



Water/ Methanol Injection Kit Stage 3 Duty

Wiring Diagram





# Benefits

- Decreases intake manifold air temperature.
- Helps prevent piston damage by lowering exhaust gas temperatures (EGT).
- Effectively increases octane rating, reducing the risk of engine knock.
- Increases dynamic compression and combustion efficiency.
- Reduces harmful emissions: CO, CO<sub>2</sub>, NOx, and HC.

# S Features

- LED indicator activates when the pump starts; adjustable activation level.
- Latest generation digital electronic controller.
- Electronically controlled high-pressure diaphragm pump.
- All components manufactured from methanol-resistant materials.
- Easy installation with plug-and-play style connectors.
- Optional low-pressure transfer pump available.
- Optional horizontal float switch for additional safety.

### Stage 3 Duty Operation

- Injects a fixed amount of fluid through the nozzle until boost drops below the set point.
- Pump has no pressure cut-off switch, preventing oscillation/pulsation.
- Internally bypassed design ensures smooth and constant flow.
- All metal components are made from nickel-plated brass, brass, and EPDM-grade plastic for long-term methanol and water corrosion resistance.

# **Box Contents**

- 1. High-Pressure Diaphragm Pump
- 2. 2 × Pump Fittings
- Nozzle
- 4. Nozzle Mounting Bung
- 5. 40-Micron Stainless Steel Filter
- 6. Filter Nut
- 7. Check Valve
- 8. 1/8" NPT → ¼" Compression Female Fitting
- 9. 1/8" NPT → ¼" Compression Fitting
- 10. 1/8" Nut
- 11. Injector Reading Module
- 12. Controller with Wiring Loom
- 13. Plastic Tank & Cap
- 14. 20 ft (6 m) 1/4" OD Injection Hose
- 15. 2 × Fully Insulated Butt Cable Connectors
- 16. Fully Insulated Ground Cable Connector
- 17. LED Holder
- 18. 5 × Zip Ties
- 19. 3 × Screws & Washers for Tank
- 20. 4 × Screws & Washers for Pump
- 21. 3D Sticker
- 22. Product Stickers
- 23. Installation Manual

#### Natallation Guide

• Route the water/methanol hose to the engine bay away from sharp edges or hot surfaces.

- If no transfer pump is used → mount the injection pump below the tank in the luggage compartment.
- If transfer pump is used → injection pump can be mounted in the engine bay.
- Weld the nozzle bung onto the intake pipe at a 90° angle, minimum 10 cm before the throttle body.
- Mount the ON/OFF switch and LED indicator inside the cabin, easily reachable by the driver.

#### Nozzle Sizing Guide

- 100% Water: 10–15% Water/Fuel ratio → 0.5–1 cc per HP
- 50/50 Water-Methanol: 15–20% W/M ratio → 1–1.5 cc per HP
- 100% Methanol: 20–25% Methanol/Fuel ratio → 1.5–2 cc per HP

# **S** Example:

- 400 HP engine with 100% water → ~200 cc/min nozzle.
- 400 HP engine with 50/50 W-M  $\rightarrow$  ~400 cc/min nozzle.

(If unspecified, the kit includes a 252 ml/min (4 GPH) nozzle by default.)

#### □ Electrical Connections

Color	Function	Section (mm²)	Length
Yellow	+12V Battery	0.75	1 m
Pink	+12V Ignition Switch	0.25	1 m
Black	Ground 0V	0.75	-1 m
Blue	Pump RED	0.50	4.5 m
Brown	Pump BLACK	0.50	4.5 m
Red	LED +	0.25	1 m
White	LED -	0.25	1 m
Red	Injector Module (+12V)	0.25	0.3 m
Black	Injector Module (Ground)	0.25	0.3 m
Green	Injector Module (Output -)	0.25	0.3 m
White	Injector Signal Input	0.25	0.3 m

# Instructions

- White: Connect to fuel injector signal wire.
- Red/Black/Green: Connect to injector duty module as per wiring diagram.
- When the pump activates, the cockpit LED lights up red.

#### Adjustment

- Factory setting: 70% duty cycle
- Range: 5% 95% duty
- Adjustment screw: 30 turns precision
- Each turn changes duty threshold by ±3%
- Turn left = lower threshold (earlier injection)
- Turn right = higher threshold (later injection)

# ▲ Application Note

- Compatible with high-ohm and low-ohm port injection engines.
- X Not suitable for direct injection engine injectors.

#### Warranty

All Bosphorus Innovations products are covered by a 2-year warranty against manufacturing defects, valid from the date of delivery.

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