

# Engineering Bulletin

## Redesigned Water-In-Fuel (WIF) Probes



Racor has redesigned all of our passive 2-wire WIF's to be more robust and feature gold plated metallic probe tips and water-tight, detachable and locking wiring harness connectors. Racor's new WIF's are also available in three versions and colors. The version chosen depends on the equipment's Electronic Control Module (ECM) requirements; 83K ohms (blue body) or 220K ohms (black body). For applications not requiring this match, the non-resistor version (green body) should be used.

Water probes are passive sensors that work in conjunction with active electronic detection amplifiers.

The probes are installed in the bottom of Racor fuel filter/water separator contaminant collection bowls. When accumulated water levels rise to the level of the metallic probe tips, the detection amplifier analyzes the change in electrical resistance (in ohms) and activates an alarm or lamp (depending on the detection amplifier used).

The WIF's will be introduced as a running change approximately February, 2013.

Refer to the cross-reference chart on next page for the new part numbers.

*CURRENT  
Probe Design*



*NEW Probe  
Design*



### Features and Benefits

- Durable and compact WIF housing
- Direct replacement for current Racor WIFs
- 1/2"-20 UNF threads with SAEJ1926 O-ring seal design
- Hermetically sealed against water and fuel
- Use with 12 or 24 vdc
- Gold plated brass probe tips
- Corrosion proof materials
- Color-coded for easy visual identification
- WIFs include mating, detachable and locking wire harness connectors

### Contact Information

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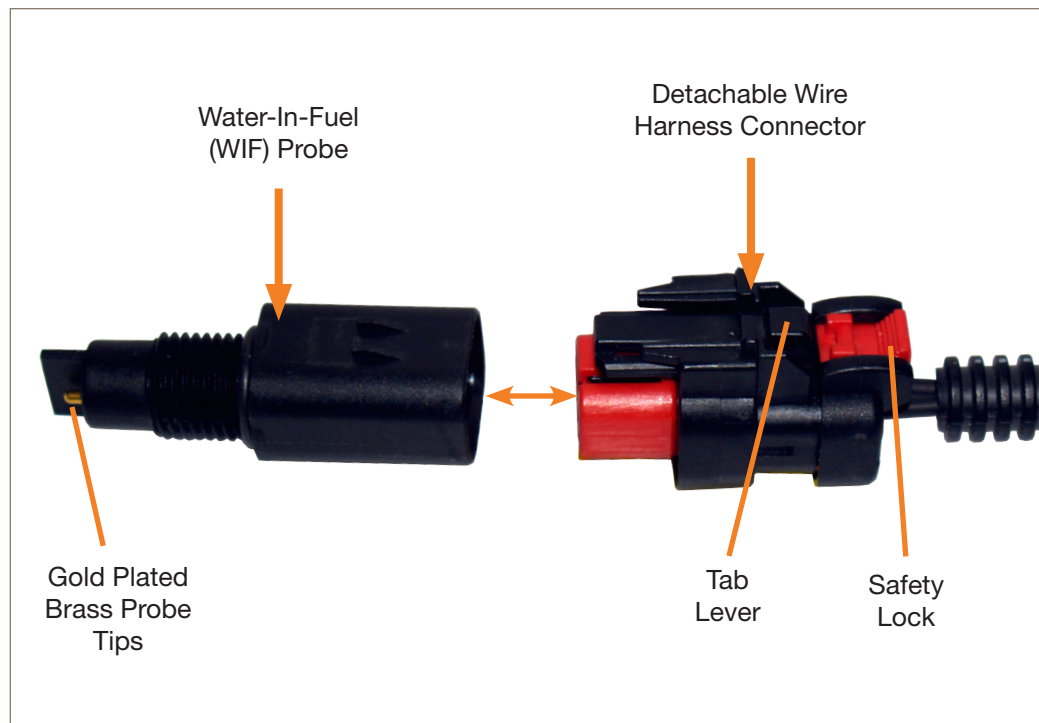
web [parker.com/racor](http://parker.com/racor)



## Detachable Locking Wire Harness

The detachable wire harness adds a convenience to remove the connection when servicing the spin-on filter or contaminant collection bowl. To remove, slide the red “safety-lock” away from the WIF probe. Next, press down on the black tab lever and pull the connector away from the WIF. To reconnect, just push the harness connector onto the WIF. It is specially “keyed” and will fit only one way.

Many harnesses are available depending on the resistance value of the WIF probe you are using. Some WIFs include an adapter connection on the harness for your application.



## Cross Reference Table

Use the table below to find the part number for the redesigned WIF assembly. Note: Racor will still offer WIF kit part numbers RK 21069 and RK 55484 for use with all turbine assemblies.

Current WIF P/N's	OHMS	Redesigned WIF P/N's	WIF Body Color	Harness Length	Harness Adapter Connector	Application
RK 21069	None	<b>RK33803</b>	Green	8.75 in. (222mm)	None	Aftermarket
RK 30964	None	<b>RK33802</b>	Green	8.0 in. (203mm)	None	Aftermarket
RK32262-02	82.5K	<b>RK33801</b>	Blue	6.0 in. (152mm)	None	Cummins ISC03/ISL03
RK 55484	220K	<b>None</b>	Black	8.0 in. (203mm)	Delphi 1216200	Cummins ECU's
RK55617	82.5K	<b>RK55725</b>	Blue	6.0 in. (152mm)	Deutsch DT042P-E003	Cummins ECU's
RK55617-01	82.5K	<b>RK55726</b>	Blue	12.0 in. (305mm)	Deutsch DT042P-E003	Onan
RK 56140	220K	<b>RK56235</b>	Black	4.0 in. (102mm)	Delphi 1216200	OEM's
RK56140-03	220K	<b>RK56236</b>	Black	14.0 in. (356mm)	Delphi 12052641	Bluebird
RK56140-04	220K	<b>RK56237</b>	Black	5.0 in. (127mm)	Delphi 12052641	Daimler

All Racor 2-wire WIFs must be connected to an additional component called a **water detection amplifier**. These devices are available in 12 or 24 VDC versions, in-dash or remote mount and essentially measure the amount of resistance (in ohms) between the two probe tips. They can detect the resistance change from fuel to water as the level of water accumulates in Racor contaminant collection bowls/sumps. The amplifiers in turn alert the operator of a high-water condition either by a lamp or buzzer or both. Water should be drained from the bowl/sump at the earliest convenience. Racor WIFs with an internal resistor are for use with OEM onboard computer ECUs which have water detection circuitry. Do not attempt to connect the WIF wires directly to power sources, they must be only connected to detection amplifiers or ECUs as directed by the manufacturer. Contact Racor Technical Support for assistance, if needed.