

TECHNICAL

TIPS

June, 2001
TT#54



TECH TIPS #54

Table of Contents

*The information listed below has been
previously posted on www.h-dnet.com and/or Fax-on-Demand.*

- 1 Primary Chain Tension Anchor Plate Screw
- 1 Horn Replacement
- 1 2001 Security System Set-up
- 1 Spark Test on EFI Softail
- 2 '00 and Early '01 Deuce and Springer
Headlight Vibration
- 2 2001 Softail EFI Idle Speed Setting
- 3 2001 Softail Owners Manual Corrections
- 3 Missing Labor Codes
- 3 Initial Care Authorization
- 4 Marking Warranty Return Parts
- 4 2001 XL Electrical Diagnostic Manual
- 5 New Service Replacement Parts
- 5 Engine Case Damage
- 4 TC-88 Oil Pump Alignment
- 4 TC-88 Camshaft Replacement
- A1-A3 TC-88 Rear Cam Bearing Warranty
Extension Letters
- A4 No Trouble Found Policy

Primary Chain Tension Anchor Plate Screw

The appearance of the primary chain tension anchor plate screw, p/n 1783A, has changed. It is now a torx drive screw and has a new p/n – 1783B. The torque specifications have not changed and remain at 12-14 ft-lbs.

Horn Replacement

If it should become necessary to replace a horn for any reason, please be aware of new torque values recommended for optimal sound quality.

The resonance of horns is affected by torque of the mounting hardware. It is suggested that a torque value of 80-100 in/lbs. be applied to the flange nut, (PN 7495), when installing a replacement horn. Over-torque of this fastener could damage the horn to the point it might not work at all. Please be attentive when performing this repair.

Please add this note to your service manuals for future reference.

2001 Security System Set-up

Please pay close attention to the set up information for 2001 models equipped with the optional security system. We have received reports that dealers are claiming they have key fobs that "do not function properly." As it turns out, there was nothing wrong with the fob, it simply was not assigned properly following the set up manual. Please make certain that the procedure is followed precisely. If it is not, the fob may not arm or disarm the security system. The key fobs must be assigned prior to configuring the security module.

It is also imperative that a personal code is set up for the security system prior to delivery. It is recommended to choose a common code to use on all security system equipped vehicles. Then instruct your customer how to change it to their personal choice. Make note of this code and be certain that the customer is aware of this code. If a personal code is not installed, and the fob is lost or damaged after the vehicle has been armed, the vehicle cannot be disarmed. The turn signal/security module will require replacement. On security equipped EFI Softails, both the TSSM and ECM will require replacement. This situation is not a warrantable issue.

Spark Test on EFI Softail

We have received information that will aid in performing diagnostics on EFI Softails with a no start condition or misfire. When performing tests to confirm spark at the spark plugs, the spark plugs must remain in the engine. The ECM has to detect proper compression to generate a spark. If after examining the plugs they are found to be ok, reinstall them before checking the spark. Use the spark tester, # HD-26792, or a known good spark plug grounded to the cylinder head. It is necessary to have the correct air gap to produce a good spark. Add this to your 2001 Softail diagnostic manual in charts 5.12, page 5-31 and 5.19, page 5-63 for reference when performing these tests.

'00 and Early '01 Deuce and Springer Headlight Vibration

There have been questions asked about vibration of the Springer and Deuce headlight on 2000 and early 2001 model year vehicles. The light is rubber isolated to reduce vibration at the bulb. Unfortunately some of the early lights vibrated a bit too much. To remedy this condition, simply order a new headlight assembly for the correct vehicle application and replace the light under warranty. If the vehicle is out of warranty, please submit a goodwill request and consideration will be given. Make certain that the number ordered is a -00A number. The new part number will contain stiffer rubber isolators to help limit the vibration. These new assemblies went into production the end of September, 2000.

Following is a list of upgraded headlight assemblies:

Domestic

68258-00A

67841-00A

67906-00A

International

68259-00A

68260-00A

67655-00A

67652-00A

Please include these new part numbers in your 2001 Softail Parts manual.

2001 Softail EFI Idle Speed Setting

Questions have been asked recently by technicians about changing the idle speed setting on 2001 Softail EFI vehicles. Our service literature indicates a range of idle speeds from 750 to 1200 rpm. It also states the idle speed should be set at 1000 rpm. Customer desire may be to lower this setting but the professional technician should be able to dissuade the customer by explaining the drawbacks.

In order to ensure proper oil pressure and an adequate minimum charging voltage is maintained, the engine idle speed should not be lower than 1000 rpm. Engine speeds lower than 1000 rpm could cause engine damage due to lack of proper oil pressure or electrical system malfunctions due to lack of proper battery voltage supply.

The capability of adjustable idle speed was designed to allow the technician to return the idle speed to 1000 rpm when performance modifications cause the idle speed to change.

2001 Softail Owners Manual Corrections

Please note the following owner's manual correction to the 2001 Softail Models owner's manual, part number 99469-01.

Page 56 lists information on the operation of an accessory switch and connector. Softail Models do not have this feature. Please indicate this in this manual upon delivery to the customer.

This same incorrect information was in the 2000 Softail Models owner's manual, part number 99469-00A on page 59. Please indicate this in the owner's manual upon delivery to the customer.

Missing Labor Codes

We were made aware of two labor codes missing from the 2001 Softail Models flat rates. Please add to your 2001 Models flat rate book, pages 1-14 and 1-30, the new labor codes 7190 (.4 hrs) and 7195 (.6 hrs) under the description "Engine cranks, but will not start". These codes do appear in the 2001 Softail Electrical Diagnostic Manual on pages 5-30 and 5-31 but were mistakenly omitted from the flat rate manual.

Initial Care Authorization

When the EFI Softail and the new Turn Signal Security System were introduced last summer we advised dealers that both systems would be part of an "Initial Care" program.

Initial Care is used on a limited basis, usually for new systems. Because it restricts part availability to dealers, you must contact Tech Service to obtain a part. This gives us an opportunity to receive early warning on potential problems and also allows us to ensure proper diagnostics were used on the new system.

We will continue Initial Care for the near future on these systems. If a problem occurs and the diagnostic procedure indicates a part is needed, contact Tech Service at 4887, then press 4, then press 4 or 5, then press 2. This will get your call to the right people.

In summary, prior authorization is required for warranty of the following:

- Engines
- Crankcases
- Frames
- Sidecar Bodies
- ECMs
- Induction Modules
- TSM/TSSMs
- Transmission assemblies

Marking Warranty Return Parts

Important--Mark your Warranty Returns!

Harley-Davidson is committed to improving the quality of the motorcycles it sends to your dealership. Consequently, The Motor Company is closely monitoring warranty returns. Parts are inspected daily for flaws in workmanship and crating/shipping damage. Your dealership's responsibility is to mark the parts you send in--as mandated in your Warranty Manual (page 102), Tech Tips #50, and the 'No Trouble Found' letter. Use tape/markers/stickers--anything non-destructive to highlight the problem on the part you are returning. If you fail to do so and the problem is not found by our staff, the part will be disposed of and the warranty claim rejected.

Also, please be aware of the following :

Repairable cosmetic damage (scratches, scuffs, tape marks, etc.) is to be repaired rather than having the part replaced. Repairable, marked parts will be returned to your dealership and the claim rejected.

Your dealership should have a Kent-Moore Paint Repair Kit -- part number HD-39994 -- and should be familiar with PHD tape #136 on paint repair techniques.

When possible, replace only the problem component--not the entire assembly (like emblems on Road King fuel tanks or one part from a painted parts kit). Fuel tanks returned for peeling emblems will be sent back and claims will be rejected.

Package return parts carefully! Parts just thrown in boxes are susceptible to numerous scratches, scuffs, and dents.

Use the correct warranty condition codes! Wrong codes may have the parts inspectors rejecting a claim because they can't identify the problem according to the codes listed on the Parts Return Tag.

The parts inspectors work under warehouse lighting conditions (not direct sunlight) and are not aware of any 'special circumstances' that might be explained in the remarks section of your warranty claim. Make sure to mark the part and if there is any special condition, note it on the part (or write in on the claim tag).

It takes less than a minute to mark a problem area--an investment well worth the effort. We've added an attachment of the 'No Trouble Found' policy for your reference. This policy is being strictly enforced, so please be sure to identify the problems on warranty returns.

2001 XL Electrical Diagnostic Manual

The 2001 XL Electrical Diagnostic Manual has a connector wire location error on pages 4-51 and 4-54. In connector 10, pin #4 should be Pink and pin #5 should be LtGn/Gy. Please make note of these changes on the wiring diagram on page 4-51 and to the three diagnostic boxes on page 4-54.

New Service Replacement Parts

The need has been recognized to offer the following service replacement parts to our customers:

Part number 72164-94 – Rubber Data Link/ Accessory Connector Plug

Part number 87162-01 – Grease Fitting for Sidecar Rod Ends

Engine Case Damage

Inspections performed on engines and engine cases returned under warranty have revealed a practice that can be detrimental to proper engine operation and engine life. There has been silicone sealant found in the holes that are used to attach the inner primary to the engine case. This practice can cause the engine case to become broken when the bolts are installed. Damage can also be caused by installing an incorrect length bolt in these locations.

DO NOT use silicone in these locations. Sealant that is present was not applied to bolt threads. There is a very small amount applied to the mounting boss around each hole during initial assembly at York.

TC-88 Oil Pump Alignment

This procedure must be performed anytime an oil pump is removed and reinstalled to ensure proper oil pump function. It has been observed that some TC-88 engines are experiencing oil in the air cleaner when the vehicle is driven at high speeds. The correction for this condition is to align the oil pump using the EVO tappet block alignment screws, P/N HD- 33443.

1. Loosen all pump assembly mounting screws
2. Remove two screws diagonal to each other
3. Install tappet block alignment screws in these two positions
4. Torque the remaining screws
5. Remove alignment screws
6. Install previously removed screws and torque

TC-88 Camshaft Replacement

The possibility exists that cam to cam timing could be incorrect after replacement camshafts are assembled in the support plate. Because the timing marks on cams are on the support plate side of the sprockets, when attempting to hold the cams and chain in proper relationship during installation, the timing marks are no longer visible after cams are installed in the support plate. This could allow cam to cam timing to shift and not be noticed during assembly. Upon starting and running the engine, driveability problems could arise and cause a technician to completely disassemble the gearcase to check timing again. The detail-oriented technician should apply a mark (liquid paper, magic marker, paint, etc.) to the backside of each cam

sprocket opposite the timing mark to confirm proper timing during assembly. This information is detailed in the 2001 Softail Service Manual and should help reduce the occurrence of incorrectly timed cams.

TC-88 Rear Cam Bearing Warranty Extension Letters

Added to this issue of Tech Tips are copies of the dealer and customer letters describing the factory warranty extension of the rear cam ball bearing. These letters were faxed to your dealership on January 19, 2001.

As a reminder, Harley-Davidson extended the factory coverage of this component to provide replacement should it become excessively noisy or damaged.

We do not recommend replacing any cam bearings that do not exhibit either of the above symptoms

January 22, 2001

Dear Customer:

We wanted you to know that the rear cam bearing in a small number of Harley-Davidson Twin Cam 88 engines has failed. While it is unlikely that you will ever have to worry about this situation, you have our assurance that Harley-Davidson is committed to your satisfaction.

The bearing design was changed during the 2000 model year. Because your bike was built before the change, the Motor Company is providing a 5-year/50,000-mile warranty on the rear cam bearing. No action is necessary on your part to activate the coverage. In the event that you have sold, or plan to sell your bike, future owners of your motorcycle are also covered.

If you have an interest in additional technical detail, our dealers are prepared to discuss the situation with you. They are our partners in ensuring that you have the best riding experience possible. You may also find out more about your motorcycle by going to the Service Checkup Area (in the Experience section) at www.harley-davidson.com on the Internet.

Harley-Davidson is confident you won't need this warranty. We are providing it so that you can have peace of mind and fully enjoy your motorcycle as you roll down the road for years to come.

Enjoy the ride!

Steve Phillips
Vice President
Quality and Customer Service



DEALER COMMUNICATIONS

Harley-Davidson Motor Company

Dealer Department Routing

<input type="checkbox"/> Dealer Principal	<input type="checkbox"/> General Merchandise	<input type="checkbox"/> Service
<input type="checkbox"/> General Manager	<input type="checkbox"/> Buell	<input type="checkbox"/> Parts
<input type="checkbox"/> Office Manager	<input type="checkbox"/> F&I Manager	_____
<input type="checkbox"/> Vehicle Sales Manager	<input type="checkbox"/> HOG Director	_____

Twin Cam 88 Rear Cam Bearing

Wednesday, January 17, 2001

Dear Dealer / Distributor:

As you are aware, a production change occurred on December 14th, 1999 involving the rear camshaft ball style bearing in Twin Cam 88 engines. The configuration was changed from a ball to a roller style bearing. Some of our mutual customers may have concerns with the earlier style bearing. To address these concerns, Harley-Davidson has decided to provide warranty on this component. Next week we will be notifying all registered owners of Twin Cam 88 motorcycles that were produced before the production change went into effect. A sample copy of the letter is attached for your review and information. You will be able to check if a customer's vehicle is potentially affected by entering the VIN on the Rear Cam Bearing page within the Service section of h-dnet.com. In addition, customers owning a potentially affected vehicle who visit the Service Checkup page (within the Experience section) of our public web site and enter their VIN will see the attached letter.

WHAT IS COVERED

In an effort to ease customer concern, and show Harley-Davidson's faith in our product, we are providing a warranty on the rear camshaft ball style bearing in Twin Cam 88 engines for 5 (five) years or 50,000 miles, whichever comes first, from the original in service date of the motorcycle. This warranty follows the warranty guidelines described in the owners' manual, and will apply to subsequent owners. If the rear camshaft ball style bearing fails during this period, it is to be repaired at no cost to the customer.

REPAIR PROCEDURE

Once a problem has been identified as the rear cam bearing, refer to Service Bulletin M-1097 dated December 21st, 1999 or Service Bulletin M-1100 dated July 10th, 2000. One of these Bulletins will provide you with the appropriate part and/or kit numbers and the repair procedure to affect the appropriate required repair.

CREDIT FOR VEHICLE REPAIR

For each vehicle serviced, submit a separate Warranty claim. Each claim must contain the VIN (Vehicle Identification Number) of the vehicle on which the service was performed. If you used the parts and repair procedure in Service Bulletin M-1097, follow normal claim filing procedures. The labor code will be 3342. If you used the parts and repair procedure in Service Bulletin M-1100, follow the CREDIT PROCEDURE listed in the Bulletin. In either case, use “MC” as your claim type if the vehicle is still under the original factory warranty. Use new claim type “CAM” if the vehicle is not under original factory warranty, and is covered under rear cam bearing replacement guidelines. Upon receipt of the properly completed claim, you will receive appropriate parts and Labor credit, depending upon the repair required.

REFUNDS – PREVIOUS REPAIRS

If you are contacted by a customer that had a failed rear cam bearing replaced in a Twin Cam 88 engine at their expense by an authorized Harley-Davidson dealer, prior to the receipt of the customer letter, please submit all documentation to:

Harley-Davidson Powertrain Department
P.O. Box 653
Milwaukee, WI 53201

Upon receipt and review of the related legible copies of the required documentation, you will be notified by Technical Service as to the amount of credit that will be issued. As soon as you receive this notification we trust the customer will be reimbursed accordingly by your dealership.

We are confident that this action will enhance our mutual customers’ satisfaction with our product, and we appreciate your support and cooperation.

Sincerely,

Steve Phillips
Vice President
Quality and Customer Service



DEALER COMMUNICATIONS

Harley-Davidson Motor Company

Dealer Department Routing

<input checked="" type="checkbox"/>	Dealer Principal	<input type="checkbox"/>	General Merchandise	<input checked="" type="checkbox"/>	Service
<input checked="" type="checkbox"/>	General Manager	<input checked="" type="checkbox"/>	Buell	<input checked="" type="checkbox"/>	Parts
<input type="checkbox"/>	Office Manager	<input type="checkbox"/>	F&I Manager	<input type="checkbox"/>	
<input type="checkbox"/>	Vehicle Sales Manager	<input type="checkbox"/>	HOG Director	<input type="checkbox"/>	

May 12, 2000

NO TROUBLE FOUND POLICY

Dear Dealer:

There has been a great deal of discussion concerning the disposition of parts sent in for warranty that have been rejected for warranty consideration. Currently, most of these parts are neither credited nor returned to the dealer. This has caused understandable discontent, especially in the instances where a part is of considerable value. In an attempt to rectify this situation, without causing a significant workload increase here at the Motor Company, we have redefined the "No Trouble Found" Policy, which will be effective **May 15, 2000**. It is as follows:

- 1) Parts returned to Harley-Davidson, found to be NTF, but which are destroyed during testing, will be credited.
- 2) Parts returned with a dealer net price of under \$150 per part, and found to be NTF, may be sent back with a shipping, handling, and inspection charge of \$15, or may be credited.
- 3) Parts over \$150, dealer net, found to be NTF, will be returned with a charge of 10% of part value for shipping, handling, and inspection.
- 4) **All parts returned to Harley-Davidson for warranty consideration for cosmetic reasons must be clearly marked and properly packaged, (as explained in Tech Tips #50 and the Warranty Policy Manual), or the part(s) will be rejected and not returned.**
- 5) If the percentage of parts found to be NTF is particularly high for your dealership, we will contact you to try to understand the reasons, and offer help as needed.
- 6) If there are questions regarding a denial of a claim due to "No Trouble Found," please contact the person whose name is in the 'Comments' section of the claim.
- 7) If, after discussing the rejected claim with the contact person, you wish to have the claim considered again, please complete the proper forms and submit the issue to the Policy Review Board.

We believe this policy will create guidelines that are fair and understandable. Our mutual goal is to satisfy the retail Harley-Davidson customer, by fixing his or her problem correctly the first time. Please be certain your technicians are following proper diagnostic procedures as part of their normal work practices. This will not only help increase your service operation's capacity, but will get the customer on the road much faster.

If we can help, or if you have questions, please feel free to contact me. Thank you.

Sincerely

Ron Mundt
Director, Service Support Operations