

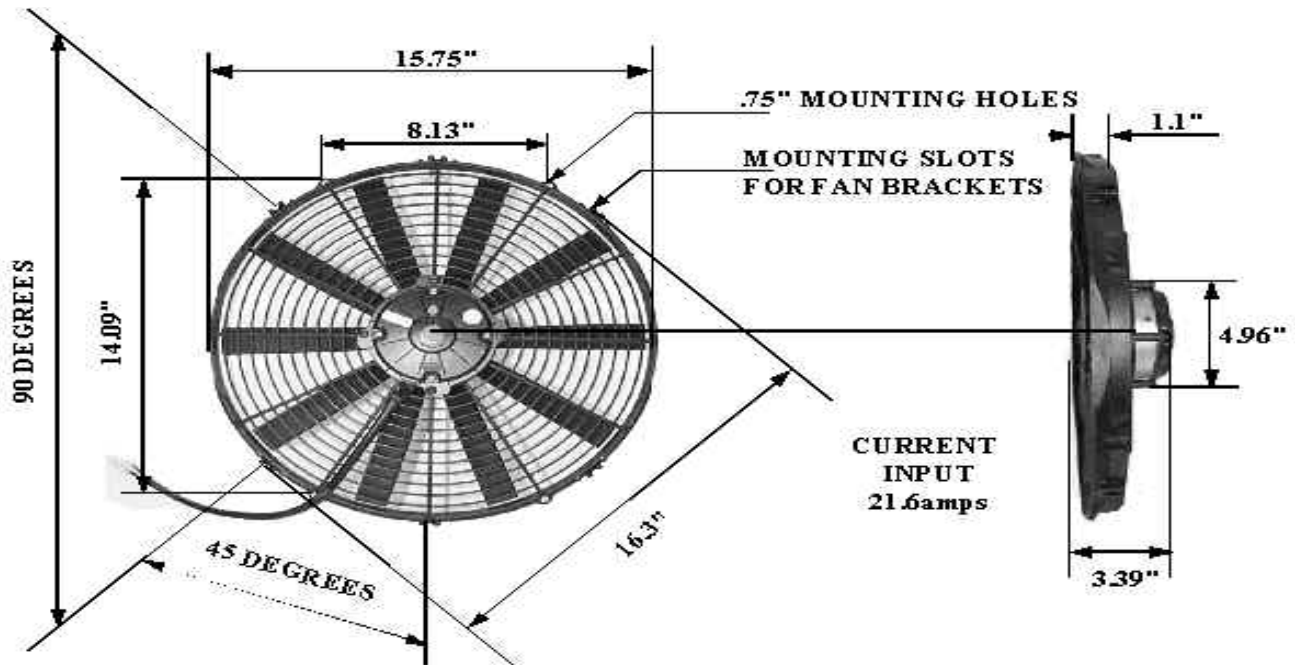
SPAL 16" PULLER FAN KIT

KIT CONSISTS OF:

No.	Qty	Part No.	Description
1.	1	716675	16" SPAL PULLER FAN
2.	1	716677	16" MOUNTING BRKT
3.	1	716678	WIRE HARNESS

Note: Due to moving an extreme amount of airflow, these fans are quite loud!

SPAL Fans - Technical Specifications



AA#	DESCRIPTION	HEIGHT (IN)	DEPTH (IN)	WIDTH (IN)	AIRFLOW (CFM)
716675	16" High Performance-Puller- Straight Blade	16.3	3.39	15.75	2360
716676	16" High Performance -Pusher- Straight Blade	16.3	3.39	15.75	2360

SPECIAL NOTE: The components packaged in this kit have been assembled and machined for specific type of conversions. Modifications to any of the components will void any possible warranty or return privileges. If you do not fully understand modifications or changes that will be required to complete your conversion, we strongly recommend that you contact our sales department for more information. This instruction sheet is only to be used for the assembly of Advance Adapter components. We recommend that a service manual pertaining to your vehicle be obtained for specific torque values, wiring diagrams and other related equipment. These manuals are normally available at automotive dealerships and parts stores.

SPAL 16" PULLER FAN KIT

WIRE HARNESS- Part # 716678

SPAL THERMOSTAT WIRING HARNESS

The SPAL fan wiring harness was designed to allow for simple installation with all SPAL performance fans. It is compatible with both positive and negative ground vehicles without requiring modifications. The 3/8" pipe thread sending unit is designed to turn the fan on at 185° and off at 170°.

Kit Includes:

- Fan Relay Harness (FRH) consisting of a high-quality wiring harness with labeled cables
- 185° OE-type thermostat with a Packard Weather Pack connector
- Installation instructions
- Hella 40-Amp relay
- Fuse holder
- All necessary hardware



MOUNTING BRACKET KIT- Part # 716677

- Kit contents: 4 rubber grommets
- 4 carriage bolts, nuts, and washers
- 4 Spal fan clips
- 4 aluminum mounting brackets

*Mounting brackets can be used for copper/brass radiators upon request. This universal set requires the customer to bend the brackets themselves to fit over the tanks or core plate for fitment. These brackets are designed to fit the 16" Spal fan only.

Please note: The Toyota truck aluminum radiator does require a special mounting bracket.



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High Performance Fans

SPAL

Fan Relay Harness (FRH)

185 Degree Thermostat Controlled Relay (185FH)

195 Degree Thermostat Controlled Relay (195FH)

Parts Included:

Fan wiring harness with relay and fuse holder

Fan thermostat, 185 degrees / 195 degrees

Overview:

We designed the SPAL fan wiring harness to enable the simplest installation of our performance fans. It is compatible with all types of vehicles and can be installed on positive or negative ground vehicles with no modifications.

Installing the fan:

When installing electric cooling fans, it is important to cover as much surface area as possible. Mount the fan as high up on the core as possible. Attach the fan to the small area around the core of the radiator where there is a metal lip that is approximately 1/4" to 3/8". This will allow mounting of the fan(s) without compromising the core of the radiator.

(Please call for fan shroud suggestions).

Wiring:

Mount the relay in a secure place in the engine compartment away from heat sources. Once this is completed, connect the wires per the diagram and notes below.

Red: Connect to the red wire of fan pigtail with pre-terminated yellow crimp.

Gray: Connect to thermostat socket (sending unit) with blue ring crimp connector.

Yellow: Connect to positive battery terminal using the fuse holder and yellow crimp connectors per diagram (see back).

Orange: Connect to ignition switch +12 vdc when engine is in run position. (Hook to constant +12 vdc for the fan to run continuously when the engine is hot even when the ignition switch is off).

Black: Connect ring terminal to chassis ground.

Fuse Holder: Connect fuse holder inline per diagram within 12" of the battery using ring terminal or equivalent.

* Note: On medium profile fans use a 20 amp fuse, on low profile fans use a 15 amp fuse

Installing the Thermostat Switch:

The sensor has 3/8" pipe thread. The thermostat supplied with the kit is an OE type that is designed to mount in the cylinder head of the engine. However, any mounting in water jacket is suitable. The 195FH sending unit comes on at 195 degrees and off at 175 degrees. The 185FH module turns on at 185 degrees and off at 165 degrees. The modules will work on the majority of applications. If a different size adapter is needed, the correct size thread adapter can be found at most automotive parts or hardware stores (1/2" adapter included in the kit) . Do not use Teflon tape on the sensor it can cause poor electrical contact and incorrect temperature readings.

Air Conditioning Relay:

Additional FRH required. From the (second) A/C relay, connect Yellow and Orange wires to ground. Connect the Red wire to the sending unit wire of the original fan relay harness. The Gray wire from the A/C relay goes to the +12 volt of the A/C compressor clutch wire. The fan will turn on when the A/C compressor activates.

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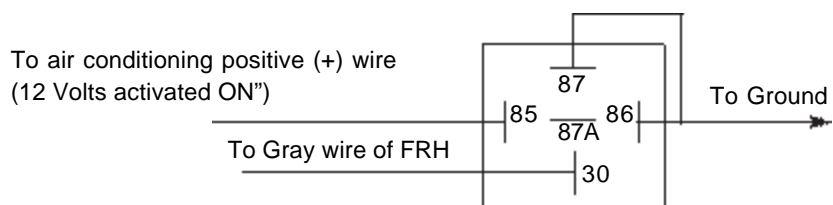
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Fax: 800-654-7725

Web Site: www.spalusa.com

E-Mail: info@spalusa.com



General Information:

If the vehicle has overheating problems, there can be many causes. Step one is to determine what is causing the vehicle to overheat. The chart below provides several problem, cause and solutions to overheating. Please contact our technical advisors at 800-454-7725 with any additional questions.

Problem	Solution(s)	Cause(s)
Engine overheats at idle and low speeds	Poor air flow through radiator	Install electric fan or duct air into engine compartment.
	Poor engine ventilation	Install SPAL fan and make sure engine compartment can vent hot air.
	Insufficient radiator	Have the core cleaned or replaced with an appropriate size.
	Engine idle circuit too lean	Enrich idle circuit.
	Engine timing too advanced	Retard timing.
Engine overheats continuously	Poor radiator / engine combo	Install sufficient radiator.
	Defective or stuck thermostat	Install new thermostat.

Single Fan Wiring Diagram

