

# SERVICE BULLETIN



M-1023

March 14, 1992

## WINTER FUEL CONDITIONER

### General

Harley-Davidson has received reports of winter driveability conditions with Harley-Davidson motorcycles which may include erratic engine operation and low idle.

See Illustration. These symptoms may be caused by carburetor icing, which can occur when certain environmental factors are present; specifically, low ambient temperatures combined with high humidity.

In response to this situation, Harley-Davidson has developed a winter fuel conditioner. The Harley-Davidson Winter Fuel Conditioner acts as a freezing point depressant to eliminate carburetor icing.

See "Product/Flashpoint", following. Despite the high flashpoint, the Harley-Davidson Winter Fuel Conditioner will ignite and burn in the combustion chambers.

The Part Number is 99889-91. This fuel additive comes in 118cc bottles and is available in a case of 12 bottles.

### Mix Ratio - Winter Fuel Conditioner/fuel

#### Usual winter riding conditions

One bottle ..... 16 gallons (60.6 Liters)

#### Very poor riding conditions

0.25 ounces ..... one gallon (2cc per Liter)

### WARNING

**This is a flammable product and should be used accordingly; that is, take all precautions**

**normally associated with flammable consumer products.**

Because of the nature of the conditions it is designed to address, this product is much less flammable than some other commonly available consumer products. For example:

Product	Flashpoint* °F (°C)
Gasoline, unleaded regular .....	-41° (-43°)
Rubbing alcohol (@ 98%) .....	45° (9°)
Methanol .....	51° (11°)
Duralt® .....	104° (40°)
Harley-Davidson Winter Fuel Conditioner® .....	188° (87°)

\*FLASHPOINT - The lowest temperature at which the vapor of a combustible liquid can be made to ignite.

### PRECAUTIONS

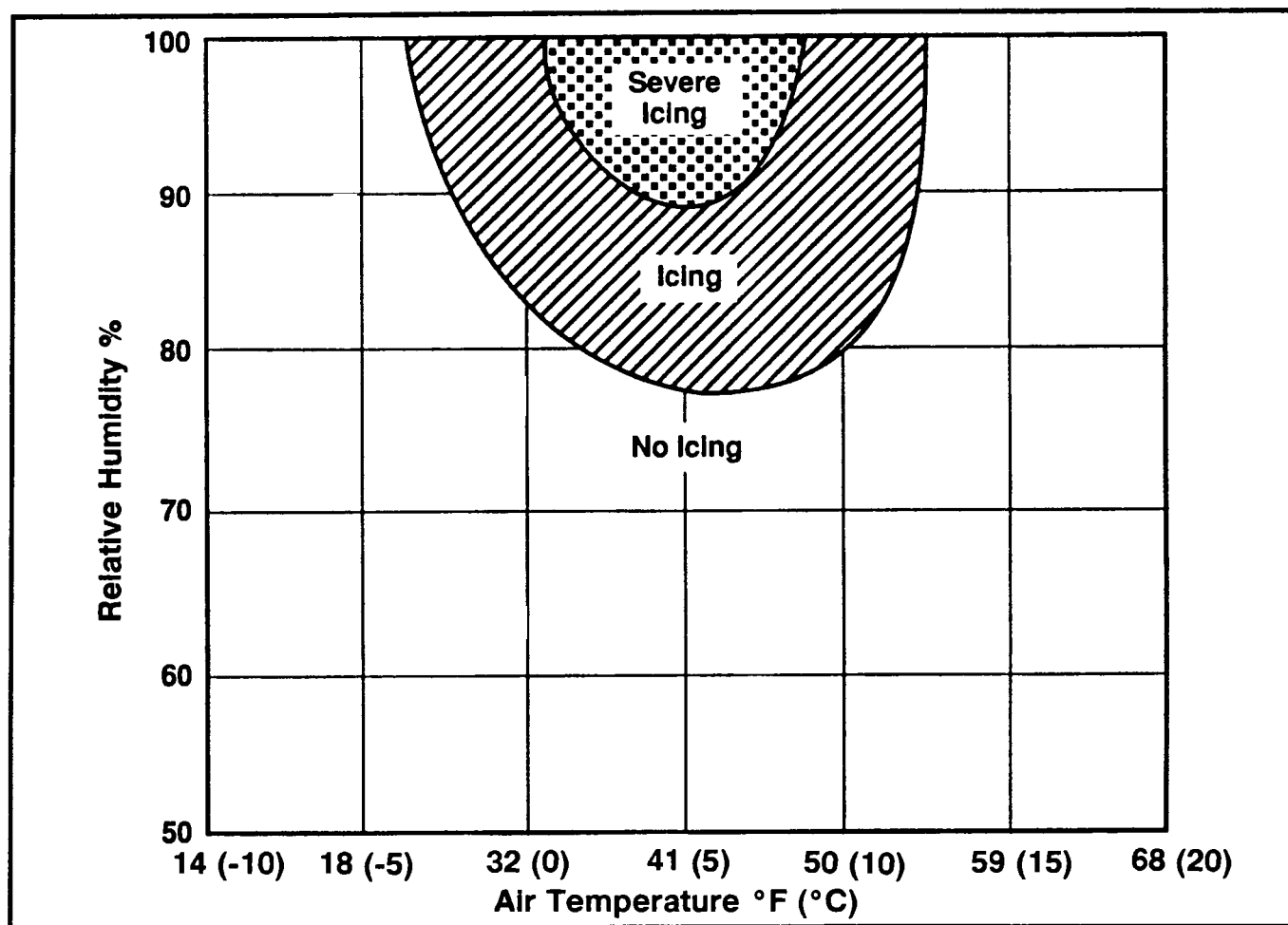
- Keep container(s) closed when not in use.
- Do not expose conditioner or container to a heat source.
- Do not allow welding, smoking or sparks in vicinity when using.

### INFORMATION

There are several books which contain detailed information about carburetor icing. One of these is:

"Automotive Fuels Handbook, SAE International"  
Library of Congress No. TP 343.089 1990  
(Dewey System) No. 629.25'38-dc20

ROUTING	SERVICE MANAGER	SALES MANAGER	PARTS MANAGER	LEAD TECHNICIAN	TECHNICIAN NO. 1	TECHNICIAN NO. 2	TECHNICIAN NO. 3	TECHNICIAN NO. 4	RETURN THIS TO
INITIAL HERE									



Temperature/Humidity Relationship - Carburetor Icing