gplink

Satellite Tracking and Monitoring Solutions

Troubleshooting Guide
J1939

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Contents

1. Introduction

This section outlines some of the common problems that can present themselves when setting up the ***gplink***® equipment. Several of the troubleshooting steps outlined here utilize the 2-inch blue gauge. Please refer to the blue gauge guide for details on its operation.

2. Starboard engine data not reporting

If the starboard ignitions are on and there is no data showing on the ***gplink*** vessel view page there are a few things to check, keep in mind that the ignitions must be on while troubleshooting engine data issues.

2.1 Checking for power

Using the 2-inch blue gauge connected to the 4-pin plug on the secondary MTM to make sure that the box is powered on. If the blue gauge does not power when plugged in, double check the power supply to the secondary. The best way to do this is to remove the power harness from the MTM and pry the wedge from the end of the 12-pin plug. Use a multimeter to check the voltage directly at the pins. Pin 7 is ground and pins 1, 5 and 6 should be the same voltage DC as the main vessel power. If the power checks is correct, replace the wedge and visually inspect the end of the plug. Make sure that all pins are properly seated and visible just under the surface of the wedge. Plug the power harness back in making sure that it is in the correct orientation and fully engaged. If the blue gauge still does not power on when connected to the 4-pin plug, contact a ***gplink*** vessel monitor at +1.252.504.5113.

2.2 Checking for CAN

Using the 2-inch blue gauge connected to the 4-pin plug on the secondary MTM, check to see if it is reporting YES CAN. If the gauge reports NO CAN then try the following:

2.2.1 Checking the J1939 harness

Double check both the 12-pin plug and the 3 pin plug on the J1939 harness. Visually inspect the end of the plugs making sure that all pins are properly seated and visible just under the surface of the wedge. Then plug the J1939 harness back in making sure that it is in the correct orientation and fully engaged. Test again for CAN with the blue gauge.

2.2.2 Swapping J1939

If the port engine is reporting data, temporarily swap its J1939 dataline into the secondary MTM and the starboard J1939 into the primary MTM. Reboot the system by removing power from both MTMs for 30 seconds, then plugging them back in. Check for CAN on both MTMs again. If the secondary MTM still shows NO CAN, contact a ***gplink*** vessel monitor at +1.252.504.5113. If the primary MTM starts showing NO CAN, double check the integrity of the J1939 dataline and connections leading from the starboard engine.

2.3 Checking continuity on the jumper cable

Remove the power harness from both MTMs and check the continuity between each of the 12-pin plugs. Pry the wedges from the ends of the 12-pin plugs and use a multimeter to check the continuity pin to pin between pins 9, 11 and 12. If there is a continuity issue fully inspect the jumper cable to locate the break. Be sure to replace the wedge and visually inspect the end of the 12- and 4-pin plugs, ensuring that all pins are properly seated and visible just under the surface of the wedge. Replug the power harnesses, ensuring that they are in the correct orientation and are fully engaged.

3. Port engine data not reporting

If the port ignitions are on and there is no data showing on the ***gplink*** vessel view page, there are a few things to check. Keep in mind that the ignitions must be on while troubleshooting engine data issues.

3.1 Checking for power

Using the 2-inch blue gauge connected to the 4-pin plug on the primary MTM to make sure that the box is powered on. If the blue gauge does not power when plugged in, double check the power supply to the primary. The best way to do this is to remove the power harness from the MTM and pry the wedge from the end of the 12-pin plug. Using a multimeter check the voltage directly at the pins. Pin 7 is ground and pins 1, 5 and 6 should be the same voltage DC as the main vessel power. If power checks out at the pins, replace the wedge and visually inspect the end of the plug making sure that all pins are properly seated and visible just under the surface of the wedge. Then plug the power harness back in making sure that it is in the correct orientation and fully engaged. If at this point the blue gauge still does not power on when connected to the 4-pin plug, contact a ***gplink*** vessel monitor at +1.252.504.5113.

3.2 Checking for CAN

Using the 2-inch blue gauge connected to the 4-pin plug on the primary MTM, check to see if it is reporting YES CAN. If the gauge reports NO CAN then try the following:

3.2.1 Checking the J1939 harness

Double check both the 12-pin plug and the 3 pin plug on the J1939 harness. Visually inspect the end of the plugs making sure that all pins are properly seated and are visible just under the surface of the wedge. Plug the J1939 harness back in ensuring that it is in the correct orientation and is fully engaged. Test again for CAN with the blue gauge.

3.2.2 Swapping J1939

If the starboard engine is reporting data, temporarily swap its J1939 dataline into the primary MTM and the port J1939 into the secondary MTM. Reboot the system by removing power from both MTMs for 30 seconds and then plugging them back in. Check for CAN on both MTMs again. If the primary MTM still shows NO CAN, contact a ***gplink*** vessel monitor at +1.252.504.5113. If the secondary MTM starts showing NO CAN then double check the integrity of the J1939 dataline and connections leading from the port engine.