

Safety Bulletin

No: SB049

Rev: 0

Date: 15 Mar 2010

DRS Power Technology, Inc. AC Interlock Control Cable Rev. A on MD500 Drive



Tesco Corporation
3993 W. Sam Houston Pkwy N.
Suite 100
Houston, Texas.77043
Phone: (713) 359-7000
www.tescocorp.com

BACKGROUND INFORMATION:

DRS Power Technology, Inc. has advised TESCO that there is a risk of electrical shock associated with the AC interlock control cable rev. A (Tesco p/n 9676) on the MD500 drive (Tesco p/n 12937). The MD500 drive is used on ECI and EMI-450 top drives.

The shock hazard can be mitigated by keeping the AC interlock control cable rev. A permanently connected to the J1 connector on the side of the MD500 system controller box. The J1 connector is a male connector that has exposed prongs that remain live (and potentially dangerous) even with the AC interlock control cable rev. A disconnected.

Additionally DRS Power Technology, Inc. has developed a procedure for retrofitting a female connector to the J1 connector. The advisory from DRS Power Technology, Inc. is attached to this document.

AFFECTED PRODUCT:

ECI and EMI-450 Top Drives.

ACTION REQUIRED:

1. Immediately enact a policy that the AC interlock control cable rev. A must never be disconnected from the side of the MD500 system controller box. A notice informing of the hazard should be securely affixed to the MD500 controller box adjacent to the J1 connector.
2. Order the replacement AC interlock control cable rev. B (Tesco p/n 5000595) and the SMC precharge power cable rev. B (Tesco p/n 5000596). The cables come equipped with the necessary connectors to be retrofit to the MD500 system controller box.
3. Retrofit the cables and connectors as per the attached advisory from DRS Power Technology, Inc.

Contact your local TESCO Parts and Service Center for further information regarding this bulletin and or supply of affected components noted above.

DRS Power Technology, Inc. - Engineering Change Notice (CN)

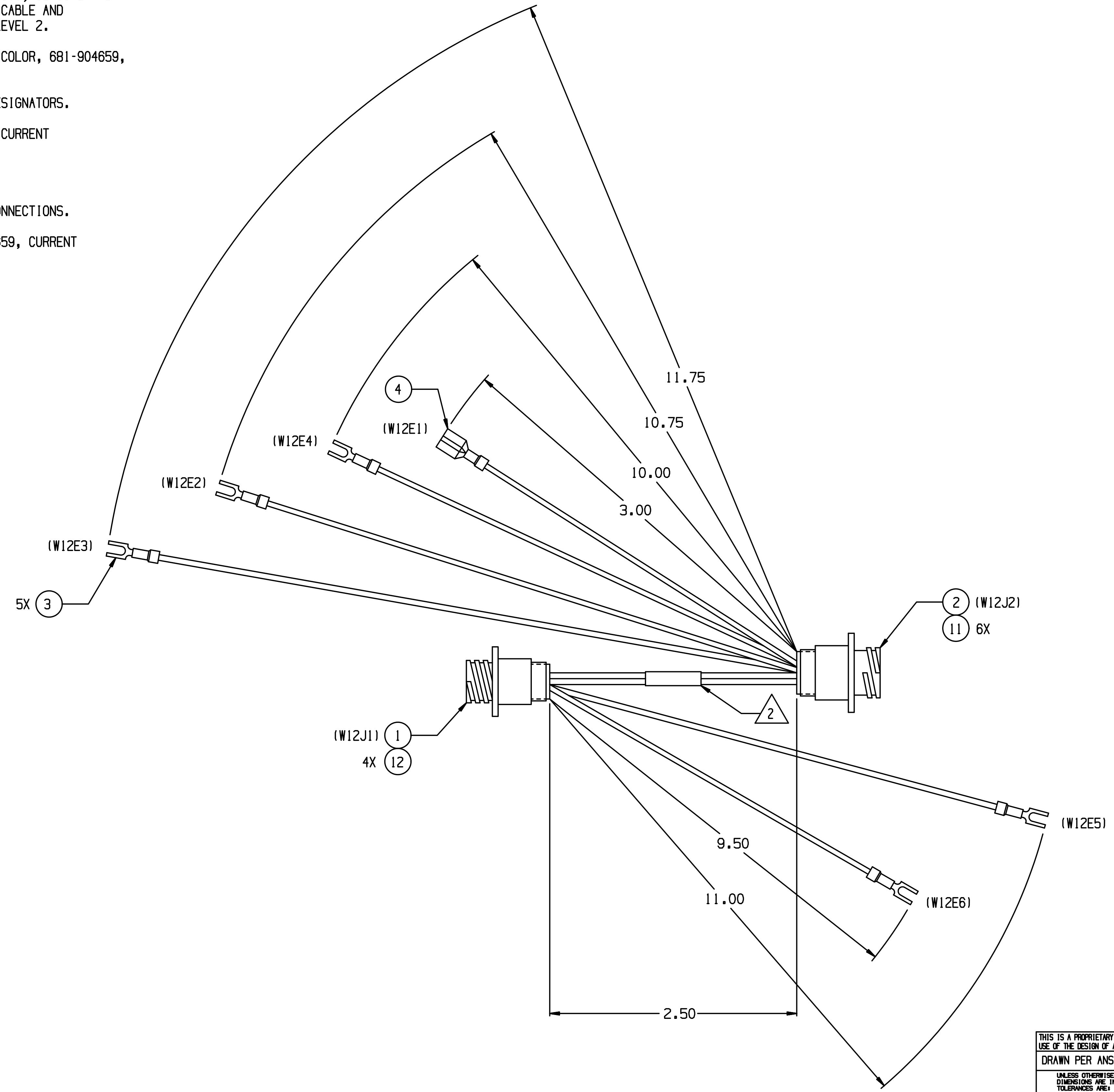
CN No. 08-7003

<i>Dwg changes by:</i> R.L.Evans		<i>YYYY-MM-DD</i> 2008-02-11	<i>Shoporder:</i> MD500	<i>Customer:</i> Tesco	
<i>Item No.</i>	<i>ML Item No.</i>	<i>Dwg Title</i>	<i>Dwg No.</i>	<i>Sheet No.</i>	<i>Revision</i>
1	N/A	CONTROL POWER CABLE, W12	681-904659	ALL	B
2	N/A	CONTROL POWER CABLE, W12	080-904659	1	B
3	N/A	AC INTERLOCK CONTROL CABLE, W1	681-904741	ALL	B
4	N/A	AC INTERLOCK CONTROL CABLE, W1	080-904741	1	B
5					
6					
<i>Primary Cause Code:</i>		SP - Specification Driven			
<i>Secondary Cause Code:</i>		SP02 - Change in Specification			
<i>Itemized description of changes:</i>		<i>Approximate Drafting / Engineering Hours (total):</i>		18	
<p>1. Change item 1, connector p/n from 104055 (Amp 206061-1) to 111183 (Tyco/Amp 206430-1). Change qty of item 11, 103936 Contact Pin from 10 to 6. Add item 12, 103937 Contact Socket qty 4.</p> <p>2. At connector W12J1 (zone B6), change item 11 to item 12.</p> <p>3. Change qty of item 1, 104054 Connector Plug from 2 to 1. Change qty of item 2, 103937 Contact Socket from 8 to 4. Add item 7, 111184 (Tyco/Amp 206429-1) Connector Recept qty 1. Add item 8, 103936 Contact Pin qty 4.</p> <p>4. At connector W1P1 (zone C7), change item 1 to item 7 and item 2 to item 8.</p>					
<i>Checked by:</i> F. HOLDER		<i>YYYY-MM-DD</i> 2008-02-11	<i>Issued by:</i> F. HOLDER	<i>YYYY-MM-DD</i> 2008-02-11	

NOTES:

1. FINISHED ASSEMBLY SHALL BE PER IPC-A-610, CLASS 2 AND INSPECTION AND TESTING PROCEDURE FOR CABLE AND HARNESS ASSEMBLIES, 4.10.0005, TEST LEVEL 2.
2. IDENTIFY BY LABELING, IN CONTRASTING COLOR, 681-904659, ASSEMBLY NUMBER AND CURRENT REVISION.
3. MARK ALL CONNECTORS WITH REFERENCE DESIGNATORS.
4. REFERENCE BILL OF MATERIALS, 904659, CURRENT REVISION, FOR ASSEMBLY COMPONENTS.
5. CABLE LENGTHS TO BE $\pm .25$.
6. REFER TO WIRE TABLE FOR ELECTRICAL CONNECTIONS.
7. REFERENCE SCHEMATIC DIAGRAM, 060-904659, CURRENT REVISION, FOR TROUBLESHOOTING.

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	FORMAL RELEASE		
B	REVISED PER CNOB-7003	R.L.EVANS	2008-02-11 F.HOLDER



FROM	WITH FN	USING FN	TO	WITH FN
W12J1-1	11	6 (WHT)	W12E5	3
W12J1-2	11	10 (YEL)	W12J2-5	11
W12J1-3	11	9 (GRY)	W12J2-4	11
W12J1-4	11	8 (BLK)	W12E6	3
W12J2-1	11	8 (BLK)	W12E1	4
W12J2-2	11	6 (WHT)	W12E2	3
W12J2-3	11	5 (ORG)	W12E3	3
W12J2-6	11	7 (BLU)	W12E4	3
W12J2-7	-	NC	-	-

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SEE SEPARATE PARTS LIST

THIS IS A PROPRIETARY DESIGN OF DRS ELECTRIC POWER TECHNOLOGIES, INC. REPRODUCTION, DISCLOSURE OR USE OF ANY ASSEMBLY, SUBASSEMBLY OR PART HEREIN OR THE USE OF THE DESIGN OF ANY SUCH ASSEMBLY, SUBASSEMBLY OR PART IS PERMISSIBLE ONLY IF EXPRESSLY AUTHORIZED IN WRITING BY DRS ELECTRIC POWER TECHNOLOGIES, INC.

DRAWN PER ANSI STANDARDS		CONTRACT NO.	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: ANGLES ±0°-30" ±.1 DECIMAL ±.08 ±.005 DECIMAL ±.015 SURFACE FINISH 125	DRWN	DRS POWER TECHNOLOGY, INC. FITCHBURG, MA 01420	
DO NOT SCALE PRINT	CHECKED	TITLE	
MATERIAL	MECHANICAL ENGINEER	CONTROL POWER CABLE (W12)	
THIRD ANGLE	ELECTRICAL ENGINEER	REV. B	
	MECH SYSTEMS	SIZE D	CAGE CODE 1W783
	PROGRAM	DRG NO. 080-904659	SCALE NONE
	MANUFACTURING	SHEET 1 OF 1	
	QUALITY		
	ISSUED		



DRS POWER TECHNOLOGY, INC.

DRS Electric Power Technologies, Inc. Single Level Manufacturing Bill of Materials



ASSEMBLY: 681-904659 REV: B

DESC: CABLE,CONTROL POWER

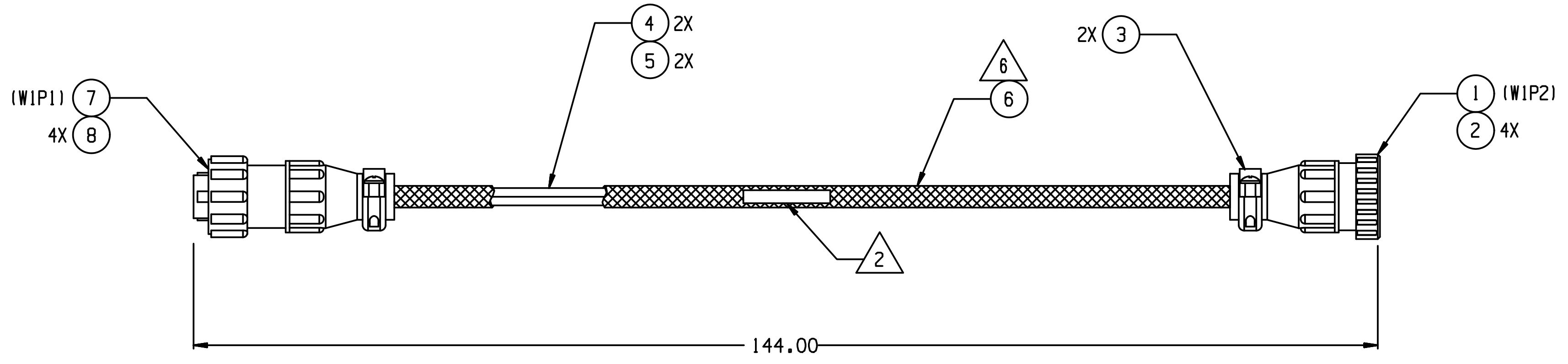
NOTE: Quantities listed as '0' are 'As Required'

FN	Part Number	Rev	Description	Qty	UM	M/B	Eff Date	MAN	MAN PN	VEN	VEN PN
0001	490-111183	-	CONN,CP,RCPT,PIN,4POS	1.0	EA	B	02/11/08	AMP0000000	206430-1		
0002	490-104073		CONN,CP,RCPT,PIN,7POS	1.0	EA	B	02/03/04	AMP0000000	211401-1		
0003	620-105085		TERM,FORK,LOCK,#6,16-14AWG,INS	5.0	EA	B	02/03/04	PANDUIT000	PN14-6LF-C		
0004	620-104831		DISCONNECT,F,16-14AWG,INS,FUNNEL	1.0	EA	B	02/03/04	PANDUIT000	DNF14-250FIB-C		
0005	670-103474		WIRE,16AWG,300V,PVC,ORG	1.3	FT	B	02/03/04	ALPHAWIR00	3057-8	METROWIREC00	
0006	670-103479		WIRE,16AWG,300V,PVC,WHT	2.0	FT	B	02/03/04	ALPHAWIR00	3057-1	METROWIREC00	
0007	670-103477		WIRE,16AWG,300V,PVC,BLU	1.0	FT	B	02/03/04	ALPHAWIR00	3057-6	METROWIREC00	
0008	670-103472		WIRE,16AWG,300V,PVC,BLK	1.5	FT	B	02/03/04	ALPHAWIR00	3057-2	METROWIREC00	
0009	670-103478		WIRE,16AWG,300V,PVC,GRY	0.3	FT	B	02/03/04	ALPHAWIR00	3057-9	METROWIREC00	
0010	670-103475		WIRE,16AWG,300V,PVC,YEL	0.3	FT	B	02/03/04	ALPHAWIR00	3057-5	METROWIREC00	
0011	525-103936		CONTACT,PIN,CRIMP,24-20AWG	6.0	EA	B	02/11/08	AMP0000000	66099-3		
0012	525-103937		CONTACT,SOCKET,CRIMP,18-16AWG	4.0	EA	B	02/11/08	AMP0000000	66101-3		

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	FORMAL RELEASE		
B	REVISED PER CN08-7003 R.L.EVANS	2008-02-11	F.HOLDER

NOTES:

1. FINISHED ASSEMBLY SHALL BE PER IPC-A-610, CLASS 2 AND INSPECTION AND TESTING PROCEDURE FOR CABLE AND HARNESS ASSEMBLIES, 4.10.0005, TEST LEVEL 2.
2. IDENTIFY BY LABELING, IN CONTRASTING COLOR, 681-904741, ASSEMBLY NUMBER AND CURRENT REVISION.
3. MARK ALL CONNECTORS WITH REFERENCE DESIGNATORS.
4. REFERENCE BILL OF MATERIALS, 904741, CURRENT REVISION FOR ASSEMBLY COMPONENTS.
5. CABLE LENGTHS TO BE ±3.00.
6. TUCK FLEX SLEEVING IN AT BOTH ENDS TO FORM A CUFF 3 INCHES LONG. STRAIN RELIEF MUST CLAMP ON CUFF.
7. REFER TO WIRE TABLE FOR ELECTRICAL CONNECTIONS.
8. REFERENCE SCHEMATIC DIAGRAM, 060-904741, CURRENT REVISION, FOR TROUBLESHOOTING.



FROM	WITH FN	USING FN	TO	WITH FN	REMARKS
WIP1-1	2	4(WHT)	WIP2-1	2	
WIP1-2	2	5(BLK)	WIP2-2	2	
WIP1-3	2	4(WHT)	WIP2-3	2	
WIP1-4	2	5(BLK)	WIP2-4	2	

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SEE SEPARATE PARTS LIST

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DRAWN PER ANSI STANDARDS	CONTRACT NO.	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: ANGLES ±0°-50" .XX DECIMAL ±.005 .XXX DECIMAL ±.005 SURFACE FINISH 125 ✓	DRS POWER TECHNOLOGY, INC. FITCHBURG, MA 01420 TITLE AC INTERLOCK CONTROLS CABLE (W1)	
DO NOT SCALE PRINT	DRAWN CHECKED MECHANICAL ENGINEER ELECTRICAL ENGINEER MECH SYSTEMS PROGRAM MANUFACTURING	SIZE D CAGE CODE 1W783 DWG NO. 080-904741 SCALE NONE
MATERIAL THIRD ANGLE	QUALITY ISSUED	REV. B SHEET 1 OF 1



DRS POWER TECHNOLOGY, INC.

DRS Electric Power Technologies, Inc. Single Level Manufacturing Bill of Materials



ASSEMBLY: 681-904741 REV: B

DESC: CABLE,AC INTERLOCK CONTROLS

NOTE: Quantities listed as '0' are 'As Required'

FN	Part Number	Rev	Description	Qty	UM	M/B	Eff Date	MAN	MAN PN	VEN	VEN PN
0001	490-104054		CONN,CP,PLUG,4POS	1.0	EA	B	02/11/08	AMP0000000	206060-1		
0002	525-103937		CONTACT,SOCKET,CRIMP,18-16AWG	4.0	EA	B	02/11/08	AMP0000000	66101-3		
0003	527-104056		CABLECLAMP,CPC,SS11,0.329 IN.BNDL	2.0	EA	B	02/03/04	AMP0000000	206062-3		
0004	670-105343		WIRE,18AWG,300V,PVC,WHT	25.0	FT	B	02/03/04	ALPHAWIR00	3055-1	METROWIREC00	
0005	670-105387		WIRE,18AWG,300V,PVC,BLK	25.0	FT	B	02/03/04	ALPHAWIR00	3055-2	METROWIREC00	
0006	690-104923		SLEEVING,EXPANDABLE,0.437 IN.,BLK	12.5	FT	B	02/03/04	ALPHAWIR00	GRP-120-1/4BLK	NELCOPRODU00	
0007	490-111184		- CONN,CP,PLUG,4POS	1.0	EA	B	02/11/08	AMP0000000	206429-1		
0008	525-103936		CONTACT,PIN,CRIMP,24-20AWG	4.0	EA	B	02/11/08	AMP0000000	66099-3		