



# ECO cruise

## TROUBLE SHOOTING

Replacement parts available from 800-982-9920  
(Kings) OR 612-922-6889

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Cruise King LLC  
www.cruisecontrolking.com  
507-334-0250

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**VSCI**

**4844 Venture Dr.**

**Ann Arbor, MI 48108**

**(313) 930-0500**

# TEST DRIVE

BEFORE BEGINNING THE TEST DRIVE, MAKE SURE ALL MECHANICAL AND ELECTRICAL CONNECTIONS OF THE ECO-CRUISE SYSTEM ARE CORRECT. ALSO MAKE SURE THE BRAKE LAMPS, ENGINE, AND TRANSMISSION ARE OPERATING PROPERLY.

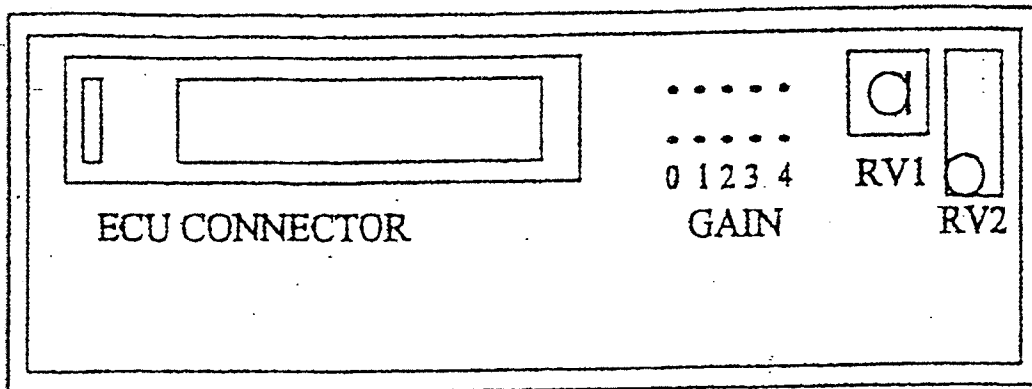
DETERMINE IF THE CRUISE SWITCHES USED ARE ECO-CRUISE SWITCHES. IF THEY ARE THE WORDS ECO-CRUISE WILL BE ON THE SWITCH. IF THE SWITCHES ARE NOT ECO-CRUISE SWITCHES A MULTIMETER MIGHT HAVE TO BE USED TO DETERMINE WHEN THE CRUISE IS ACTIVATED. TO DO THIS PUT A GROUND LEAD TO PIN 25 AND A POSITIVE LEAD TO 18. NOW WHEN THE CRUISE IS SET THE METER SHOULD READ A VOLTAGE.

DRIVE THE VEHICLE UP TO 25 MPH AND MAINTAIN THAT SPEED.

- |   | YES     | NO      |
|---|---------|---------|
| 1. SET CRUISE AT 25 MPH DOES CRUISE LAMP COME ON?   | GOTO 4  | GOTO 2  |
| 2. RAISE VEHICLE SPEED GRADUALLY WHILE TRYING TO SET CRUISE. DOES LIGHT COME ON?  | GOTO 3  | GOTO 15 |
| 3. AT WHAT SPEED DOES CRUISE LIGHT COME ON?<br>(if speed is to high adjust RV2)   | GOTO 4  |         |
| 4. DOES VEHICLE HOLD SET SPEED?   | GOTO 5  | GOTO 5  |
| 5. WILL VEHICLE ACCELERATE USING THE CRUISE ACCELERATE SWITCH?  | GOTO 6  | GOTO 15 |
| 6. IF THE VEHICLE DOES NOT HOLD SET SPEED BUT WILL ACCELERATE TRY AN RV2 ADJUSTMENT. IF NO IMPROVEMENT GO THROUGH SYSTEM DIAGNOSIS. |         |         |
| IF SYSTEM DOES HOLD SET AND ACCELERATE.   | GOTO 7  |         |
| 7. DOES THE CANCEL/RESUME SWITCH OPERATE?   | GOTO 8  | GOTO 15 |
| 8. OPERATE BRAKES DOES SYSTEM DISENGAGE?  | GOTO 9  | GOTO 15 |
| 9. ONCE SPEED IS SET CAN A SLIGHT SURGE BE FELT?  | GOTO 10 | GOTO 14 |

YES NO

- |   |         |         |
|---|---------|---------|
| 10. TURN RV2 CLOCKWISE ONE TURN IS SURGE<br>ELIMINATED?                   | GOTO 14 | GOTO 11 |
| 11. TURN RV2 CLOCKWISE ANOTHER TURN IS SURGE<br>ELIMINATED?               | GOTO 14 | GOTO 12 |
| 12. MOVE GAIN SETTING UP TO A HIGHER GAIN SETTING<br>IS SURGE ELIMINATED? | GOTO 14 | GOTO 13 |
| 13. MOVE GAIN SETTING UP TO A HIGHER GAIN SETTING<br>IS SURGE ELIMINATED? | GOTO 14 | GOTO 15 |
| 14. SYSTEM IS OPERATING NORMALLY.   |         |         |
| 15. RETURN TO SHOP FOR SYSTEM DIAGNOSIS.                                  |         |         |



NOTE THAT THE GAIN JUMPER IS SET AT THE NUMBER ONE POSITION FROM THE FACTORY AND SHOULD BE IN THIS POSITION WHEN BEGINNING THE RV2 ADJUSTMENT. ALSO RV1 SHOULD BE IN THE FULLY CLOCKWISE POSITION AND REMAIN THERE.

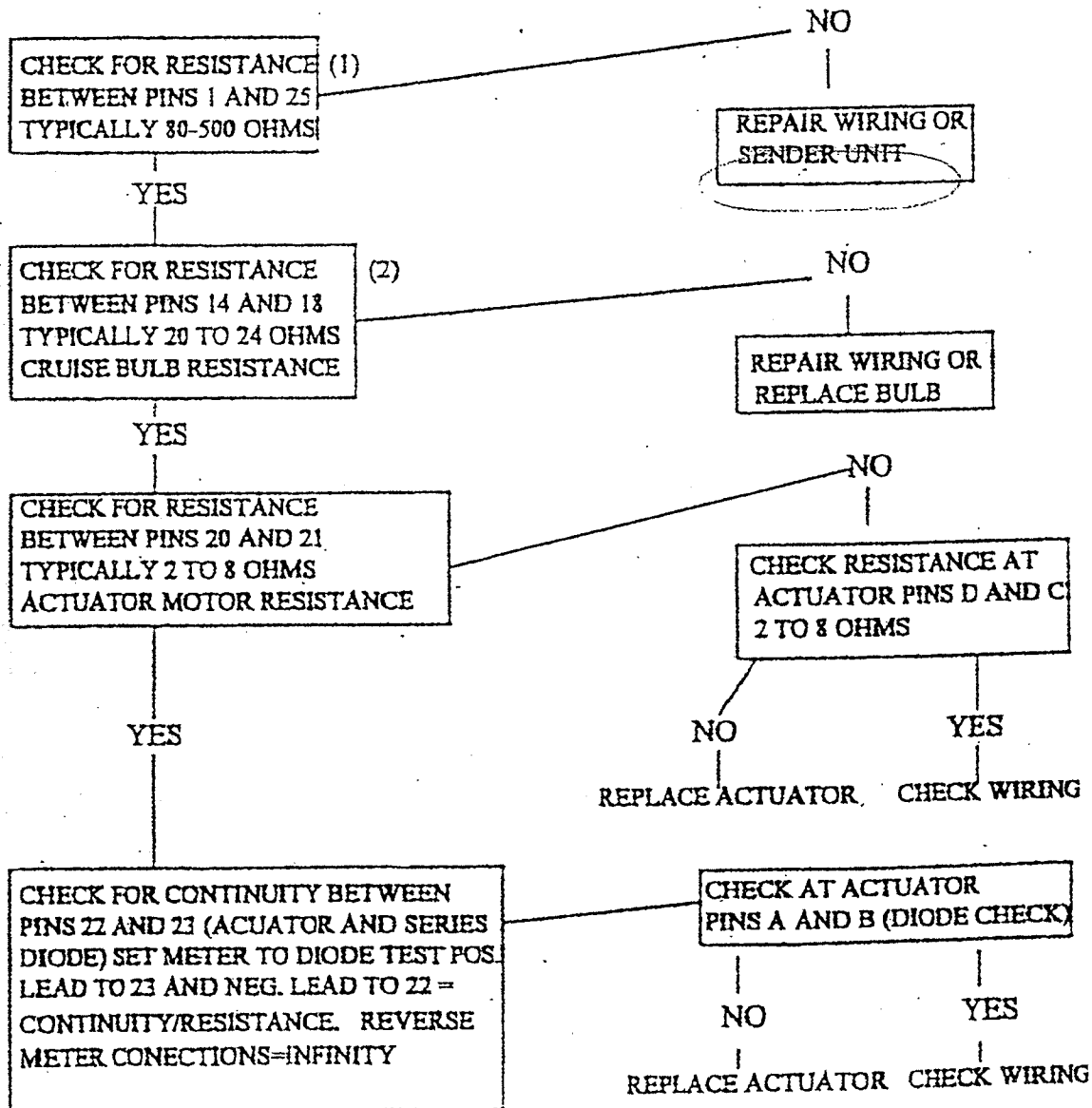
#### ADJUSTMENT OF RV2

1. TURN RV2 CLOCKWISE UNTIL A CLICK IS HEARD.  
(RV2 HAS 30 TURNS AND CANNOT BE STRIPPED)
2. TURN RV2 COUNTERCLOCKWISE 5 TURNS.
3. TEST DRIVE VEHICLE AT 25 MPH TURN ON CRUISE SWITCH AND SET CRUISE.
4. IF LIGHT COMES ON GO TO STEP 5 IF NOT GO TO STEP 6.
5. TURN RV2 CLOCKWISE UNTIL LIGHT GOES OFF. (MAINTAIN 25 MPH)
6. TURN RV2 ONE TURN COUNTERCLOCKWISE AND SET CRUISE, DO THIS UNTIL CRUISE LIGHT COMES ON. (MAINTAIN 25 MPH)
7. AT THIS POINT RV2 IS ADJUSTED.

**SHOP DIAGNOSIS  
DISCONNECT ECU  
WITH IGNITION OFF**

BEFORE BEGINNING DO A VISUAL CHECK OF THE WHOLE SYSTEM. CHECK FOR DAMAGED CABLES, INCORRECT THROTTLE HOOKUPS, IMPROPER CRIMP CONNECTIONS, OR ANY MECHANICAL TYPE OF DAMAGE.

**START AT ECU**



**NEXT PAGE**

(1) DOES NOT APPLY TO ALLISON ELECTRONIC TRANSMISSIONS  
(2) ONLY APPLIES TO ECO-CRUISE SWITCH ASSEMBLY

CHECK FOR CONTINUITY  
BETWEEN PINS 14 AND 15  
WHEN MEMERORY SWITCH  
IS IN SET/ACCEL POSITION.

CHECK FOR CONTINUITY  
BETWEEN PINS 14 AND 16  
WHEN MEMORY SWITCH IS IN  
CANCEL/RESUME POSITION. -

CHECK FOR INFINITE RESISTANCE  
BETWEEN PIN 25 AND PINS  
20, 21, 22, 23 IN TURN.

GO TO SYSTEM ON TESTS

NO

CHECK WIRING,  
CHECK WIRE CONNECTIONS  
AT SIX WAY CONNECTOR  
OR REPLACE SWITCH

NO

CHECK WIRING,  
CHECK WIRE CONNECTIONS  
AT SIX WAY CONNECTOR  
OR REPLACE SWITCH

CONTINUITY

CHECK FOR INFINITE  
RESISTANCE AT ACTUATOR,  
BETWEEN CASE OF ACTUATOR  
AND ACTUATOR PINS.

CONTINUITY

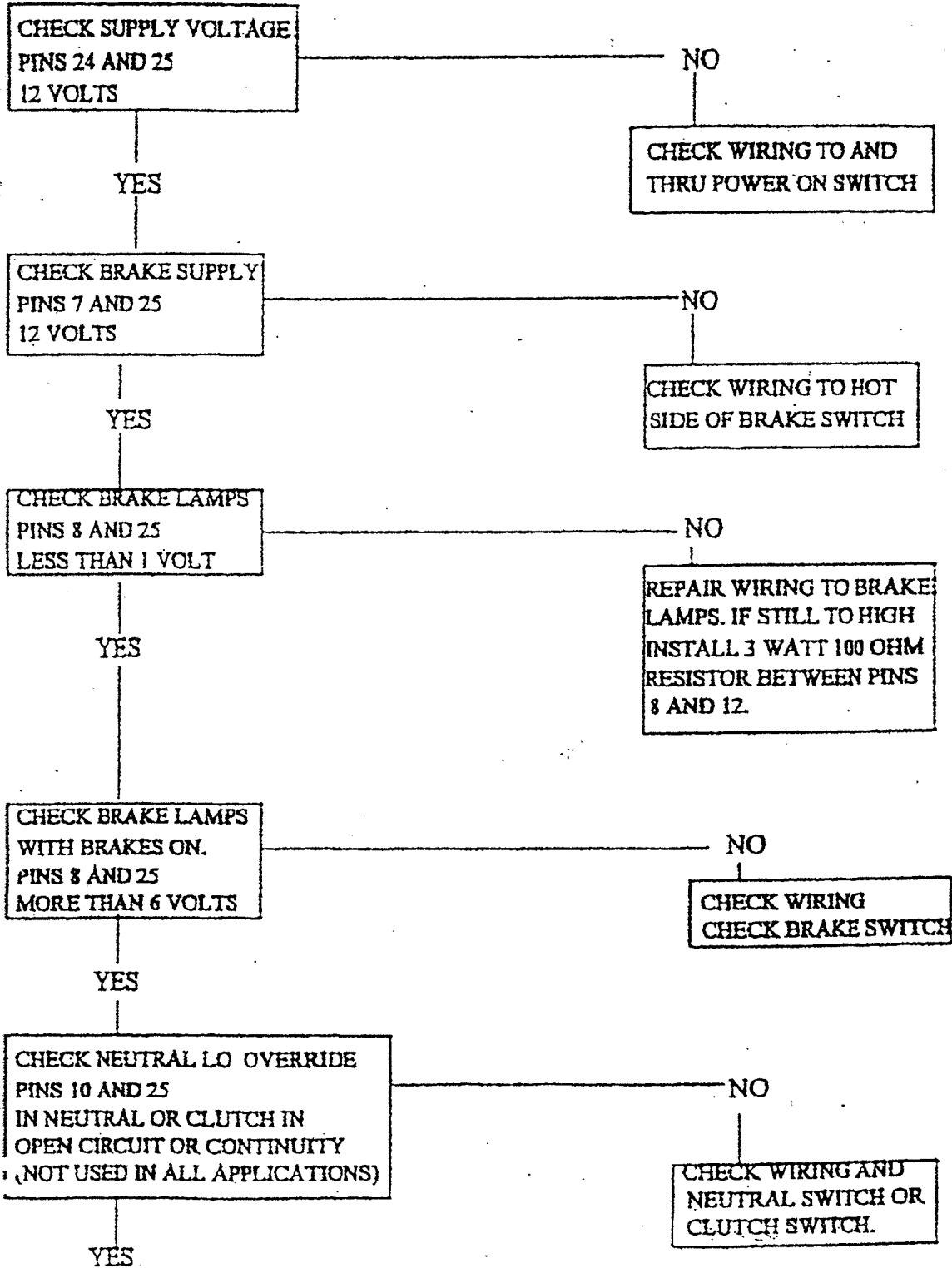
REPLACE  
ACTUATOR

RESISTANCE

CHECK  
WIRING

## SYSTEM ON TESTS

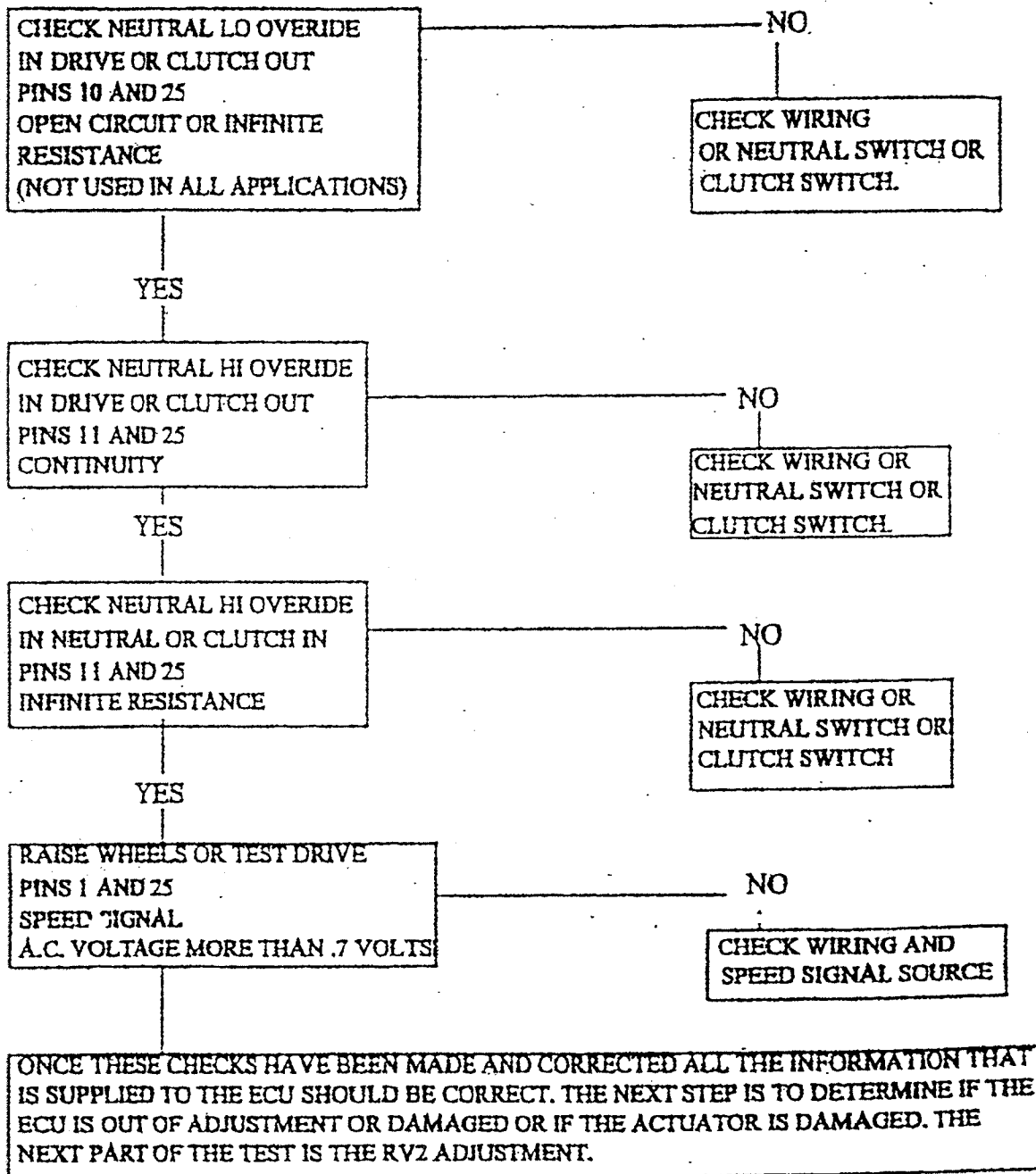
PLUG IN ECU, SWITCH IGNITION ON, AND SWITCH CRUISE ON



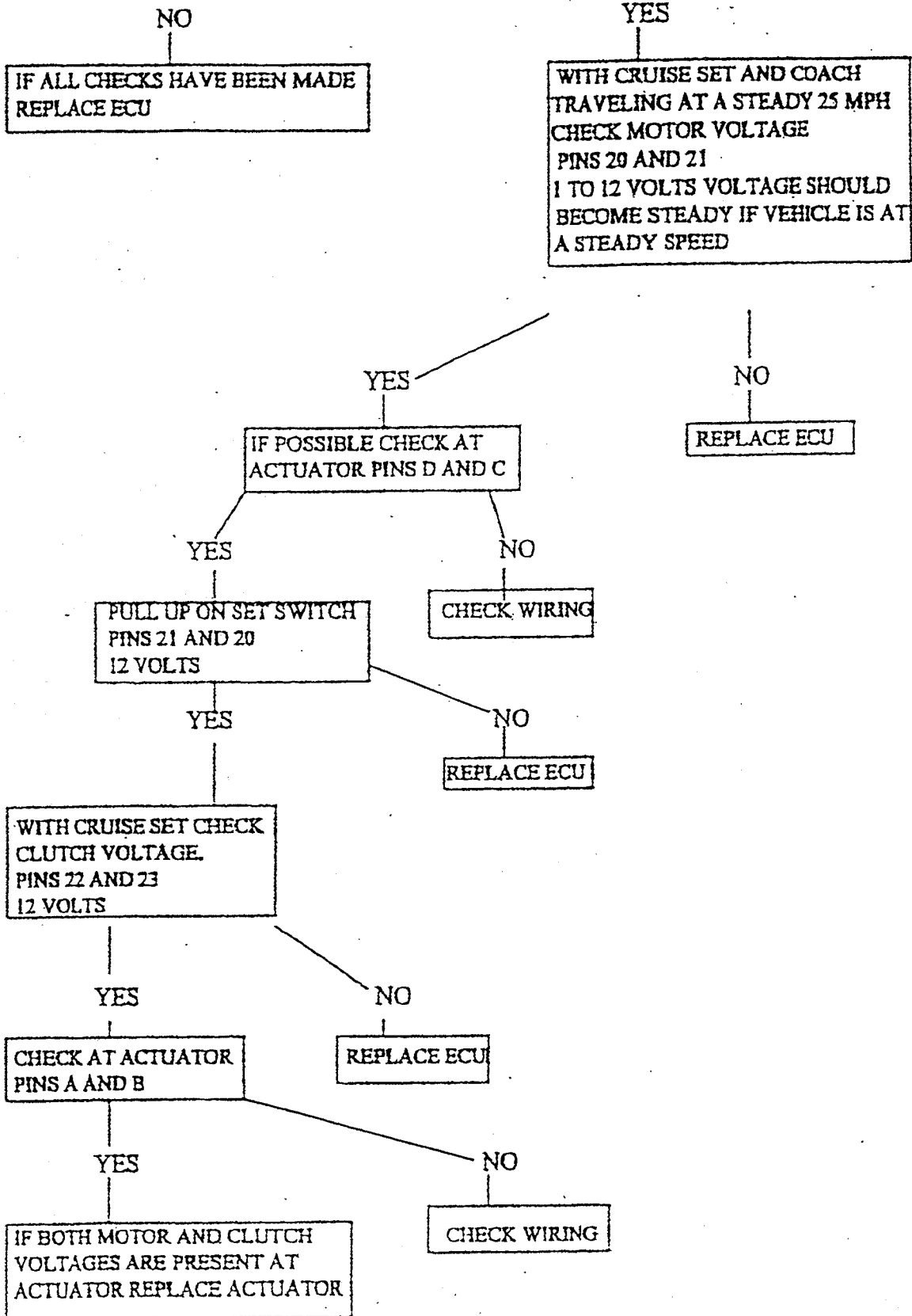
NOTICE NEUTRAL OVERRIDE WAS ONLY USED ON EARLY SPARTAN CHASSIS. IF THERE IS NOT A WIRE IN PIN 10 IT IS AN UPDATED CHASSIS. IF THERE IS A WIRE IN PIN 10 CUT IT BACK FROM THE ECU HARNESS AND TAPE THE WIRE TO THE ECU HARNESS.



NOTE: NEUTRAL OVERRIDES ARE NOT NORMALLY USED ON AUTOMATIC TRANSMISSIONS. PINS 11 AND 12 SHOULD BE LINKED TOGETHER AND PIN 10 CAN BE LEFT UNUSED.



AFTER ADJUSTING RV2 DID LIGHT COME ON?

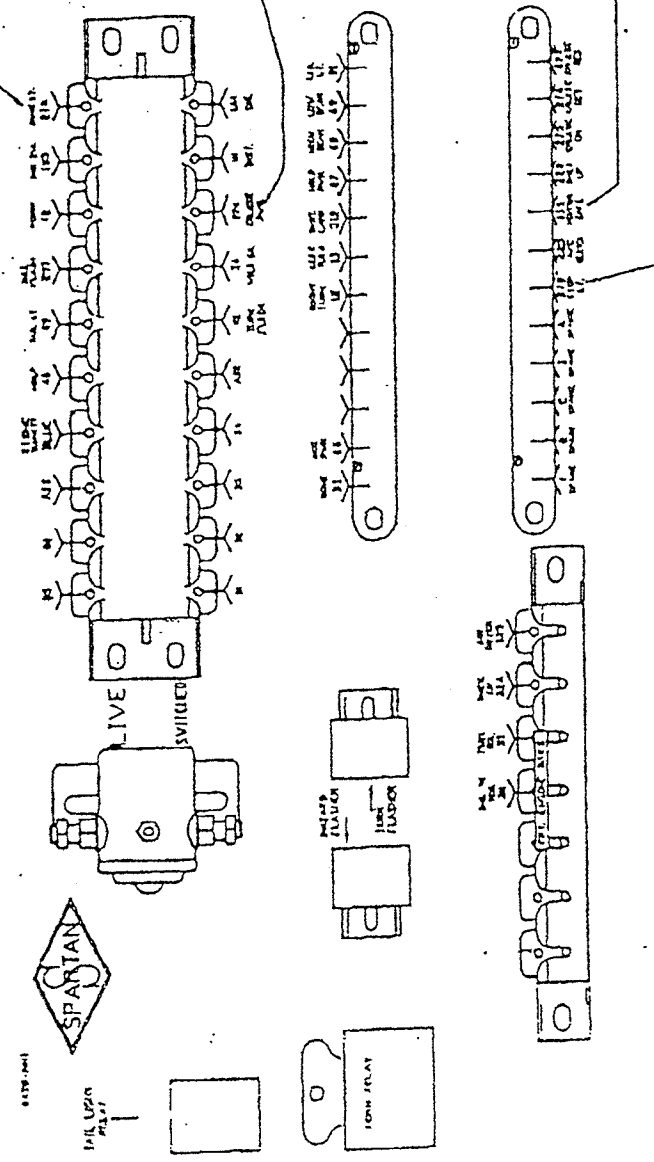


0766-GG5

# CURRENT PRODUCTION

(SEE DRAWING # 0768-GG5 FOR PREVIOUS PRODUCTION)

- BRAKE LT. 27A (RED)
- 274 (442) CRUISE PWR. (RED)
- 135 NEUTRAL SAFE (WHITE)
- 27B STOP LT. (RED)



NOTE: 152 (BLACK) MUST BE GROUNDED

RELEASED PER E.C. NO. 10191-B  
 REFERENCE S.O. NO. \_\_\_\_\_  
 MUST MEET FEDERAL SPEC. \_\_\_\_\_



Spartan Motors Inc.  
 WORLD WIDE VEHICLES AND EQUIPMENT  
 CHARLOTTE, NICHIGAH 48813

DATE: 7/19/93	SCALE: 1:1	DESIGNER: CJS	CHECKED: CJS	APPROVED: R. RANSBURG
DO NOT SCALE DRAWING				
1. PLACE 1:020				
2. PLACE 1:015				
3. PLACE 1:005				
STANDARD HOLE TOLERANCES ±.1 DEC				
STANDARD HOLE TOLERANCES ±.005				
WIRING: ECO CRUISE TO FRONT PANEL.				0766-GG5

REV.	REVISIONS	E.C.	DATE	BY

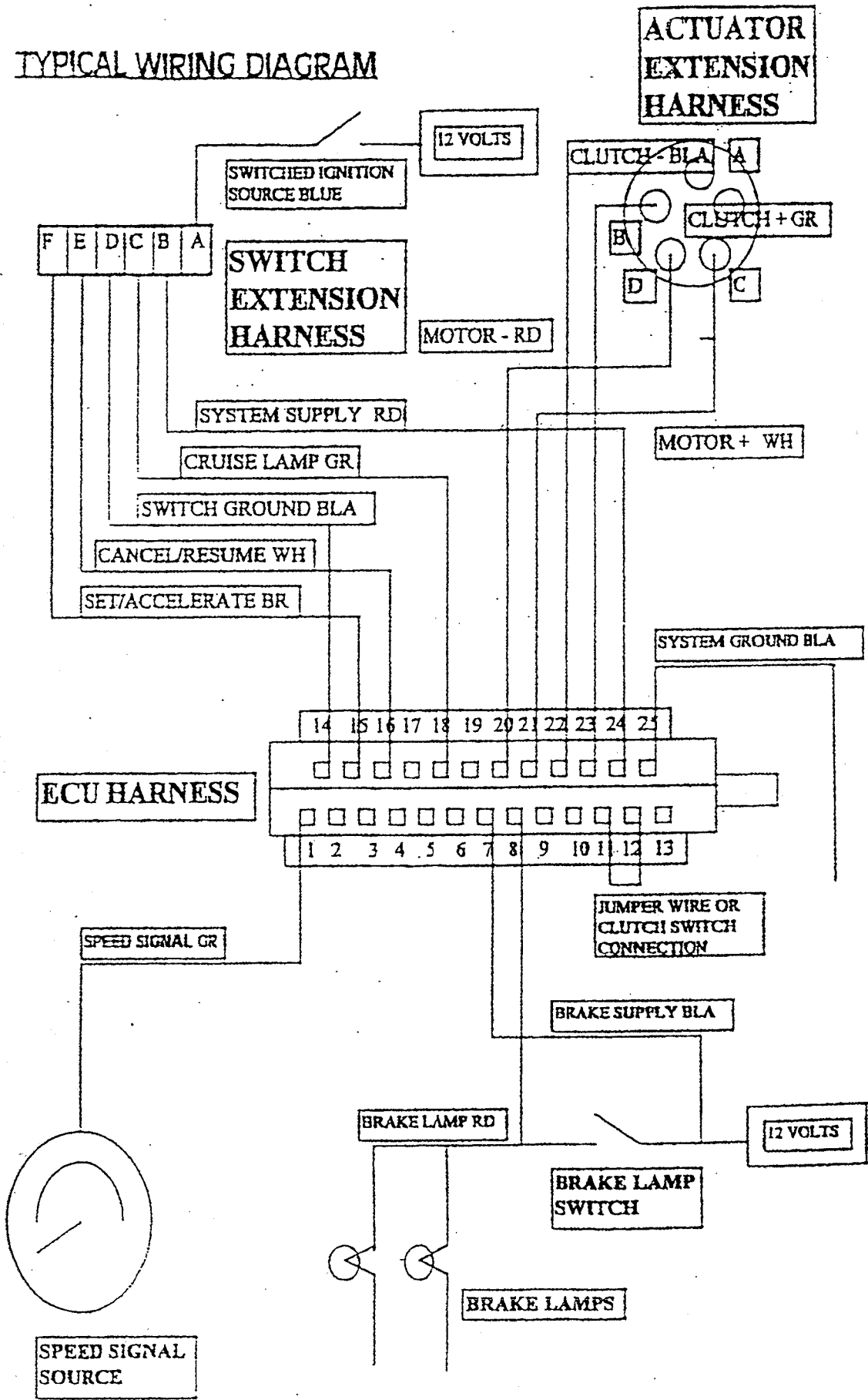
NEXT ASSEMBLY

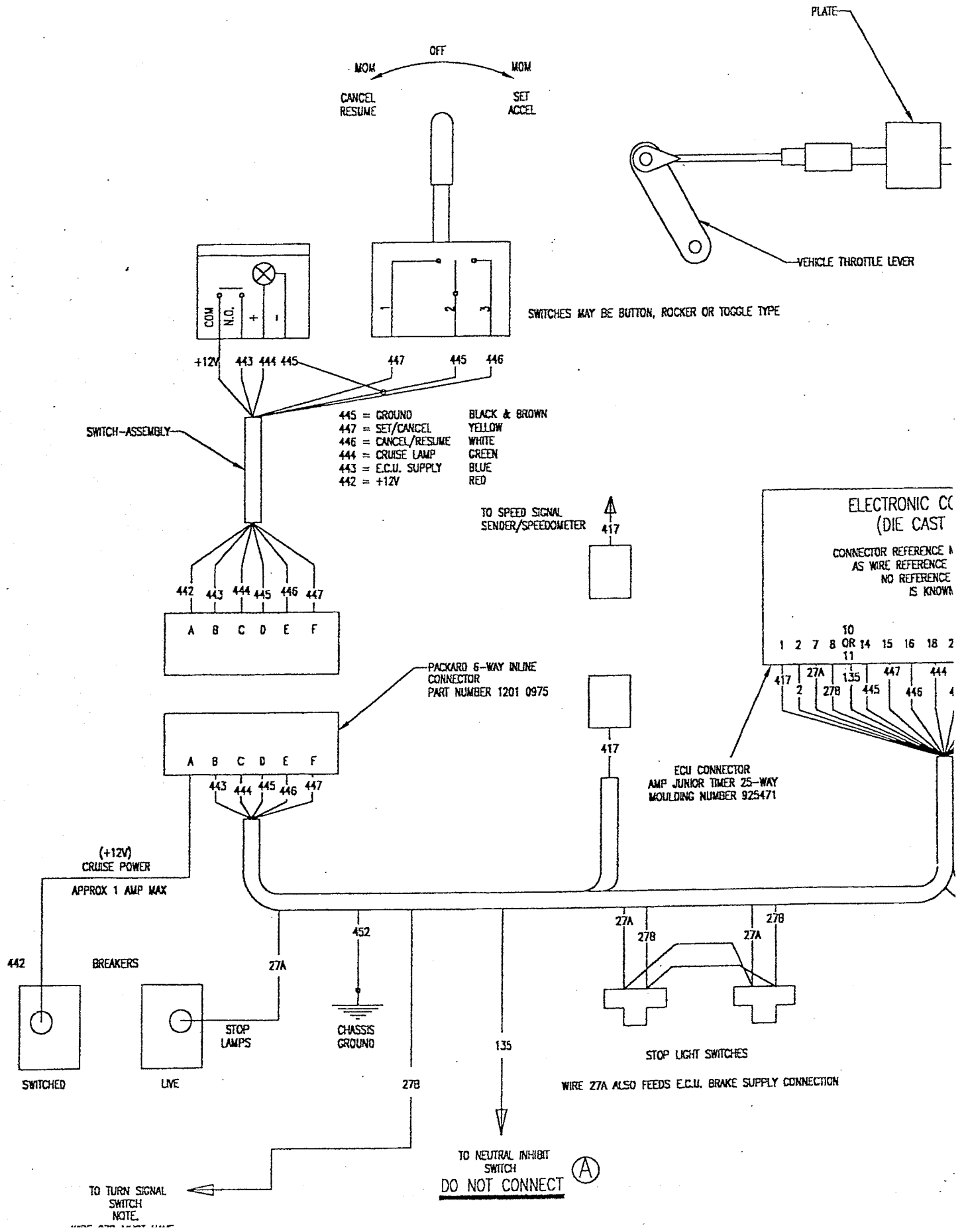
SLIDE TO

R

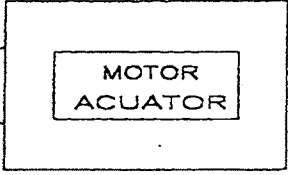
NO. REV.

# TYPICAL WIRING DIAGRAM

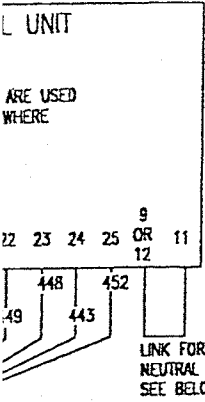




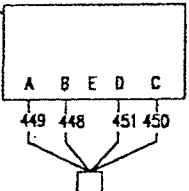
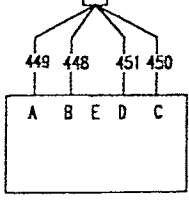
CRUISE CABLE



- 451 = MOTOR - VE BROWN
- 450 = MOTOR + VE BLUE
- 449 = CLUTCH - VE YELLOW/GREEN
- 448 = CLUTCH + VE BLACK



PACKARD 5-WAY CONNECTOR  
PART NUMBER 1203 4342



0745-GG5

(A) NOTE: - NEUTRAL OVERRIDE.  
NEUTRAL OVERRIDES ARE UNUSED.  
LINK PINS 9 OR 12 TO 11 ON E.C.U.

RELEASED PER S.O. NO. 10339  
REFERENCE S.O. NO.  
MUST MEET FEDERAL SPEC.

NEXT ASSEMBLY

SIMILAR TO

NO. REQ'D.