

# SECTION **STC**

## STEERING CONTROL SYSTEM

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**TILT & TELESCOPIC SYSTEM**

PFP:48805

**System Description**  
**OPERATION**

AGS000LD

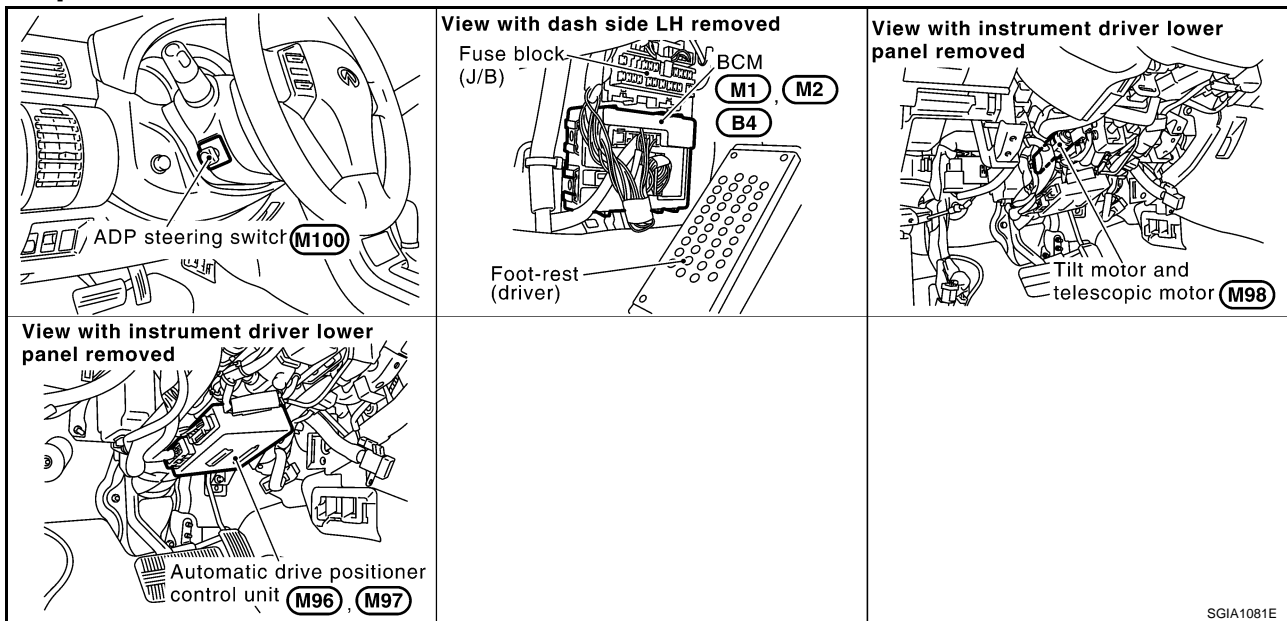
Steering wheel position can be adjusted with the ADP steering switch.

**NOTE:**

Steering wheel position can be manually operated with the ignition switch OFF.

**Component Parts and Harness Connector Location**

AGS000LE



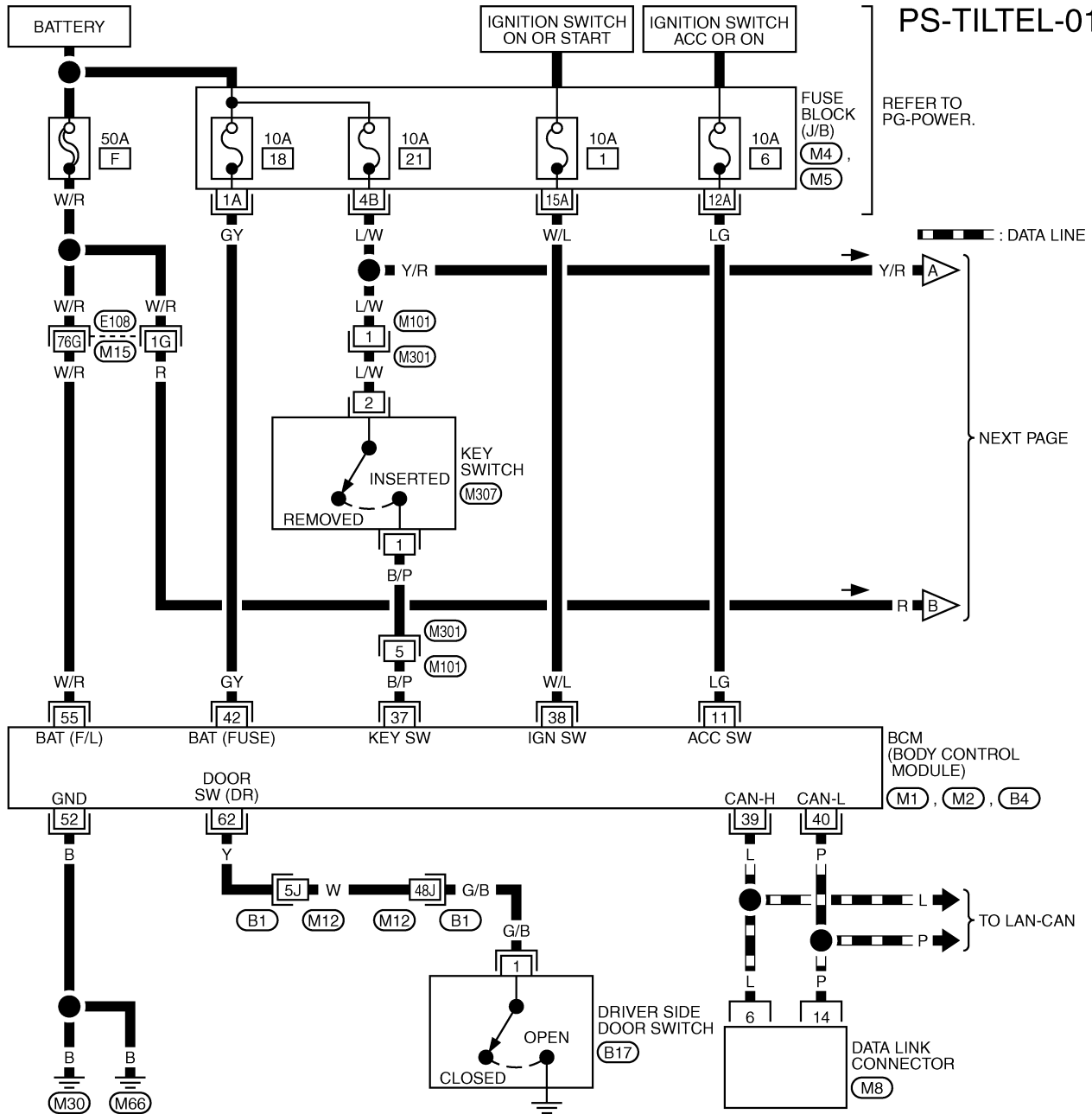
SGIA1081E

# TILT & TELESCOPIC SYSTEM

[TILT/TELESCOPIC]

AGS000LF

## Wiring Diagram



PS-TILTEL-01

REFER TO PG-POWER.

DATA LINE

NEXT PAGE

BCM (BODY CONTROL MODULE) (M1, M2, B4)

REFER TO THE FOLLOWING.  
 (E108), (B1) -SUPER MULTIPLE JUNCTION (SMJ)  
 (M4), (M5) -FUSE BLOCK-JUNCTION BOX (J/B)  
 (M1), (M2), (B4) -ELECTRICAL UNITS

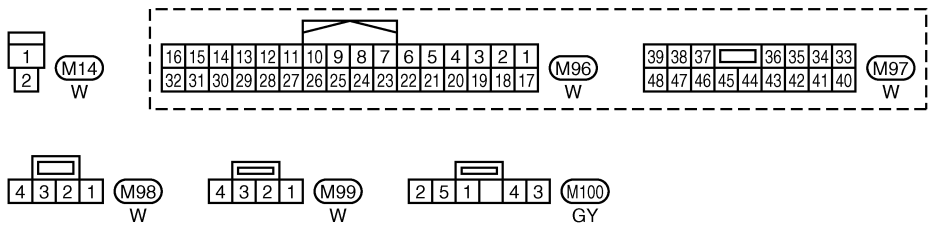
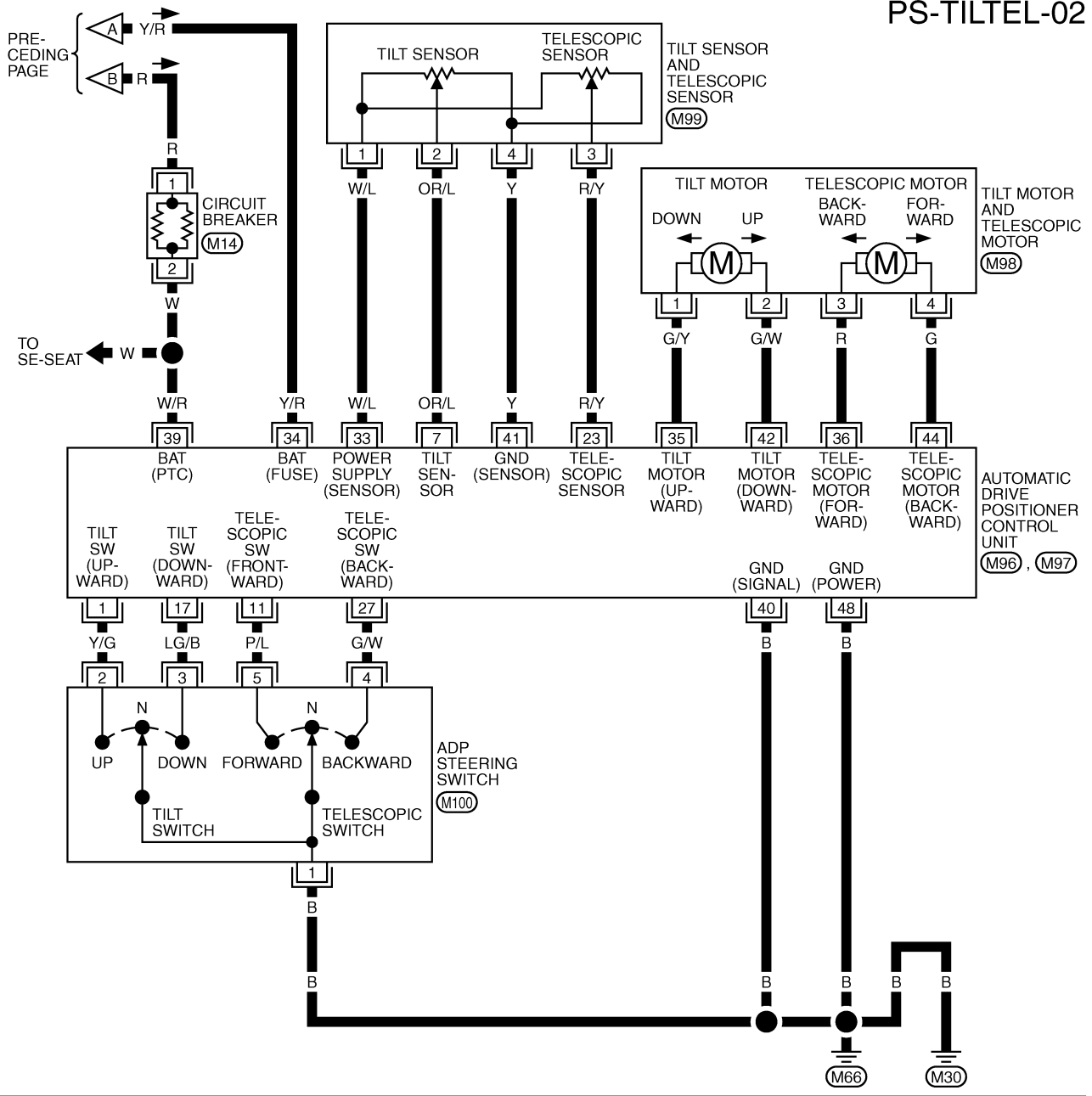
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TGWM0020E

# TILT & TELESCOPIC SYSTEM

[TILT/TELESCOPIC]

PS-TILTEL-02



TGWM0021E

# TILT & TELESCOPIC SYSTEM

[TILT/TELESCOPIC]

## Terminals and Reference Values for Automatic Drive Positioner Control Unit

AGS000LG

TERMI- NAL	WIRE COLOR	ITEM	CONDITION	VOLTAGE (V) (Approx.)
1	Y/G	Tilt switch UP signal	Tilt switch turned to upward	0
			Other than above	5
7	OR/L	Tilt sensor signal	Tilt position, top	2
			Tilt position, bottom	4
11	P/L	Telescopic switch FORWARD signal	Telescopic switch turned to forward	0
			Other than above	5
17	LG/B	Tilt switch DOWN signal	Tilt switch turned to downward	0
			Other than above	5
23	R/Y	Telescopic sensor input	Telescopic position, top	1
			Telescopic position, bottom	4
27	G/W	Telescopic switch BACKWARD signal	Telescopic switch turned to backward	0
			Other than above	5
33	W/L	Sensor power supply	–	5
34	Y/R	Power source (Fuse)	–	Battery voltage
35	G/Y	Tilt motor UP signal	Tilt switch turned to upward	Battery voltage
			Other than above	0
36	R	Telescopic motor FORWARD signal	Telescopic switch turned to forward	Battery voltage
			Other than above	0
39	W/R	Battery power supply	–	Battery voltage
40	B	Ground (Signal)	–	0
41	Y	Sensor ground	–	0
42	G/W	Tilt motor Down signal	Tilt switch turned to downward	Battery voltage
			Other than above	0
44	G	Telescopic motor BACKWARD signal	Telescopic switch turned to back ward	Battery voltage
			Other than above	0
48	B	Ground (Power)	–	0

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**Preliminary Check**  
**POWER SUPPLY AND GROUND CIRCUIT INSPECTION**

**1. CHECK FUSE**

Check if any of the following fuses in the Automatic drive Positioner control unit are blown.

Unit	Terminal No.	Voltage (V)
Automatic drive Positioner control unit	34	Approx. 12

OK or NG

OK >> GO TO 2.

NG >> If fuse is blown, be sure to eliminate cause of malfunction before installing new fuse. Refer to [PG-4, "POWER SUPPLY ROUTING CIRCUIT"](#) .

**2. CHECK POWER SUPPLY CIRCUIT (AUTOMATIC DRIVE POSITIONER CONTROL UNIT)**

1. Disconnect Automatic drive Positioner control unit connector.
2. Turn ignition switch ON.
3. Check voltage between Automatic drive Positioner control unit harness connector M96, M97 terminal 39 (W/R), 34 (Y/R) and ground.

Terminals		Power source	Condition	Voltage (V)
(+)	(-)			
Connector	Terminal			
M96, M97	39 (W/R), 34 (Y/R)	BAT power supply	Ignition switch OFF	Battery voltage

OK or NG

OK >> GO TO 3.

NG >> Repair or replace harness. Check harness for open or short between Automatic drive Positioner control unit and fuse.

**3. CHECK GROUND CIRCUIT (AUTOMATIC DRIVE POSITIONER CONTROL UNIT)**

1. Turn ignition switch OFF.
2. Check continuity between Automatic drive Positioner control unit harness connector M96, M97 terminal 40 (B), 48 (B) and ground.

Terminals		Condition	Continuity
(+)	(-)		
Connector	Terminal		
M96, M97	40 (B)	Ground Ignition switch OFF	Yes
	48 (B)	Ground Ignition switch OFF	Yes

OK or NG

OK >> Preliminary check is OK.

NG >> Repair or replace Automatic drive Positioner control unit ground harness.

**Symptom 1: Telescopic System does not Operate****1. CHECK STEERING WHEEL TELESCOPIC MECHANISM**

Check the following.

- Operation malfunction caused by steering wheel telescopic mechanism deformation or pinched harness or other foreign materials.
- Operation malfunction and interference with other parts by poor installation.

OK or NG

- OK >> GO TO 2.  
NG >> Repair the malfunctioning part and check again.

**2. CHECK TELESCOPIC SWITCH INPUT/OUTPUT**

1. Disconnect ADP steering switch connector.
2. Turn ignition switch ON.
3. Check voltage between ADP steering switch harness connector M100 terminals 4 (G/W), 5 (P/L) and ground.

Terminals		Voltage (V)	
(+)			
Connector	Terminal	(-)	
M100	4 (G/W)	Ground	Approx. 5V
	5 (P/L)	Ground	Approx. 5V

OK or NG

- OK >> GO TO 3.  
NG >> GO TO 5.

**3. CHECK ADP STEERING SWITCH GROUND CIRCUIT**

1. Turn ignition switch OFF.
2. Check continuity between ADP steering switch harness connector M100 terminal 1 (B) and ground.

**1 (B) – Ground : Continuity should exist.**

OK or NG

- OK >> GO TO 4.  
NG >> Replace or replace harness.

**4. CHECK TELESCOPIC SWITCH**

Check continuity between ADP steering switch connector terminals 4, 5 and 1.

Terminals	ADP steering switch operation	Continuity
4 – 1	Backward position	Yes
	Neutral or forward position	No
5 – 1	Forward position	Yes
	Neutral or backward position	No

OK or NG

- OK >> GO TO 6.  
NG >> Replace ADP steering switch.

## 5. CHECK HARNESS CONTINUITY

1. Disconnect Automatic drive Positioner control unit connector.
2. Check continuity between Automatic drive Positioner control unit harness connector M96, M97 terminals 11 (P/L), 27 (G/W) and ADP steering switch harness connector M100 terminals 4 (G/W), 5 (P/L).
3. Check continuity between Automatic drive Positioner control unit harness connector M96, M97 terminals 11 (P/L), 27 (G/W) and ground.

Terminals				Continuity
(+)		(-)		
Connector	Terminal	Connector	Terminal	
M96, M97	11 (P/L)	M100	5 (P/L)	Yes
	27 (G/W)		4 (G/W)	Yes
	11 (P/L)	Ground		No
	27 (G/W)	Ground		No

### OK or NG

- OK >> Replace Automatic drive Positioner control unit.  
 NG >> Repair or replace harness.

## 6. CHECK AUTOMATIC DRIVE POSITIONER CONTROL UNIT OUTPUT SIGNAL

1. Disconnect tilt motor and telescopic motor connector.
2. Check voltage between tilt motor and telescopic motor harness connector M98 terminals 3 (R), 4 (G) and ground.

Terminals			Condition	Voltage
(+)		(-)		
Connector	Terminal			
M98	3 (R)	Ground	Telescopic switch (FORWARD operation)	Battery voltage
	4 (G)	Ground	Telescopic switch (BACKWARD operation)	Battery voltage
	3 (R), 4 (G)		Ground	Telescopic switch OFF

### OK or NG

- OK >> Replace tilt motor and telescopic motor.  
 NG >> GO TO 7.

## 7. CHECK TELESCOPIC MOTOR CIRCUIT

1. Disconnect Automatic drive Positioner control unit and tilt motor and telescopic motor connectors.
2. Check continuity between Automatic drive Positioner control unit harness connector M96, M97 terminals 36 (R), 44 (G) and tilt motor and telescopic motor harness connector M98 terminals 3 (R), 4 (G).
3. Check continuity between Automatic drive Positioner control unit harness connector M96, M97 terminals 36 (R), 44 (G) and ground.

Terminals				Continuity
(+)		(-)		
Connector	Terminal	Connector	Terminal	
M96, M97	36 (R)	M98	3 (R)	Yes
	44 (G)		4 (G)	Yes
	36 (R)	Ground		No
	44 (G)	Ground		No

### OK or NG

- OK >> Replace automatic drive positioner control unit.  
 NG >> Repair or replace harness.



**Symptom 2: Tilt System does not Operate****1. CHECK STEERING WHEEL TILT MECHANISM**

Check the following.

- Operation malfunction caused by steering wheel tilt mechanism deformation or pinched harness or other foreign materials.
- Operation malfunction and interference with other parts by poor installation.

OK or NG

- OK >> GO TO 2.  
NG >> Repair the malfunctioning part and check again.

**2. CHECK TILT SWITCH INPUT/OUTPUT**

1. Disconnect ADP steering switch connector.
2. Turn ignition switch ON.
3. Check voltage between ADP steering switch harness connector M100 terminals 2 (Y/G), 3 (LG/B) and body ground.

Terminals		Voltage (V)
(+)		
Connector	Terminal	(-)
M100	2 (Y/G)	Ground
	3 (LG/B)	Ground
		Approx. 5V
		Approx. 5V

OK or NG

- OK >> GO TO 3.  
NG >> GO TO 5.

**3. CHECK ADP STEERING SWITCH GROUND CIRCUIT**

1. Turn ignition switch OFF.
2. Check continuity between ADP steering switch harness connector M100 terminal 1 (B) and body ground.

**1 (B) – Ground : Continuity should exist.**

OK or NG

- OK >> GO TO 4.  
NG >> Repair or replace harness.

**4. CHECK TILT SWITCH**

Check continuity between ADP steering switch connector terminals 2, 3 and 1.

Terminals	ADPSteering switch operation	Continuity
2 – 1	Tilt up position	Yes
	Neutral or tilt down position	No
3 – 1	Tilt down position	Yes
	Neutral or tilt up position	No

OK or NG

- OK >> GO TO 6.  
NG >> Replace ADP steering switch.

## 5. CHECK HARNESS CONTINUITY

1. Disconnect Automatic drive Positioner control unit connector.
2. Check continuity between Automatic drive Positioner control unit harness connector M96, M97 terminals 17 (LG/B), 1 (Y/G) and ADP steering switch harness connector M100 terminals 3 (LG/B), 2 (Y/G).
3. Check continuity between Automatic drive Positioner control unit harness connector M96, M97 terminals 17 (LG/B), 1 (Y/G) and ground.

Terminals				Continuity
(+)		(-)		
Connector	Terminal	Connector	Terminal	
M96, M97	1 (Y/G)	M100	2 (Y/G)	Yes
	17 (LG/B)		3 (LG/B)	Yes
	1 (Y/G)	Ground		No
	17 (LG/B)	Ground		No

### OK or NG

- OK >> Replace Automatic drive Positioner control unit.  
 NG >> Repair or replace harness.

## 6. CHECK AUTOMATIC DRIVE POSITIONER CONTROL UNIT OUTPUT SIGNAL

1. Disconnect tilt motor and telescopic motor connector.
2. Check voltage between tilt motor and telescopic motor harness connector M98 terminals 1 (G/Y), 2 (G/W) and ground.

Terminals			Condition	Voltage
(+)		(-)		
Connector	Terminal			
M98	1 (G/Y)	Ground	Tilt switch (UP operation)	Battery voltage
	2 (G/W)	Ground	Tilt switch (DOWN operation)	Battery voltage
	1 (G/Y), 2 (G/W)	Ground	Tilt switch OFF	0V

### OK or NG

- OK >> Replace tilt motor and telescopic motor.  
 NG >> GO TO 7.

**7. CHECK TILT MOTOR CIRCUIT**

1. Disconnect Automatic drive Positioner control unit and tilt motor and telescopic motor connectors.
2. Check continuity between Automatic drive Positioner control unit harness connector M96, M97 terminals 35 (G/Y), 42 (G/W) and tilt motor and telescopic motor harness connector M98 terminals 1 (G/Y), 2 (G/W).
3. Check continuity between Automatic drive Positioner control unit harness connector M96, M97 terminals 35 (G/Y), 42 (G/W) and body ground.

Terminals				Continuity
(+)		(-)		
Connector	Terminal	Connector	Terminal	
M96, M97	35 (G/Y)	M98	1 (G/Y)	Yes
	42 (G/W)		2 (G/W)	Yes
	35 (G/Y)	Ground		No
	42 (G/W)	Ground		No

**OK or NG**

- OK >> Replace automatic drive positioner control unit.
- NG >> Repair or replace harness.

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