

TECH STUFF

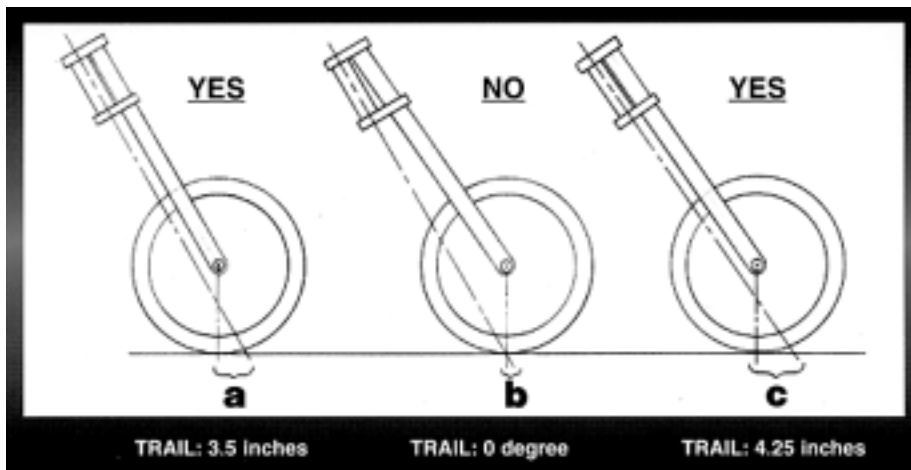
Raked Triple Trees--Ya Gotta Be Kidding!
 The Debate Over Raked Trees Continues
 By Randy Smith

We are often asked to manufacture raked triple trees. Our decision NOT TO RAKE TRIPLE TREES revolves around the stability and handling of the bike, and the safety of you, the rider. Raked triple trees are scientifically unsound, as explained below.

As trail is REDUCED, instability results, producing a natural tendency towards deflection or speed wobble.

As trail is INCREASED, so does the ability of a motorcycle to resist wobble and follow a straight line. There is a limit, however - too much trail can result in a motorcycle only being able to travel in a straight line!

TRAIL is geometrically determined by continuing a centerline through the frame head to the ground, and dropping a vertical line from the center of the axle. The difference between the 2 points (corrected to the centerline of the motorcycle) is measured in inches.



THREE DIFFERENT FORK CONFIGURATIONS SHOWING HOW TRAIL IS AFFECTED

- A) Typical Stock Configuration
 A 30 rake is established in the frame head. The fork is also at 30, with no rake change evident in the triple trees. The trail is lets say 3.5"
- B) Raked Triple Tree
 The Frame Head remains unaltered at 30. The triple trees are machined to produce 35 in the fork. The trail vanishes to zero degree, producing gross instability.
- C) How it Should Be Done
 >The components are the same except that the Frame Head is reconfigured to 35. The altered geometry increases the trail to let's say 4.25 inches and produces more straight-line stability.
 So what's the solution? We recommend altering the frame head in order to achieve the desired non-standard rake. Never consider the "easy way out" by choosing raked triple trees. We would caution the rider to seek professional help in selecting a precision jig and only using sound, careful welding procedures.

Glossary
RAKE: The angle of the fork tubes, expressed in degrees off vertical. Also: **CASTER TRAIL:** An imaginary distance arrived at geometrically, expressed in inches.
FRAME HEAD: A tubular section of the frame that houses the assembled fork stem and bearings. It is a normally immovable part which establishes the rake of the fork.
TRIPLE TREE: Machined, forged or cast plates which contain the fork tubes and fork assembly. Usually no rake angle is established here.



Our family here at Hal's Harley-Davidson & Buell would like to thank everyone who contributed to 'Rollin' For Rowinski, a benefit fundraiser for Hal's own Brian Rowinski and his wife Juli who were in a serious motorcycle accident. From the companies who donated everything from food to raffle items, to family and friends who donated their time and efforts, and everyone who attended, the event was a great success!

The event was held on November 9th at Mustang Shelly's. A ride was organized to leave Hal's and end at Mustang's. Over 100 bikes showed their support for Brian and Juli as Fox 6 news came out to film the departure and learn more about what the benefit was all about.

Hundreds attended the "Rollin For Rowinski" event. For a \$10 donation, patrons received a commemorative pin, raffle ticket, and delicious food. Many bands donated their time to keep the crowd rock'n and customers also enjoyed a silent auction and fish bowl raffles. Excitement mounted around 6pm that night, as there was a drawing held for a chance to win one of four prizes, the grand prize being a 2003 Sportster XL883. Anyone could have a chance to win for a \$20 donation. A recap of the winners is as follows:

- *Tom Rowinski Jr.- 1st Prize winner of the Sportster
- *Chris Check- 2nd Prize winner of a Twin Cam S&S Cycle 124" Motor
- *Jeremy Rusch- 3rd Prize winner of a Shiatsu Massage Recliner autographed by Orange County *Choppers Paul Teutel Sr. and Jr.
- *Carrie Hannerhan- 4th Prize winner of an Olympia Resort & Spa Harley Suite Weekend

Congratulations to the winners!
 The final totals are in! Brian and Juli appreciate everyone's support and thank you.

ZMC PRODUCTIONS

12th Annual PRESENTS THE
Motorcycle Swap Meet

■ SATURDAY ■
 February 14, 2004 - 10:00 A.M. to 4:00 P.M.
Fond du Lac County Fairgrounds
 Fond du Lac, Wisconsin

■ INFO ■
 Admission - \$6.00 • ABATE Members \$5.00
 • Parts for new and old motorcycles
Tattooing by **IN YOUR FACE TATTOOS**
of Fond du Lac
 • Leather goods and leather repair • T-shirts

■ VENDOR SETUP ■
 Friday - 6:00 to 8:00 P.M. • Saturday - 6:00 to 10:00 A.M.
 Booths \$35.00 each • Tables Available
 To reserve a booth call 920/922-5068 or 922-0952

E-mail: scoffzmc@charter.net
MAKE PAYMENTS TO: Z.M.C. • P.O. BOX 1311 • FOND DU LAC, WI 54936-1311

CASPER'S LEATHER
 (50 miles West of Duluth)
 (218) 492-1903

Pants • Vests • Jackets • Alterations
 Chaps • Saddle Bags • Patches Sewn
 Zippers Replaced • Western Tack

STORE HOURS
 Mon.-Sat.
 10 am - 5 pm
 UPS SHIPPER

CASPER'S LEATHER, Inc. • 122 BRIDGE
 HWY. 2, BOX 2828 • WARBA, MN 55793
 VISIT OUR WEBSITE AT: www.caspersleather.com

Digger's Den Tattoo Studio
 And Piercing

Sterile/Clean/New Needles
 Black & White/Cover-ups
 50 Colors

www.diggers-den.com 1-262-723-4071
 39 N. Wisconsin St. Elkhorn, WI 53121

BIKERS SERVING BIKERS
 TOMAHAWK, WI

3 miles
 of Hwy 8 on L.
 on Lake Nokomis

BOB & BETH
 LEKFIELD

715-453-5090

WHILE-A-WAY
 RESORT
mexican
 FOOD