NISSAN
FORKLIFT

SERVICE MANUAL

MODELS

1B1 / 1B2

PUBLICATION

SM06E-B12G0

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1B1 / 1B2

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NISSAN FORKLIFT

Drive Motor Diagnostic/Replacement Report

BARRETT Industrial Trucks

REPORT DATE: _____

1. Contact Information:

Customer Name/Location _____

Dealer Name/Location _____

Repairs by: End-User ☐ Dealer ☐

2. Equipment Information:

Model _____ Serial # _____ Hours _____

Customer Unit # _____ Purchase Date _____ Date Last PM _____ Hours Last PM _____

3. Application Information:

Floor conditions Clean ☐ Smooth ☐ Rough ☐ Dry/Dusty ☐ Wet ☐

# of Shifts _____ Running hours per shift _____ Operating days per week 1-2 ☐ 3-4 ☐ 5-6 ☐ 6-7 ☐

4. Previous Failure History:

Drive Motor Replaced Previously? Yes ☐ No ☐

If Yes, complete the following:

Fail Date _____ Hours _____ Serial Number of failed Drive Motor _____ Repair Date _____

Fully describe **both the nature and cause of the Drive Motor Problem** requiring it to be replaced:

_____

_____

_____

Was the replacement of the Drive Motor claimed while under warranty? Yes ☐ No ☐

If the answer to the above question was 'Yes' what was the Claim # _____

5. Current Failure Information:

Fail Date _____ Hrs _____ Motor Serial# _____

Repair Date _____ Condition of Battery, Voltage Readings: Static _____ Loaded _____

Fully describe **both the nature and cause of the Drive Motor Problem** requiring it to be replaced:

_____

_____

Provide the following information:

(1) Error/Trouble Codes displayed at time motor failed: _____

(2) Record of Inspection. Condition of following depending on type of Drive Motor, AC or DC.

Item	Good	Worn	Other	*If condition is "Other" please describe:*
1. Brushes	☐	☐	☐	_____
2. Brush Holder	☐	☐	☐	_____
3. Commutator	☐	☐	☐	_____
4. Armature	☐	☐	☐	_____

NFC Warranty Claim # _____ Claim Status: Pending ☐ Denied ☐ Appealed ☐ Rejected ☐

Serial # of new replacement Motor _____ Replaced by, (Name) _____

Complete Report in its entirety. Failure to provide all information will result in delays and/or denied claim.

NFC-Warranty. Drive Motor Replacement/Diagnostic Report. Revised May 24, 2011

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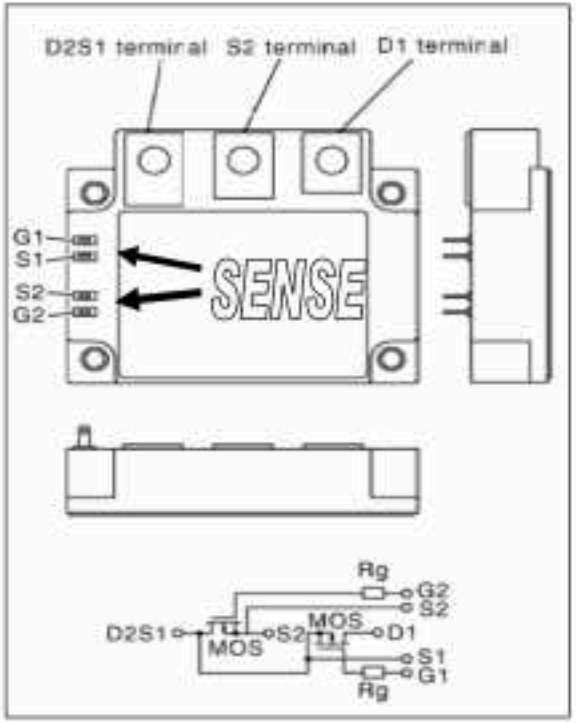
FUNCTIONAL TESTING OF FET MODULES

1N1 PUMP AND 1B1 - 1B2 PUMP / DRIVE FETS

STEP1	D1	+	OL
	D2S1	-	
STEP2	G1 SENSE	+	OL
	D2S1	-	
NOTE: STEP 3 MUST BE PERFORMED WITHIN 15 SECONDS OF STEP 2			
STEP3	D1	+	CONTINUITY
	D2S1	-	
NOTE: IF STEP 3 FAILS VERIFY STEP 2 IS CORRECT AND RE TEST			
STEP4	D1	+	OL
	G1 SENSE	-	
STEP 5	D1	+	OL
	D2S1	-	
STEP 6	D2S1	+	OL
	S2	-	
STEP 7	G2 SENSE	+	OL
	S2	-	
NOTE: STEP 8 MUST BE PERFORMED WITHIN 15 SECONDS OF STEP 7			
STEP 8	D2S1	+	CONTINUITY
	S2	-	
NOTE: IF STEP 8 FAILS VERIFY STEP 7 IS CORRECT AND RE TEST			
STEP 9	S2	+	OL
	G2 SENSE	-	
STEP 10	D2S1	+	OL
	S2	-	
STEP 11	D2S1	+	CONTINUITY
	S1 SENSE	-	
STEP 12	S2	+	CONTINUITY
	S2 SENSE	-	

THIS TEST WAS VERIFIED WITH THE USE OF A DIGITAL VOM IN THE DIODE TEST MODE, USE OF AN ANALOG METER WILL PROVIDE INCORRECT TEST VALUES.

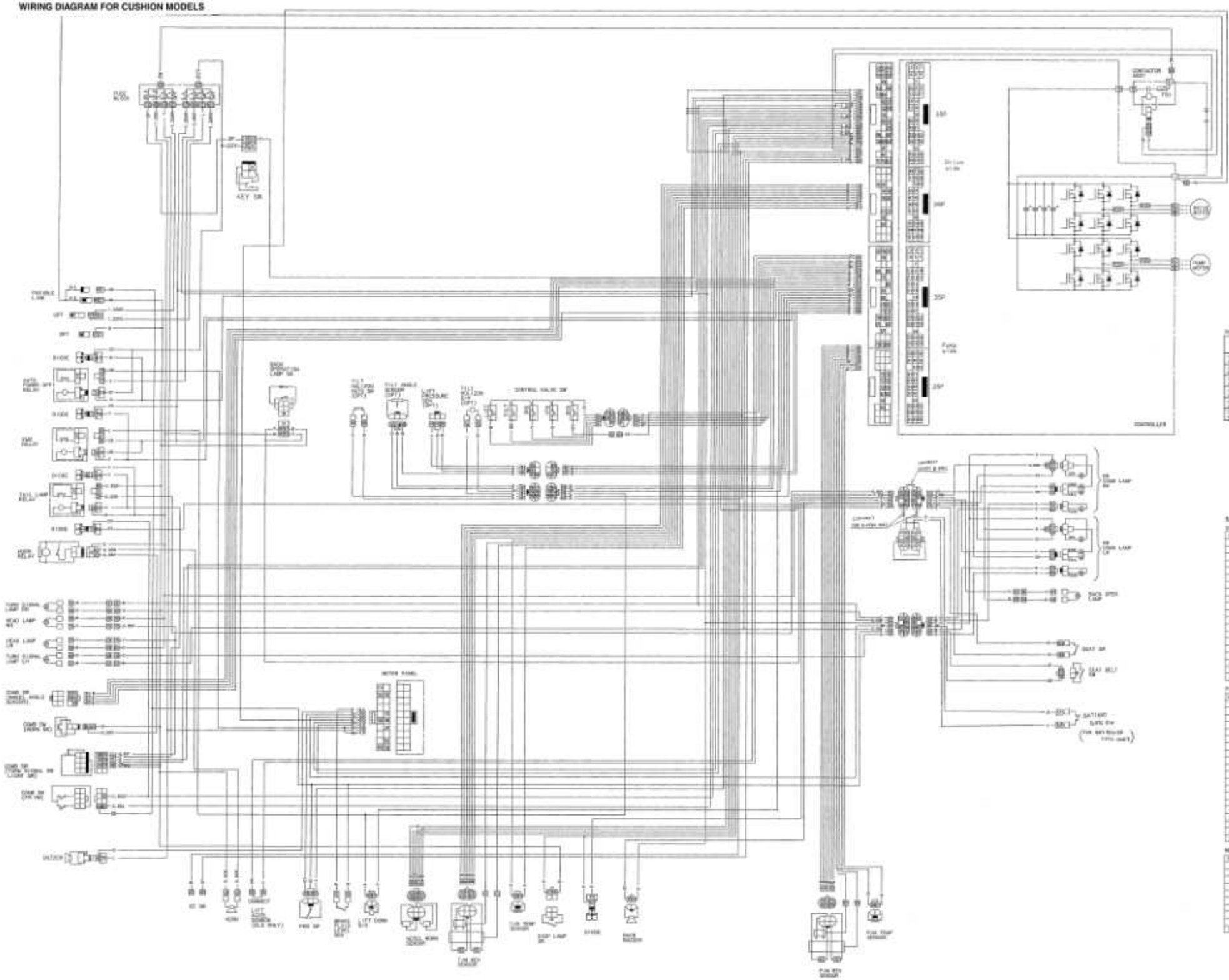
**** NOTE: DIGITAL METER MUST HAVE A MINIMUM OF 4.5 V OUTPUT IN DIODE TEST MODE ****



IF ANY OF THE ABOVE TEST VALUES DO NOT MATCH TEST HAS CONFIRMED A FAILURE

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WIRING DIAGRAM FOR CUSHION MODELS



NOTE:
1. The number indicates wire size, and asterisked indicates wire color by 1.25R WHITE.
   Unasterisked wire size is No. 0.5.
2. The number of three-columns indicates circuit number.
3. Circle and connector mark conform with Table-3.
4. The correspondence of wire size is shown with Table-2.

ARRAY						

Wire size specified by ISO 6722 (mm²)	Nominal Width Number
0.5	AWG NO. 20
0.85	AWG NO. 18
1.25	AWG NO. 16
2	AWG NO. 14
3	AWG NO. 12

NAME OF TERMINALS

DRIVE (TRACTION) CONTROL

No.	Item	No.	Item
1	B.P.D. RELAY DRIVE	21	HIGH MAST SWITCH
2	HEAT CHARGE OUT	22	REVERSE SWITCH
3	MAIN CONTACTOR DRIVE +	23	SEAT SWITCH
4	MAIN CONTACTOR DRIVE -	24	TILL SWITCH
5	KEY SW (+)(B)	25	SWITCH (RR)
6	KEY SW (+)(ACC)	26	SWITCH (RR)
7	FLASHER POWER	27	ACCUTRAN SWITCH
8	ACCEL SENSOR (5V)	28	(+) TO C-CONTROLLER (5V)
9	ACCEL SENSOR POWER	29	(-) TO C-CONTROLLER (GND)
10	HEADLIGHT OUT 2	30	LEFT TURN SWITCH
11	ACCEL SENSOR SIGNAL A	31	SM REV. SEN. POWER
12	ACCEL SENSOR SIGNAL B	32	SM REV. SEN. GND
13	HEADLIGHT OUT 1	33	SM REV. SEN. SIGNAL A
14	HEADLIGHT OUT 2	34	SM REV. SEN. SIGNAL B
15	LEFT FLASHER OUT	35	SM REV. SEN. SIGNAL A GND
16	HEADLIGHT OUT 3	36	SM REV. SEN. SIGNAL B GND
17	CONTROL SWITCH	37	SM REV. SEN. POWER SHIELD
18	KEY SW (PRESENT)	38	SM REV. SEN. SIGNAL SHIELD
19	CRUISE BRAKE SWITCH	39	SM TEMP. SENSOR (-)
20	BRAKE SWITCH	40	SM TEMP. SENSOR (-)

PUMP CONTROL

No.	Item	No.	Item
1	LIFT DOWN SOL. (PWM DRIVE)	24	GND SWITCH
2	TILT WORK SOL. (PWM DRIVE)	25	ATM SWITCH
3	SOL. POWER RELAY	26	CST SWITCH
4	PA C SOLENOID (PWM DRIVE)	28	LIFT UP SWITCH
5	EMERGENCY VALVE	29	TILT SWITCH
6	TYPE ANGLE SEN. POWER	31	LIFT ACCEL SEN. GND
7	STEER ANGLE SEN. GND	32	OIL PRESS SEN. POWER
8	TILT ANGLE SENSOR POWER	33	OIL PRESS SEN. SIGNAL
9	TYPE ANGLE SEN. GND	34	PA REV. SEN. GND
10	STEER ANGLE SEN. POWER	35	PA REV. SEN. SIGNAL A
11	TYPE ANGLE SEN. SIGNAL	36	PA REV. SEN. SIGNAL B
12	TILT ANGLE SENSOR GND	38	PA REV. SEN. SIGNAL A GND
13	TILT ANGLE SENSOR SIGNAL	41	PA REV. SEN. SIGNAL B GND
14	OPT LOCK/UNLOCK	42	PA REV. SEN. POWER
15	LIFT ACCEL SEN. POWER	46	PA REV. SEN. GND
16	STEER ANGLE SEN. SIGNAL A	50	PA REV. SEN. POWER SHIELD
20	LIFT ACCEL SEN. SIGNAL	51	PA REV. SEN. SIGNAL SHIELD
21	STEER ANGLE SEN. SIGNAL B	52	CNT TEMP. SENSOR +
22	STEER ANGLE SEN. SIGNAL H	54	CNT TEMP. SENSOR +
23	TILT HORIZONTAL SWITCH		

METER PANEL

No.	Item	No.	Item
1	Battery voltage	11	Power GND
2	Battery power	12	Back lamp input
3	Back terminal	13	OPT relay 2
4	Brake fluid level SW	14	OPT relay 1
5	Seat belt SW	15	Key SW power to the CAN
6	Parking BK lap signal	16	Back terminal
7	Back terminal	17	Back terminal
8	Back terminal	18	Back terminal
9	Charging state SW	19	C to M communication data
10	Battery full level sensor	20	CAN C communication data

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