



SINCE 1954



BOOST/EXHAUST Installation Instructions

Part No: SG611240
2 inch-52mm

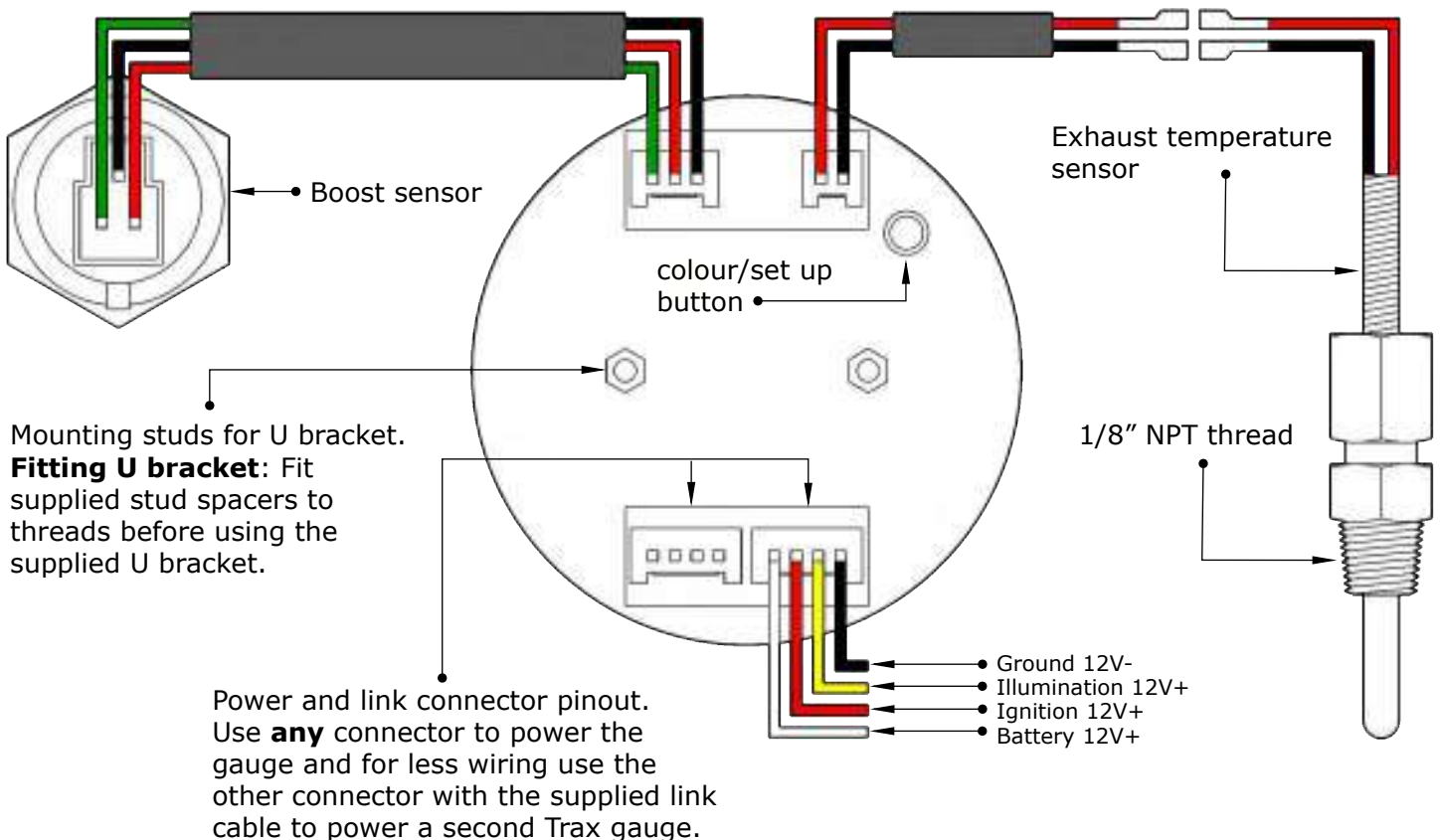
Important notes before installing:

- Installing this product to your vehicle may require an adaptor. SAAS make a large range of adaptors and installation parts, please check with your SAAS dealer for available adaptors.
- SAAS Trax 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.

Wiring Guide:

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

Wiring Diagram Typical Layout



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.

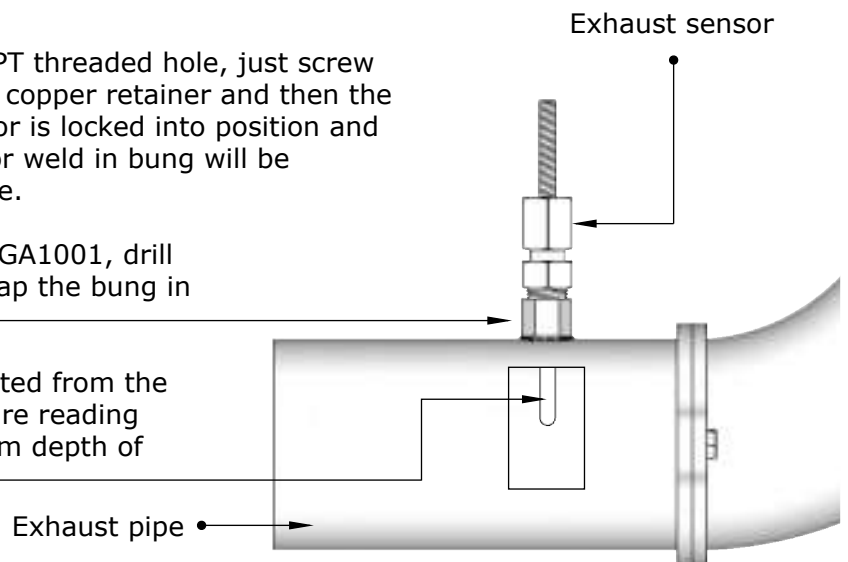
There is no right or wrong location to fit an exhaust sensor, an exhaust gauge is designed to give you a temperature reading from it's installed location that you can use as a guide to get an average running temperature. Once you have your average running temperature, you can use that to gauge weather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

- Fitting the exhaust sensor:

If your exhaust has a pre existing 1/8" NPT threaded hole, just screw the exhaust sensor nut in followed by the copper retainer and then the sensor. Tighten the top nut until the sensor is locked into position and do not over tighten! 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



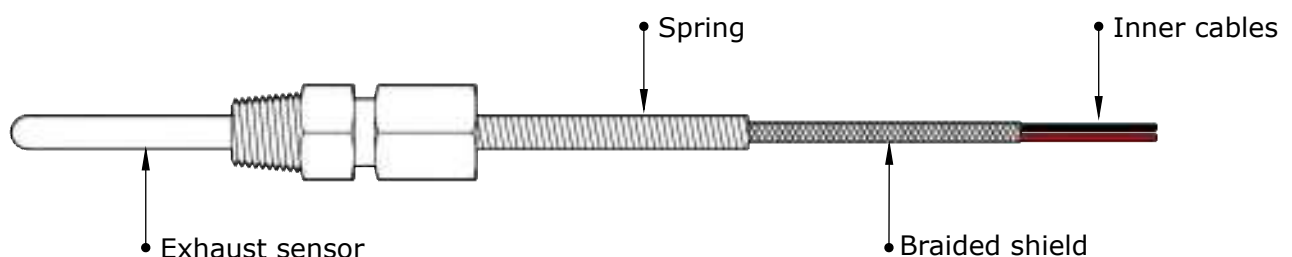
Important Fitting Notes For Installers:

- 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 while 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 and this will **NOT** be covered under warranty!



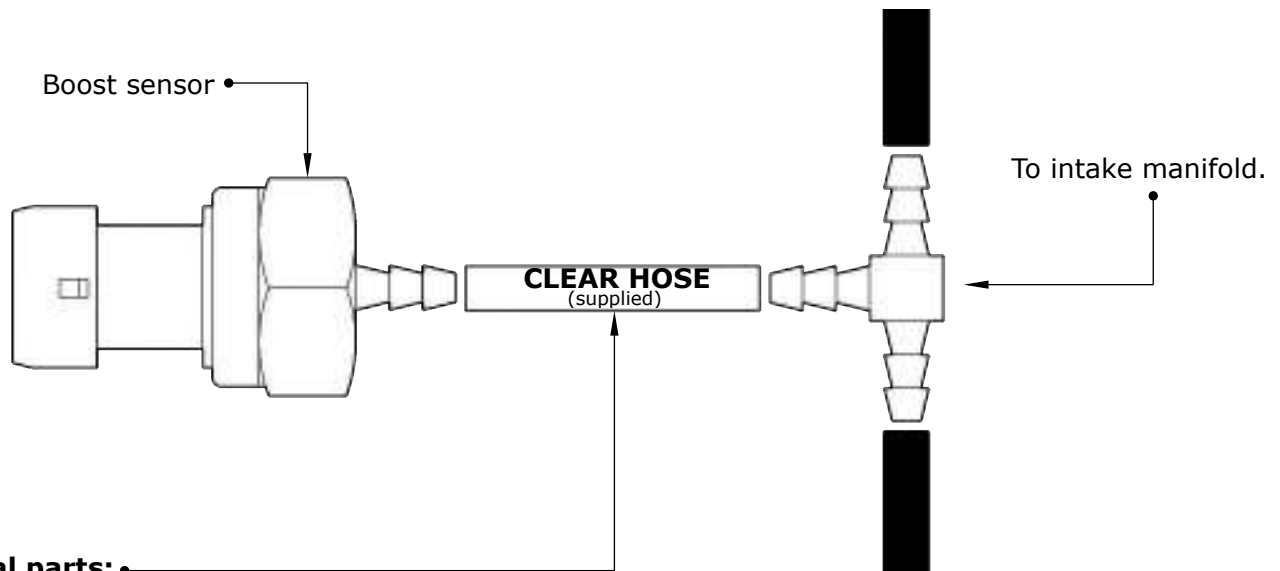
Boost Sensor Installation:

- Recommended sensor locations:

Connect the boost sensor to the intake manifold or intercooler piping **before** any factory sensors.

To secure the boost sensor, cable tie to a wiring loom away from extreme heat or mount the sensor inside the vehicle and run the hose through the firewall. (longer hose may be required)

The supplied tee fitting is used to splice into most vacuum lines but some vehicles may require optional parts like threaded barb adaptors or vehicle specific adaptors.



Optional parts:

Part# **SG21007** - 4 meter clear boost hose extension kit.

Part# **SSVH33MM** - 3 meter black silicone boost/vacuum hose. (Great for higher temperature applications and easier to work with)

Setting Gauge Functions:

Note: Use the button at the back of the gauge to set all gauge functions before fitting gauges to gauge pods and holders.

Gauge Warning Functions

- **Analogue read out:** Turn ignition on > press and hold button for 5 seconds until needle flashes > release button > press and hold button again to move the needle to your desired setting > release button > gauge will exit setup after 5 seconds.

- **Example:** Boost warning is set to 17 PSI; when boost reading exceeds 17 PSI the analogue gauge (needle and backlight) will flash and beep.

- **Digital read out:** Turn ignition on > press and hold button for 10 seconds until digital display flashes > release button > press and hold button again to adjust your desired setting > release button > gauge will exit setup after 5 seconds.

- **Example:** Exhaust warning is set to 650°C; when exhaust reading exceeds 650°C the digital gauge (LED section) will flash and beep.

Backlight Colour

- Turn ignition on > press button once to change colour.

Beep Disable

- Turn ignition on > press and hold button for 15 seconds > release button > press button again to turn beeps on or off > gauge will exit setup after 5 seconds.

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 |
|-----------------------------------------------|--------------------------------------------------------|------------------------------------------------------------------------------------------------------------|
| -not reading boost | -sensor not plugged in correctly | -check connector on gauge and sensor |
| | -wrong boost location | -boost line must come from intake manifold before any factory sensors |
| | -damaged sensor | -test sensor using a multimeter, a good sensor should read: 0.37v @ 0 PSI or 0.75v @ 15 PSI |
| -needle gets stuck | -over tightened metal gauge cup | -loosen band on gauge cup to free needle -see note below |
| -needle sitting below starting point | -gauge has been dropped or suffered a mechanical shock | -replace gauge |
| -exhaust not reading -readings jump around | -bad sensor connection | -check connectors on gauge and sensor |
| | -sensor cables reversed | -reverse the black and red sensor cables |
| | -wet sensor | -allow sensor to dry out and insulate if needed (split tubing, electrical tape or heat shrink) |
| -exhaust reads 999°C beeps and flashes | -exhaust sensor not plugged in | -plug exhaust sensor in |
| | -damaged sensor | -check sensor for any damage |
| | | -test sensor using a multimeter, a good sensor should read: 17Ω @ room temp 21°C -see note below |
| -gauge beeps and flashes randomly | -warning function activated | -adjust warning settings accordingly |
| -no backlight | -incorrect wiring | -refer to fitting instructions |
| | -connected to a dimmer | -refer to fitting instructions |
| -gauge gets hot | -incorrect wiring | -refer to fitting instructions |
| | -damaged boost sensor | -replace boost sensor |

Additional Troubleshooting Notes/Tips:

- How to test a Trax 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 Ωohms with a multimeter, a good sensor should read around 17Ω @ room temp (21°C).

- Boost needle won't read or is stuck:

If your gauge is mounted in a **metal** gauge cup, please loosen the band as this may be the cause. Over tightening the gauge cup band puts a lot of pressure on the gauge body and will make the needle stick at some point.

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

GAUGE INFORMATION

Specifications

| | |
|----------------------------------------|-------------------------------------------------------------|
| Gauge operating range | (boost) 0 > 30 PSI (EGT) 0°C > 999°C |
| Gauge operating voltage | 8v > 18v |
| Boost sensor operating range | 0.37v > 1.5v, scale: 0.37v > 0 PSI , 1.125v > 30 PSI |
| Boost sensor cable length / boost hose | 2 meter power cable, 500mm boost hose |
| Exhaust temp sender type | (K type), Ω test: 17 Ω > 21°C |
| Exhaust temp sender thread size | 1/8" NPT |
| Mounting depth required for sensor | 10mm (minimum) must be in the exhaust pipe |
| Exhaust temp sender dimensions | total length 85mm |
| Exhaust temp sender wire length | 2 meters with a 100mm 2 pin gauge connecting plug |
| Gauge lighting type | 7 colour LED (with a non adjustable dimmer) |
| Gauge lighting colours | blue/red/green/purple/ice blue/amber/white/needle only/scan |
| Gauge power harness length | 1 meter |
| Gauge link harness length | 300mm |
| Mounting depth required for gauge | 55mm (minimum) |
| Total depth of gauge | 55mm (including bezel) |
| Mounting hole size for gauge | 52mm |

Contents:

| In The Box | Qty | Notes | Part No. |
|------------------------------------------------------|-----|-------|----------|
| Boost/exhaust gauge | 1 | | |
| Exhaust temperature sender and 2 pin gauge connector | 1 | | SG61003 |
| Boost sensor and 3 pin power harness | 1 | | SG61004 |
| Boost hose and plastic tee | 1 | | SG21007 |
| Gauge power connector | 1 | | SG6100 |
| Gauge link connector | 1 | | SG6101 |
| Mounting U bracket | 1 | | SG61005 |
| Mounting U bracket studs (M4x0.7 thread) | 2 | | |
| Mounting U bracket nuts | 2 | | |
| 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.

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ACCESSORIES & Installation Solutions

| Item | Part No. |
|-------------------------------------------------|-----------|
| Exhaust gauge probe extension 1.2 meter | SG21008 |
| Exhaust probe weld in temperature bung | SGA1001 |
| Boost gauge tube extension 4 meter (clear tube) | SG21007 |
| Silicone boost/vacuum tube 3 meter (black tube) | SSVH33MM |
| Silicone boost/vacuum tube 3 meter (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



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SAAS Automotive PTY LTD
25 Metrolink Circuit West, Campbellfield,
Victoria 3061 Australia

ABN: 48166279670
ACN: 166279670

Phone: +61 3 9930 0100
Fax: +61 3 8339 2270
Email: tech@saasautomotive.com.au
Web: www.shopsaas.com