

To Adjust Speed Control: (Figure 10-22)

- Raise rear of vehicle per LIFTING INSTRUCTIONS, SECTION 1, Page 1-5.
- Speed control is located behind the battery tray on the left side of the vehicle. The speed has an adjustable linkage rod from the accelerator.
- Remove cotter pin and clevis pin. Turn clevis.
- Replace pins.

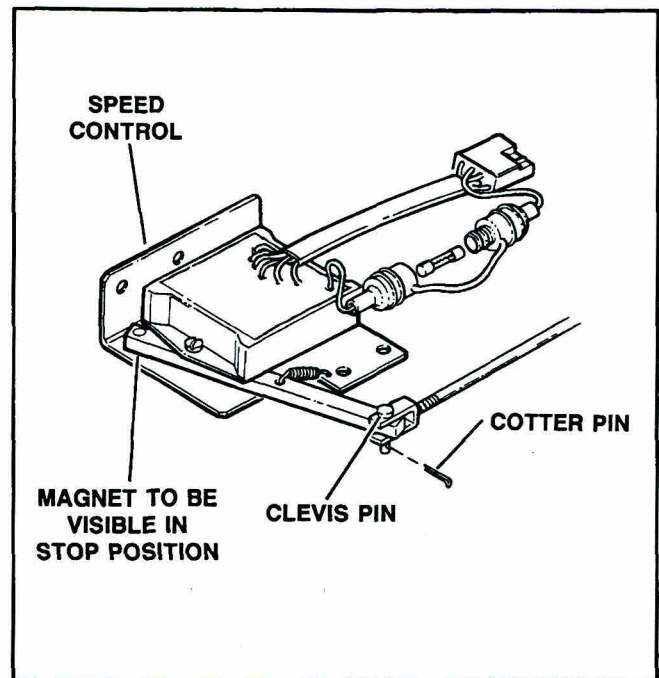


Figure 10-22 – Speed Control Adjustment

ELECTRICAL OPERATION AND CIRCUITS

Charging

Key Switch position	Off
Speed Switch Arm position	At rest
Solenoid C1	Not energized – open
Solenoid C2	Not energized – open
Solenoid F	Not energized; continuity between bottom terminals; top terminals open
Solenoid R	Not energized; continuity between bottom terminals; top terminals open
Voltage to Motor A1-A2	None
Resistor R1	No current flow
Resistor R2	No current flow

First Speed

Key Switch position	Forward
Speed Switch position	First speed
Solenoid C1	Not energized
Solenoid C2	Not energized
Solenoid F	Energized; continuity between large top terminals; large bottom terminals open
Solenoid R	Not energized; continuity between large bottom terminals; large top terminals open
Voltage to Motor A1-A2	Approximately 26.5 Volts
Resistor R1	In circuit (hot)
Resistor R2	In circuit (hot)

Second Speed

Key Switch position	Forward
Speed Switch Arm position	Second speed
Solenoid C1	Energized; continuity between large bottom terminals
Solenoid C2	Not energized
Solenoid F	Energized; continuity between large top terminals; large bottom terminals open
Solenoid R	Not energized; continuity between large bottom terminals; large top terminals open
Voltage to Motor A1-A2	Approximately 29 Volts
Resistor R1	Out of circuit (cold)
Resistor R2	In circuit (hot)

Third Speed

Key Switch position	Forward
Speed Switch Arm position	Third speed
Solenoid C1	Not energized
Solenoid C2	Energized; continuity between large bottom terminals
Solenoid F	Energized; continuity between large top terminals; bottom terminals open
Solenoid R	Not energized; continuity between large bottom terminals
Voltage to Motor A1-A2	Approximately 31.5 Volts
Resistor R1	In circuit (hot)
Resistor R2	In circuit (cold)

Fourth Speed

Key Switch position	Forward
Speed Switch position	Fourth speed
Solenoid C1	Energized
Solenoid C2	Continuity between large bottom terminals
Solenoid F	Energized; continuity between large top terminals; large bottom terminals open
Solenoid R	Not energized; continuity between large bottom terminals
Voltage to Motor A1-A2	Approximately 34 Volts
Resistor R1	Out of circuit (cold)
Resistor R2	Out of circuit (cold)

Reverse

Key Switch position	Reverse
Speed Switch Arm position	Same as forward speeds
Solenoid C1	Same as forward speeds
Solenoid C2	Same as forward speeds
Solenoid F	Not energized; continuity between large bottom terminals; large top terminals open
Solenoid R	Energized; continuity between large top terminals; large bottom terminals open
Voltage to Motor A1-A2	Same as forward speeds
Resistor R1	Same as forward speeds
Resistor R2	Same as forward speeds

SOLENOIDS

If the speed control solenoid C1 or C2 is not functioning properly, one of the following conditions will exist:

Solenoid

C1 (Above 3 coil resistor) – Stuck closed (welded)

SPEED CONTROL POSITION	CAR ACTUALLY RUNS IN () SPEED
1st	2nd
2nd	2nd
3rd	4th
4th	4th

Solenoid

C1 – Stuck open (not energizing)

SPEED CONTROL POSITION	CAR ACTUALLY RUNS IN () SPEED
1st	1st
2nd	1st
3rd	3rd
4th	3rd

Solenoid

C2 (Above 5 coil resistor) – Stuck closed (welded)

SPEED CONTROL POSITION	CAR ACTUALLY RUNS IN () SPEED
1st	3rd
2nd	4th
3rd	3rd
4th	4th

Solenoid

C2 – Stuck open (not energizing)

SPEED CONTROL POSITION	CAR ACTUALLY RUNS IN () SPEED
1st	1st
2nd	2nd
3rd	3rd
4th	2nd

SOLID STATE SPEED CONTROL TROUBLESHOOTING GUIDE

PROBLEM	POSSIBLE CAUSE
Car will not charge.	Poor battery condition. Faulty charger. Faulty charger plug. Faulty receptacle.
No forward or reverse.	Faulty batteries or connections. Faulty key switch. Faulty speed switch. Faulty motor. Both "F" and "R" solenoid not functioning.
Forward OK, no reverse.	Faulty key switch. Solenoid "F" open between large bottom terminals. Solenoid "R" not energizing.
Reverse OK, no forward.	Faulty key switch. Solenoid "R" open between large bottom terminals. Solenoid "F" not energizing.
No 1st and 2nd, 3rd and 4th OK.	Resistor coil R2 broken.
No 1st and 3rd, 2nd and 4th OK.	Resistor coil R1 broken.
No 2nd and 4th, 1st and 3rd OK.	Solenoid C1 not energizing. No continuity between large side terminals of solenoid C1.
No 3rd and 4th, 1st and 2nd OK.	Solenoid C2 not energizing. No continuity between large side terminals.
No 4th, 1st, 2nd and 3rd OK.	Speed switch linkage out of adjustment preventing full travel of magnet arm.
Car continues to run in 1st with key in forward or reverse.	Speed switch linkage out of adjustment preventing magnet arm from returning to off position.
Car continues to run with key in off position.	"F" or "R" solenoid stuck in energized position.