Sensor on machines with oil pressure greater than 65 psi. (4.5 bar)
- Do not use cleaning solvents incompatible with Polycarbonate, ABS/PC, PMMA, silicone, and Viton.
- Visit [Luneta.com](https://www.luneta.com) for more details.

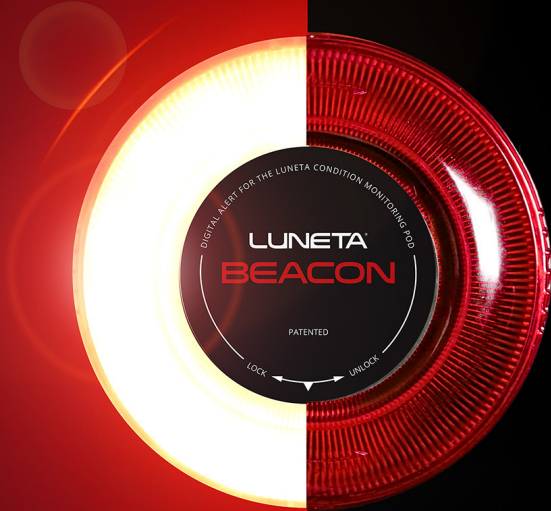
Specifications

Application	Oil Level Ports
Ratings	FCC Part 15, CE, IP65, RoHS
Outdoor compatible	Yes
Chemical compatibility	Mineral and Synthetic oils compatible with Viton, PMMA, and silicone.
Beacon Material	PC, ABS/PC, PA66, Silicone, Nitrile Rubber, Brass, Zinc-plated steel, Zinc-plated brass
Magnet	Neodymium Rare Earth
Cable Material	Unshielded PVC, gold-plated copper pins
Cable Connectors	M12 4-Pin Code A Connectors (Male and Female)
Sensor Material	Teflon coated stainless steel, Nickel-plated brass, Viton
Sensor Mounting Threads	1/4" NPT
Sensor Type	Capacitance
Oil Level Resolution	0.2 in (5mm)
Sampling Frequency	5 minutes
Power	6 volts (4x AA Batteries, Energizer Ultimate Lithium L91)
Battery Life	
Sampling Only, No Flashes	> 1 year
Low Oil Level, Continuous Flashes	~14 days
Low Battery, Continuous Flashes	3 days



RoHS

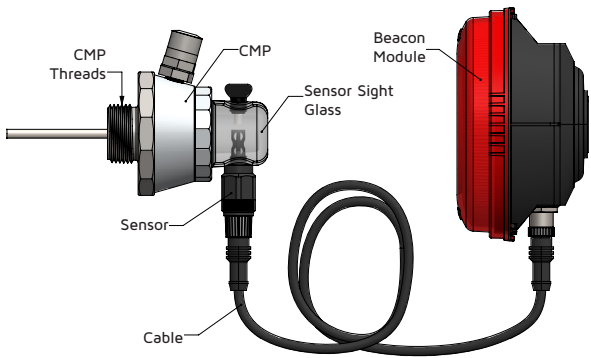
Beacon Kit



LUNETATA
SMART PRODUCTS • RELIABLE MACHINES

What is Beacon?

The Luneta Beacon is a digital alert system for use with the Condition Monitoring Pod (CMP®) and Luneta Oil Level Sensor. The sensor is installed inside the CMP sight glass and connects to the Beacon via a cable. When the oil level drops and empties the sight glass, Beacon will begin to flash, indicating a drop in oil level. Beacon is battery-powered and attaches easily to any ferromagnetic surface with a magnet.



How to Use Beacon

- Position Beacon so that it is easy to see during daily inspections.
- During daily inspections, visually check Beacon for any flashing alerts.
- If a daily inspection is missed, conduct a battery check by pressing the power button for 1 second.
- If Beacon is flashing a low oil level alert, take immediate action by following your low oil level protocols. Once the oil is replenished, Beacon will stop flashing.
- If Beacon is flashing a low battery alert, take immediate action to replace the batteries.
- Refer to the Flashing Sequence chart for more details on what flashes mean.
- Check sensor daily. Remove any sludge, debris, or other build-up as it can interfere with level readings.

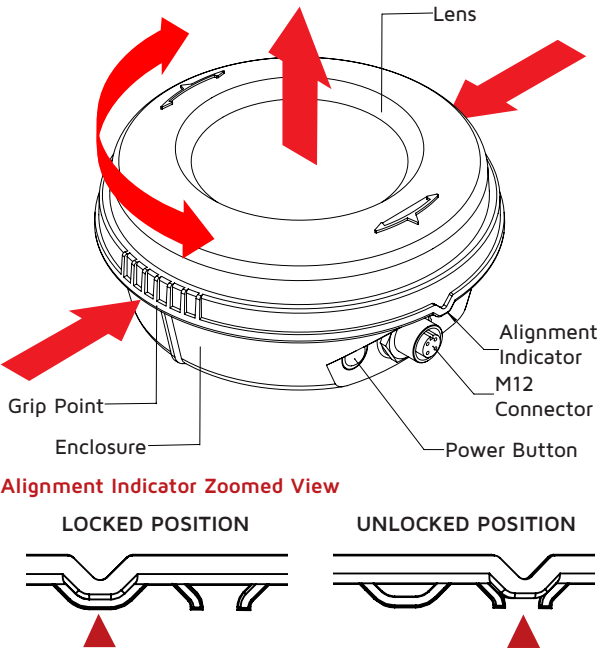
What's included in the Beacon Kit?

- **Beacon Module** (p/n BEACON)
- **Beacon Cable** (p/n CABLE.1M, CABLE.3M)
- **Sensor** (p/n SENSOR.OL)
- **CMP with Sensor Sight Glass** (p/n CMPOD.XXX.SSG)
- **Optional: Batteries** (p/n BATT.AA.4PK)

What is required for installation?

Batteries may not be included with Beacon. Four AA Energizer Ultimate Lithium batteries are required for operation. Beacon does not require special tools for installation. The CMP and Sensor will require a wrench and thread-sealing paste.

Opening the Beacon Module



Beacon Kit Installation Steps

1. Install the Luneta Sensor into the CMP Sensor Sight Glass.
 - Check for any debris in the sensor.
 - Thread the sensor into the sensor port until the O-ring on the sensor is properly compressed.
 - The sensor port is larger than the steel indicator port.
 - Do not over-tighten and damage the Sight Glass threads.
2. Install the CMP into the machine by following the CMP instruction manual, the Luneta Sensor is used in place of the magnetic plug.
3. Return the oil to its original level.
4. Check for leaks and tighten the CMP or Sensor as needed. If leaks persist, use thread-sealing paste. **DO NOT** use Teflon™ tape on Sight Glass threads.
5. Open the Beacon Module:
 - Grab and squeeze the red lens at the grip points.
 - Turn counterclockwise until the alignment indicator is over the unlocked position.
 - Pull the lens and the enclosure apart.
6. Insert four AA Energizer Ultimate Lithium batteries into the battery holder inside the Beacon Module. Only install new batteries. Do not touch the electronics, they are sensitive to static.
7. Reattach the lens.
 - Align the alignment indicator with the unlocked icon.
 - Push the two parts together to compress the O-ring.
 - Rotate until the indicator arrow is over the locked icon. Four locking tabs inside the lens will engage with the enclosure.
 - Ensure the O-ring between the lens and the enclosure stays in the O-ring groove and does not get kinked.
8. Attach the Beacon Cable between the Sensor and Beacon.
 - The cable has both a female and male connector.
 - The male attaches to the Beacon Module and the female attaches to the Sensor.
 - The M12 connectors on the cable are keyed, so ensure correct orientation before threading.
 - Fully tighten the M12 threads on the connector by hand.
9. Power on the module by pushing the power button.
 - The lens will flash in a clockwise pattern, followed by a single flash. There will be a 15 second delay before Beacon takes its first reading. Ensure you wait a full 15 seconds before attempting to verify operational status.

NOTE: To power off, press the power button for 2 seconds. The lens will flash twice and Beacon will power off.

Beacon Kit Installation Steps Continued

10. Verify that the Beacon module and sensor are working correctly.
 - If the Sensor is submerged in oil, the Beacon will not flash again after start-up.
 - If the Sensor is **Not** Submerged in oil, the Beacon will begin flashing after start-up.
 - You can rotate the Sight Glass on the CMP to simulate both conditions for verification
- **If the Beacon and/or Sensor are not working properly, refer to the troubleshooting section.**
11. Use the magnet on the Beacon Module to place it in a location with a good line of sight for daily inspections. Ensure it is well within reach to perform daily battery checks.
 - **DO NOT** attach the Beacon Module to a surface with excessive vibration.
12. Secure the Beacon Cable so it does not get caught or snagged.
13. This completes installation of the Beacon Kit.

Flashing Sequence

Power On		From off, press the power button for one second. The lens will flash in a clockwise pattern, followed by a single flash. It will take 15 seconds to begin reading.
Battery Check		From on, press the power button for one second. The lens will flash once to indicate the batteries are good.
Power Off		From on, press the power button for two seconds. The light will flash twice to confirm shutdown.
Low Oil Level		The entire lens will flash continuously if oil is low; refill oil to stop the alert. Beacon may take up to five minutes to refresh its status.
Low Battery		One LED will flash continuously battery is low; replace batteries to stop. NOTE: When low oil and low battery occur simultaneously, the alerts flash in an alternating pattern.