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**– December 1993 –
#37**

TECH TIPS #37

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TECHNICAL TIPS #37

DECEMBER 1993

** ALL MODELS **

TAPPET GUIDE CHANGE

A recent change has eliminated the use of welch plugs in all 1340cc tappet guide blocks. The new part numbers are:

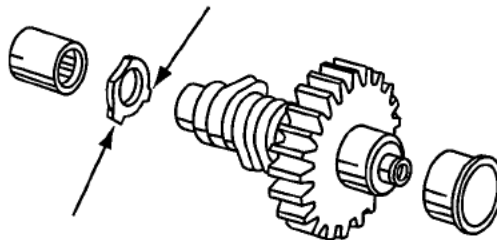
18623-85B - **front** tappet guide

18622-85B - **rear** tappet guide

The new guide blocks went into production with the following crankcase numbers; 1594-271-143 and 2094-272-001 and are retro-fitable.

CAMSHAFT WASHER CHANGE

The tangs were recently removed from the camshaft thrust washer used on all 1340cc models. The new thrust washer; part number 25550-57A, is a complete retrofit.



It is important to note that this information is intended to keep servicing technicians informed of recent production changes as quickly as they occur. The availability of these new parts may be delayed until current Parts & Accessory inventory is depleted.

COMPENSATOR SPROCKET IDENTIFICATION

At the beginning of the 1994 model year, all 1340cc vehicles had a one tooth increase in the primary engine sprocket from 24 to 25 teeth. To easily identify one sprocket from another, a groove has been added to the face of the 25 tooth sprocket. This was a running change which took place in late September. This identifier will not be present on early 1994 build motorcycles.

NEW VALVE GUIDE SEALS

A change has been made to the valve guide seal material to improve the sealing capability. The new seals can be identified by their new **black** Teflon color. The seals used previously were **blue** in color. There was also a part number change from 18001-83A to 18001-83B.

1340 TRANSMISSION UPDATE

The spline section length of 1340 sprockets have been increased to improve durability. This was a running change which occurred on October 18, 1993. Transmission assemblies built after the following numbers will reflect this change;

Domestic	994-291-073
International	994-291-154

This also brought about changes to a number of related components including the seal and spacer.

Replacement sprockets are sold in a kit with all the parts needed to update vehicles. All earlier part numbers have been obsoleted and superceded to this later kit; part number, 40210-85D. The kit contains the following parts:

40251-94	Transmission sprocket
33344-94	Sprocket spacer
12067	Seal
35211-91A	Sprocket nut
40251-92	Retaining plate
3594	Screw

CARBURETOR FLOAT PIN REMOVAL

Service Bulletin M-1035, dated October 8, 1993, described the change to a press fit float pin. **Terry Blocker**, Blocker Enterprises, Parryville, PA. wrote to us with an easy and safe method of pin removal. Terry uses a spring loaded center punch, **Blue Point tool, YA805A** to easily remove the pin. Your editor tried this and found that the tool works well for both removal and installation. The tool is quite powerful, but the pin is a pretty tight press fit. You will have to cycle the spring loaded tool 5 or 6 times to get a pin out the first time it's removed. Be careful and put a shop rag around the pin and wear your safety glasses. When it does come out, it can really fly!

TANK EMBLEM REMOVAL UPDATE

Tech Tips #36 described a procedure for the removal of 90th Anniversary tank emblems. **Carl Boockholdt**, Bud's Harley-Davidson, Evansville, IN. has good success with dental floss. After using the 3-M adhesive remover, Carl uses heavy dental floss to "saw" the emblem free of the tank. He prefers this to prying the emblem free. Great suggestion Carl!! Don't forget to brush twice a day and keep up that good dental hygiene.

FUEL TANK INTERNAL COATING

A late breaking piece of information has come to us from our York, PA. facility. Starting in late November, the paint shop will be changing the internal coating of the fuel tanks to a powder coating. There are some important manufacturing and environmental reasons driving this change. The improvements this process change will bring about also have significant field implications. Powder coating, which is gray in color, will eliminate any clogging of cross-over tubes. The uniformity of the coating will insure a rust free interior, without excess buildup. Finally, problems of yellow overspray in the filler neck area will be gone.

SPRINGER HEAD BEARING TOOL

Jim Boner, Service Manager at Evansville, IN. wrote with this suggestion. Are the roll pins you used in making the Springer Fork bearing tool bending after a few uses? Replace the pins with early Big Twin four speed transmission needle bearings: part number 9084

HIGH CONTACT RATIO GEARS

A quick clarification to Service Bulletin M-1037. In 1994, the 1340cc 5 speed transmissions with STANDARD gears are marked with a 0.030" (0.76mm) radius groove on the O.D. of the gear. 1993 and earlier STANDARD 1340cc transmission gears were NOT identified with a groove on the gear O.D. When in doubt, check the transmission number, located on the right side of the transmission case behind the shifter or top cover, to determine which gears the transmission has.

**** FLT MODELS ****

SERVICE PROCEDURE CHANGE

The best and most trouble free method of draining the fuel tank should be with the plastic Mity-Vac Hand Pump, HD-23738. The alternative method of a very low pressure on the nipple vented to atmosphere could cause damage and is no longer recommended.

**** MISCELLANEOUS ****

TECH TIPS CORRECTION

The July 1993 issue of Tech Tips #34, incorrectly listed the parts numbers of the retrofit Sportster oil tank kits. The correct part numbers are:

62482-93 1982 - early 1987 models

62472-93 late 1987 - 1990 models

Please note this correction.

*Thanks to all those technicians and dealerships
who have responded with suggestions.
Stay tuned for more articles in future Tech Tips.*



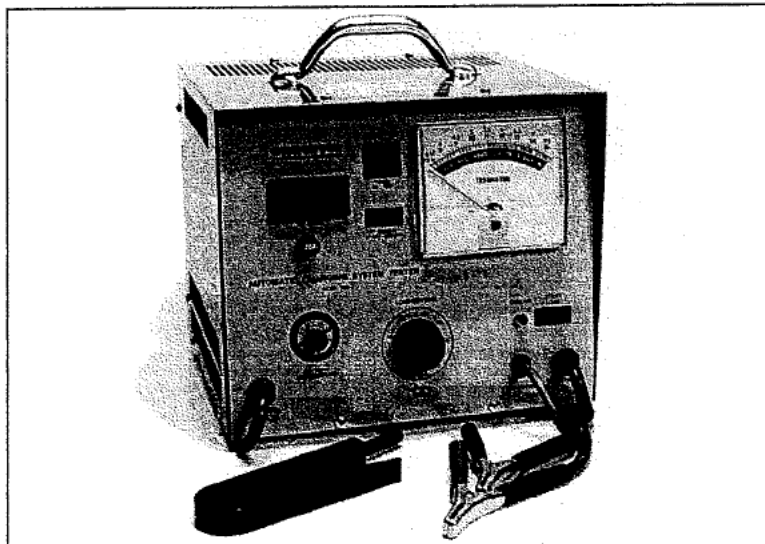
CHARGING SYSTEM/ BATTERY LOAD TESTER

Dear Dealer,

The Carlson Company has recently depleted it's supply of the Christie Automatic Motorcycle Charging System Load Tester, Model ACST-100. It was developed specifically to meet Harley-Davidson needs.

This valuable service tool provides a quick and accurate diagnosis of charging system and battery problems. It features a solid-state load bank, external inductive amperage pickup, a large digital amperage display and a color coded testmeter display. Automatic electronic controls permit the correct amperage for battery testing. This portable unit performs the following functions without an AC power source and without disconnecting any motorcycle wiring leads:

1. Tests the alternator and regulator performance
2. Checks the state of charge of the battery
3. Determines the battery condition with a 15 second load test
4. Checks the starter motor current draw



In order to secure renewed availability for Harley-Davidson dealers, a minimum number of units (50) must be manufactured. A special price of \$739.00 will be offered for orders received before January 31, 1994. An order form is provided. Please complete and mail or fax directly to:

The Carlson Company
P.O. Box 15051
Santa Ana, CA 92705

If you have any questions, or to place an order, call Carlson's toll free number, 1-800-222-6199 or FAX, (714) 731-0500.

Shipment will be F.O.B. Santa Ana, CA, via UPS. Terms are COD or payment in advance. We will pay shipping cost, US only or International orders to York, if payment is recieved with order. California dealers (only) should add sales tax. Shipment will be by April 30, 1994. If it happens that an insufficient number of orders are recieved, those dealers who have elected to pay in advance, to save freight, will be fully refunded.

Regards,

Robert R. Carlson

THE CARLSON COMPANY ORDER FORM

SOLD TO AND SHIP TO: _____ DATE _____
 FIRM _____ PERSON ORDERING _____
 STREET _____ TITLE _____
 CITY/STATE/ZIP _____ PHONE (____) _____

QUANTITY	CATALOG NO.	DESCRIPTION	PRICE
	ACST-100	CHRISTIE MOTORCYCLE CHARGING SYSTEM	
		LOAD TESTER @ \$739.00* EACH.	
		* SPECIAL OFFER. GOOD IF ORDER	
		RECEIVED DURING JANUARY, 1994.	

SIGNATURE _____

- PAYMENT SENT WITH ORDER
 PLEASE SHIP C.O.D.

AMOUNT OF ORDER*	
APPLICABLE SALES TAX	
TOTAL	

*F.O.B. SHIPPING POINT, FREIGHT COLLECT

Post Office Box 15051 • Santa Ana CA 92705-0051 • 714-731-2544 • Fax 714-731-0500

Technical Support Phone Numbers

Technical Service.....414-935-
Policy Adjustments.....1-800-464-
 Factory Technical Training.....414-935-
 Warranty Administration.....414-935-
 Recall: Vehicle Information.....1-800-448-
 RSI: Technical Assistance.....1-800-367- **
 & in-warranty authorizations
 Whelen: Police Equipment.....203-526-

 Technical Service Fax.....414-935-

International dealers are asked to FAX their inquiries regarding vehicle problems to the Technical Service FAX line. Questions about sound system matters should be faxed directly to RSI at 502-589-. At this time it is not possible to access the 800 series numbers from outside the U.S.

To leave a phone mail message for a specific individual, you can phone 414-935-, 24 hours a day, then enter their extension.

<i>Person</i>	<i>Area</i>	<i>Extension</i>
Jim Cotton	Rubber mount & Electrical	
Pat Karl	1340 Powertrain	
Dennis Meskin	XL Powertrain & Chassis	
Mike Rheam	Softtail chassis	
Bob Follet	General	
Chuck Hammel	General	
Aaron Sterling	General	

Remember: When you call with a question always have the following information ready:

- CUSTOMER'S NAME
- VEHICLE IDENTIFICATION NUMBER (VIN)
- MILEAGE
- DATE OF PURCHASE
- WARRANTY CLAIM NUMBER

** Please be sure to contact RSI first when in need of any sound system diagnostic help. They are equipped to provide timely, toll free assistance.