



Owner's Manual

**INDIAN MECHANICAL-TO-ELECTRONIC
SPEEDOMETER CONVERSION KIT
P/N KITRSE4306C**



Thunder Heart Performance Corporation
120 Industrial Drive
White House, TN 37188
www.thunder-heart.com

MANUAL P/N EI4306
Revision 6/11/04

TABLE OF CONTENTS

CHAPTER 1 INTRODUCTION	1
1.1 General Information.....	1
1.2 Speed Sensor Requirement Identification.....	1
1.3 Preparation and Painting of the Console	2
CHAPTER 2 SYSTEM INSTALLATION.....	3
2.1 Mechanical Speedometer Console Removal	3
2.2 Electronic Speed Sensor Installation	3
2.3 Electronic Speedometer Console Installation	4
2.4 Preparation for Operation.....	4

CONTACTING THUNDER HEART PERFORMANCE CORP.

Mailing Address..... P.O. Box 76
White House, TN 37188

Shipping Address 120 Industrial Drive
White House, TN 37188

Phone 615-672-8811

Fax..... 615-672-1353

Tech Support E-mail..... techsupport@thunder-heart.com

Website..... www.thunder-heart.com

CHAPTER 1 INTRODUCTION

1.1 General Information

Your Indian Mechanical-To-Electronic Speedometer Conversion Kit is designed to provide all the components necessary convert the mechanical speedometer and speedometer drive to an electronic 3-1/8" speedometer and electronic pick-up (as used on later Indian motorcycles). This kit is designed to fit 1999-2000 Chiefs and some early 2001 Scouts/Spirits that had the small (2-1/2") mechanical speedometer with front wheel speedometer drive and cable.

Note: Conversion of a mechanical speedometer drive to an electronic unit requires either Thunder Heart P/N ASM4100-440I Transmission Speed Sensor, or Thunder Heart P/N RSE4101 Rear Wheel Speed Sensor. To determine which sensor is required, refer to section 1.2 Speed Sensor Requirement Identification.

1.2 Speed Sensor Requirement Identification

Certain motorcycles are not equipped with a port that will accept a Transmission Speed Sensor. Those models will require a Rear Wheel Speed Sensor.

To determine which sensor is required, follow the following procedure:

Determine if you have a mechanical speedometer

1. The mechanical speedometer is around 2 1/4" in diameter.
2. On the axle on the left side of the front wheel, there will be a 2" diameter 'donut like' part that the axle passes through. This is the speedometer drive. Attached to the speedometer drive and extending back and up under the fuel tank will be a housed cable. This is the speedometer drive and cable to drive the mechanical speedometer.
3. If these conditions are true, you have a mechanical speedometer.

Determine which speedometer drive sensor you need. You must determine if your transmission will accept the transmission sensor. If not, you will need the rear axle sensor.

1. On the top, right, rear of the transmission, will be a 1" by 1/2" (approximately) cover held in by one bolt.
2. If you find this then REMOVE the bolt and over.
3. If after removal of the cover you find a larger hole underneath, then you can use the transmission sensor.



Figure 1—Transmission Sensor Port (Inset Shows Cover Removed)

4. If you have no cover, or under the cover is not a hole, then you need the rear axle sensor. Be sure to look closely and under the gasket under the cover.
5. If you have no sensor hole, then you need to make sure you have the rear wheel sensor. Contact Thunder Heart Performance if you need to exchange your sensor for a different one.

1.3 Preparation and Painting of the Console

Your console is made of Lexan®, which is a clear, durable plastic. It can be painted on the *inside* (so that outside scratches will not affect the paint), or on the outside. For the best paint results, thoroughly clean the console *only* with the following cleaners:

- Isopropyl Alcohol
- Windex®
- 409®
- Mr. Clean ®

WARNING USE OF ANY OTHER CLEANER, DEGREASER, OR THINNER MAY DAMAGE THE CONSOLE AND/OR NOT ALLOW THE PAINT TO ADHERE TO THE CONSOLE

CHAPTER 2 SYSTEM INSTALLATION

2.1 Mechanical Speedometer Console Removal

1. Remove the two hold-down screws that fasten the console in place.
2. Disconnect the speedometer drive cable from the speedometer.
3. *Before* disconnecting the two spade connectors on the back of the speedometer, look at the destination of each wire on the back of the speedometer. Label which wire *on the motorcycle harness* leads to power, and which wire leads to ground. This will ensure that each wire is connected to the proper wire on the speedometer pick-up harness in Section 2.3, Step 4.

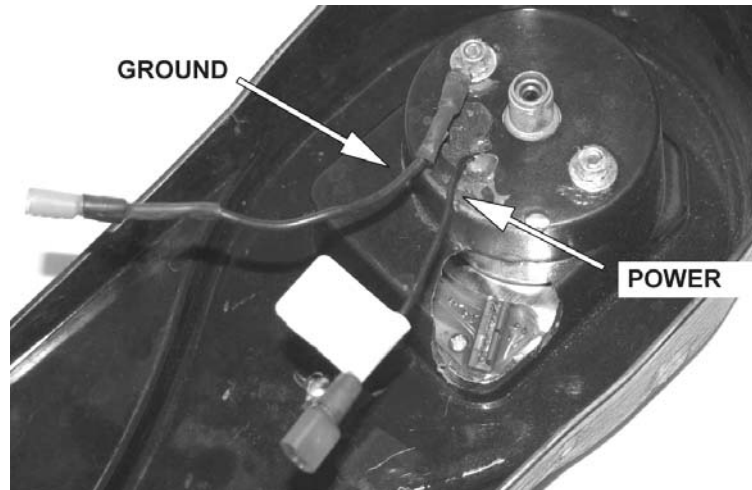


Figure 2—Identification of Speedometer Power and Ground Wires

4. Disconnect the two spade connectors that power the speedometer illumination.
5. Disconnect the flat connector cable that runs from the Electronic Harness Controller (EHC) to the indicator panel from the back of the dash assembly.
6. Remove the mechanical speedometer drive system from the motorcycle.

2.2 Electronic Speed Sensor Installation

1. Install the speed sensor either on the rear axle, or in the transmission port (depending upon which sensor type is being used).

Note: If you are using the wheel speed sensor, and the axle bushing on your motorcycle is too large to fit the wheel speed sensor, replace the factory bushing with the supplied smaller-diameter axle bushing.

2. Route the harness for the speed sensor up between the tanks.

2.3 Electronic Speedometer Console Installation

1. Paint the console using the guidelines in Section 1.3.
2. Insert the speedometer into the dash assembly, and insert the dash assembly into the console.
3. Connect the flat white connector of the speedometer pick-up harness (supplied) into the back of the speedometer.

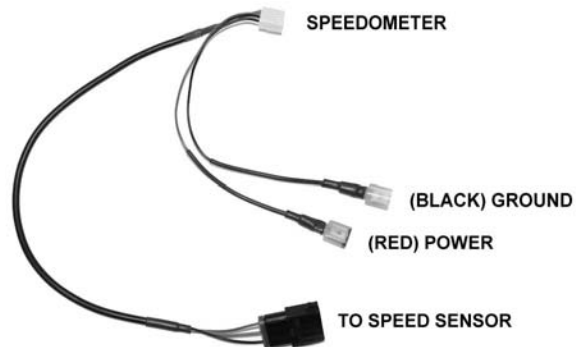


Figure 3—Speedometer Pick-Up Harness Connections

4. Connect the two spade connectors from the speedometer pick-up harness into their corresponding spade connectors on the motorcycle's main wiring harness (labeled from Section 2.1, Step 3).
5. Connect the three-pin connector into the transmission sensor harness.

2.4 Preparation for Operation

1. Install the new console assembly onto the bike using the two factory bolts.
2. Test ride the motorcycle to ensure proper operation.