Do this as a first step before each scenario below

Check running belt movement – with the tread power OFF check the running belt
rotation/movement using one foot to accelerate the belt briskly by pushing
it in the normal direction and determine if it moves freely without any
grinding, rubbing, or other abnormal noises.

If the running belt does not move freely or coast briefly after accelerated manually as
above, the condition must be identified and corrected before treadmill is
powered.
Check motor shaft/flywheel rotation for binding or grinding, check belt alignment and
tension, check rotation of front & rear rollers, check running belt
for binding, pinching, obstructions, etc., and verify running belt/deck
has adequate/appropriate lube.

Does the tread error out with "E1" at start-up with little to NO belt movement?

Does the tread error out with "E1" after start-up with belt movement for only 10 seconds?

Does the tread error out with "E1" after shut down of belt movement at various times into
workout routine?

Does the tread error out with "E1" at start-up with NO belt movement?

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1. If the operator is standing on the running belt at start-up the tread must be started with no load on the running belt and the speed must be increased above 1mph to 2mph immediately after start-up. If this corrects the error and tread will otherwise run properly it is likely VR1 potentiometer on the MCB is not adjusted correctly.

Is the problem resolved?

YES

NO

VR1 setting should be near middle of its range to provide non-stalling and steady non-jerky belt movement at .5mph to 1mph with user on running belt. Try adjusting VR1 and walk on tread to test out

2. If the tread will not start at all with no load on running belt and all checks in item 1 above are fine, check all MCB wire connections are securely connected/plugged in and verify no pinched or cut wire/cable connections.

SOLUTION: If checks and corrections do not correct problem send new **MCB** to correct the problem

3. Check console cable connection at MCB and user assembled locations for being securely connected/latched and verify cable is not pinched or cut anywhere along the cable length. Cable must be plugged in for console to get power and turn ON, but if RPM or PWM wires within cable are cut or not connected tread will error out with "E1".

DONE

Does the tread error out with "E1" after start-up with belt movement for only 10 seconds?

JOHNSON

Software programming will shut tread down with "E1" error 10 seconds after start-up of workout if no speed sensor signal is detected

↓

If user is not standing on belt and if belt is running for the first 10 seconds before shutting down with "E1" error there is likely a problem with speed sensor detection

↓

Check speed sensor for secure mounting at front roller bracket and confirm magnet in front roller pulley is present and that sensor is aligned with magnet as roller pulley rotates

↓

Is the problem resolved? → NO → Check speed sensor cable connection is securely latched into MCB header connector → **Is the problem resolved?** → NO → Check speed sensor cable is not pinched or cut anywhere along cable length → **Is the problem resolved?** → NO → If the speed sensor cable is not pinched or cut and is securely latched, adjust or change the position of the speed sensor and/or mounting bracket to attempt getting detection of the speed sensor signal → **Is the problem resolved?** → NO → Check console cable connection at MCB and user assembled locations are securely connected/latched and verify cable is not pinched or cut anywhere along cable length. Cable must be plugged in for console to get power and turn ON, but if RPM or PWM wires within c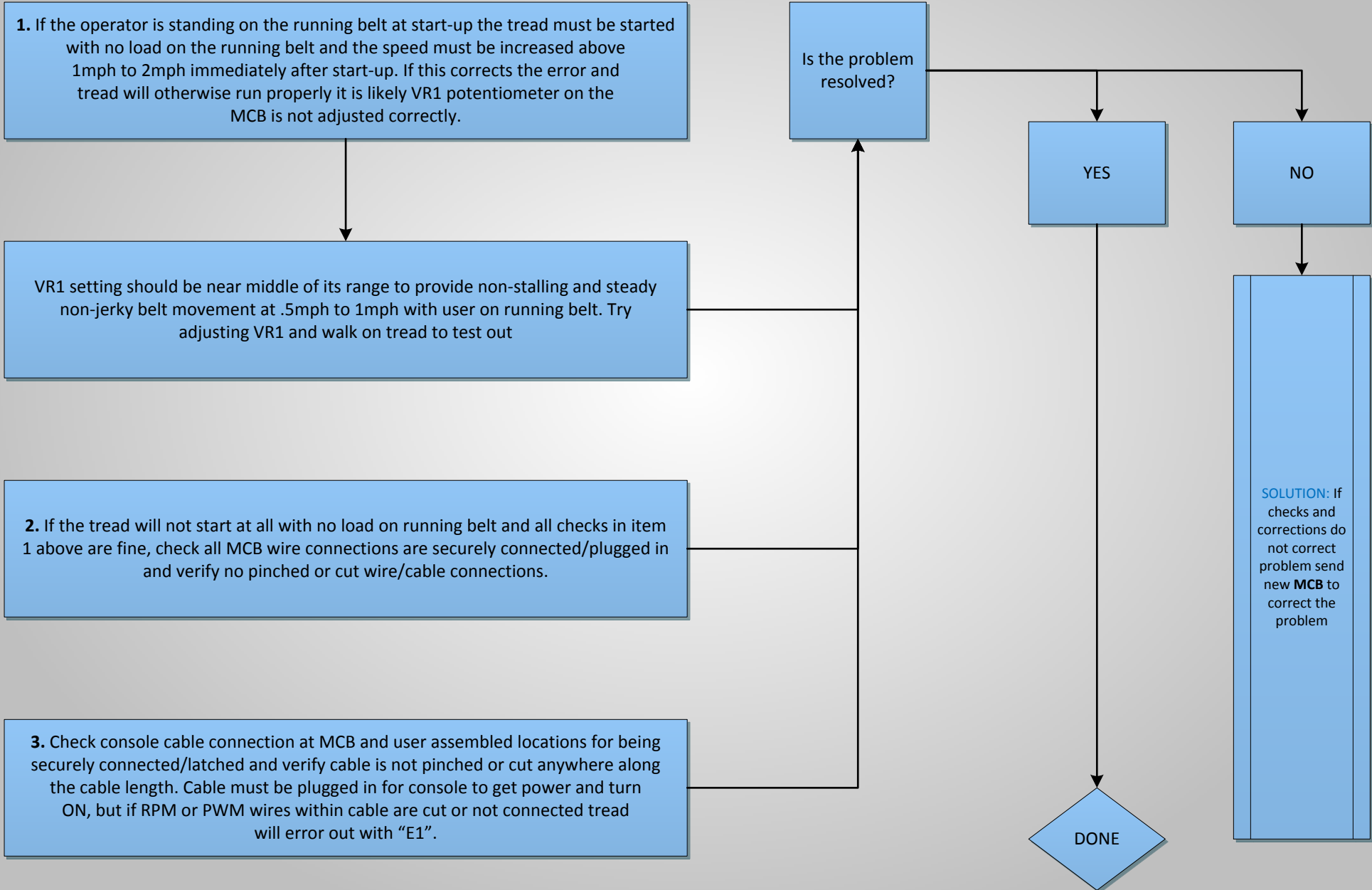able are cut or not connected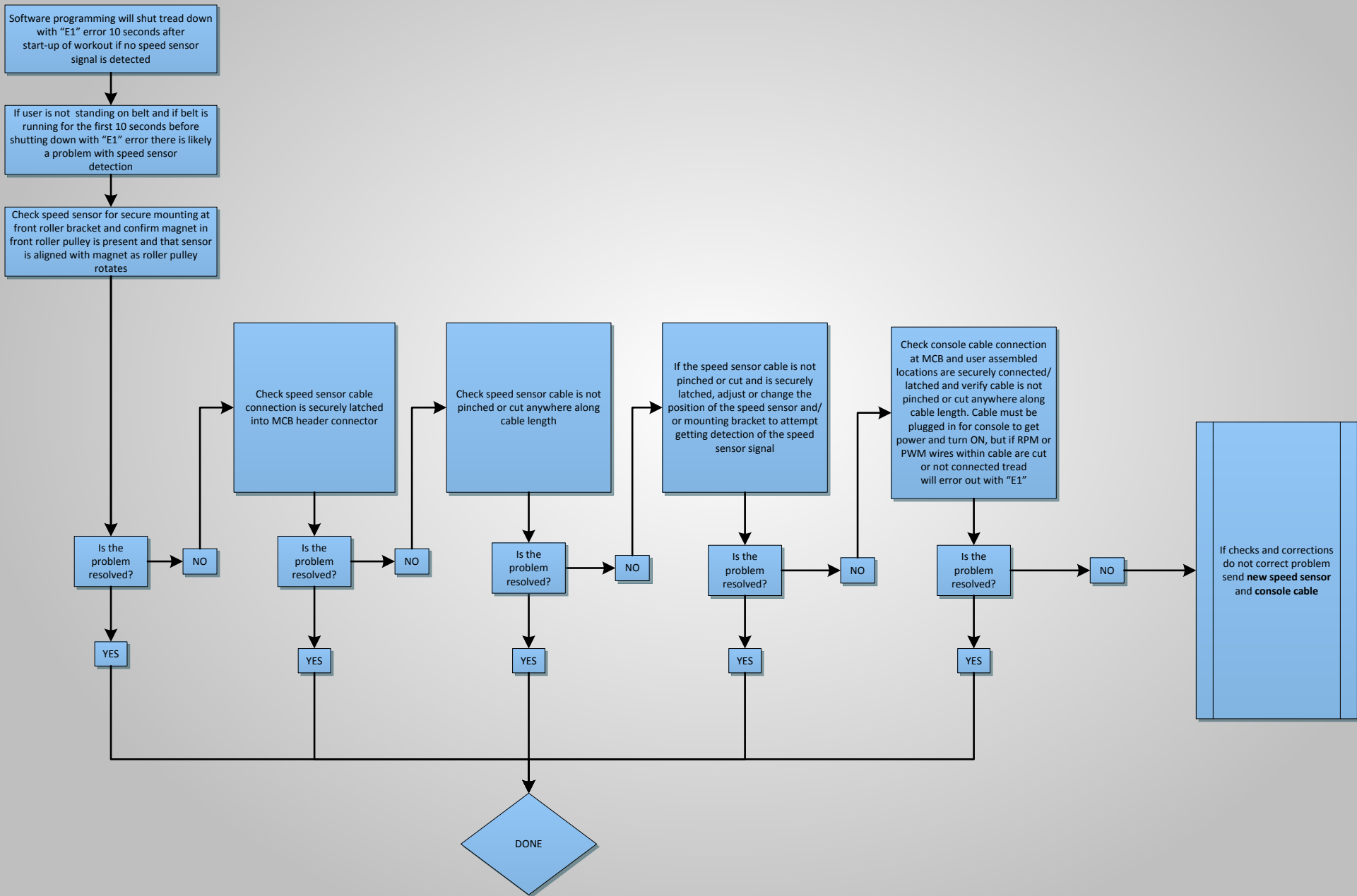 tread will error out with "E1" → **Is the problem resolved?** → NO → If checks and corrections do not correct problem send **new speed sensor** and **console cable**

YES ↓   YES ↓   YES ↓   YES ↓   YES ↓

DONE

Does the tread error out with "E1" after shut down of belt movement at various times into workout routine?

JOHNSON ®

Software programming will shut tread down with "E1" error 3 seconds after loss of speed sensor signal when in workout routine

This could be due to faulty speed sensor detection, faulty MCB motor drive function, intermittent cable connections (including console cable), possibly a defective belt drive motor, or something causing too great of load (too much belt rotation resistance) on MCB.

Check running belt/deck for adequate/appropriate lube, should have ample film of silicone across entire deck running surface. Apply additional lube if questionable. (NOTE: Should not have any wax evident on deck or contamination is an issue.)

Check all MCB wire connections for being securely connected/plugged in.

Check speed sensor for secure mounting at front roller bracket and confirm magnet in front roller pulley is present and that sensor is aligned with magnet as roller pulley rotates.

Check speed sensor cable connection is securely latched into MCB header connector.

Check speed sensor cable is not pinched or cut anywhere along cable length. Cable must be plugged in for console to get power and turn ON, but if RPM or PWM wires within cable are cut or not connected tread will error out with "E1".

Check console cable connection at MCB and user assembled locations for being securely connected/latched and verify cable is not pinched or cut anywhere along cable length.

If tread will re-start and problem recurs check belt drive motor and running belt rotation as indicated in item 1 above immediately after shutdown. If motor is extremely hot or has an extremely bad smell the belt drive motor will need replacing.

If possible monitor red LED D23 near top center edge of MCB printed circuit board during operation to see if it blinks during use and if it stays lit after tread shuts down with "E1" error. Check the location of the LED D23 HERE

Is the problem resolved? — NO
Is the problem resolved? — NO
Is the problem resolved? — NO
Is the problem resolved? — NO
Is the problem resolved? — NO
Is the problem resolved? — NO
Is the problem resolved? — NO
Is the problem resolved? — NO

YES
YES
YES
YES
YES
YES
YES
YES

DONE

If so MCB is shutting down due to "Overload". If running belt is still free to rotate treadmill send a new MCB and drive motor.

If drive motor and MCB appear ok (LED D23 does **NOT** stay lit) replace speed sensor and console cable.