

PERRIN

60MM GAUGES

INSTRUCTION MANUAL

Important



Read through all instructions before performing any portion of installation.

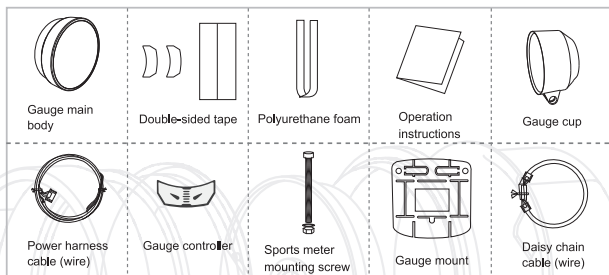
Thank you for purchasing a PERRIN Performance gauge. Installation of these gauges should only be performed by persons experienced with installation of aftermarket performance parts and proper operation of high performance vehicles. If the vehicle needs to be raised off the ground for installation, the installer must use proper jacks, jack-stands, and/or a professional vehicle hoist for the safety of the installer and to protect property. If the vehicle is lifted improperly, serious injury or death may occur.

If you have any questions, please contact our tech department prior to starting installation. We can be reached via the following methods:

Email: Tech@PERRINperformance.com
Instant Chat off the main page of www.PERRINperformance.com
Call our tech team at 503-693-1702

- Never work in a space with poor air ventilation. A running engine may cause carbon monoxide poisoning, combustion, or injury. Soldering gasses may cause health problems.
- Before installation, the vehicle engine should be turned off and the negative terminal of the battery should be removed. This will lower the risk of short circuits, fires, or damage to other parts of the vehicle.
- Damage to your vehicle or unexpected performance results due to the incorrect installation of this product is outside the liability limits of the warranty (e.g. connecting wires to the incorrect/reversed poles or damage caused by incorrect usage). PERRIN Performance is not liable for any loss of personal property which may arise from the incorrect usage or installation of this product.
- This product is designed for 12V DC vehicles only; it will not work in vehicles using 6V DC or 24V DC systems. Attempting installation on vehicles using 6V DC or 24V DC systems will void the warranty.
- Consult a professional before installation if unfamiliar with 12V DC automotive electrical systems.
- Do not damage the outer rubber of the electric cables/wires. Broken cables/wires may cause fire due to short circuits, poor contact, etc.
- Cover soldered joints with insulation tape or shrink tubing and make sure no soldered joint is exposed without cover.
- Do not install gauges in a location near high temperature or humidity, as this could cause the gauges to malfunction.
- Make sure all harnesses and sensors are connected before powering on your gauge(s).
- Changing the settings function of this product while driving is highly dangerous - it will take your attention away from the road or traffic conditions and may cause an accident. ONLY change the settings when the vehicle is parked.
- Depending on the gauge purchased: PT (Pipe Thread) fittings are a tapered thread that seals when tightened, not bottomed out. Thread the fittings in by hand and tighten roughly 1/2 to 1 full turn more until fitting is tight. NOTE: Using a small amount of Teflon tape on threads is a good idea to ensure a proper seal.

Common Parts

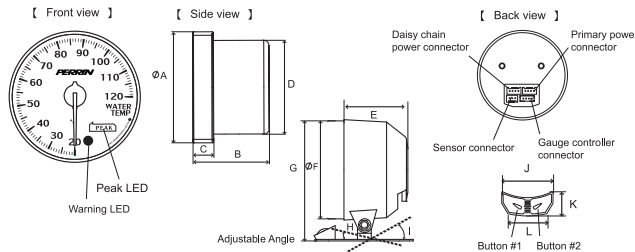


Specific Parts

Water Temp. & Oil Temp.	Fuel Press. & Oil Press.	Exhaust Temp.	Boost Pressure
Temperature sensor cable (wire)	Pressure sensor cable (wire)	EGT bung	Filter
			Three-way vacuum connector
			Vacuum hose
			Boost sensor

Technical Information

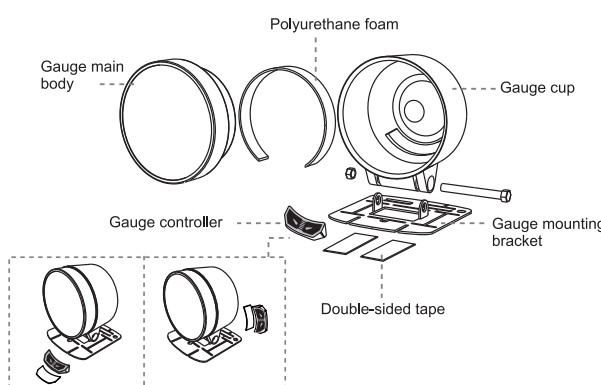
Default voltage : 12 volts
Default current : 20 uA / 0.3 watts



Dimension of gauge						Unit: mm	
Ø 60 gauge							
A	66.2	D	60	G	75.3	J	28.6
B	37.5	E	44.8	H	15°	K	14.5
C	12.9	F	62.5	I	32°	L	22

Installation Instructions

Gauge Assembly Diagram



Installation

- Choose a mounting location where the driver's sight will not be impaired, especially when installing multiple gauges.

Clean the area where the gauge will be mounted

- Keep the installation area dry and clean.
- Use a proper detergent (for example, alcohol or adhesive remover) to remove all grease and dirt from mounting location and from gauge mounting bracket.

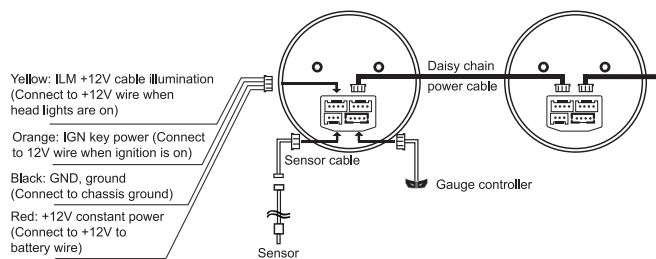
Mounting and fixing the gauge

- Apply double-sided tape to bottom of gauge mounting bracket.
- Test fit the bracket to mounting location. Make any adjustments to bracket by bending mount.
- Remove adhesive backing from tape. Install mount to mounting location, making sure to press mount firmly down for roughly 30 seconds.
- Allow adhesive to bond for 1 hour before applying too much force or gauge may become dislodged.

Inserting gauge

- Apply polyurethane foam to outside of gauge. Using varying amounts of foam will determine how tightly gauges will fit into pod.
- Press gauge firmly into pod. Ensure harness plugs are accessible.

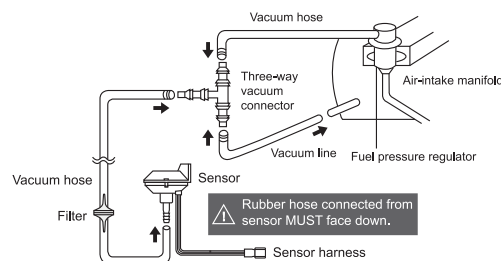
Wiring Diagram



Wire Connections

- Strip 10mm from front end of connection wire.
 - Strip 10mm of wire on circuit to be connected.
 - Twist wire around circuit to be connected.
 - Solder connection using proper soldering methods. Alternatively, a high quality crimp may be used.
 - Wrap connection thoroughly with electrical tape, making sure it's covered completely and no solder or bare wire is exposed.
- a. 10mm
b. 10mm
c. Solder after twisting.
d. Wrap with high quality electrical tape.

Boost Sensor

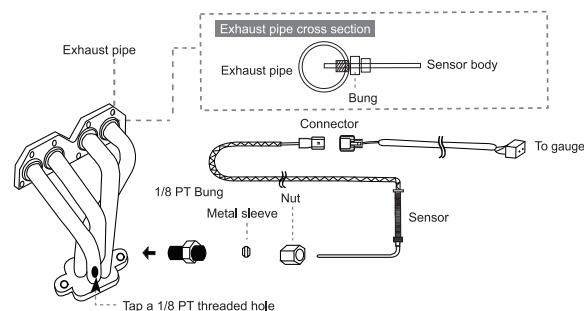


- With the shortest path possible, route vacuum tube to vacuum source, making sure to clear mounting points and moving parts.
- Mount sensor away from extreme vibration and high underhood temperatures (such as over a turbocharger).
- A vacuum source can often be found between intake manifold and fuel pressure regulator. Do not connect to hoses used for boost control - inaccurate readings will occur.
- Cut vacuum tube from intake manifold, then connect three-way vacuum connector to vacuum tubes as shown above. Use remaining rubber tubing to connect sensor and three-way connector.



Note: Use zip ties to secure hoses at all joints.

Exhaust Gas Temperature Sensor

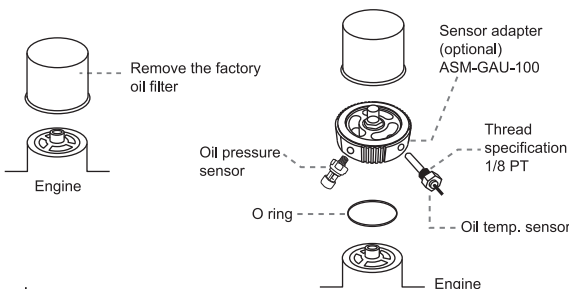


- Drill a 21/64" hole into exhaust pipe and tap hole with 1/8 PT thread. Depth of tap is very important; do not tap too deep or fitting will not seal. Tap 2-3 turns, then test until it threads in 2-3 turns by hand. Thread 1/8 PT bung into pipe. Note: Hole should be drilled as close to head as possible.
- Slide sensor through the nut and sleeve. Adjust the position of sensor so top of sensor is sticking out into exhaust pipe roughly 0.500" and tighten the lock nut.
- Threads should not be bottomed out into adapter to seal (threads are a tapered type which seal as they get tight). Thread in by hand, then turn 1 to 1.5 more turns to seal.



Clean burrs & chips from the pipe after drilling hole to prevent turbocharger damage. Most accurate readings will be found if sensor can be placed close to engine exhaust ports.

Oil Temperature / Pressure Sensors



Warning

- Do not twist wires when installing sensor into adapter. Metal inside the wire could become broken and gauge may not work because of a poor connection.
- Replace any motor oil lost during the installation. Lack of motor oil will cause damage to the engine.

Notes

- We recommend a thread specification for the sensor adapter of 1/8 PT. If the specification is not matched, please consult the dealer, or the shop you purchased from, for another adapter.
- Threads should not be bottomed out into adapter to seal (threads are a tapered type which seal as they get tight). Thread in by hand, then turn 1 to 1.5 more turns to seal. Check for leaks after engine has started, then again after it is warmed up.

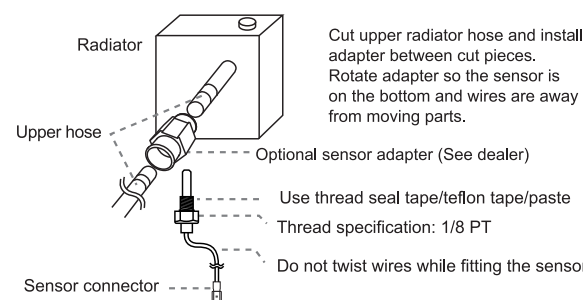
PERRIN Performance
Address: 3111 N.E. Shute Rd. Hillsboro, OR 97124
Tel: 503-693-1702 Fax: 503-693-1782
E-mail: sales@perrinperformance.com
Website: www.perrinperformance.com

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Water Temperature Sensor



Warning

- Do not twist wires when installing sensor with bung adapter. The metal inside wire could become broken and gauge may not work because of a poor connection.
- Replace coolant which was lost during installation. Lack of engine coolant will cause damage.

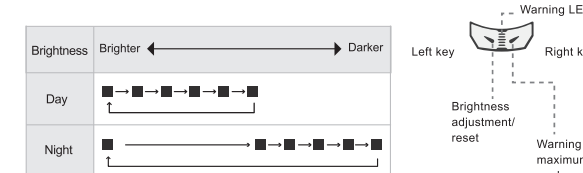
Notes:

- We recommend a thread specification for the sensor adapter of 1/8 PT. If the specification is not matched, please consult the dealer, or the shop you purchased from, for another adapter.
- Threads should not be bottomed out into adapter to seal (threads are a tapered type which seal as they get tight). Thread in by hand, then turn 1 to 1.5 more turns to seal. Check for leaks after engine has started, then again after it is warmed up.

Operating Your Gauges





Brightness Adjustment

PERRIN gauges have 2 modes: Day & Night. Default mode is Day. The mode will shift to Night mode automatically when the headlights are turned on. There are 6 brightness steps for each mode.



Button Functions

If the adjustment or key pad buttons are idle for 5 seconds, the gauge will be reset back to normal mode, except when operating brightness adjustment or peak and warning setup.

	Change between Red/Amber and White	Warning level reset	Maximum peak	Brightness adjustment function	
Activation Button(s)					
	Press and hold for two seconds	Press down for two seconds	Push right button	Push left button	
Operation after mode change	Each time gauge will change from Amber to White or White to Amber.	Reset warning level downward: press (push) and hold down key (button) or speed up the increment.	Reset warning level upward: press (push) and hold down key (button) or speed up the increment.	Clear maximum peak and return to normal mode.	Return to normal mode.
				Each time you push the button, the brightness will change by one step.	

Warranty

ASMC, LTD. (dba ALTA and PERRIN Performance) warrants to the original retail purchaser ("Purchaser") who holds title to the vehicle on which the parts are originally installed that the products will, when delivered, substantially conform to the respective written Product description furnished to Purchaser, and all PERRIN Performance & ALTA Performance brand electronic products to be free from defects in material and workmanship (excludes cosmetics, coatings, and appearance and applies only to the function of the Product for its intended manner and purpose) for one (1) year and will perform in accordance with provided original operating instructions if properly installed, used, and serviced on passenger cars. Should a product become defective within said period, Purchaser will, at their own cost, submit their claim and the defective Product to ASMC, LTD. with an accompanying Return Manufacturer Authorization (RMA) number and the sales receipt stating the defects and the circumstances under which the defect occurred. ASMC, LTD. will examine and, upon establishing Purchaser's validity of claim and at its sole discretion, repair the Product, exchange the Product, or refund the purchase price, which shall fully satisfy and discharge any and all warranty claims. Warranty-related inquiries should be addressed to the following address: ALTA and PERRIN Performance c/o Warranty Service 3111 NE Shute Rd. Hillsboro, Oregon 97124.

This warranty extends only to the Product installed in such vehicle model as specified for the respective Product and does not extend to any Product which (i) has been used or operated in a way that is inconsistent with its intended use, (ii) has not been properly installed by a qualified, licensed auto mechanic experienced in the installation of the Product, (iii) has been installed in a vehicle that has been used for racing or off road use (Product(s) specifically designated for off-road use only may be submitted for warranty claim. ASMC, LTD. holds sole discretion to warranty claims on those Product(s) not to exceed the sixty month limitation above.), (iv) was modified or repaired by anyone other than ASMC, LTD. personnel, (v) was damaged because of misuse, neglect, accident, improper installation, or service, (vi) was sold or used outside the United States of America. No warranty of fitment for a particular purpose is made. In addition, the foregoing warranty shall NOT apply to any components not manufactured by ASMC, LTD. Manufacturers and users of motor vehicles incorporating ASMC, LTD. products should at all times take necessary precautions against damage to persons or property resulting from malfunction of the products.

THE WARRANTIES SET FORTH HEREIN ABOVE ARE IN LIEU OF ALL OTHER WARRANTIES EXPRESSED OR IMPLIED. THE SALE IS MADE ON THE EXPRESS UNDERSTANDING THAT THERE IS NO IMPLIED WARRANTY THAT THE PRODUCTS SHALL BE FIT FOR ANY PARTICULAR PURPOSE. THE PURCHASER ACKNOWLEDGES THAT THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION HEREIN. IN NO EVENT SHALL ASMC, LTD. BE LIABLE FOR CONSEQUENTIAL, INCIDENTAL, OR SPECIAL DAMAGES, AND DAMAGES ARISING OUT OF THE PURCHASE, UNLOADING, HANDLING, AND THE USE OF ANY PRODUCTS ALL OF WHICH ARE WAIVED BY PURCHASER. IN ANY EVENT, DAMAGES HEREUNDER SHALL BE LIMITED TO A MAXIMUM OF THE PURCHASE PRICE OF THE RESPECTIVE PRODUCT. THIS WARRANTY GIVES THE CONSUMER SPECIFIC LEGAL RIGHTS AND THE CONSUMER MAY ALSO HAVE OTHER RIGHTS, WHICH VARY FROM STATE TO STATE.