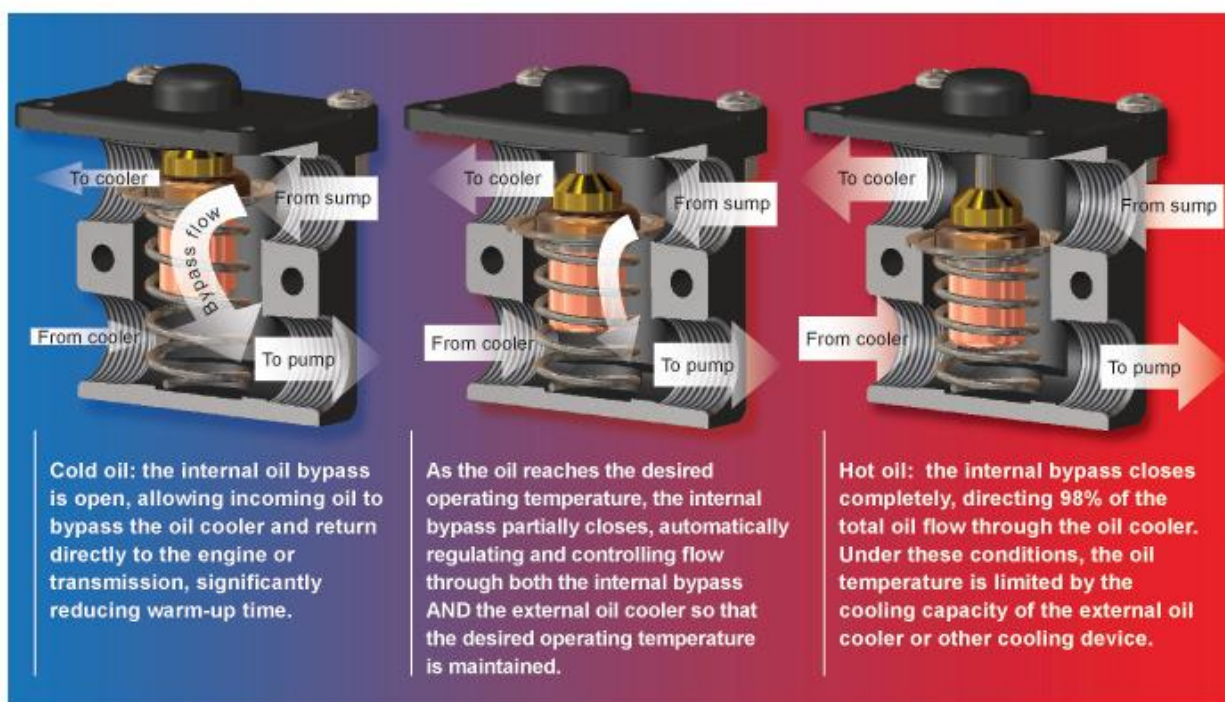


STANDARD MINOR MODIFICATION
THERMOSTASIS P6-H OIL BYPASS VALVEIntroduction

This leaflet contains the required information to permit the fitment of a Conair Sports ThermoStasis P6-H, a thermostatic oil bypass valve, to a BMAA microlight aircraft.

The oil bypass can be fitted to the Rotax 912 series engines. The intention is to decrease warm-up time and increase the minimum normal oil operating temperature.

The oil bypass is open at lower oil temperatures allowing oil to go straight from the oil tank to the engine reducing warm up time. As the oil temperature increases the bypass starts to close and more oil flows through the cooler. This continues until the bypass becomes completely closed, directing all flow through the oil cooler.



The bypass is operated by a wax thermostatic element; the recommended default operating temperature for the Rotax 912 series is 190°F (88°C). However other elements are available from Conair Sports, if required, with operating temperatures from 170°F (77°C) to 205°F (96°C).

The ThermoStasis P6-H received initial approval via BMAA MAAN 2321. The unit is only intended for use on permit (non certified) aircraft that do not rely on the engine for flight safety.

Notwithstanding the simple approach taken by this TIL, it is the aircraft owner's responsibility to ensure:

- All materials used in a modification are of adequate quality.
- Proper aircraft engineering standards are applied.
- The modification does not create any safety problem when combined with any other modification to the aircraft.
- No relevant information has been withheld from the BMAA or BMAA Inspector.

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Essential Safety Checks

1 Pre-installation checks

- 1.1 Only Conair Sports can supply the ThermoStasis unit.
- 1.2 The aircraft must already have an approved oil cooler and working oil temperature and pressure gauges.
- 1.3 The aircraft designer (or approval holder) must be consulted before installation goes ahead.

2 Hoses and fittings

- 2.1 Only approved and BCAR Section S compliant oil hosing maybe used.

3 Installation

- 3.1 The ThermoStasis unit must be fitted i.a.w the latest ThermoStasis fitting instructions from Conair Sports.
- 3.2 No holes must be drilled in any primary structure.

4 Post-installation check

- 4.1 The oil system must be filled and purged in full accordance with the Rotax engine manual.

5 Ground running

- 5.1 The system must be ground run i.a.w the Conair Sports ThermoStasis fitting instructions.

6 Documentation

- 6.1 Following must be kept with aircraft documents:
 - Proof of supply of ThermoStasis and cartridge by Conair Sports (e.g. Conair Sports invoice).
 - Copy of Conair Sports ThermoStasis fitting instructions.
 - Proof of supply of additional fire-resistant oil hose by Conair Sports, Skydrive or any other UK CAA approved microlight manufacturer.
- 6.2 Weight and balance must be checked and compliance with the relevant HADS/TADS must be demonstrated.

7 Flight Test

- 7.1 It is recommended that once all the safety checks contained in this Standard Minor Modification have been satisfied, the first flight should be i.a.w the 'test' flight specified in the Conair Sports fitting instructions.

IMPORTANT

- 7.2 Fly as though expecting the oil to overheat or the oil pressure to go out of limits at any time.
- 7.3 Ensure to stay close to the airfield or a suitable landing site at all times until satisfied that the unit is operating correctly.

It is acceptable to send in the form with your permit renewal form.

Aircraft must be wholly owned by BMAA members. A BMAA Ownership Trustee Grid should be submitted with this form for syndicate, group and company owned aircraft.

Prepared by:

Approved for Issue:



R S Mott
Airworthiness Engineer
British Microlight Aircraft Association

B J Syson
Chief Technical Officer
British Microlight Aircraft Association

**STANDARD MINOR MODIFICATION
THERMOSTASIS P6-H OIL BYPASS VALVE**

BMAA – STANDARD MINOR MODIFICATION CHECKLIST: TIL 112

Reg: G-	Aircraft type:	Serial No:
Owners name:		Owners BMAA No:
<i>BMAA Aircraft Ownership Trustee Grid required for syndicate/group/company owned aircraft</i>		

Installation Details

Engine Type	Rotax 912-UL <input type="checkbox"/>	Rotax 912-ULS <input type="checkbox"/>
Installation Instructions	Issue Number:	Issue Date:

Safety Checks

No.	<u>ACTION</u>	<u>OWNER'S INITIALS</u>	<u>INSPECTOR'S INITIALS</u>
<i>1 Pre-installation checks</i>			
1.1	Ensure that Conair Sports supplied the ThermoStasis P6-H unit.		
1.2	Ensure latest issue of Conair ThermoStasis fitting instructions present and a copy appended to the aircraft manual.		
1.3	Approved oil cooler already fitted including working oil temperature and pressure gauges.		
1.4	Ensure aircraft designer consulted (UK manufacturer for factory-built aircraft, UK kit distributor for amateur-built aircraft, BMAA for orphan aircraft) and that the designer's advice or instructions are adhered to.		
<i>2 Hoses and fittings</i>			
2.1	Additional oil hose suitable for Rotax 912 series.		
2.2	Additional oil hose fire-resistant in accordance with BCAR Section S.		
2.3	Only metal fittings used.		
<i>3 Installation</i>			
3.1	ThermoStasis fitted in full accordance with Conair Sports fitting instructions.		
3.2	Plumbing in accordance with a recommended configuration in fitting instructions; no tight bends in hose.		
3.3	All hoses secure; metal hose clips only.		
3.4	Thermostat and plumbing satisfactorily located and routed taking into account heat sources (e.g. exhaust), propeller clearance, relative movement between parts in operation, cowlings etc.		
3.5	Thermostat secure; plumbing satisfactorily secured and protected against abrasion.		
3.6	Modification implemented to a satisfactory standard and in accordance with normal aviation practice.		
3.7	No holes or cuts made in airframe.		

**STANDARD MINOR MODIFICATION
THERMOSTASIS P6-H OIL BYPASS VALVE**

	<u>ACTION</u>	<u>OWNER'S INITIALS</u>	<u>INSPECTOR'S INITIALS</u>
<i>4 Post-installation checks</i>			
4.1	Oil system filled and purged in full accordance with Conair Sports fitting instructions and or Rotax manual.		
4.2	If angled or banjo fittings used, suction test in accordance with Rotax 912 installation manual performed and passed.		
<i>5 Ground running</i>			
5.1	Ensure ground running satisfactory as per fitting instructions.		
5.2	Ensure hose clips secure and no leaks are present.		
<i>6 Documentation</i>			
6.1	Following documents to be kept with aircraft records: <ul style="list-style-type: none"> • Proof of supply of oil thermostat and cartridge by Conair Sports (e.g. Conair Sports invoice). • Conair Sports fitting instructions. • Proof of supply of additional fire-resistant oil hose by Conair Sports, Skydrive or UK CAA approved microlight manufacturer. 		
6.2	Amended weight and balance report entered into airframe logbook. Modified aircraft continues to comply with the weight and balance requirements of the TADS / HADS.		

<u>OWNER'S DECLARATION</u>		
I declare that the foregoing information is correct to the best of my knowledge and I will not change the installation design once approved.		
Signed:	Name:	Date:

<u>INSPECTOR'S DECLARATION</u>			
I declare that the foregoing information is correct and the installation is fit to be flown.			
Signed:	Name:	Insp No:	Date:

This form must be sent with payment as per current fees in MF or www.bmaa.org, and BMAA Aircraft Ownership Trustee Grid (if applicable) to*:- technical.office@bmaa.org

Note: It is recommended that the aircraft's first flight be flown in accordance with the Conair Sports ThermoStasis fitting instructions. Ensure that the flight is conducted so that in the event of a problem flight safety is not compromised.

BMAA Office Approval:	(signed)	(Name)
Mod No.: G-_____ / TIL112 / 20 __ / _____		(Date)

**Whilst waiting for this form to be returned by the BMAA the aircraft may be flown for upto one calendar month from the Inspection date above. Once this form is returned to you signed please enter the full modification approval number above in your aircraft logbook and retain this sheet with your aircraft records.*