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**– October 1993 –  
#36**

# **TECH TIPS #36**

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# TECHNICAL TIPS #36

*SEPTEMBER 1993*

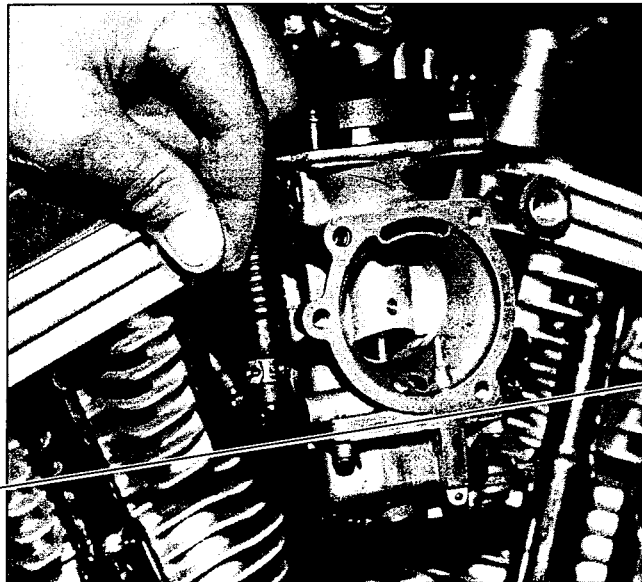
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**\*\* ALL MODELS \*\***

## *CARBURETOR FLOAT LEVEL ADJUSTMENT*

Checking carburetor float level can be easily done, without even removing the carburetor from the motorcycle. Simply attach a section of clear model airplane fuel line to the float bowl overflow fitting. Small diameter fuel line, which is compatible with gasoline, can be found in most hobby supply shops. Route the hose upward alongside the carburetor body. The motorcycle must be held **level** and **be running** to perform this test.

Open the float bowl drain screw and fuel will rise in the tube to the same level as that in the bowl itself. A carburetor with a properly adjusted float level will have the level the same height as the float bowl O-ring surface.



Correct  
fuel level

## **\*\* ALL MODELS \*\***

### *90TH ANNIVERSARY TANK EMBLEM REMOVAL*

Apply 3M general purpose adhesive remover; part number (051135) 08984 to surrounding foam and adhesive backing. Allow to soak. Carefully apply heat directly onto the 3-D nameplate with hair dryer or heat gun. **Avoid excess heat which will damage the painted surface underneath.** Using plastic, wood or rubber tool, carefully pry between the fuel tank and the nameplate and lift the nameplate from the tank. The pulling and prying will damage and destroy the nameplate itself, but the heat will soften the foam adhesive enough to permit easier removal. All remaining adhesive can be removed using additional 3M remover. A slight back and forth motion directly on the foam will ball material up for easier removal.

## **\*\* XL MODELS \*\***

### *SPROCKET SHAFT SEAL CHANGE*

Beginning on April 1st, 1993, Harley-Davidson began to reverse the direction in which the sprocket shaft seal is installed. The open side of the seal (exposing the spring) now faces towards the engine sprocket and primary/drive compartment. This will promote better crankcase sealing, while reducing the potential for transfer of fluids and crankcase pressure. The seal spacer inside diameter was also reduced to .995-1.000" for a tighter fit on the sprocket shaft. The spacer and seal part numbers did not change.

# XL OIL CARRYOVER DIAGNOSTIC CHECKLIST SHEET

VIN NUMBER \_\_\_\_\_

DATE \_\_\_\_\_

PRESENT MILEAGE \_\_\_\_\_

MILEAGE BETWEEN  
OCCURRENCES \_\_\_\_\_

AMOUNT OF BREATHER OIL:

1. Oil only in breather bolts and no where else.
2. Oil in breather bolts, small amount in sponge, small trace on backplate.
3. Oil in breather bolts, large amount in sponge, oil visibly thick on backplate, element still clean.
4. Same as #3. element paper now collecting oil.
5. Same as #3, element paper completely saturated.
6. Oil exiting air cleaner from backplate.

## INSPECTION POINTS/ ACTION ITEMS

### *INSPECTION*

### *ACTION TAKEN*

Is origin of oil known?

Make sure it is not an oil leak

Fuel present in the  
air cleaner?

Check for fuel overflow or  
venting problem

Is air filter saturated?

Replace to stop oil from exiting

Oil laying on backplate shelf  
of air cleaner assembly?

If not, look for oil leak

Long breather bolts installed?

Bolts must be longer ones;  
part number- 3534A

Breather bolts have sealant on threads?	Bolts must have pipe sealant or tape applied ( <b>very critical</b> )
Proper oil level in tank?	Check and adjust as needed
Oil/vent lines routed without bends or restrictions?	Change routing
Perform compression test expected range: 883cc - 130-140 psi 1200cc - 150-160 psi	If compression is 10% below lower limit, 12% above upper limit, or varies by more than 10% between cylinders inspect and repair
Perform cylinder leakage test expected range: 0-8%	If greater than 12 % inspect and repair
vacuum present in transmission/primary case?	check with crankcase gauge, part number: 96950-68 or attach attach clear hose to transmission vent line and drop in a glass of water. If one inch or more of vacuum is present, check sprocket shaft seal change information.
Gasket leaks?	Check and repair
Crankcase seam leak?	Check and repair
All production engine components?	Note: Screamin' Eagle air cleaner assemblies can make oil carryover visible sooner

## **\*\* DYNA MODELS \*\***

### *DYNA MAIN WIRING HARNESS*

Gaining access to a Dyna's main wiring harness is easier than you may think. Should you need to service or replace one, please consult page 8-47 in the 1993-94 Dyna Glide Service Manual for the quickest, easiest method. These procedures can also be applied to earlier models.

## **\*\* FX MODELS \*\***

### *PARTS & ACCESSORY REPLACEMENT FUEL TANKS*

Currently there are two types of rightside replacement fuel tanks in Parts & Accessories; **vented** and **nonvented**. The two can be identified by a stamping inside the filler neck.

The vacuum vented tank (1992 & later) has two stampings inside the filler neck. These are a "RH" and the Bar & Shield logo. This tank requires a vacuum vented gas cap: part number, 61272-92.

The other type of tank does not have any venting provisions built into the tank. Only a Bar & Shield logo is stamped into the filler neck for identification. This fuel tank requires a pressure and vacuum vented cap: part number, 61102-83B.

## OLD PARTS AND NEAT STUFF

**THE HARLEY—DAVIDSON SERVICE DEPT. HAS COMPILED THE FOLLOWING LIST TO AID RESTORERS IN OBTAINING OBSOLETE PARTS AND/OR SERVICE. WE DO NOT ENDORSE ANY OF THE NON—AUTHORIZED HD ESTABLISHMENTS, BUT MERELY PRESENT THIS INFORMATION AS A CUSTOMER SERVICE.**

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American Motorcycle Classics, 3650 S.W. Third, Corvallis, OR 97333, 503/752-7402  
Antique Cycle Supply, Inc., Route 1, Dept. BJI, Cedar Springs, MI 49319, 616/636-8200, fax 616/636-8669  
Brandt's Harley-Davidson, 1617 So. Wabash Street, Wabash, IN 46992, 219/563-6443  
Competition Harley Network, 1355 Kingsdale, Hoffman Estates, IL 60194, 708/884-6033  
Cycle Parts Emporium, Hilltop Hwy 421 West, Boone, NC 28607, 704/297-2520  
Egan's, M.F. (Mike) Vintage Motorcycle, 136 No. Ojai St., PO Box 688, Santa Paula, CA 93060-0688, 805/933-1557,  
fax:805/525-3562 (be sure to put M. Egan's name & phone # on fax)  
Graves Harley-Davidson, 2319 Texas Avenue, Lubbock, TX 79405, 806/744-0218  
Harley-Davidson 45" Restoration Company, PO Box 12843, Albany, NY 12212, 518/459-5012, 800/445-1945  
Harley-DAvidson Sales, 4016 No. Detroit, Toledo, OH 43612, 419/476-5655  
Harley-Davidson of Villa Park, 305 East North Avenue, Villa Park, IL 60181, 312/834-6571  
H-D of Crete (Servi-Car parts), 1048 Main St., Box 125, Crete, IL 60417, 708/672-6601  
Jeff's American Classics, 270 No. Highway 99W, Dundee, OR 97115, 503/538-7028  
Kick-Start, Motorcycles Parts Inc., PO Box 1338, Big Rapids, MI 49307 USA, 616/796-3334  
Molenaar's, 5617 Calumet Avenue, Hammond, IN 46320, 219/932-8340  
Precision Harley-Davidson, 269 Armistice Road, Pawtucket, RI 02860, 401/724-0010  
Sarafan, David, PO Box 293, Spring Valley, NY 10977, 914/356-1080, fax:914/425-7803  
S.C.R.A.P., PO Box 922620, Sylmar, CA 91392, 818/367-0688  
Skip Fordyce Harley-Davidson, 7840 Indiana Avenue, Riverside, CA 92504, 714/785-0100  
Sports Motors Harley-Davidson, 1814 Oxford Avenue, Eau Claire, WI 54701, 715/834-0451  
Stan's Cycle Shop, State Street Road, Batavia, NY 14020, 716/343-9598  
Stubbs Harley- Davidson, 4436 Telephone Road, Houston, TX 77087, 713/644-7535  
Suburban Motors Harley-Davidson, 139 No. Main, Thiensville, WI 53092, 414/242-2464  
Throttle Masters M/C Salvage, 3921 So. Archer Avenue, Chicago, IL 60632, 312/247-5211 (Servi-Car)  
Vince's Antique & Modern Cycle Supply, 908 San Mateo Avenue, San Bruno, CA 94066, 415/871 -9183, fax 415/871 -0456  
American Motorcycle Classics, 3650 S.W. Third, Corvallis, OR 97333, 503/752-7402  
Antique Cycle Supply, Inc., Route 1, Dept. BJI, Cedar Springs, MI 49319, 616/636-8200, fax 616/636-8669  
(exhaust/wiring)  
Apol's Harley-Davidson, 102 Cofield North, Raymond, MN 56282, 612/967-4512  
Baer Sport Center, Inc., (250cc lightweight parts), Rt. 6 East, Honesdale, PA, 717/253-2000  
Barbour, Jerry, PO Box 242, Lizella, GA 31052-0242, 912/935-8638  
Bayliss & Son (Hummers), Rt. 1, Box 461 H, Stafford, VA 22554  
Brewster Harley-Davidson, Rt. 22, Brewster, NY 10509, 914/279-5141/2  
  
Charleston Custom Cycle (Donald VanDusen), 211 Washington, Charbston, IL 61920, 217/345 - 2577  
Competition Harley Net work, 1355 Kingsdab, Hoffman Estates, IL 60194, 708/884-6033  
Cummings Harley-Davidson, Inc., 1515 So. Saginaw St., Flint, MI 48503, 313/234-6646  
Cycle Parts Emporium, Hilltop Hwy 421 West, Boone, NC 28607, 704/297-2520  
Harley-Davidson Cycb Genter, 2900 Reserve Street, Missoula, MT 59801, 406/543-3151  
Harley-Davidson of Hempstead, Inc., 4 Laurel Avenue, Hempstead, L.I., NY 11550, 516/481-7100, fax:516/481-7106



Harley-Davidson of St. Augustine, 515 San Marco Avenue, St. Augustine, FL 32084, 904/829-8782  
H.E.L. Crete Harley-Davidson (Servi-Car parts), 1048 Main St., Box 125, Crete, IL 60417, 708/672-6601  
Jim's Harley-Davidson, PO Box 166 St. Rt. 707, Mendon, OH 45862, 419/795-4185  
Kenosha Harley-Davidson, 5403 52nd St., Kenosha, WI 53142, 414/652-3653  
Kesco/Hoover Harley-Davidson, 603 East Carson Avenue, Cushing, OK 74023, 918/225-1818  
Lancaster Harley-Davidson, Inc., S08 Beaver Valby Pike, Willow Street, PA 17584, 717/464-2703

Mike's Custom Cycle, Route 3, Box 243, Augusta Hwy, Sparta, GA 31087, 706/444-5838  
Moto Italia, 13960 Hwy 9, Boulder Creek, CA 95006, 408/338-3340  
Precision Harby-Davidson, 269 Armistice Road, Pawtucket, RI 02860, 401/724-0010  
Skip Fordyce Harley-Davidson, 7840 Indiana Avenue, Riverside, CA 92504, 714/785-0100  
Stubbs Harley-Davidson, 4436 Telephone Road, Houston, TX 77087, 713/644-7535

TOP END - Kick-Start, Motorcycle Parts Inc., PO Box 1338, Big Rapids, MI 49307 USA, 616/796-3334  
PAINT (Pre-1970 only) - Antique Cycle Supply, Inc., Route 1, Dept. BJI, Cedar Springs, MI 49319, 616/636-8200, fax 616/636-8669  
DECALS (obsolete) - Miller's Customer Parts (George Miller), 1863 So. Ridgewood Ave., So. Daytona, FL 32119, 904/761-0858  
ANTIQUA HARLEY-DAVIDSON TOYS - Antique Cycle Supply (see above) - Egan's (see under Big Twins)  
HARLEY-DAVIDSON BICYCLES - Antique Cycle Supply (see above)  
TIRES - Coker Tire Company, PO Box 72554, Chattanooga, TN 37407, 800/251-6336  
SADDLE TOP RECOVERING - M. Warren Shank, Box 209 Letort Road, Milbrsville, PA 17551  
SEATS/SADDLEBAGS - Brother's Leather Works, Star Rt. 1, Box 184F, Mount Ida, AR 71957, 501/867-3211  
SPEEDOMETER RESTORATION/REPAIR - Mr. Pat Powell, 2644 Willow Street, Franklin Park, IL 60131, 708/455-4918 40s, 50s, 60s majority - prefer pre-1970 models  
CARBURETORS - Linkert, Schebler, others/Mike at Classic Cycles, 6602 W. 89th Pl., Oak Lawn, IL 60453, 708/599-7556  
BUYING/SELLING MOTORCYCLES/PARTS - Buzz Walneck, Walneck's Cycle Trader, Walneck's, Inc., 7923 Janes Avenue, Woodridge, IL 60517 Bike Journal International, Subscription Services, PO Box 391, Mt. Morris, IL 61054, 815/734-1101  
OLD MANUALS - Jim's Harley-Davidson Sales, PO Box 166 St. Rt. 707, Mendon, OH 45862, 419/795-4185  
RACING - (Resources/Parts) Competition Harley Network, 1355 Kingsdale, Hoffman Estates, IL 60194, 708/884-6033

# **“I WANT YOUR IDEA FOR TECH TIPS”**



## ***HARLEY-DAVIDSON WANTS YOUR IDEA FOR TECH TIPS !!***

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