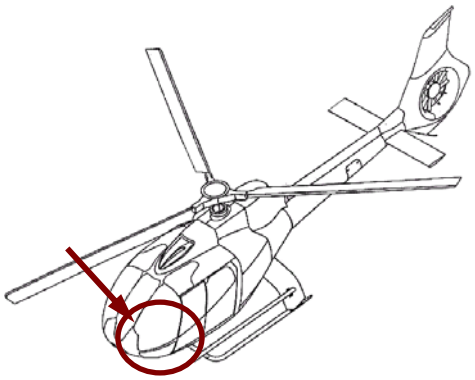


Civil version: B4

ALERT SERVICE BULLETIN

SUBJECT: ENGINE STARTING

Improving twist grip operational logic
Corresponds to MOD 074263



For the attention of


Revision No.	Date of issue
Revision 0	2012-11-22
Revision 1	2013-08-13

Summary:

Revision 0:
Make microswitch "65K" operational in case of simultaneous failure of microswitches "53Ka" and "53Kb" on the twist grip.

Revision 1:
The purpose of Revision 1 of this ALERT SERVICE BULLETIN is to:
- modify the electrical connection between the switch "26K" and the relay "54K",
- modify the test procedure,
- change the compliance deadline of this ALERT SERVICE BULLETIN,
- withdraw the cancellation of compliance with the instructions of ALERT SERVICE BULLETINS No 05A009 when this ALERT SERVICE BULLETINS is complied with.

Compliance:

EUROCOPTER considers that application of instructions contained in this ALERT SERVICE BULLETIN is essential.

Revision 1 supersedes compliance with Revision 0 of this ALERT SERVICE BULLETIN.

1. PLANNING INFORMATION

1.A. EFFECTIVITY

1.A.1. Helicopters/Installed equipment

Helicopters equipped with ARRIEL 2B1 engine, post-MOD 073773 and pre-MOD 074263.

NOTE

Refer to the aircraft Certificate of Conformity (or RIC AMS-Individual Inspection Log Book), the Equipment Log Cards or the aircraft Log Book to identify the actual modification status of the aircraft.

1.A.2. Non-installed equipment

Not applicable.

1.B. ASSOCIATED REQUIREMENTS

Not applicable.

1.C. REASON

Revision 0:
In case of simultaneous failure of microswitches "53Ka" and "53Kb" located on the twist grip, switching over from "IDLE" mode to "FLIGHT" mode can be degraded.
For this reason EUROCOPTER developed modification 074263 to, in all cases, recover engine "FLIGHT" mode when the pilot operates the twist grip.

Revision 1:

Revision 1 of this ALERT SERVICE BULLETIN supersedes compliance with Revision 0.

Revision 1 of this ALERT SERVICE BULLETIN consists in:
- modify the electrical connection between the switch "26K" and the relay "54K",
- modify the test procedure,
- change the compliance deadline of this ALERT SERVICE BULLETIN,
- withdraw the cancellation of compliance with the instructions of ALERT SERVICE BULLETINS No 05A009 when this ALERT SERVICE BULLETINS is complied with.

Although the safety level of the aircraft is compliant with airworthiness regulations, the release of this ALERT SERVICE BULLETIN ensures enhanced EUROCOPTER safety standards.

1.D. DESCRIPTION

Revision 0:

This ALERT SERVICE BULLETIN consisted in:
- removing electrical connection between diode "66K" and relay "54K",
- directly connecting switch "26K" to relay "54K",
- modifying terminal connection on diode module "66K" of electrical wire originating from connector "87DEL-J1".

Revision 1:

Operators who complied with Revision 0 of this ALERT SERVICE BULLETIN must modify diode module “66K” terminal connection.

For operators who have not complied with Revision 0 of this ALERT SERVICE BULLETIN, Revision 1 consists in:
- removing electrical connection between diode "66K" and relay "54K",
- directly connecting switch "26K" to relay "54K".

1.E. COMPLIANCE

1.E.1. Compliance at the works

1.E.1.a. Helicopters/Installed equipment

Not applicable.

1.E.1.b. Non-installed equipment

Not applicable.

1.E.2. Compliance in service

Helicopters/installed equipment:

EUROCOPTER considers that application of instructions contained in this ALERT SERVICE BULLETIN is essential.

For operators who have complied with Revision 0 of this ALERT SERVICE BULLETIN, comply with paragraph 3, excluding paragraph 3.B.2.a.1. within 6 months following issue of Revision 1 of this ALERT SERVICE BULLETIN at the date mentioned in page footer.

For operators who have not complied with Revision 0 of this ALERT SERVICE BULLETIN, comply with paragraph 3, excluding paragraph 3.B.2.a.2. within 6 months following issue of Revision 1 of this ALERT SERVICE BULLETIN at the date mentioned in page footer.

Non-installed equipment:

Not applicable.

1.F. APPROVAL

Approval of modifications:

The information or instructions relate to modification 074263 which was approved on May 3, 2013 by the EASA for civil version helicopters subject to an Airworthiness Certificate.

Approval of this document:



The technical information contained in this ALERT SERVICE BULLETIN Revision 0 was approved on November 20, 2012 under the authority of EASA Design Organization Approval No. 21J.056 for civil version helicopters subject to an Airworthiness Certificate.

The technical information contained in this ALERT SERVICE BULLETIN Revision 1 was approved on August 12, 2013 under the authority of EASA Design Organization Approval No. 21J.056 for civil version helicopters subject to an Airworthiness Certificate.

1.G. MANPOWER



Qualification:

For compliance with this ALERT SERVICE BULLETIN, EUROCOPTER recommends the following personnel qualifications:

Qualification: 1 Avionics Technician.



Time for the operations:

Times are given for reference, for a standard configuration.

Time for the operations: 12 hours approximately for the Avionics Technician.



Estimated helicopter grounding time:

1 day 1/2 approximately.

1.H. WEIGHT AND BALANCE

Weight: Negligible.

Moment: Negligible.

1.I. EFFECT ON ELECTRICAL LOADS

Not applicable.

1.J. SOFTWARE MODIFICATION EMBODIMENT RECORD

Not applicable.

1.K. REFERENCES

The following documents are required for compliance with this ALERT SERVICE BULLETIN:

AMM : 24-00-00, 2-1 : Electrical Power Supply on the Ground,
AMM : 24-00-00, 3-1 : General Safety Instructions - Electrical Power Supply System,
AMM : 76-12-03, 5-1b : Functional Tests - Twist Grip Indications (POST MOD 073773),
AMM : 80-11-00, 5-1a : Functional Tests - Starting Control PRE MOD 073587,
AMM : 80-11-00, 5-1b : Functional Tests - Starting Control POST MOD 073587,

PMV SECTION 8

MTC: 20.02.01.411: Cable binding methods.
MTC: 20.02.01.415: Installation of electrical cable bundles and optical fibers.
MTC: 20.02.01.418: Protection of electrical wiring during maintenance operations.
MTC: 20.07.02.201: Helicopter parked in a repair shop.
MTC: 20.07.03.406: Instructions applicable when working on an aircraft electrical circuit and power generating systems.
MTC: 20.07.03.408: Appearance checks on an aircraft after an inspection or repair.

1.L. DOCUMENTS AFFECTED



Document to be updated:

This ALERT SERVICE BULLETIN will give rise to amendment of the following document by EUROCOPTER: WDM.

This document will be circulated at a later date.

Document already updated:

Not applicable.

1.M. INTERCHANGEABILITY OR MIXABILITY OF PARTS

Interchangeability:

Not applicable.

Mixability:

Not applicable.

2. MATERIAL INFORMATION

2.A. MATERIAL: PRICE - AVAILABILITY - PROCUREMENT

For any information concerning the price of modification kits and/or components or assistance, contact the Eurocopter network or Customer Support Sales Department.

EUROCOPTER
Etablissement de Marignane
Direction VENTES et Relations Client (ECR)
13725 MARIGNANE CEDEX
FRANCE

NOTE

On the purchase order, please specify the mode of transport, the destination and the serial numbers of the aircraft to be modified.

NOTE

For ALERT SERVICE BULLETINS, order by:
Telex: HELICOP 410 969F
Fax: +33 (0)4.42.85.99.96.

2.B. INFORMATION CONCERNING INDUSTRIAL SUPPORT

Not applicable.

2.C. MATERIAL REQUIRED FOR EACH HELICOPTER/COMPONENT

Kits or components to be ordered for one helicopter or one assembly:

Key Word	Qty	New P/N	Item	Former P/N	Instruction
Cap Contact Clamp, binding	2 1 10	E0737B0816 M39029/101-553 E0043-7C0	1 2 3		

Products to be ordered separately:

As per Work Cards and Tasks mentioned in this ALERT SERVICE BULLETIN.

The ingredients can be ordered separately, from the INTERTURBINE AVIATION LOGISTICS,
Website: http://www.interturbine.com
Telephone: +49.41.91.809.300
AOG: +49.41.91.809.444

Special tools:

As per Work Cards and Tasks mentioned in this ALERT SERVICE BULLETIN and as per following table:

Key Word	Qty	Tooling P/N or equivalent	Item
Ohmmeter	1	Commercial	zz

2.D. MATERIAL TO BE RETURNED

Not applicable.

3. ACCOMPLISHMENT INSTRUCTIONS

3.A. GENERAL

- Comply with the electrical general instructions as per MTC Work Card 20.07.03.406 and AMM Task 24-00-00, 3-1.
- Comply with instructions for grounding the aircraft as per MTC Work Card 20.07.02.201.
- Install electrical harnesses as per MTC Work Card 20.02.01.415.
- Carry out binding of electrical wiring as per MTC Work Card 20.02.01.411.
- Carry out protection of electrical wiring during modification embodiment as per MTC Work Card 20.02.01.418.
- Energize ground power generation of the aircraft as per AMM Task 24-00-00, 2-1.

3.B. OPERATIONAL PROCEDURE

3.B.1. Preliminary steps

- Cut off all electrical power sources.
- Implement suitable access means.
- Remove and/or open all cowlings, panels, doors and all equipment to allow adequate access to the various work areas.

3.B.2. Procedures

3.B.2.a. Modification with direct connection between switch “26K” and relay “54K”

3.B.2.a.1. Revision 0 of this ALERT SERVICE BULLETIN not previously complied with

NOTE

For swaging swage-type contact (2) on the electrical wire, refer to paragraph 4.A.

As per Figure 1
- To modify the wiring, use contact (2), caps (1) and clamps (3).
- Test electrical continuity of modified wires.

3.B.2.a.2. Revision 0 of this ALERT SERVICE BULLETIN previously complied with

As per Figure 2
- Modify terminal connection as per Figure 2
- Test electrical continuity of modified wires.

3.B.3. Tests

NOTE

For operators who do not have a light helicopter ground test set, a ground run, along with a check as per Section 8 of the PMV can be performed as replacement for the operational test procedure of the start control.

- Perform the operational tests and indicating tests of the twist grip as per AMM Task 76-12-03, 5-1b.
- Check visual aspect and cleanliness as per MTC Work Card 20.07.03.408.
- Reconnect all electrical power sources.
- Set aircraft into test condition (test operations must not be altered, in particular by equipment removed in paragraph 3.B.1.; install them again if required).
- Perform the operational tests as per AMM Task 80-11-00, 5-1a or 80-11-00, 5-1b.

3.B.4. Final steps

- Check visual aspect and cleanliness as per MTC Work Card 20.07.03.408.
- Re-install and/or close all the padding, coverings, panels and equipment removed and/or opened when restoring the aircraft to flight conditions (§ 3.B.1.).
- Remove access means.
- Restore the helicopter to flight condition.

3.C. IDENTIFICATION

Identification of this document:

Record compliance with this ALERT SERVICE BULLETIN with the Revision number in the aircraft documents.

Identification of modifications on documentation:

Record compliance with modification 074263 in the aircraft documents.

3.D. OPERATING AND MAINTENANCE INSTRUCTIONS

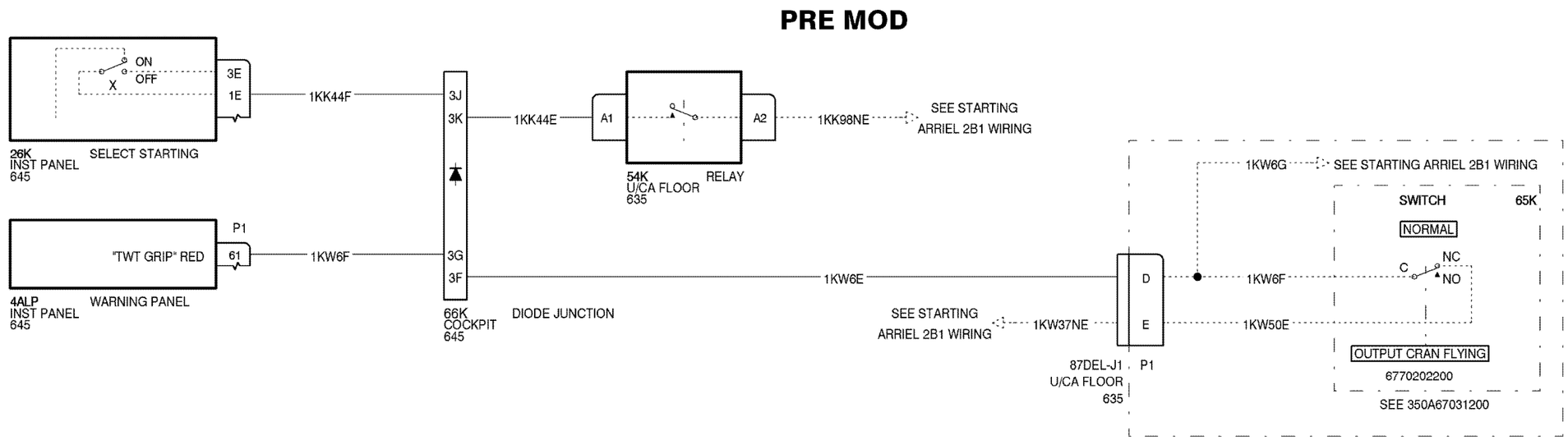
Operating instructions:

Not applicable.

Maintenance instructions:

Not applicable.

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PRE MOD
ON
OFF
X
3E
1E
1KK44F
26K
INST PANEL
645
SELECT STARTING
3J
3K
1KK44E
A1
A2
1KK98NE
SEE STARTING
ARRIEL 2B1 WIRING
54K
U/CA FLOOR
635
RELAY
P1
"TWT GRIP" RED
61
1KW6F
4ALP
INST PANEL
645
WARNING PANEL
3G
3F
66K
COCKPIT
645
DIODE JUNCTION
1KW6E
SEE STARTING
ARRIEL 2B1 WIRING
1KW37NE
D
E
87DEL-J1
U/CA FLOOR
635
P1
1KW6G
SEE STARTING ARRIEL 2B1 WIRING
SWITCH
65K
NORMAL
C
NC
NO
1KW6F
1KW50E
OUTPUT CRAN FLYING
6770202200
SEE 350A67031200

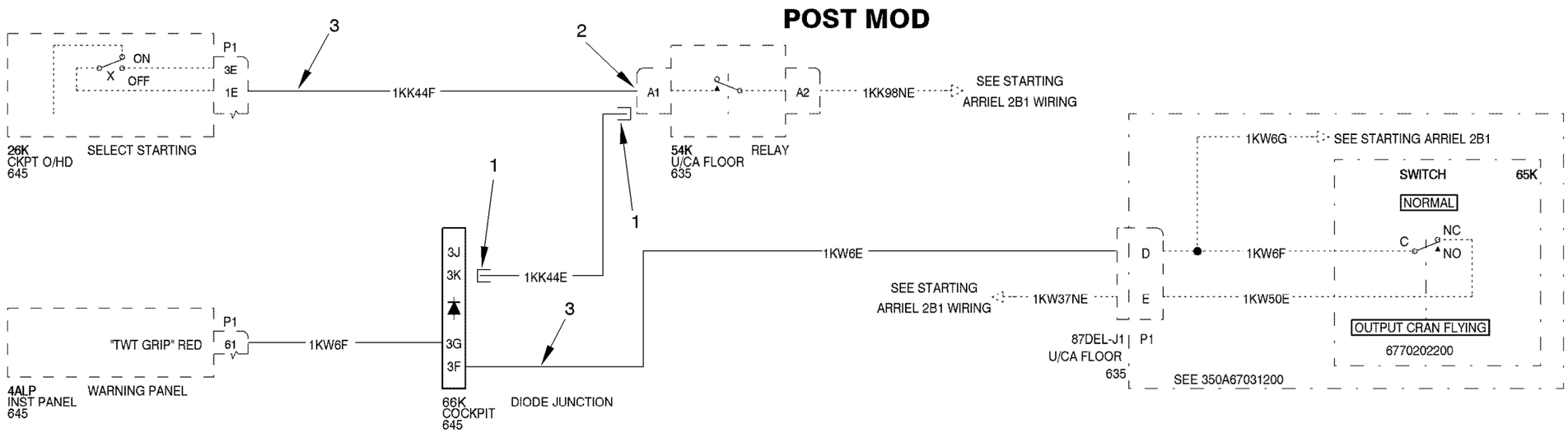
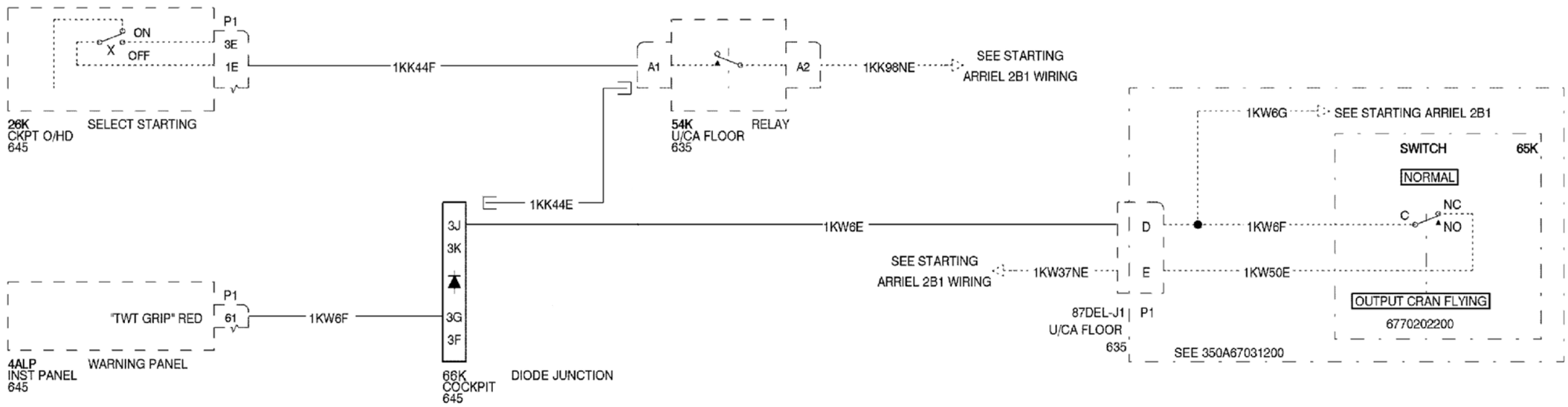

POST MOD
3
2
1
1
3
ON
OFF
X
P1
3E
1E
1KK44F
26K
CKPT O/HD
645
SELECT STARTING
A1
A2
1KK98NE
SEE STARTING
ARRIEL 2B1 WIRING
54K
U/CA FLOOR
635
RELAY
3J
3K
1KK44E
1KW6E
SEE STARTING
ARRIEL 2B1 WIRING
1KW37NE
D
E
87DEL-J1
U/CA FLOOR
635
P1
1KW6G
SEE STARTING ARRIEL 2B1
SWITCH
65K
NORMAL
C
NC
NO
1KW6F
1KW50E
OUTPUT CRAN FLYING
6770202200
SEE 350A67031200
P1
"TWT GRIP" RED
61
1KW6F
4ALP
INST PANEL
645
WARNING PANEL
3G
3F
66K
COCKPIT
645
DIODE JUNCTION

Figure 1

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POST REVISION 0



POST REVISION 1

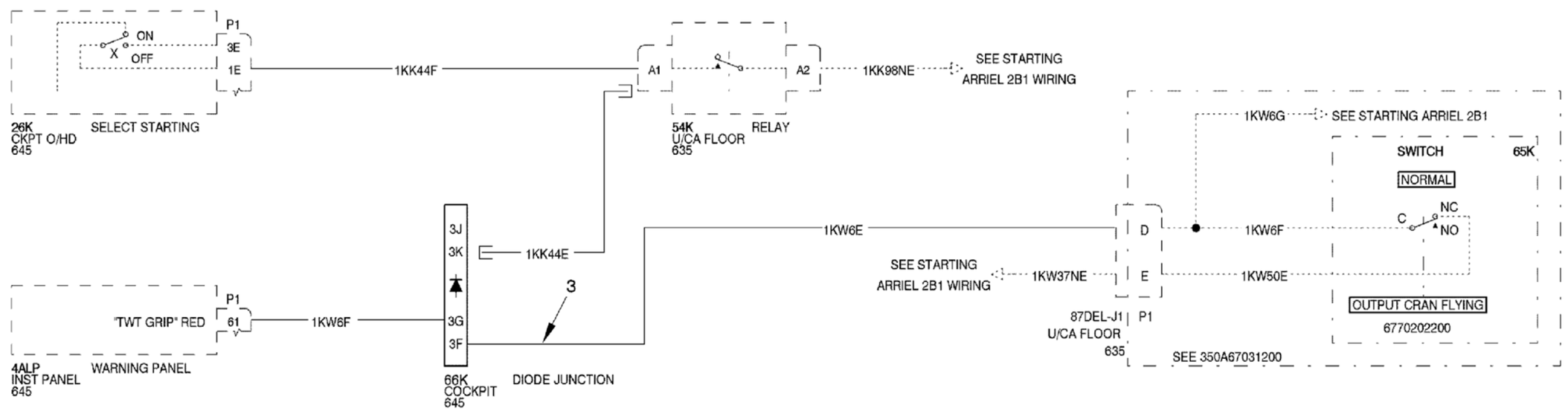


Figure 2

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4. APPENDIX

4.A. SWAGING CONTACTS P/N M39029/**-***

Contact P/N	Cable wire gage	Pliers M22520/ or equivalent						Ins./ext. tool M81969/		
		1-01		2-01		7-01		P/N	Ins. color	Ext. color
		Pos.	Reg.	Pos.	Reg.	Pos.	Reg.			
M39029/101-553	22			2.08	6	7.12	4	1.02	Red	White