A TEREX COMPANY

Service Manual

Serial Number Range

Z-45/25
Z-45/25J

Bi-Energy Power

from Z452510A-39314
to Z452513A-48152

Part No. 237062

Rev B

September 2015

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SPECIFICATIONS

Hydraulic Hose and Fitting Torque Specifications

Your machine is equipped with Parker Seal-Lok™ ORFS or 37° JIC fittings and hose ends. Genie specifications require that fittings and hose ends be torqued to specification when they are removed and installed or when new hoses or fittings are installed.

Seal-Lok™ Fittings
(hose end - ORFS)

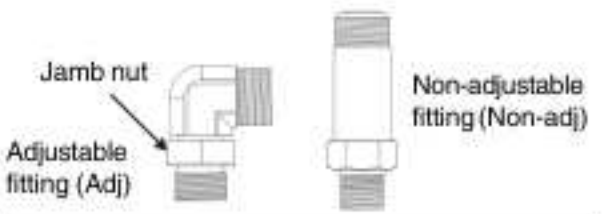
SAE Dash size	Torque
-4	10 ft-lbs / 13.6 Nm
-6	30 ft-lbs / 40.7 Nm
-8	40 ft-lbs / 54.2 Nm
-10	60 ft-lbs / 81.3 Nm
-12	85 ft-lbs / 115 Nm
-16	110 ft-lbs / 150 Nm
-20	140 ft-lbs / 190 Nm
-24	180 ft-lbs / 245 Nm

JIC 37° Fittings
(swivel nut or hose connection)

SAE Dash size	Thread Size	Flats
-4	7/16-20	2
-6	9/16-18	1 1/4
-8	3/4-16	1
-10	7/8-14	1
-12	1 1/16-12	1
-16	1 5/16-12	1
-20	1 5/8-12	1
-24	1 7/8-12	1

SAE O-ring Boss Port
(tube fitting - installed into Aluminum)
(all types)

SAE Dash size	Torque
-4	14 ft-lbs / 19 Nm
-6	23 ft-lbs / 31.2 Nm
-8	36 ft-lbs / 54.2 Nm
-10	62 ft-lbs / 84 Nm
-12	84 ft-lbs / 114 Nm
-16	125 ft-lbs / 169.5 Nm
-20	151 ft-lbs / 204.7 Nm
-24	184 ft-lbs / 249.5 Nm



SAE O-ring Boss Port
(tube fitting - installed into Steel)

SAE Dash size		Torque
-4	ORFS / 37° (Adj)	15 ft-lbs / 20.3 Nm
	ORFS (Non-adj)	26 ft-lbs / 35.3 Nm
	37° (Non-adj)	22 ft-lbs / 30 Nm
-6	ORFS (Adj / Non-adj)	35 ft-lbs / 47.5 Nm
	37° (Adj / Non-adj)	29 ft-lbs / 39.3 Nm
-8	ORFS (Adj / Non-adj)	60 ft-lbs / 81.3 Nm
	37° (Adj / Non-adj)	52 ft-lbs / 70.5 Nm
-10	ORFS (Adj / Non-adj)	100 ft-lbs / 135.6 Nm
	37° (Adj / Non-adj)	85 ft-lbs / 115.3 Nm
-12	(All types)	135 ft-lbs / 183 Nm
-16	(All types)	200 ft-lbs / 271.2 Nm
-20	(All types)	250 ft-lbs / 339 Nm
-24	(All types)	305 ft-lbs / 413.5 Nm

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FAULT CODE CHART

Fault Code	Programmer	Condition	Possible Causes	Solution
21	Throttle fault 1	Machine will not drive	Open in the WH/RD wire #32, pin 14 OR the RD/WH wire #29, pin 16 between the motor controller and the drive joystick OR pin 14 is internally shorted to power or ground OR the potentiometer on the joystick is defective.	Consult the Genie service department.
	Throttle fault 2	Machine will not drive	WH/Rd wire #32, pin 14 is shorted to power or ground OR the potentiometer on the drive joystick is defective.	Consult the Genie service department.
31	CONT DRVR OC	Machine will not drive	Main contactor PR1 coil is defective OR brake release relay CR5 is defective OR motor controller is defective.	Replace PR1 contactor OR CR5 relay OR motor controller.
32	Main cont welded	Machine will not drive	Main contactor PR1 contacts stuck closed OR green wire at pin 17 on the motor controller is shorted to ground OR an open in the drive motor armature wiring OR the motor controller has an internal short to ground.	Consult the Genie service department.
33	Precharge fault	Machine will not drive	External short between B+ terminal on motor controller and ground OR motor controller is defective.	Repair short between B+ terminal and ground OR replace motor controller. Note: Short can be on any part of the circuit connected to the B+ terminal on the motor controller.

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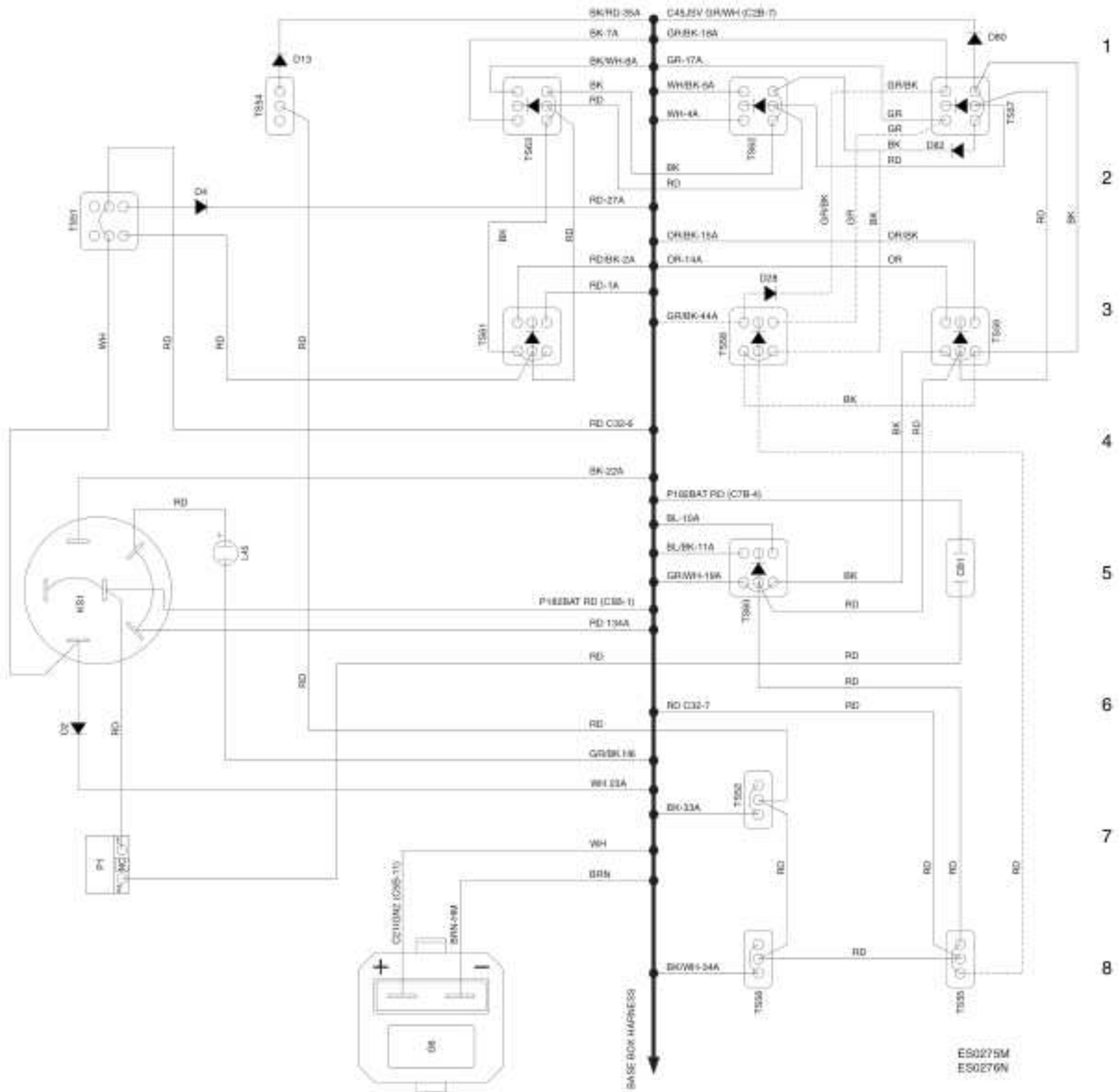
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Ground Control Box Switch Panel Wiring Diagram, (AS) (from serial number Z452511A-40560 to Z452513A-45734)

COMPONENT INDEX - GROUND CONTROLS

LABEL	DESCRIPTION
CB1	CONTROLS CIRCUIT BREAKER, 15A
CR1	48V DC POWER RELAY
CR2	48V DC POWER RELAY
CR3	AUXILIARY PUMP RELAY
CR4	HORN RELAY
CR5	BRAKE RELEASE RELAY
CR20	PRIMARY PUMP RELAY
G2	ROGRMETER
K51	KEY SWITCH
L2	LED - FAULT INDICATOR
L4E	LED - PLATFORM OVERLOAD
P1	EMERGENCY STOP BUTTON
TS51	AUXILIARY PUMP TOGGLE SWITCH
TS52	ENGINE START TOGGLE SWITCH
TS54	RPM SELECT TOGGLE SWITCH
TS55	FUNCTION ENABLE TOGGLE SWITCH
TS56	GLOW PLUG TOGGLE SWITCH
TS57	PLATFORM ROTATE TOGGLE SWITCH
TS58	JIB BOOM UP / DOWN TOGGLE SWITCH (OPTION)
TS59	PLATFORM LEVEL UP / DOWN TOGGLE SWITCH
TS60	SECONDARY BOOM UP / DOWN TOGGLE SWITCH
TS61	PRIMARY BOOM UP / DOWN TOGGLE SWITCH
TS62	TURNTABLE ROTATE TOGGLE SWITCH
TS63	PRIMARY BOOM EXTEND / RETRACT TOGGLE SWITCH

NOTE: DASHED LINES INDICATE OPTIONS.



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SPECIFICATIONS

SAE FASTENER TORQUE CHART

• This chart is to be used as a guide only unless noted elsewhere in this manual •

SIZE	THREAD	Grade 5				Grade 8				A574 High Strength Black Oxide Bolts	
		LUBED		DRY		LUBED		DRY		LUBED	
		in-lbs	Nm	in-lbs	Nm	in-lbs	Nm	in-lbs	Nm	in-lbs	Nm
1/4	20	80	9	100	11.3	110	12.4	140	15.8	130	14.7
	28	90	10.1	120	13.5	120	13.5	160	18	140	15.8
		LUBED		DRY		LUBED		DRY		LUBED	
		ft-lbs	Nm	ft-lbs	Nm	ft-lbs	Nm	ft-lbs	Nm	ft-lbs	Nm
5/16	18	13	17.6	17	23	18	24	25	33.9	21	28.4
	24	14	19	19	25.7	20	27.1	27	36.6	24	32.5
3/8	16	23	31.2	31	42	33	44.7	44	59.6	38	51.5
	24	26	35.2	35	47.4	37	50.1	49	66.4	43	58.3
7/16	14	37	50.1	49	66.4	50	67.8	70	94.7	61	82.7
	20	41	55.5	55	74.5	60	81.3	80	108.4	68	92.1
1/2	13	57	77.3	75	101.6	80	108.4	110	149	93	126
	20	64	86.7	85	115	90	122	120	162	105	142
9/16	12	80	108.4	110	149	120	162	150	203	130	176
	18	90	122	120	162	130	176	170	230	140	189
5/8	11	110	149	150	203	160	217	210	284	180	244
	18	130	176	170	230	180	244	240	325	200	271
3/4	10	200	271	270	366	280	379	360	515	320	433
	16	220	298	300	406	310	420	420	569	350	474
7/8	9	320	433	430	583	450	610	610	827	510	691
	14	350	474	470	637	500	678	670	908	560	759
1	8	480	650	640	867	680	922	910	1233	770	1044
	12	530	718	710	962	750	1016	990	1342	840	1139
1 1/8	7	590	800	790	1071	970	1315	1290	1749	1090	1477
	12	670	908	890	1206	1080	1464	1440	1952	1220	1654
1 1/4	7	840	1138	1120	1518	1360	1844	1820	2467	1530	2074
	12	930	1260	1240	1681	1510	2047	2010	2725	1700	2304
1 1/2	6	1460	1979	1950	2643	2370	3213	3160	4284	2670	3620
	12	1640	2223	2190	2969	2670	3620	3560	4826	3000	4067

METRIC FASTENER TORQUE CHART

• This chart is to be used as a guide only unless noted elsewhere in this manual •

Size	Class 4.6				Class 8.8				Class 10.9				Class 12.9			
(mm)	LUBED		DRY		LUBED		DRY		LUBED		DRY		LUBED		DRY	
	in-lbs	Nm	in-lbs	Nm	in-lbs	Nm	in-lbs	Nm	in-lbs	Nm	in-lbs	Nm	in-lbs	Nm	in-lbs	Nm
5	16	1.8	21	2.4	41	4.63	54	6.18	58	6.63	78	8.84	68	7.75	91	10.3
6	19	3.05	36	4.07	69	7.87	93	10.5	100	11.3	132	15	116	13.2	155	17.6
7	45	5.12	60	6.83	116	13.2	155	17.6	167	18.9	223	25.2	195	22.1	260	29.4
	LUBED		DRY		LUBED		DRY		LUBED		DRY		LUBED		DRY	
	ft-lbs	Nm	ft-lbs	Nm	ft-lbs	Nm	ft-lbs	Nm	ft-lbs	Nm	ft-lbs	Nm	ft-lbs	Nm	ft-lbs	Nm
8	5.4	7.41	7.2	9.88	14	19.1	18.8	25.5	20.1	27.3	26.9	36.5	23.6	32	31.4	42.6
10	10.8	14.7	14.4	19.6	27.9	37.8	37.2	50.5	39.9	54.1	53.2	72.2	46.7	63.3	62.3	84.4
12	18.9	25.6	25.1	34.1	48.8	66	64.9	88	69.7	94.5	92.2	125	81	110	108	147
14	30.1	40.8	40	54.3	77.4	105	103	140	110	150	147	200	129	175	172	234
16	46.9	63.6	62.5	84.8	125	170	166	226	173	235	230	313	202	274	269	365
18	64.5	87.5	86.2	117	171	233	229	311	238	323	317	430	278	377	371	503
20	91	124	121	165	243	330	325	441	337	458	450	610	394	535	525	713
22	124	169	166	225	331	450	442	600	458	622	612	830	536	727	715	970
24	157	214	210	285	420	570	562	762	583	791	778	1055	682	925	909	1233

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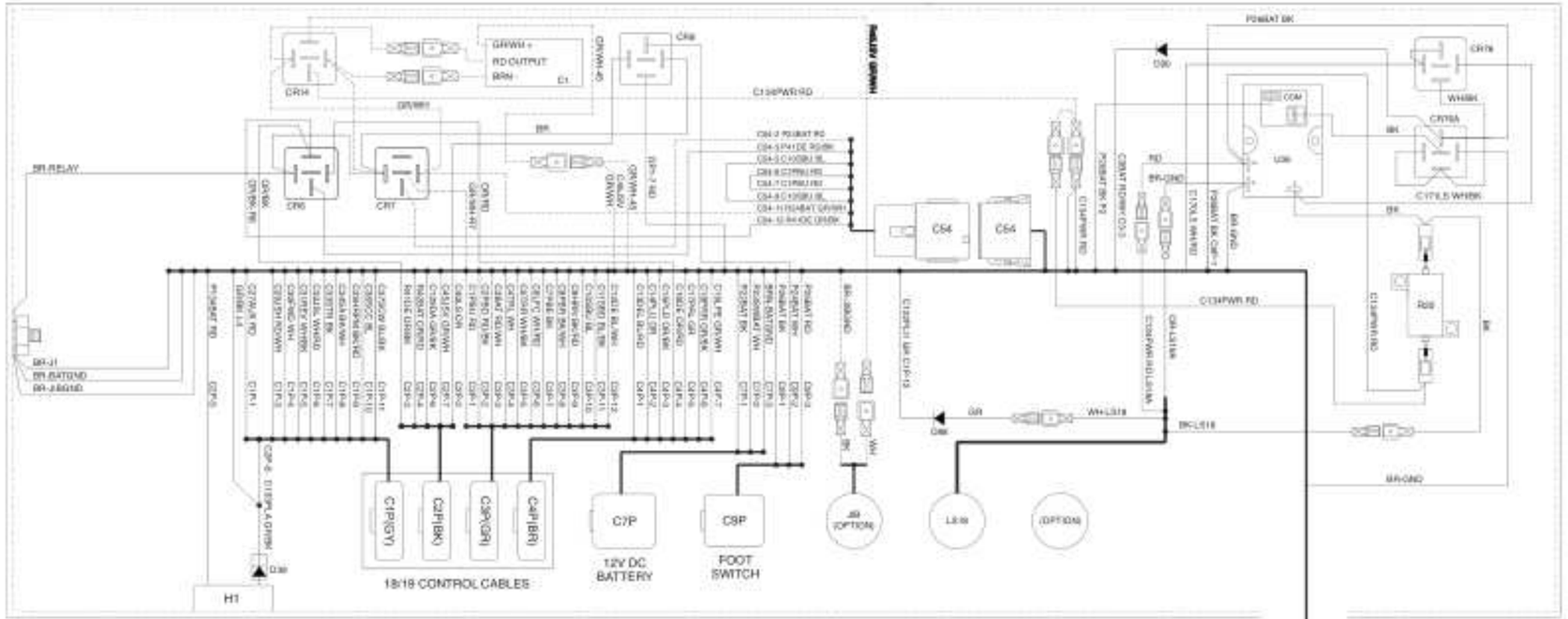
Platform Control Box Wiring Diagram, (AS)

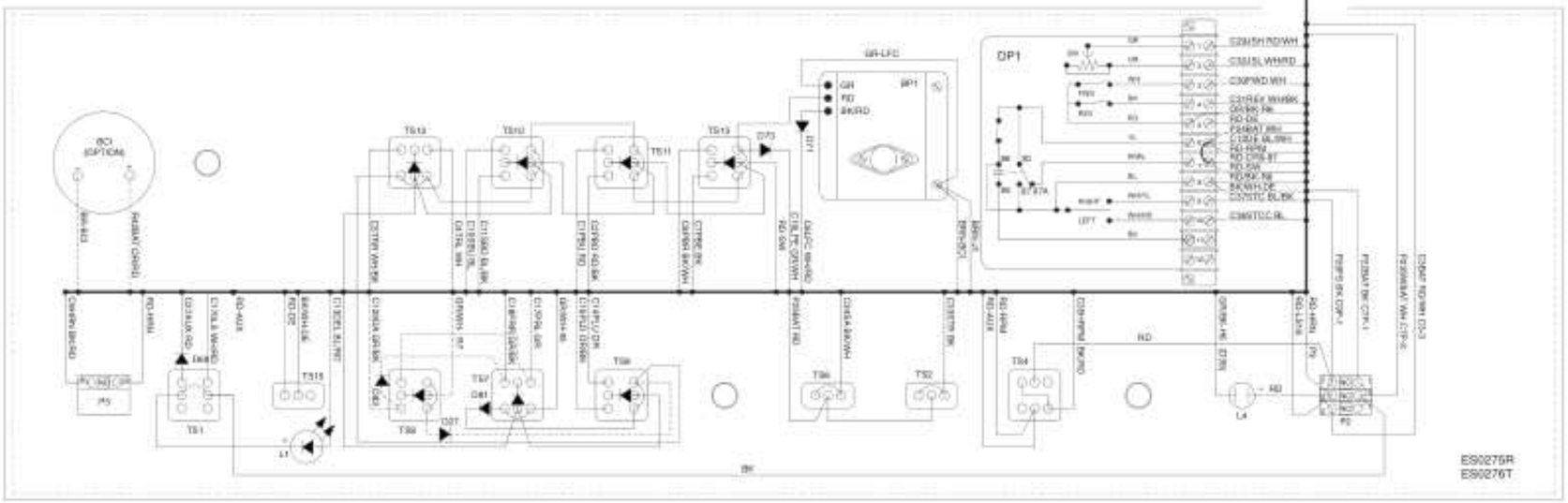
(from serial number Z452513A-45735)

COMPONENT INDEX - PLATFORM CONTROLS

LABEL	DESCRIPTION
BCI	BATTERY CHARGE INDICATOR (OPTION)
BP1	ROTARY FLOW CONTROL DIAL
C1	TIME DELAY CAPACITOR (OPTION)
CR6	DRIVE ENABLE RELAY
CR7	JIB SELECT RELAY (OPTION)
CR8	LIFT / DRIVE RELAY
CR14	JIB VALVE RELAY (OPTION)
CR76	AUXILIARY RECOVERY RELAY, PLATFORM OVERLOAD
CR76A	AUXILIARY RECOVERY RELAY, PLATFORM OVERLOAD
DP1	DRIVE / STEER JOYSTICK
H1	TILT ALARM
L1	LED - DRIVE ENABLE
L4	LED - PLATFORM OVERLOAD
LS16	LIMIT SWITCH - PLATFORM OVERLOAD
P2	EMERGENCY STOP BUTTON
P3	HORN BUTTON
R20	RESISTOR - 4.7K Ω
TS1	AUXILIARY PUMP TOGGLE SWITCH
TS2	ENGINE START TOGGLE SWITCH
TS4	ENGINE RPM SELECT TOGGLE SWITCH
TS6	GLOW PLUG TOGGLE SWITCH
TS7	PLATFORM ROTATE CW / CCW TOGGLE SWITCH
TS8	JIB BOOM UP / DOWN TOGGLE SWITCH (OPTION)
TS9	PLATFORM LEVEL UP / DOWN TOGGLE SWITCH
TS10	SECONDARY BOOM UP / DOWN TOGGLE SWITCH
TS11	PRIMARY BOOM UP / DOWN TOGGLE SWITCH
TS12	TURNTABLE ROTATE CW / CCW TOGGLE SWITCH
TS13	PRIMARY BOOM EXTEND / RETRACT TOGGLE SWITCH
TS15	DRIVE ENABLE TOGGLE SWITCH
U35	TIME DELAY RELAY - 2 SECOND, 30A

NOTE: DASHED LINES INDICATE OPTIONS.





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