

# CARAVAN & RV LPG REGULATOR KIT TDS

(Item number: 6060586-27)



## DESCRIPTION

160MJ dual-stage regulator kit. Attaches to 2 x 9kg cylinders for a caravan to regulate the gas pressure to 2.75kPa to connect to gas hoses to supply gas to the caravan appliances.

## KIT INCLUDES

- 6060513: 160MJ/hr dual-stage LPG regulator. Model 524AS.
- 6160673: Brass adaptor 3/8" R M x 3/8" SAE M and nut
- 6LCC270450FLA: 2 x 450mm SS braided pigtails. Class F. Type 27 inlet and 7/16" inverted flare outlet.
- 1210302: Manual changeover valve

All components are secured with Loxeal 58-11 where required and leak tested.

## HOW IT WORKS

LPG gas enters the regulator through a pigtail from a gas cylinder. The gas enters the regulator at a pressure of about 700kPa to 1100kPa from a 9kg cylinder. The actual pressure depends on the ambient temperature, how full the cylinder is and the volume of the gas cylinder. The first stage of the regulator reduces the pressure to about 70kPa (no matter what the entering pressure was) and then the second stage reduces the temperature again to a nominal 2.75kPa.

The pigtail/ cylinder that the lever points to is the gas cylinder that the gas is being drawn from. When the cylinder is empty there will be no gas flow and appliances will not work. The lever then needs to be manually turned over to the full cylinder to draw gas from it. The empty gas cylinder should then be replaced.

## ADJUSTING PRESSURE

The outlet pressure of the second stage can be adjusted from about 2.6kPa to 3.2kPa depending on the flow rate. To adjust the pressure, unscrew the plastic nut off the second stage diaphragm and using a small flat head screwdriver, screw accordingly for more or less pressure.

## TESTING OUTLET PRESSURE

To test, ensure the line has no leaks, turn all appliances on, or at least 10% of the regulator capacity (16MJ flow for the 160MJ regulator) and connect a manometer to the test point to ensure the pressure is 2.75kPa.

## SAFETY PRESSURE RELIEF VALVE

Bromic regulators are approved to UL144. According to section 15.3, we have a type 2 pressure relief valve instead of an OPSO. This relieves pressure through the vent, so the pressure downstream doesn't exceed 14kPa.

## **SPECIFICATIONS**

- Gas type: Propane
- Model: 6060513 (524AS)
- Capacity: 160 Mj/hr (3.2 kg/hr propane)
- Outlet pressure: 2.8 kPa (28 mbar)
- Inlet Pressure (Max.): 1750 kPa (17.5 bar)
- Operating temperature: -20°C to +50°C
- Body: Die cast Zinc alloy/ painted
- Diaphragm: Approved NBR (fabric reinforced)
- Inlet connection: Type 27 gas connection
- Outlet connection: 3/8" SAE M with nut
- Warranty: 1 year replacement warranty

## **WARNING**

- Leaking gas can cause fires or explosions.
- Only licensed gas fitters should work on gas systems
- Inspect gas systems regularly.
- Replace regulators every 10 years or sooner, depending on the condition of the regulator.

## **IMPORTANT SAFETY INFORMATION**

1. All Bromic regulators shall be installed or serviced by a licensed Gas Fitter. All Bromic regulators shall be installed in accordance with **AS5601** and comply with any local amendments to the installation standard.
2. It is the responsibility of the sellers, installation and maintenance personnel and the end user to be aware of and in compliance with all the applicable standards, codes of practice, regulations and laws.
3. Always destroy damaged or worn regulators, pipes and parts so they cannot be reused.
4. Bromic regulators must be routinely inspected and replaced after 10 years of use. Regulators that are exposed to extreme heat, cold or other severe environmental conditions must be inspected and replaced more often as dictated by their condition and performance.

## **REGULATOR INSTALLATION GUIDELINES**

1. Blow out all the lines before installing the regulator. If foreign matter should become embedded in the regulator seat, it could cause high lockup pressure. The rising pressure could activate the pressure relief device inside the regulator. Make sure the lines to the regulator are free from all foreign matter.
2. Connect regulator inlet to the cylinder valve. Connect the regulator outlet to system service piping.
3. The regulator should be installed with the vents directed downward and /or under a covering to protect it from the ingress of rainwater.
4. Before turning on any gas at the cylinder, make certain that any valves at the appliance are fully closed.
5. Check each joint and connection for gas leaks by using an adequate leak detection method.

## **SAFETY DEVICES**

### **Protection device in case of overpressure**

The overpressure value (14 kPa), which is accepted by the UL standard 144/ AS 1596, in case of working problems or anomalies, is controlled by a safety device consisting of a flow limiter working together with a safety valve. This device keeps the over-pressure value widely lower than the value expected by the standard without releasing high quantities, of propane gas into the atmosphere through the vent hole.

### **Protection device in case of an excess flow**

The "excess flow" device assembled into the regulator operates (at 140% of the guaranteed flow rate) by limiting the gas flow (to 50 Mj/hr) in the event of a sudden increase in the desired flow, as in the case of a hose rupture or accidental disconnect from the outlet of the regulator while in use.

## **FAQS**

**Is this kit available with POL connections instead of the type 27?** Yes, the product code is 6060586 and has 2 x 6SHW0450 instead of the 2 x 6LCC270450FLA.

**Is the outlet pressure adjustable?** Yes, has a nut on the top that can be taken off and a small flat head screwdriver can be screwed in to increase pressure.

**What standard are the regulators approved to?** Bromic regulators are approved to UL144. They comply with AS/NZS 1596, Section 5.5.8 of AS/NZS 1596 says "Regulators shall comply with UL144..."

**Is the regulator AGA approved?** Bromic's dual stage regulators do not have AGA approval, but instead has UL144 approval which comply with AS/NZS 1596, Section 5.5.8 of AS/NZS 1596 says "Regulators shall comply with UL144...". The UL Report File is under MH12419.

This is the location of the approval

<https://productiq.ulprospector.com/en/profile/3662835/yksr.mh12419?term=YKSR&page=1>

**Does this regulator have an OPSO?** No, Bromic regulators are approved to UL144. According to section 15.3, we have a type 2 pressure relief valve instead of an OPSO. This relieves pressure through the vent, so the pressure downstream doesn't exceed 14kPa.

**Does this regulator have an UPSO?** No.

**Do I have to have both gas bottles open?** No, they can be either open or closed, as long as the cylinder in usage is open and both pigtailed are connected. When the cylinder empties, the manual changeover valve is switched over and the corresponding gas cylinder should also be opened.

**Does the vent have a threaded connection?** No, for outdoor use only.

**Can they be installed horizontally or vertically?** No, they must be installed with the vents facing down as per the manual.

**Where were these regulators manufactured?** In Italy, by Cavagna.

END TECHNICAL DATA SHEET