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## EXRAY Installation: ClubCar Villager & Transporter 6 & 8 Passenger with DRUM Brakes



### EXRAY Supplemental installation instructions for Villager 6 & 8 and Transporter 6 & 8 passenger Golf Carts with Front Drum Brakes

Instructions Author: EDT LLC, Tony Thorne

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The ClubCar Villager and Transporter 6 and 8 passenger vehicles have longer wheel base and utilize front DRUM BRAKES. The typical EXRAY sensor and magnet mounts requires a different mounting method than shown in the EXRAY Operators manual.

Three EXRAY Model kits are created specifically for these ClubCar Front DRUM brake vehicles which includes the proper axle sensor mounting bracket, and steering column display mounting bracket. This installation procedure supplements the EXRAY-VOLT operators manual for the 10MM BOLT sensor mounting instructions only.

#### NOTE:

This kit may NOT fit all 8" wheels and depends solely on the rim and back spacing. It is assumed the installer will verify proper clearance of the magnet, clamp, and wheel rim before driving the vehicle. If the 8" rims do not provide the proper spacing, a 10" rim is recommended.

#### CAUTION:

**Use caution when supporting the vehicle on jack stands and wear eye protection at all times.**

#### Step ONE:

- Jack the vehicle and place onto jack stands
- Remove front DRIVERS side Wheel.

#### Step TWO:

- Assemble the 6MM magnet with JAM NUT on the magnet head side.
- Insert the magnet into the bracket as shown (Magnet facing OUT).
- Install the NYLOC nut as shown with at least 1 thread showing. This will be adjusted later.



Pictures Courtesy of DAN'S GOLF CARS, Elizabethtown, NC (910)-879-9971  
[www.dansgolfcarandtrailers.com](http://www.dansgolfcarandtrailers.com)

#### >6-Passenger Model Numbers:

EXRAY-UBOLT-CC-DRUM, Universal Mount  
 EXRAY-MCC-DRUM, CNC Display Mount  
 EXRAY-MCCP-DRUM, CNC Display Mount, with "Plastic steering column tube protector"

#### >8-Passenger Models - ADD to your order:

1pc: ASY200-005 - TEMP EXTENSION CABLE



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**Step THREE:**

Remove the Drum and use a wrench and remove the NUT on the top rear axle flange bolt.

Install the 10MM sensor bracket and angle rear-ward.

- Leave the 10mm BOLT Sensor cable nuts hand tight at this time!



**Step FOUR:**

- Position the clamp and Magnet bracket so the CLAMP HEAD MUST be OPPOSITE side of the 6MM magnet bracket to provide proper balance as shown and tighten clamp.
- Install the drum and align the two brackets
- Remove the drum and TIGHTEN the AXLE FLANGE bolt.



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**Step FIVE:**

The 10MM BOLT Sensor bracket is installed until the two are lined up. If not, remove the drum and realign. Then re-tighten the AXLE FLANGE HUB bolt to manufacturers specifications:

- Install a wheel lug nut onto the wheel stud and tighten to draw the DRUM TIGHT.
- Align the two brackets with approximately ¼" gap (6mm) between the sensor and magnet (About the width of a sideways zip™ cable tie). Some adjustments to the magnet and sensor nuts may be required. Tighten the 10MM sensor bolt nuts and the 6MM Magnet nuts. Do not over tighten! (Approx 25 inch.lb)

**Step SIX:**

The speed sensor cable is "double zip™ cable tied" at the steering knuckle arm (just in case one cable tie breaks) and the speed cable is zip™ tied to provide "flex loop" during full lock to lock turns.

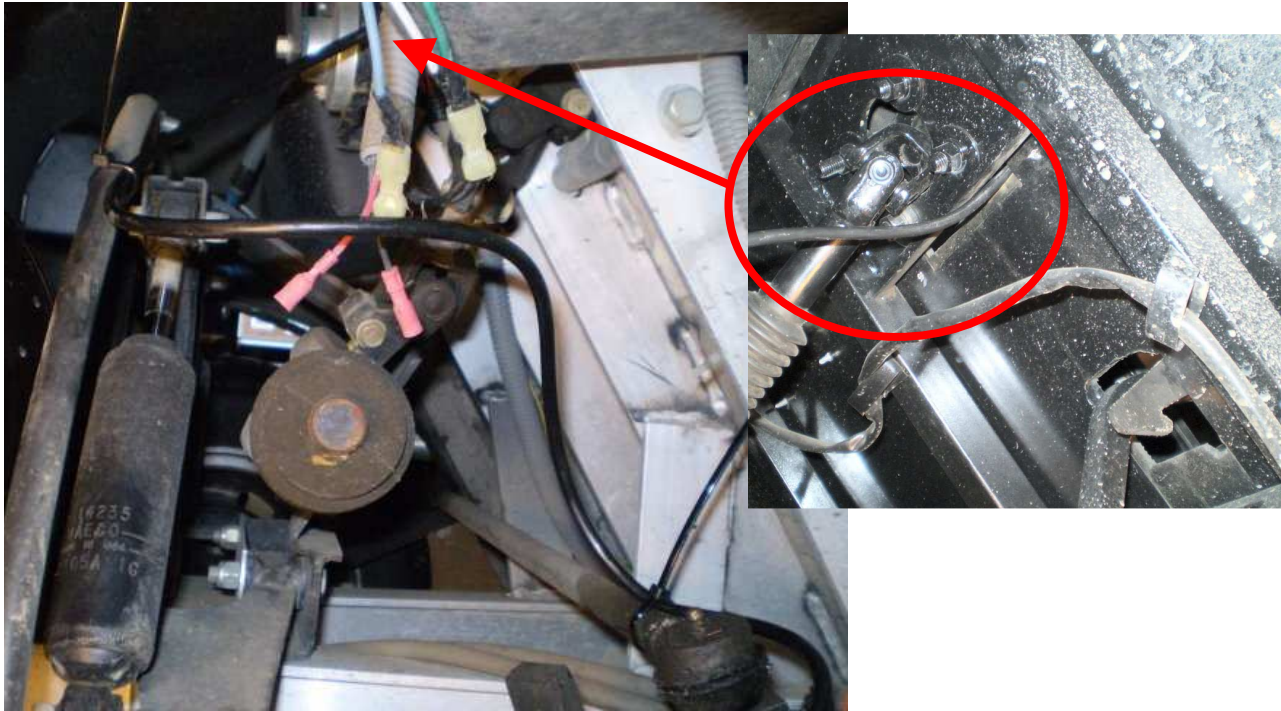


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Zip™ cable tie the 10MM speed sensor cable with enough flex to allow suspension movement and prevent pinch hazards from moving parts.

- NOTE: There are variations of suspension parts and travel – use best judgment in securing the cable to prevent steering issues or creating a hazardous steering condition.
- Route the cable through an access hole near the steering column. Cable tie to prevent the steering UJOINT from damaging the cable or causing a hazardous steering condition.



**Follow the remainder setup and installation instructions in the EXRAY operators manual.**

If there are any questions, please contact me (Author: Tony Thorne) through email: [tony@edt-exray.com](mailto:tony@edt-exray.com)

**If you have design suggestions, installation advice and wish to provide improvements and/or better pictures, please contact me directly. We appreciate your input!**

**The EXRAY digital speedometer kits are years of collaborative work between engineering and customer input.**

Thank you for your business and hope you enjoy your EXRAY Product.

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