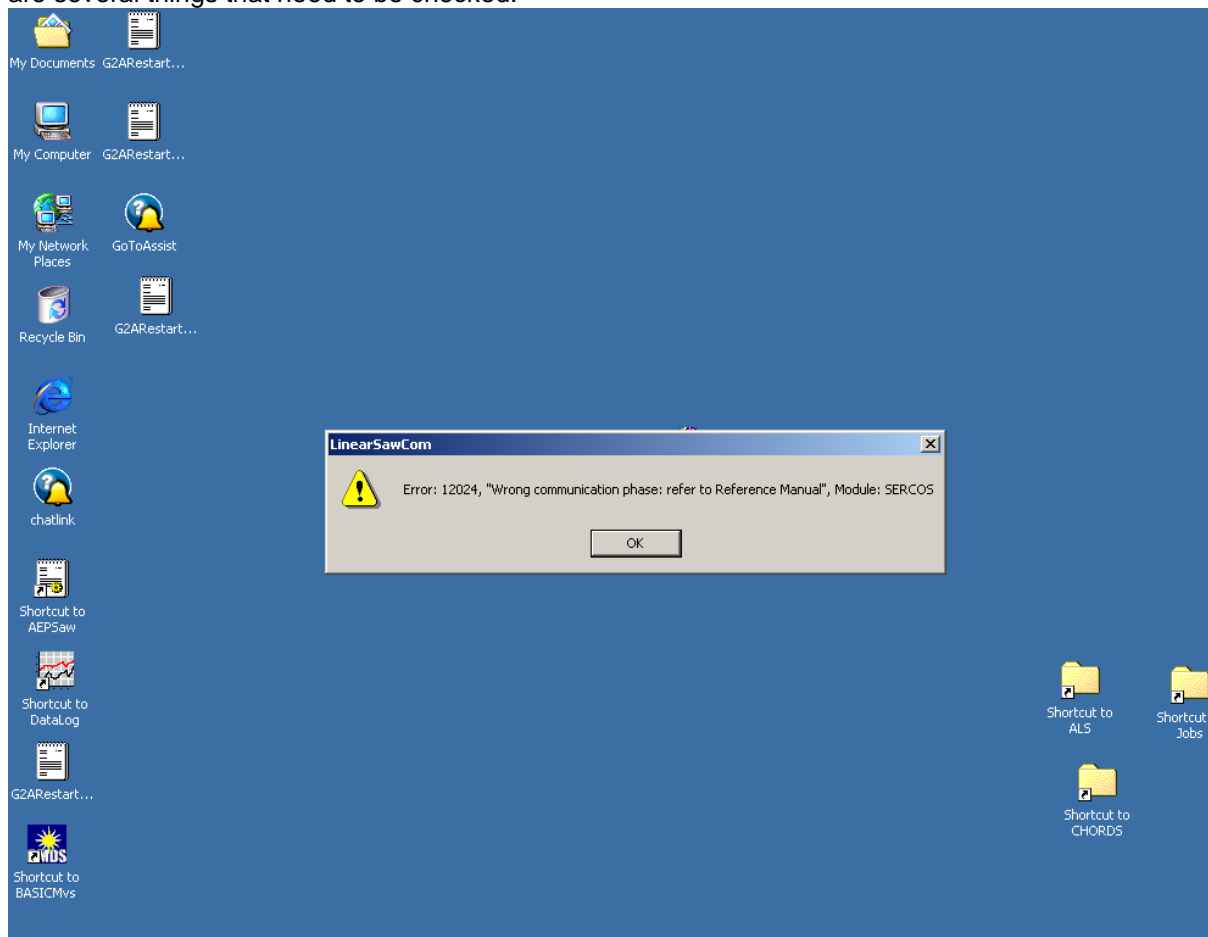


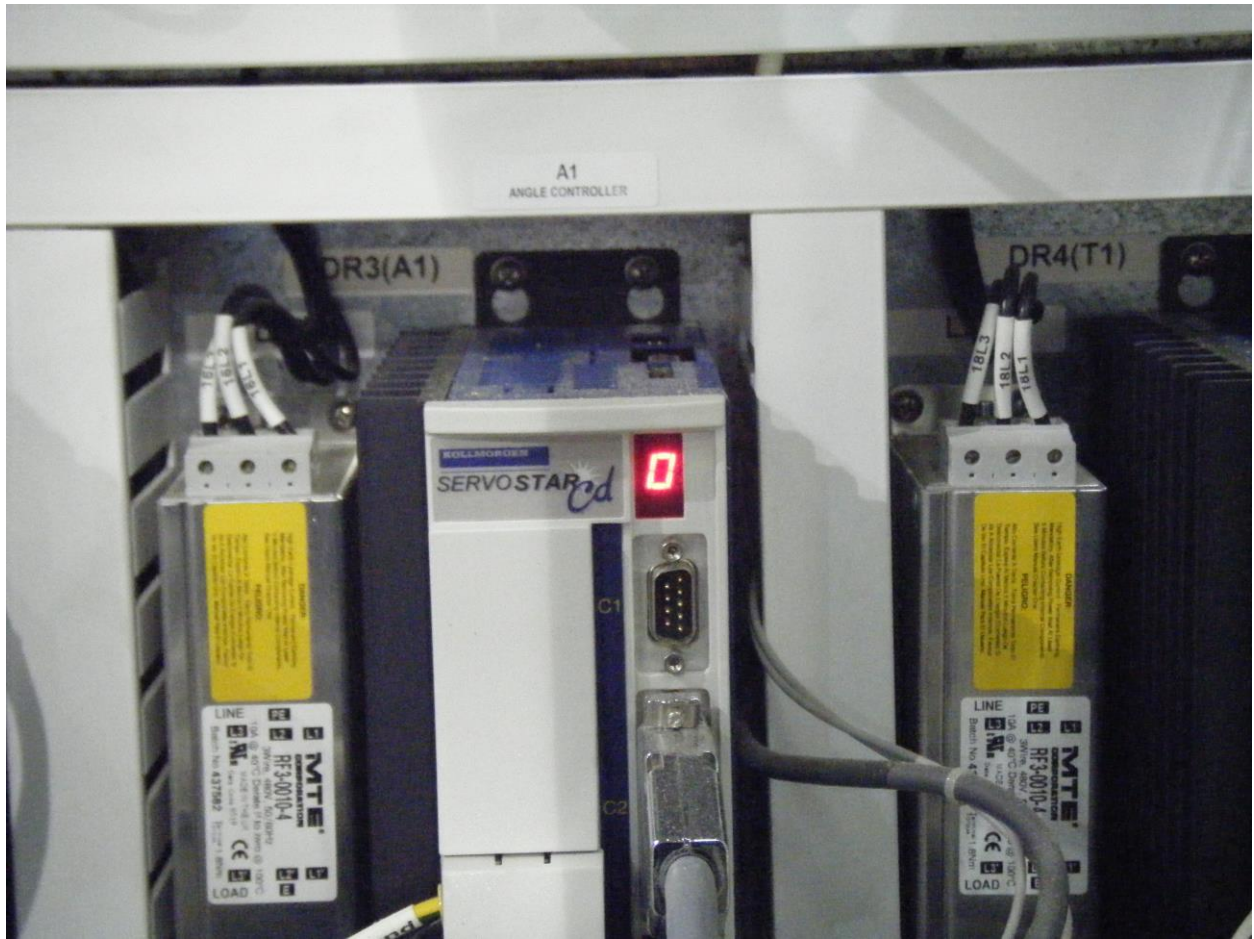
**Equipment:** ALS 276  
**Call Type** Troubleshooting  
**SubType:** Electrical/Electronics  
**SubCat.**

**Description:** Wrong communication phase:refer to Reference Manual,Module :SERCOS.

**Resolution:** When this error message appears when attempting to open the ALS program there are several things that need to be checked.



The display on each drive should also be flashing P and 0.



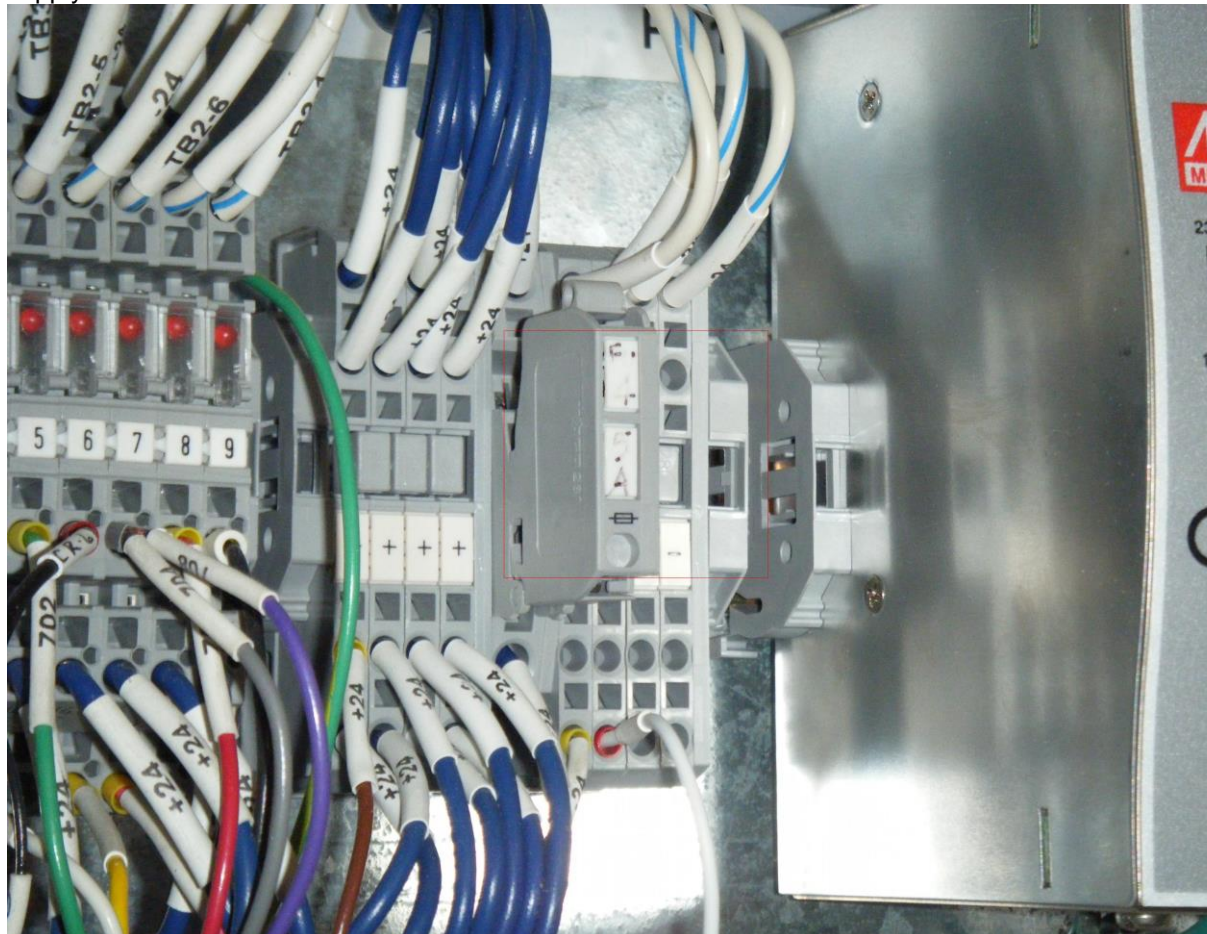
If any of the drives do not have anything in the display then that drive is not working properly.

1. If one or more drives have no display. The three phase power needs to be verified at terminals L1, L2 and L3 on the drive. If power checks good between all phases then the drive(s) need to be replaced.

2. The next step is to make sure that the Key Switch is in the on position and the Estop on the operator station and the one on the electrical cabinet are out. Also make sure the front door on the ALS is closed and the door switch plunger is engaged properly.

3. The next thing that needs to be checked is the 1/2 amp fuse in the electrical cabinet. ( Caution) When in electrical cabinet use extreme caution and make sure power is turned off and locked out before taking any wire loose.

The fuse is labeled FU4 and it is located to the left of the 24volt power supply.



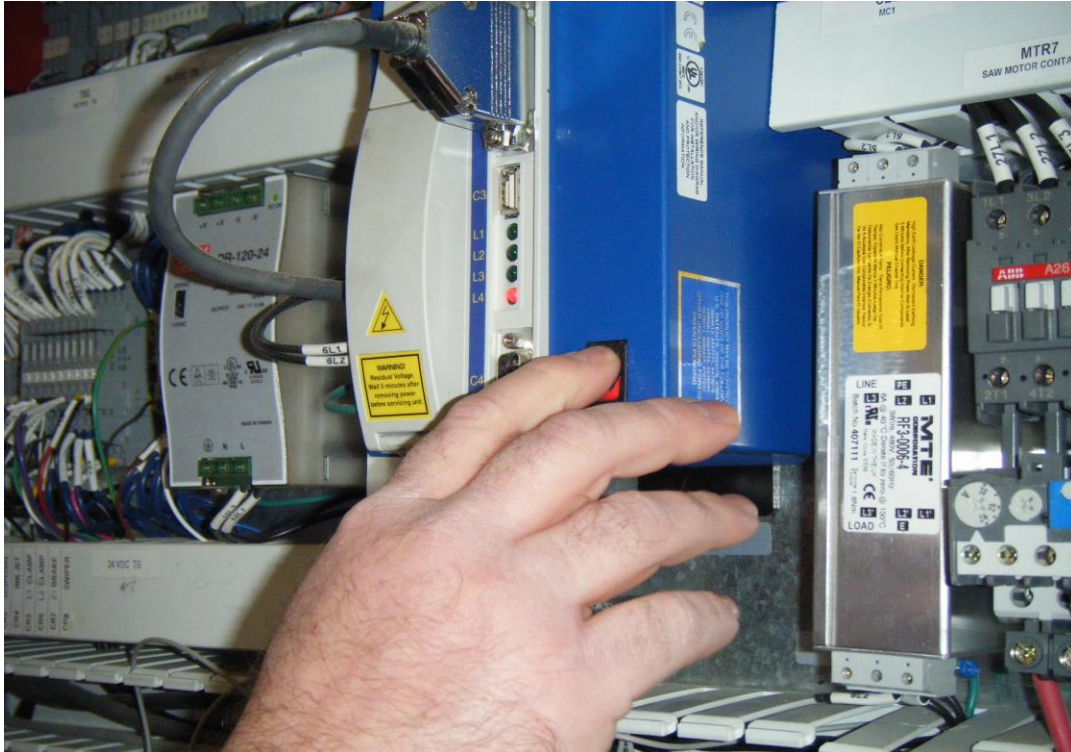


You can check the fuse with a meter or fuse tester. If the fuse is blown replace and then power up machine. If the drives are still flashing P and 0 and the fuse is OK go to step 2.

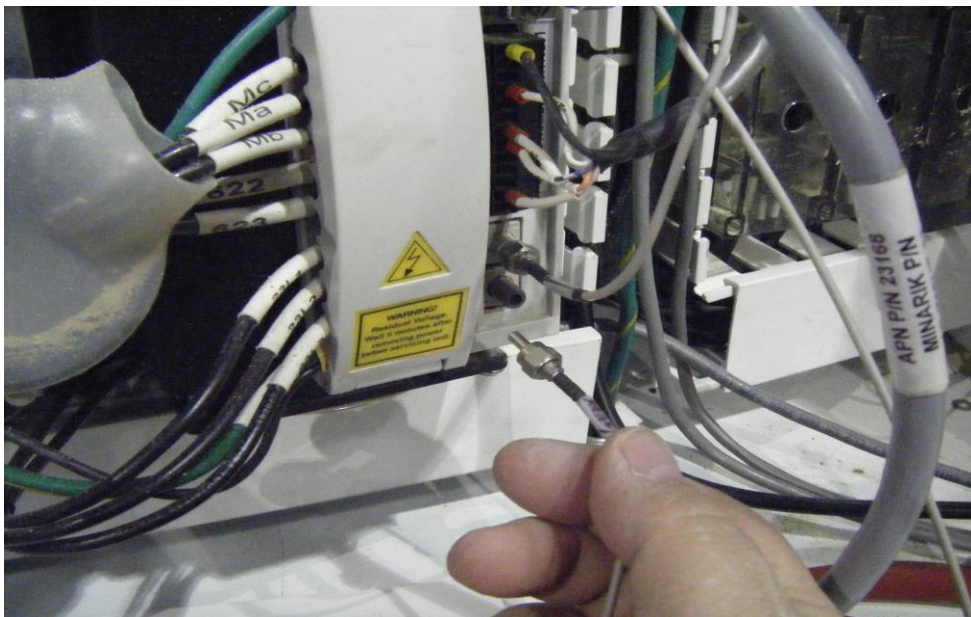
3. If error message still appears. Each servo drive will need to be checked to make sure the drive is functioning properly. There are 2 sercos (fiber optic) cables that are attached to each drive and the master controller.



They transfer light from drive to drive. This is called the sercos ring. If one of the drives, Master controller or one of the cables is not functioning properly this error will be seen. To troubleshoot this problem further the power must be on to the ALS. **Someone who is experienced working with electrical components or a certified maintenance person should be the only one to perform the next steps.** To troubleshoot each drive you will first need to turn the Master controller off.



Then remove the lower sercos cable on the Z1 drive.





Then remove the lower cable from the L1 drive and connect the line that was taken from Z1 to the L1 drive



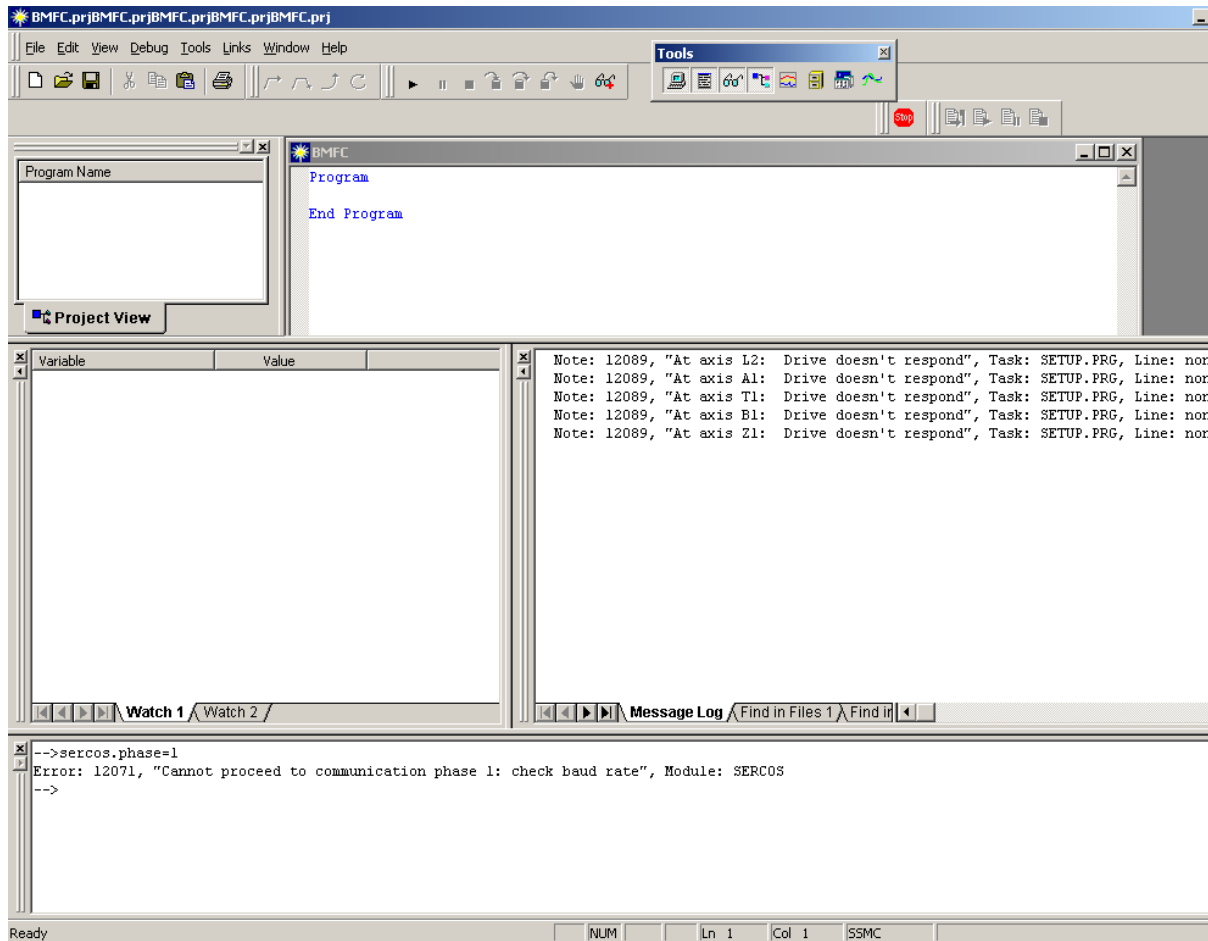
You will have to cut some of the small tie wraps on the wire that the sercos cable is attached to. Then turn the Master Controller back on.



Note ( Wait until the light on the Master Controller L4 turns from red to green before opening Basic Moves.)



4. Go to the computer and look for the shortcut to Basic Moves and double click on it. The first screen that you will see will ask you to select communication Method. Select Ethernet and then select OK. The next screen will ask you to Select Device. Select the SSMC Controller and select OK. In the Terminal window type the command (sercos.phase=1) and then select enter. If the drive is functioning properly there will be an error in the terminal window that says "Cannot proceed to communication phase 1; check baud rate" Module; SERCOS. In the message log screen you should see that all the drives except L1 report drive doesn't respond.



This tells us that the L1 drive is working properly. Now turn the power off to the master controller and close Basic Moves.

5. Then take the cable that was taken from Z1 and connect it to L2 in the same manner as we did on L1 and reconnect the proper cable to the L1 drive. Then follow the same instructions in step 3. In the message log screen you should see that all the drives except L1 and L2 report drive doesn't respond. Repeat this process until the error message goes back to Wrong communication phase: refer to reference manual, module: SERCOS. This will be the drive that is not working properly.