

Part No.	Part Name	Quantity
1	Spal Fan (Specifications are application dependent) - ALL Spall Relay Harness	1
2	185 Degree Fan Harness - CUSTOMER SPECIFIED (SOLD SEPARATELY) 195 Degree Fan Harness	1

BimmerWorld recommends you use Bentley Publisher's service manual for your specific model whenever attempting a complex service or part replacement project—Bentley Service Manuals are available from BimmerWorld!

NOTE: These instructions are intended as a guide only! Fitment will vary depending on application and existing modifications. BimmerWorld is not responsible for damages caused to any component as a result of poorly executed installation!

The Spal fan can be wired one of four ways:

- 1) As a mechanical fan replacement and auxiliary fan supplement, wired parallel to auxiliary fan. Requires relay kit— Spal fan will come on with OEM aux. fan.
- 2) As a standalone mechanical fan replacement—wired using Spal relay kit and temperature sensor (customer specified activation temperature range)
- 3) As a direct replacement for the OEM auxiliary fan—This requires removing auxiliary fan and is wired using Spal relay kit. Recommended for race cars only!
- 4) Full manual—toggle switch using Spal relay kit

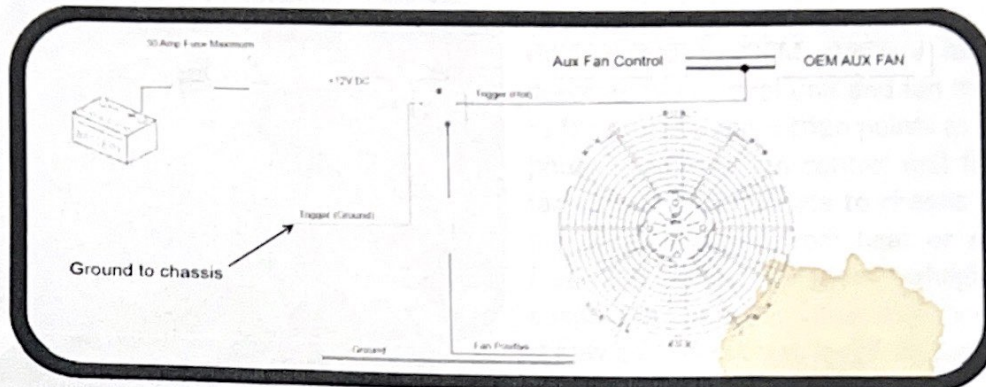
Mount Spal fan to radiator using either Spal Fan Bracket and Strap Mounting Kit or Electric Fan Quick Mount Kit (both sold separately). Mounting position and methods are application dependent.

BimmerWorld strongly discourages reusing any factory wiring for carrying power to the fans. If the fans are an 'upgrade' from a factory fan they will draw more power/current and therefore require upgrading the wiring for proper function. You can usually maintain factory control of the fans, by using the existing vehicle harness to trigger a correctly wired/sized relay like in the fan install kits.

Connections should be soldered rather than crimped. Crimped connections tend to work loose in harsh and high-vibration environments. All connections should be sealed with heat shrink tubing.

OPTION 1—PARALLEL TO OEM AUXILIARY FAN

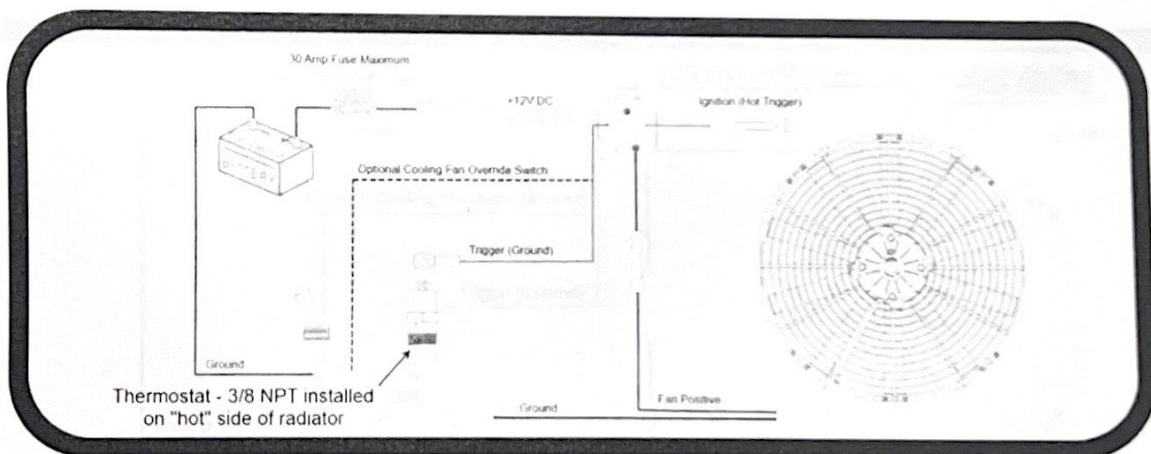
1



Gain access to OEM auxiliary fan (This requires removal of the front bumper and fan shroud). Splice orange wire from Spal relay into black/blue wire between fan motor and fan control unit (see wiring diagram above). Connect red relay wire to red wire on Spal fan pigtail. Connect black wire from Spal fan pigtail and gray wire from Spal relay to chassis ground. Connect fuse to battery positive and splice to yellow wire on Spal relay.

OPTION 2—STANDALONE WITH TEMPERATURE SENSOR

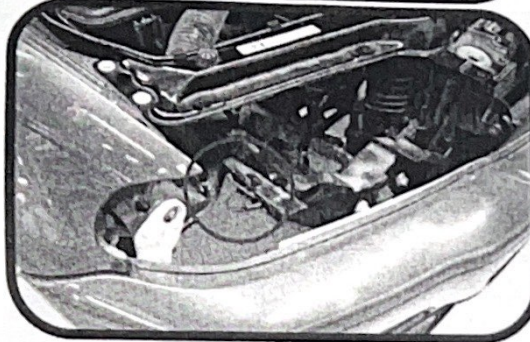
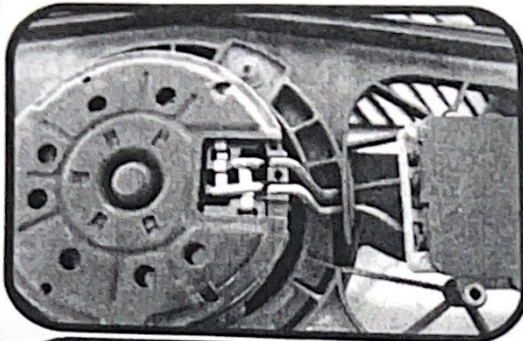
2



Install temperature sensor (included with Spal 185 or 195 Degree Relay Harness Kit) in "hot" coolant stream—driver's side of radiator for US models. Connect gray wire from Spal relay to temperature sensor. Connect orange wire to "hot" in ignition (the circuit at the ignition switch that is hot only when the ignition is on) if you would like for the fan to turn off with the ignition regardless of coolant temperature. Connect orange wire to "always hot" circuit for fan to run until coolant cools below sensor's threshold. Connect all other wires as shown in diagram above.

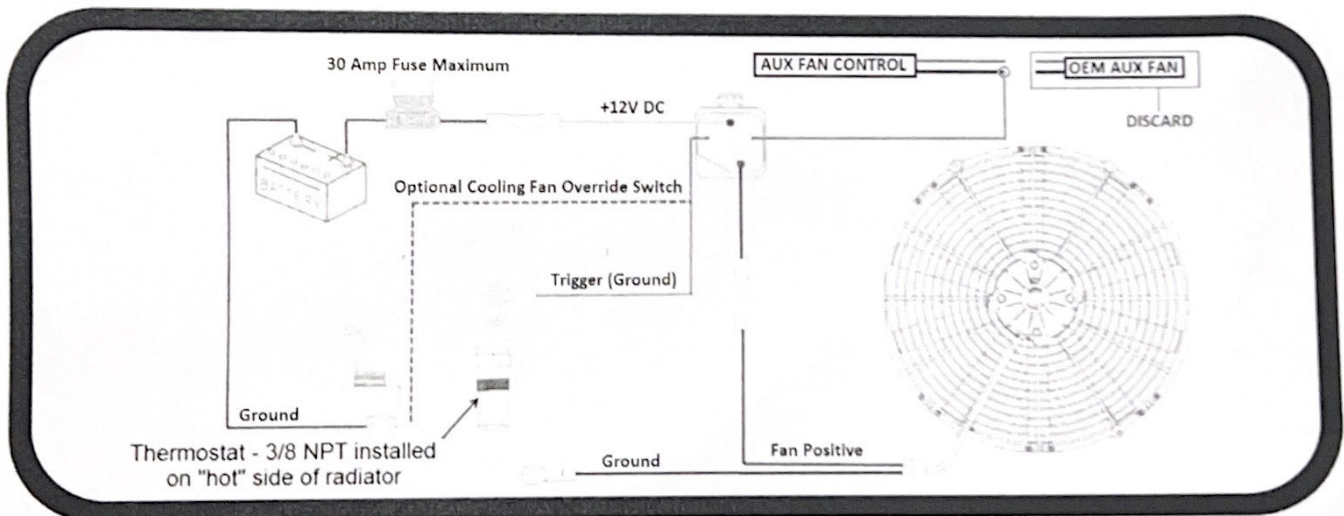
Option 3—OEM AUXILIARY FAN REPLACEMENT

3



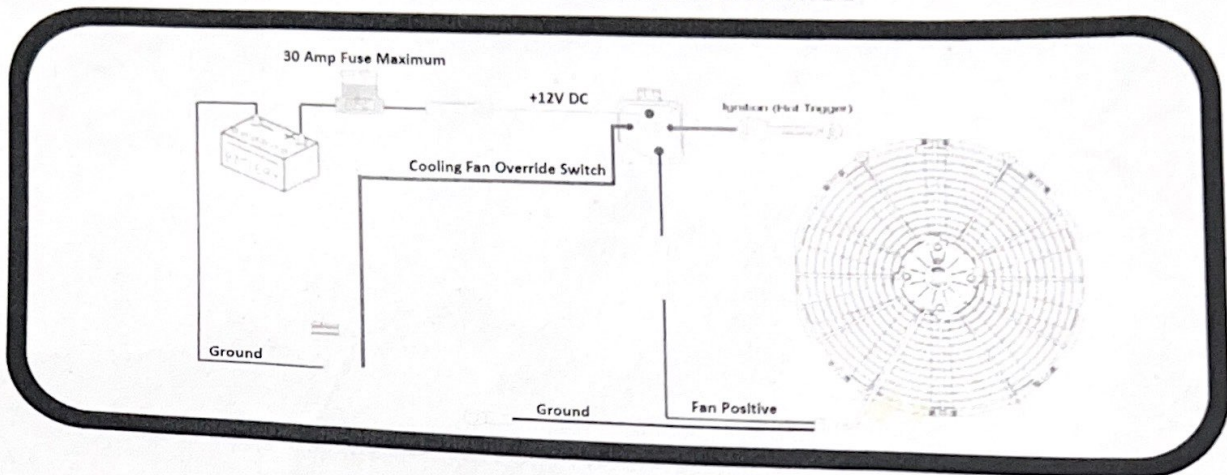
Gain access to OEM auxiliary fan. Cut wires between fan control unit and fan motor as close to fan motor's connection points as possible (see photo). Separate fan control unit from auxiliary fan shroud and relocate to chassis frame rail or any location away from heat or moving parts (see 2nd —new location highlighted by red circle). Depending on control unit's new location, it may be necessary to lengthen the fan's pigtail.

Splice orange wire from relay harness into black/blue wire coming from fan control unit. Connect red relay wire to red wire on Spal fan pigtail. Wire the gray wire and the black wire from the fan pigtail to a ground. Connect fuse to battery positive and splice to yellow wire on Spal relay.



OPTION 4—FULL MANUAL CONTROL

4



Connect gray wire from Spal relay to override switch in the cabin of the car. Connect orange wire to "hot" in ignition (the circuit at the ignition switch that is hot only when the ignition is on) if you would like to be able to turn the fan on while ignition is off, connect orange wire to an "always hot" circuit. Connect all other wires as shown in diagram above.