

TECH TIPS # 28

FEBRUARY 1992

ALL MODELS

1992 BRAKE PADS & DISCS

With the change in brake disc and pad material for 92 comes a change in the break in (burnishing) procedure. Burnishing is the process that occurs as the pads and disc wear into one another. Burnishing is complete when the pad and disc contact surfaces are fully worn into each other, thus providing maximum contact. The new combination of softer disc and more aggressive sintered metal pads allows the normal burnishing process to scratch the disc more than before, this grooving is normal and will diminish after burnishing is achieved. Early disc brake systems with organic type pad materials needed fairly harsh break-in braking to burnish the disc and pads. With the new combination, burnishing can no longer be achieved by making repeated hard stops. In fact, this practice can cause premature wear. Repeated hard stops can generate excessive heat causing material transfer between pads and disc. Burnishing pads and discs can only be done properly by normal brake operation through the vehicle's break-in period.

CALIFORNIA EVAPORATIVE EMISSIONS SYSTEM

When servicing California bikes with the solenoid controlled air inlet, pay close attention to the routing of the four wire loom that connects the solenoid to the vehicle's harness. Any chafing or pinching of these wires can create strange problems later on. One of those wires is tied directly to the starter relay and in turn to the ignition circuit breaker. Any short to ground of those wires could induce an intermittent ignition operation.

SERVICE PARTS -- OVERSIZE CRANKPINS

Oversized crankpins for pre-commonized taper models are now available through Parts & Accessories. This will permit fitment of late style rod bearings to 1957- early 1981 XL's and 1941- early 1981 FL/ FX's.
The part numbers are;

23952-81	.001 OS	FL/FX
23953-81	.002 OS	FL/FX
23954-81	.001 OS	XL
23955-81	.002 OS	XL

TIRE SPECIFICATIONS

Please add the following new tire tread depth specifications to the tire section in your warranty manual. They will enable you to accurately judge the amount of wear that has taken place on the newer Dunlop OEM tires.

D401/D402 front tires- 6/32" D402 rear tires-9/32"
D401 rear tires- 11/32" Elite(21"front)-5/32"

Dunlop 291 tires are no longer available from Dunlop. Harley-Davidson dealerships are now the only source for these OEM tires.

VOLTAGE REGULATOR WARRANTY

A large percentage of voltage regulators returned under warranty are good, except for the lack of a good chassis ground. Always check for the presence of oxidation on base of the regulator at the mounting points. Use of an ohmeter to verify an adequate ground to the negative battery terminal may be a good indicator when checking for grounds. For best results, clip a jumper wire between the fins of the regulator and battery ground while load testing. The jumper wire will overcome any voltage drops which would cause the regulator to not work.

CALIFORNIA SOLENOID REPLACEMENT

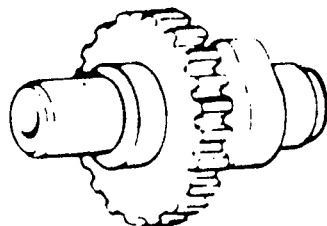
If you are replacing a solenoid assembly the color of the wire leads may not match those of the solenoid being replaced. Some units ordered from P & A might have a slightly different wire color scheme. Use the chart below which will allow you to correctly match the solenoid wires to those in the motorcycle's wire harness.

<u>wire color on replacement solenoid</u> -----	<u>motorcycle's OEM mating wire color</u> -----	<u>connector block pin no.</u> -----
orange	white	# 4
black	grey/ black	# 3
red	black/ red	# 2
black	black	# 1

XL MODELS

SCREAMIN' EAGLE CAMSHAFTS

When installing Screamin' Eagle bolt-in hydraulic cam kit, part number 25648-91, in 883's that have been converted to 1200, pay careful attention to the valve to piston clearance. In some cases, the piston could touch the exhaust valve at cranking speeds unless the piston is clearanced beforehand.

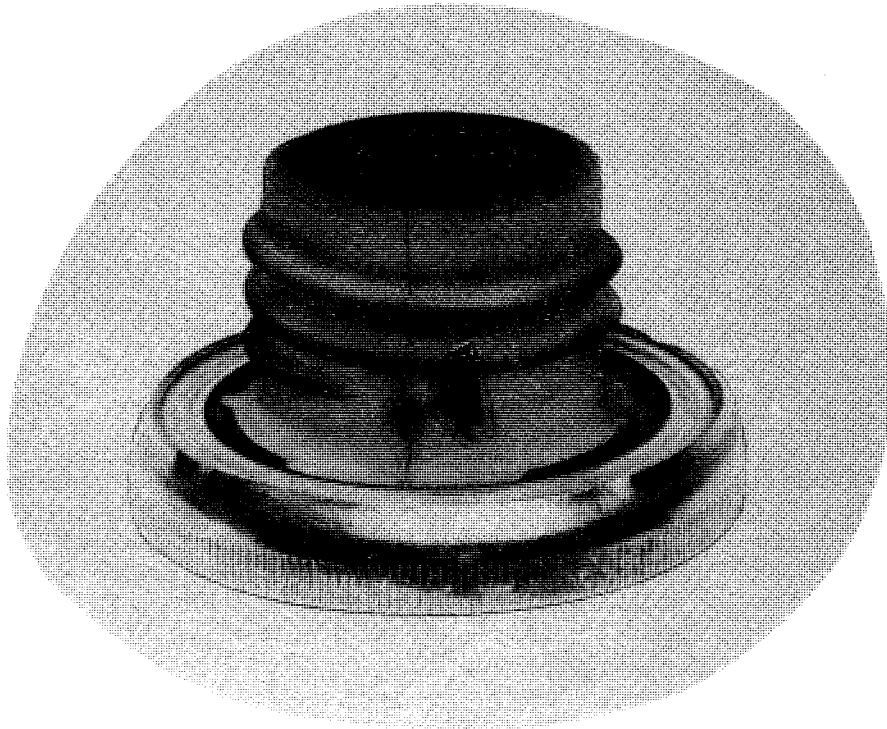


TECH TIPS

FX MODELS

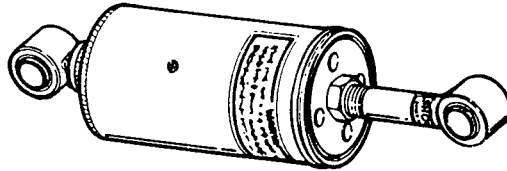
SOFTAIL FUEL TANK CAPS

As we mentioned in Tech Tips #23, a change was made to fuel cap gaskets last year to help eliminate Softail fuel tank staining. Production and field use of that gasket (61109-85C) has helped a lot. Here's another "anti-stain" tip. A number of left fuel caps (61103-83A) used on 1990 and early 1991 Softails may be contributing to the condition. To identify a prospect, unscrew the left cap and turn it upside down. Check the die number stamped at the bottom of the middle cavity of the cap. It will be either a 1 or 2. If it's a 2, examine the cap further. Check the area where the left handed thread just starts near the top of the plastic sleeve, in the vicinity of the parting line from the die. If you notice a small depression or sunken area, replacing the cap could prevent a stain from occurring.



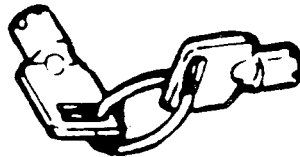
REAR SHOCK ABSORBER SERVICE KIT

A service parts kit has been released to repair Softail shocks from 1989 to early 1991. The kit consists of a seal and thrust washer. This will permit the service technician to repair shock absorber assemblies where the rubber washer has extruded from the shock cover. The kit part number is 54528-91.



1992 ROUND KEY NUMBERS -- IGNITION/ SADDLEBAGS/ TOURPAK

During initial set-up and pre-delivery of vehicles using round type keys, don't discard the small plastic tab that connects the two keys. The key number is etched on that tab. Should that tab be lost before the number is recorded, the customer will not be able to obtain additional or replacement keys.



FL MODELS

BREATHER GEAR CHANGE

Starting with the 92 models, all 1340 engines were equipped with the -82 breather gear. Testing has shown that this breather gear working together with the separator baffle provides the best protection from oil carry-over to date.

TECH TIPS

WARRANTY FLAT RATE CHANGE

Please note that labor code 5385 for all Softail models has been revised upwards to .5. Although this change is not reflected in the 92 flat rate manual, warranty claims submitted subsequent to this Tech Tip will be credited at the higher rate. The increase allows for more careful fuel tank removal to gain access to the VOES wire connections.

INNER TUBE IDENTIFICATION

Starting on Jan. 1, 1992, all 16" inner tubes used in production are specially marked. The valve stem is marked with yellow ink so that when the tube is properly installed the mark will appear on the outboard side of the stem. Should you encounter a vehicle with the paint identification on the inboard side, please contact the Service dept. in Milwaukee.

SERVICE MANUAL UPDATE

The 1991-92 DYNA and FX Service Manuals , on page 6-6 list a sprocket nut torque of 180 ft./lbs. Maximum torque specification should be 150 ft./lbs. Please note this correction and mark the change in your Service Department's Manuals.

MISCELLANEOUS

TECHNICAL SERVICE DEPARTMENT STAFF MEETINGS

Remember that our Technical Service Department normally has it's staff meeting on Monday mornings. During that time there is no technical phone support available. Please leave any messages or requests for callbacks on the Phonemail box of the respective service individual that you wish to speak to. Phone support resumes at 11:30 CST.