

EZ-Steer® Assisted Steering System

Installation Instructions Platform Kit P/N 53059-21

Case IH

- **Puma 165**
- **Puma 180**
- **Puma 195**
- **Puma 210**

New Holland

- **T7030**
- **T7040**
- **T7050**
- **T7060**

**Revision A
June 2007**

Part Number 53345-21-EU2



Legal Notices

Support

For support, go to www.EZ-Steer.com.

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This product is covered by the following patents: 6,501,422, 6,703,973, and 6,198,992. Other patents are pending.

Release Notice

This is the June 2007 release (Revision A) of the *EZ-Steer System Platform Kit (P/N 53059-21) Installation Instructions*, part number 53345-21-EU2.

Introduction

This document describes how to install the EZ-Steer® system platform kit (P/N 53059-21) in a:

- Case IH Puma
- New Holland T70x0



WARNING – THE EZ-STEER ASSISTED STEERING SYSTEM IS SOLELY INTENDED FOR AGRICULTURAL USE IN AN OPEN FIELD ENVIRONMENT WITH AGRICULTURAL VEHICLES APPROVED BY THE MANUFACTURER FOR USE WITH THE EZ-STEER SYSTEM, AND SHOULD NOT BE USED WITH ANY OTHER TYPE OF VEHICLE OR FOR ANY OTHER PURPOSE. Contact your local EZ-Steer system reseller or check www.EZ-Steer.com to confirm that the EZ-Steer system has been tested and approved by the manufacturer for use with your vehicle make and model. The EZ-Steer system should not be installed on a vehicle not approved by the manufacturer for such use. Installation of the EZ-Steer system on an unapproved vehicle will invalidate the product warranty.

Hardware organization

Platform kit (P/N 53059-21)	EZ-Steer T2 system (P/N 62000-xx-ROW)	GPS receiver	Controller bracket (P/N 59171)
– EZ-Steer bracket – Bolt kit (EZ-Steer bracket) – Bolt kit (EZ-Steer motor) – Metal templates	– EZ-Steer controller – EZ-Steer motor – Cable kit	– EZ-Guide Plus® lightbar with integrated receiver – EZ-Guide 500 lightbar – AgGPS® 252 receiver with magnetic mount	– Seat bracket for EZ-Steer controller

Vehicle measurements

Item	Measurement
Steering wheel diameter	388 mm
Wheel base	2884 mm
Antenna height	3040 mm
Antenna distance from rear axle	To be measured on the vehicle

Installation process

To install the EZ-Steer platform kit (P/N 53059-21) on the Case IH or New Holland vehicle:

1. Prepare the vehicle.
2. Modify the steering column housings.
3. Attach and adjust the EZ-Steer motor.
4. Mount the EZ-Steer controller.
5. Mount the antenna/receiver.
6. Connect to the power supply.

These steps are described in greater detail below.

Step 1. Preparing the vehicle

1. Park the vehicle on a hard, level surface.
2. Engage the park brake and then remove the ignition key.
3. On an articulated vehicle, install the articulation locks.
4. Remove all dirt and debris from the areas of the vehicle where the system is to be installed.
5. Open all kit boxes and lay all of the parts out on a clean workbench.
6. Check the contents of the boxes against the packing lists.

Note – The left and right sides of the vehicle are referenced while standing behind the vehicle, facing the normal direction of travel.

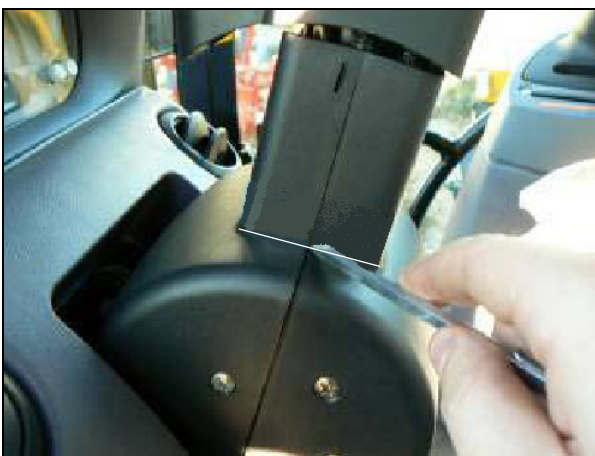
Step 2. Modifying the steering column housings

1. Lift up the steering column.



2. Cut the base of the plastic housing, as shown. Remove all of the upper part of the square-shaped housing.

Note – Do not cut off the ignition box.



CAUTION – Ensure that you do not cut the cables under the plastic housing. This will damage the vehicle and may prevent it from operating correctly.





Tip – To avoid doing damage when you are cutting, completely remove the plastic housing from the steering column.



3. Place the template over the top side of the upper plastic housing, as shown.



4. Mark the line that you need to cut.



CAUTION – Ensure that you do not cut the cables under the plastic housing. This will damage the vehicle and may prevent it from operating correctly.



5. Place the template on the under-side of the plastic housing, as shown.



6. Mark the line that you need to cut.



CAUTION – Ensure that you do not cut the cables under the plastic housing. This will damage the vehicle and may prevent it from operating correctly.



7. Cut the plastic housing along the lines that you have marked.

Step 3. Attaching and adjusting the EZ-Steer bracket and motor

1. Attach the EZ-Steer motor bracket to the steering shaft, as shown.



Note – This view shows the EZ-Steer bracket mounted and the steering column fully extended.



2. Adjust the distance between the EZ-Steer motor bracket and the steering wheel.

Ensure that the distance between the slotted arm of the EZ-Steer bracket and the outer edge of the steering wheel is 235 mm–240 mm.



3. Insert the carriage bolts through the slotted arm of the EZ-Steer bracket and then secure the bolts with the T-nuts.



4. Adjust the position of the motor until there is 30 mm–35 mm of clearance between the motor drive wheel and the steering wheel ring.



Step 4. Mounting the EZ-Steer controller

1. Locate the controller seat mounting bracket and bolts.



2. If the seat suspension air reservoir is present on the right of the seat, cut the cable tie that holds the connector onto the top of the reservoir and then disconnect the plug.

If the air reservoir is not installed, skip to Step 17.



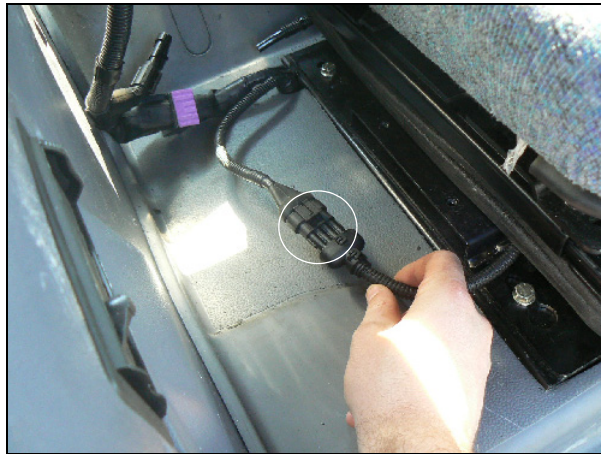
3. Release the pressure in the reservoir using the switch on the left armrest and disconnect the air hose from the accumulator.



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4. Unbolt the bracket that holds the accumulator and then take off the accumulator assembly.



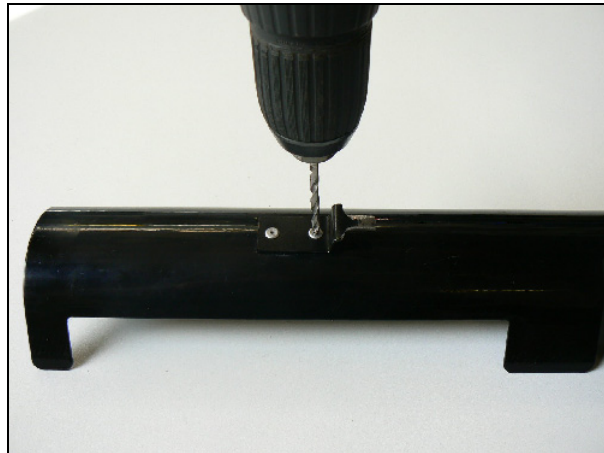
5. Reconnect the plug disconnected in Step 2.



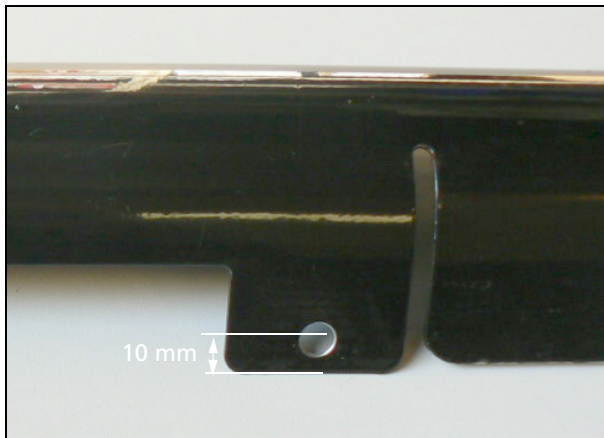
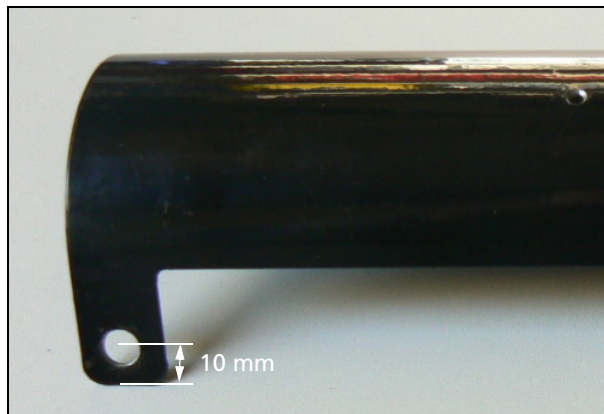
6. Disassemble the air reservoir from its bracket.



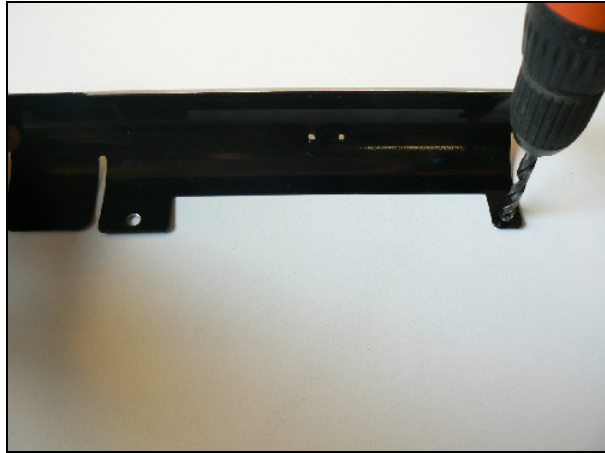
7. Drill through the rivets to remove the small bracket from the reservoir bracket.



8. Mark the position of the two mounting holes 10 mm from the end of each tab as shown.

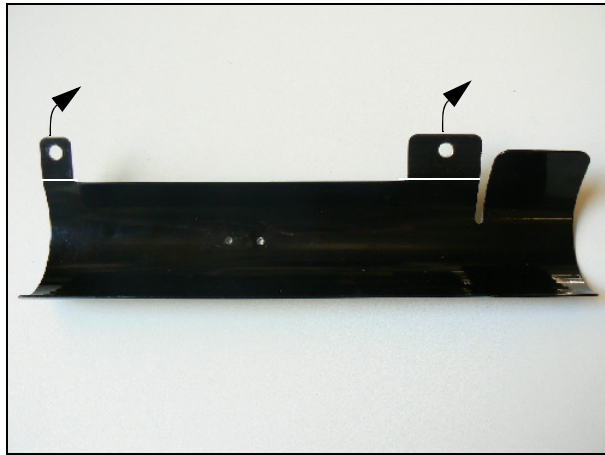


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9. Drill a 9 mm hole at each of the two marked locations.



10. Slightly bend the two tabs towards the back. Follow the white line to obtain enough room between the air reservoir and the bracket to mount the M8 nuts.

In this image, the tabs are being bent away from the camera.

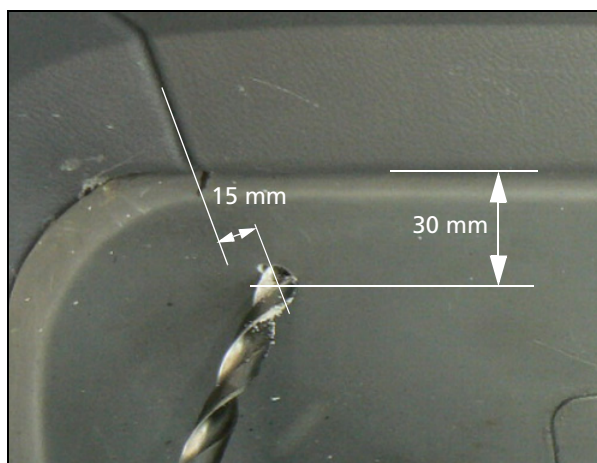


11. Drill two holes with a diameter of 9 mm through the rubber mat at the rear of the seat as shown.

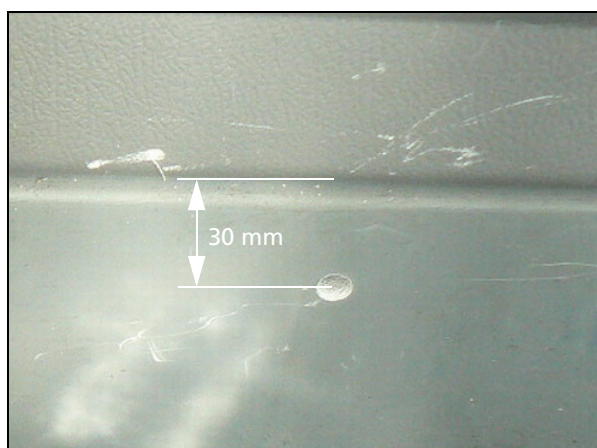


CAUTION – Ensure that you only drill through the rubber mat. If you drill through the rear wall, you can cause damage to the wires and other devices that are present behind the wall.





LEFT HOLE



RIGHT HOLE

12. Install two flat head M8 x 16 mm screws in place as shown.



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13. Place the air reservoir bracket over the M8 screws and then secure them with some M8 nuts.



14. Option 1:

Mount the reservoir onto the bracket. Use the two Serflex belts with the air connector pointing to the right fender.

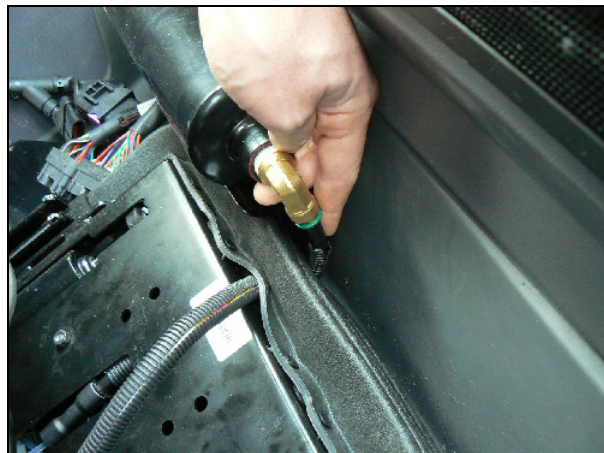
Extend the 3/8" air hose using a 3/8" adaptor (not provided) and 3/8" hose. Connect it to the air reservoir.



Option 2:

To avoid extending the 3/8" hose, do the following:

- a. Reroute the air hose towards the back of the seat.
- b. Mount the reservoir with its base facing the right fender.
- c. Adjust the length of the air hose and then connect it to the air connector.



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15. Secure the reservoir with the two Serflex belts as shown.



16. Remove the two existing seat retaining screws.



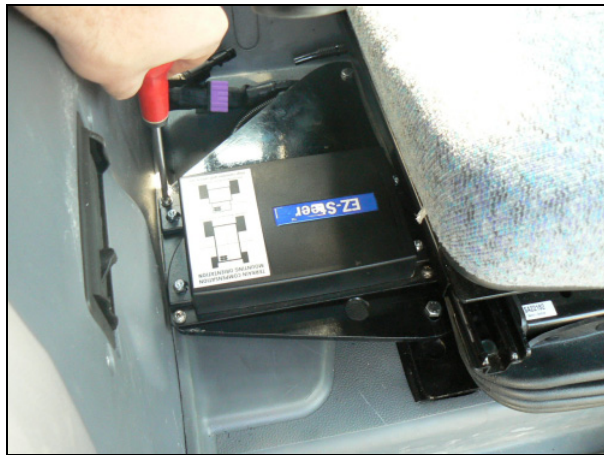
17. Install the 27 mm high spacers over the seat mounting holes.



18. Install the seat bracket over the spacers and then secure it with the provided M8 x 50 mm screws.



19. Use four #10 x 5/8" screws to fasten the EZ-Steer controller to the mounting plate.



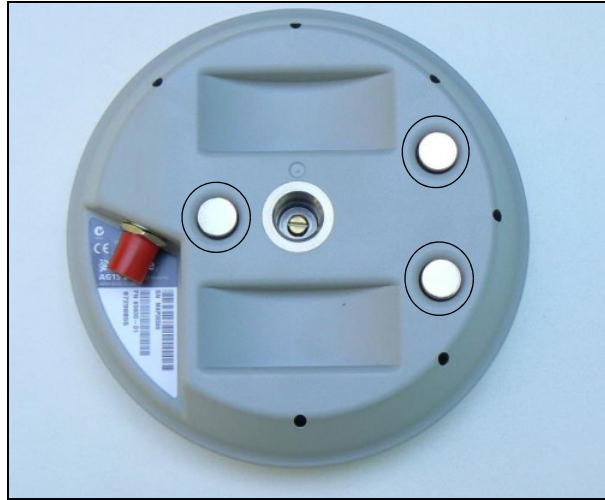
20. Connect the end connectors of both cables to the controller. Route the:
 - a. EZ-Steer motor cable toward the front of the cab
 - b. Power cable to the power plug
 - c. Lightbar cable to the EZ-Guide Plus lightbar



Step 5. Mounting the antenna/receiver

EZ-Guide Plus / EZ-Guide 500 system antenna

1. If the antenna is already fitted with built-in magnets, go to Step 3.



2. Screw the magnet onto the antenna. Stick the cover onto the magnet as shown.



3. Clean the antenna location on the roof of the cab with a light solvent to remove oil and dust.

Remove the covers from the adhesive strips and then stick the antenna mounting plate onto a flat surface as close as possible to the front of the cab roof. Ensure the plate is exactly on the centerline of the vehicle so the adhesive strips are on either side of the central rib, as shown.



Note – To secure the mounting plate to the roof, you can also rivet the plate to the plastic roof using the four existing holes.

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4. Place the antenna magnetic mount at the center of the mounting plate. Connect the cable to the antenna and route the cable through the rear window toward the lightbar.



AgGPS 252 GPS receiver

1. Attach the magnets to the receiver mounting plate.
Mount the AgGPS 252 GPS receiver using the three ¼" bolts.

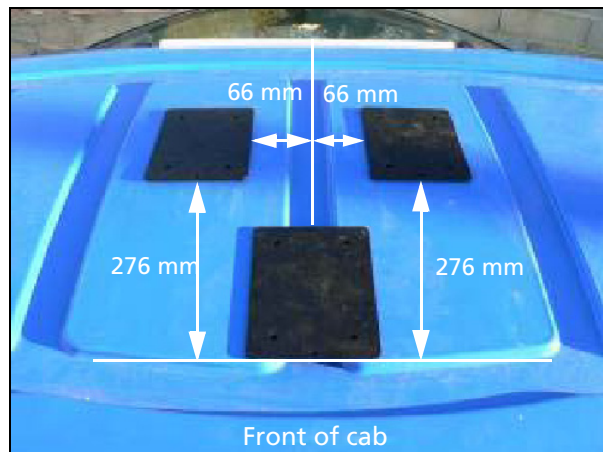
Note – Ensure that the nuts are on the receiver side.



2. Turn the mounting plate upside down. Stick the covers over the magnets as shown.



3. Attach the three mounting plates so the receiver is as close as possible to the front of the vehicle.



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4. Stick the antenna magnetic mounts at the center of the mounting plates.



5. Connect the antenna cable to Port A of the *AgGPS* 252 GPS receiver and then route the cable through the rear window toward the lightbar.



Step 6. Connecting to the power supply

Direct connection to the cigarette lighter plug

1. Locate the cigarette lighter plug.



2. Insert the EZ-Steer cigarette lighter connector. Turn on the switch on the cigarette lighter connector.

In order to connect both the EZ-Steer and the AgGPS 252 GPS receiver connectors, use a cigarette lighter splitter (not included in the kit).



Direct connection to an existing 12 Volt connector

Connecting the EZ-Steer system to a lightbar with integrated receiver

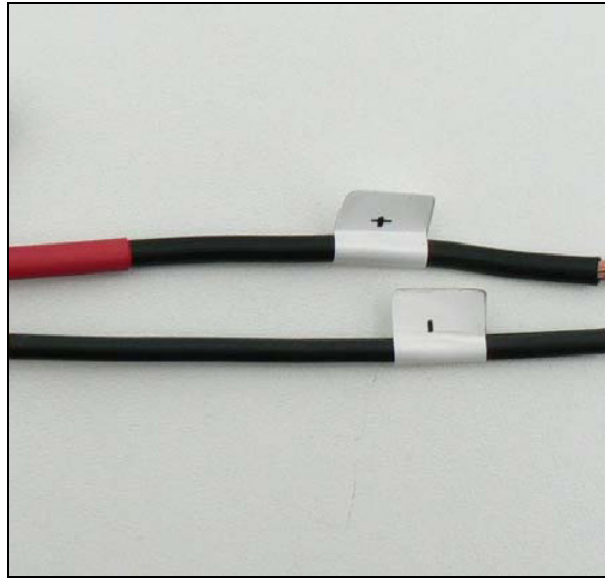
1. Locate a 12 Volt connector inside the cab.



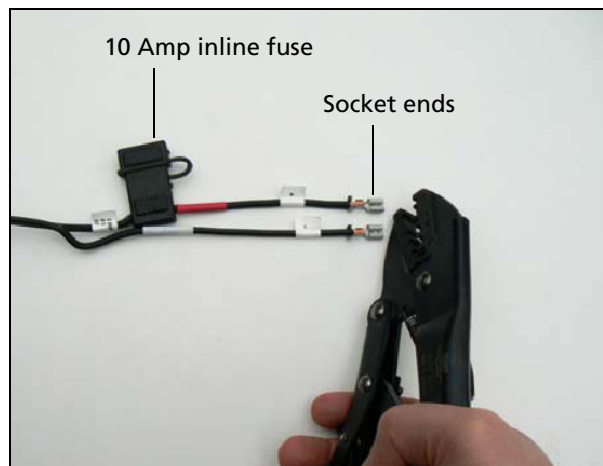
2. Cut the cigarette lighter connector off the EZ-Steer power cable.



3. One of the wires is grooved.
Clearly mark the grooved wire
as “+12 Volt” and the smooth
wire as “Ground”.



4. Connect an inline 10 Amp fuse
and a socket end to the
“+12 Volt” wire.
Connect a socket end to the
“Ground” wire.



5. Connect the socket ends to the
connector.

Note – Neither the socket
terminals nor the 12 Volt plug are
included in the kit.

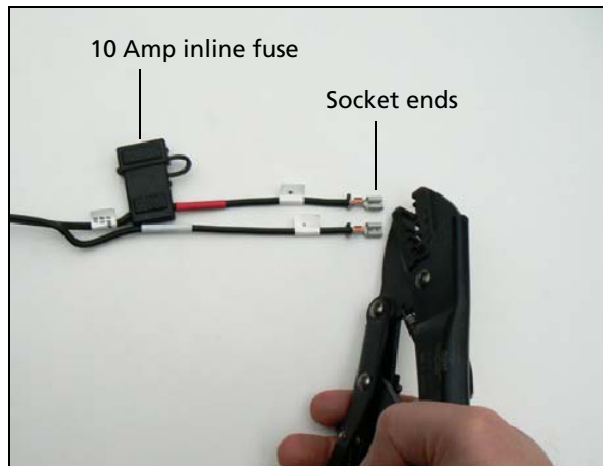


Connecting the EZ-Steer system to a lightbar and an AgGPS 252 GPS receiver

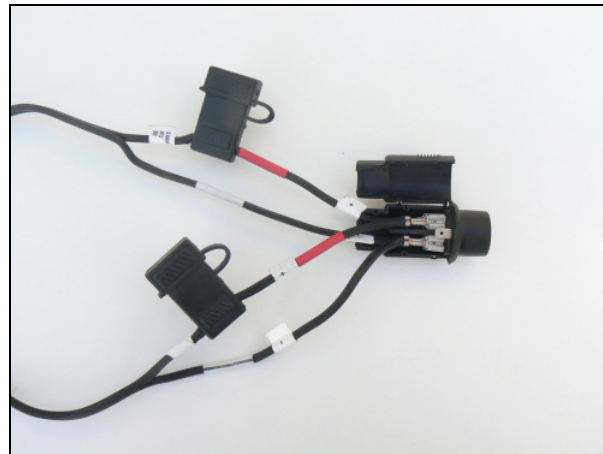
1. Cut the cigarette lighter connector off the power cable (P/N 50166).



2. Connect an inline 10 Amp fuse and a socket end to the "+12 Volt" wire.
Connect a socket end to the "Ground" wire.



3. Connect both the AgGPS 252 power cable and the EZ-Steer system power cable to the connector.



Additional information

For additional support information, refer to documentation on www.EZ-Steer.com.