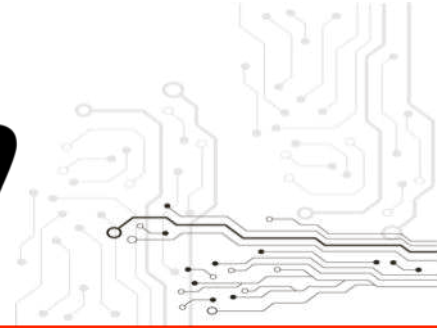




SINCE 1954

MUSCLE 3 SERIES



EXHAUST TEMPERATURE

Part No: SG32240
2 inch-52mm

Installation Instructions

v20230508

Important notes before installing:

- Installing this product to your vehicle may require an adaptor. SAAS offer a large range of adaptors and installation parts; please check with your SAAS dealer for available adaptors.
- SAAS Muscle series gauges are designed for **12volt** systems **ONLY!**
- All installation work should be done by a qualified professional to avoid damage to this product.
- SAAS **RECOMMENDS** all products be tested prior to installation. This will save time and speed up the troubleshooting process if you encounter any issues.

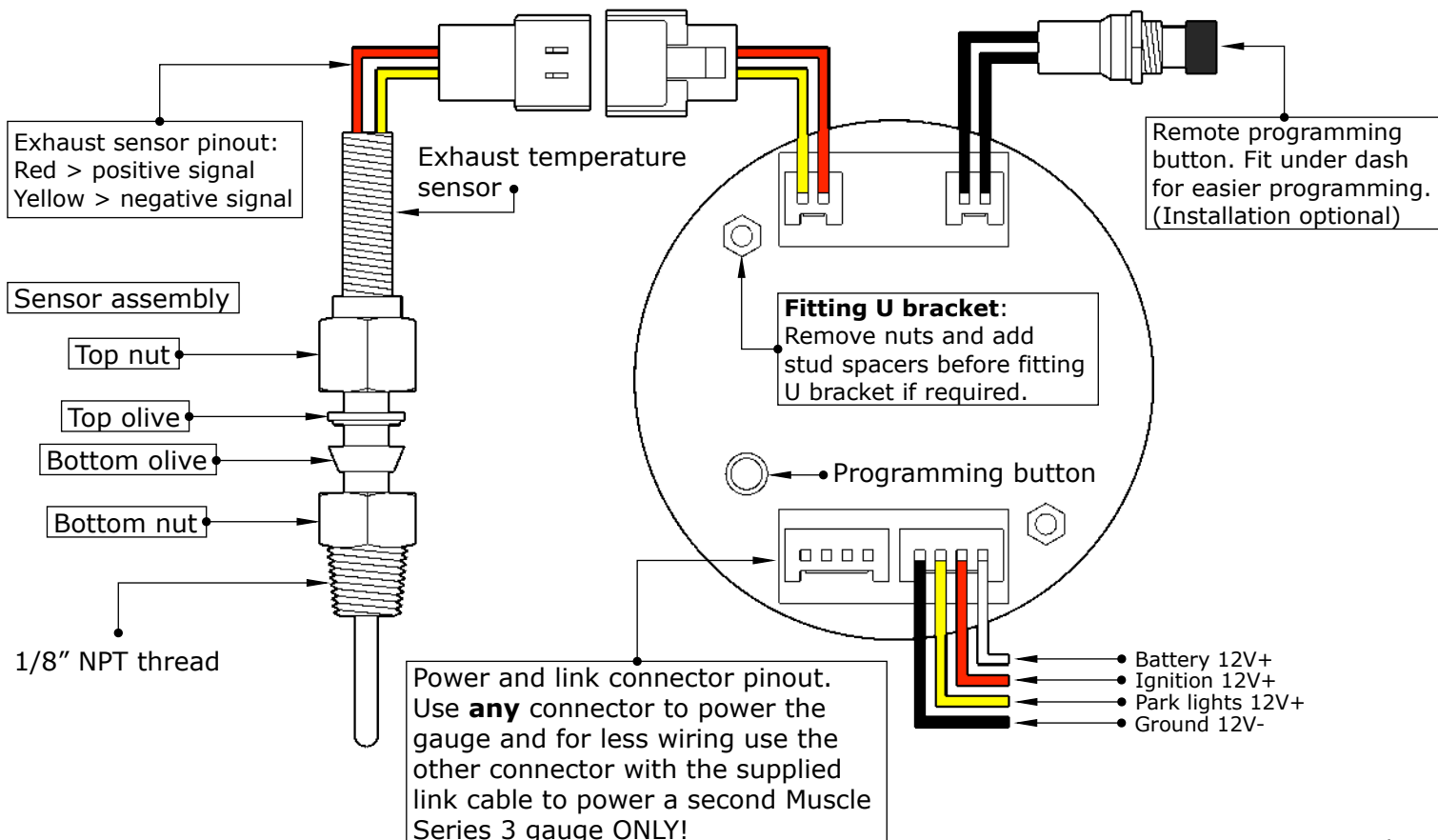
- **BEFORE** installing, please check our website (shopsaas.com) for the latest fitting instructions. If the top left corner (**v**) number is different to website, please use instructions from website.

Wiring Guide:

Wire colour	Wire Function	Wire Connection Location
Black	Ground 12V-	Vehicle body
Yellow	Park lights 12V+	Park light circuit (do NOT connect to a dimmer)
White	Battery 12V+	Ignition harness / Fuse box
Red	Ignition 12V+	Ignition harness / Fuse box

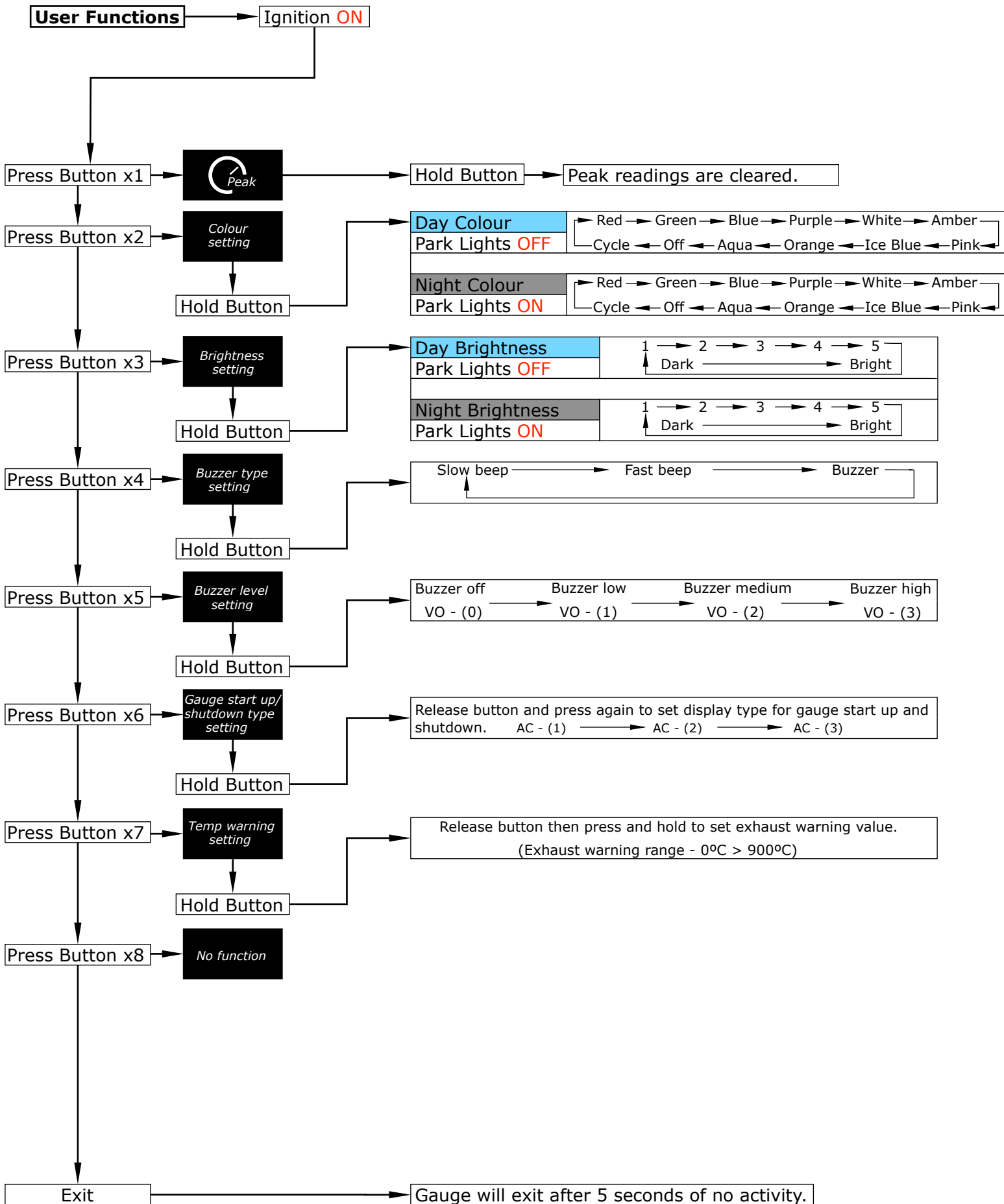
Wiring Diagram

Typical Layout



User Functions:

Note: Use the remote programming button or the button on the back of the gauge to set the below functions.



Exhaust Sensor Installation:

- Recommended sensor locations:

Turbo vehicles: Exhaust dump pipe or exhaust manifold.

Pros & cons for exhaust dump pipe:

Easier to fit, doesn't require removal of the turbocharger, extended sensor life and slightly lower temperature readings.

Pros & cons for exhaust manifold:

Harder to fit, exhaust manifold may need to be removed to clean out metal shavings, higher temperature readings and shorter sensor life.

Non turbo vehicles: Fit the sensor into the thin walled section of your exhaust manifold where all the pipes meet.

There is no right or wrong location to fit an exhaust sensor; an exhaust gauge is designed to give you a temperature reading from its installed location that you can use as a guide to get an average running temperature. Once you have your average running temperature, you can use that to gauge whether or not you have a temperature problem.

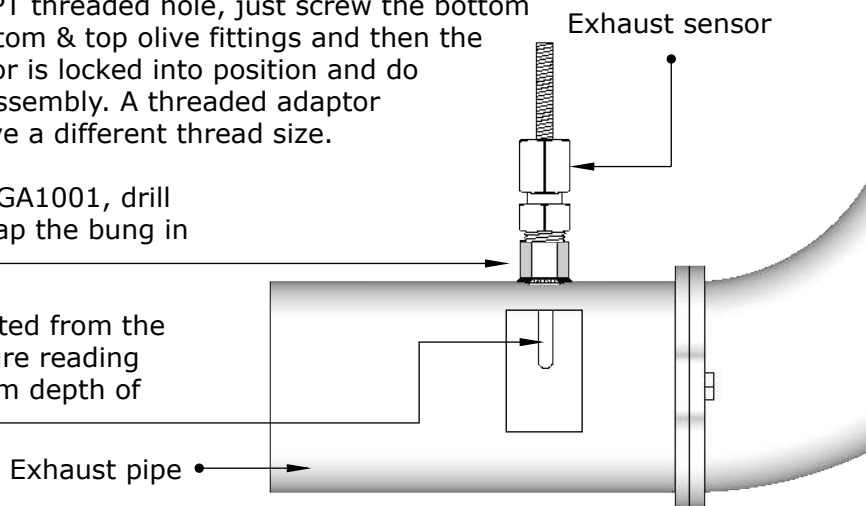
- Fitting the exhaust sensor:

Note: Exhaust sensors are **NOT** water proof and will give incorrect readings when wet. Depending on the mounting location, you may need to insulate the cable using a protective tubing!

If your exhaust has a pre existing 1/8" NPT threaded hole, just screw the bottom exhaust sensor nut in followed by the bottom & top olive fittings and then the sensor. Tighten the top nut until the sensor is locked into position and do not over tighten! See page 1 for sensor assembly. A threaded adaptor or weld in bung will be required if you have a different thread size.

When using a SAAS weld in bung part# SGA1001, drill a 16mm hole in your preferred location, tap the bung in and weld around

Exhaust temperature readings are generated from the tip of the sensor. To get a good temperature reading the tip of the sensor must have a minimum depth of **10mm** in the exhaust pipe



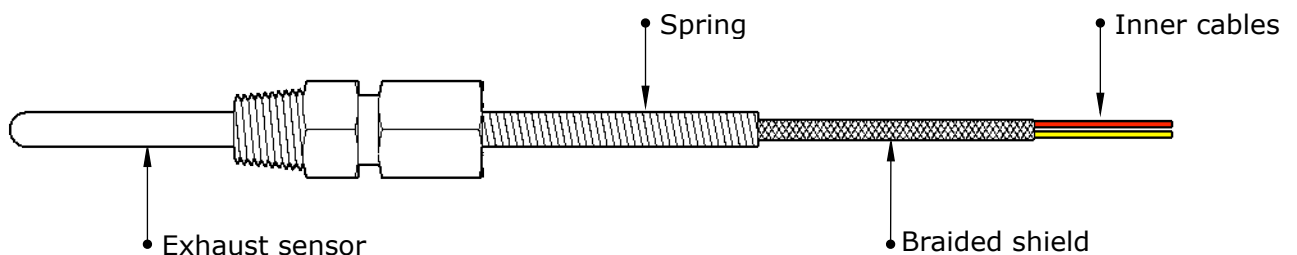
Important Fitting Notes For Installers:

- How to pass cables and sensors through firewalls correctly:

Option (A): Drill or cut a hole into a rubber grommet making sure there is enough room behind not to damage any factory cables and enough space to pass your cables and sensors through **without** any force. **DO NOT** pull on connectors when feeding through firewalls or grommets!

Option (B): Wrap some electrical tape around a wire coat hanger and around the connectors/ cables that you want to pass through the firewall, use some WD40 to lubricate the coat hanger so the connectors pass through the firewall grommet gently. **DO NOT** pull on connectors when feeding through firewalls or grommets!

- **WARNING:** When installing exhaust sensors, **DO NOT** allow the braided cable to twist or bend whilst screwing the sensor in or out of the exhaust! Over twisting or bending the cable will cause the inner cables and braided shield to break underneath the spring causing incorrect readings or no readings at all. This will **NOT** be covered under warranty!



Troubleshooting:

Please note: If you are having problems with the installation of this product, please do not contact your retailer or SAAS until you have read **ALL** the troubleshooting notes below.

Problem	Possible Cause	Solution
-no power	-incorrect wiring	-refer to fitting instructions
-exhaust not reading -readings jump around	-bad sensor connection -sensor cables reversed -wet sensor	-check connectors on gauge and sensor -reverse sensor cables -allow sensor to dry out and insulate if needed (split tubing, electrical tape or heat shrink) -test sensor using a multimeter, a good sensor should read between $2 > 17 \Omega$ @ room temp 21°C -see note below
-gauge beeps and flashes randomly	-warning function activated	-adjust warning settings accordingly

Additional Troubleshooting Notes/Tips:

- How to test a Muscle Series exhaust sensor:

Disconnect exhaust sensor from gauge, use a led test light or multimeter and check for any ground signal coming through sensor cables. If ground is present in either cable then check sensor for damage or replace sensor. If no ground is present then check the Ω ohms with a multimeter, a good sensor should read between $2 > 17\Omega$ @ room temp (21°C).

GAUGE INFORMATION

Specifications

Gauge operating range	$0^{\circ}\text{C} > 900^{\circ}\text{C}$
Gauge operating voltage	$8\text{v} > 18\text{v}$
Exhaust temp sensor type	(K type), Ω test: $2 > 15\Omega$ @ room temp (21°C)
Exhaust temp sensor thread size	1/8" NPT
Exhaust temp sensor dimensions	total length 85mm
Exhaust temp sensor wire length	3.6m from sensor to gauge connector
Gauge lighting type	10 colour LED with 5 levels of brightness
Gauge lighting colours	red - green - blue - purple - white - amber - pink - ice blue - orange - aqua - OFF - cycle mode
Gauge power harness length	1 metre
Gauge link harness length	300mm
Mounting depth required for gauge	45mm (minimum)
Total depth of gauge	50mm (including bezel)
Mounting hole size for gauge	52mm

For further assistance email: tech@saasautomotive.com.au

Contents:

In The Box	Qty	Notes	Part No.
Exhaust temperature gauge	1		
Exhaust temperature sender and 2 pin gauge harness	1		SG91003HD
Remote programming button	1		SG4106
Gauge power connector	1		SG5100
Gauge link connector	1		SG9101
Mounting U bracket with studs, nuts and washers	1	(M4x0.7 thread)	SG61005
Fitting instructions	1		

Warranty Terms & Conditions:

SAAS Automotive Pty Ltd warrants this product against defects in factory workmanship and materials for a period of twelve (**12**) months from the date of original purchase. This warranty applies to the first retail purchaser, is non-transferable and covers only where the product has been subjected to normal use or service. Provision of this warranty shall not apply to any SAAS Automotive product that has been used for a purpose for which it is not designed, or which has been altered in any way that would be detrimental to the performance or life of the product, or misapplication, misuse, negligence or accident. Warranty claims to the manufacturer must be transportation prepaid and accompanied with dated proof of purchase. On any part or product found to be defective after examination by SAAS Automotive Pty Ltd, SAAS Automotive Pty Ltd will only repair or replace the merchandise through the original selling dealer or on a direct basis. SAAS Automotive Pty Ltd assumes no responsibility for diagnosis, removal and/or installation labour, loss of vehicle use, loss of time, inconvenience or any other consequential expenses. The warranties herein are in lieu of any other expressed or implied warranties, including any implied warranty of suitability, and any other obligation on the part of SAAS Automotive Pty Ltd, or the selling dealer.

For further assistance email: tech@saasautomotive.com.au

www.shopsaas.com



ACCESSORIES & Installation Solutions

Item	Part No.
Exhaust probe weld in temperature bung	SGA1001
Boost gauge tube extension 4 metre (clear tube)	SG21007
Silicone boost/vacuum tube 3 metre (black tube)	SSVH33MM
Silicone boost/vacuum tube 3 metre (blue tube)	SSVH33MME
Metal gauge cup 52mm black	SGC52BH
Metal gauge cup 52mm chrome	SGC52CH
Plastic gauge cup 52mm black	SGC52P

**See our full range of installation components @
www.shopsaas.com**

Gauge Mounting Solutions



Sensor Mounting Solutions



Spare Parts



www.shopsaas.com





SINCE 1954

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