

ALLISON HYBRID

DRIVE UNIT UPDATES

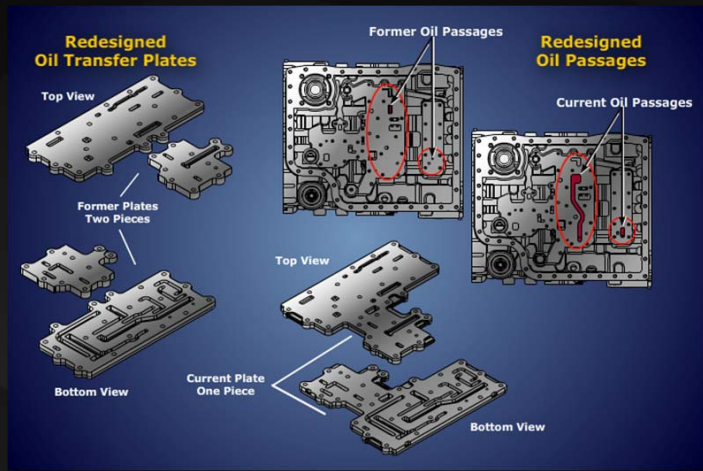


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Drive Unit Updates

Oil Transfer Plate Update

- Stator housing oil passage and oil transfer plate changes were implemented effective February 2009 and January 2010.
 - Former and current stator housings utilize different oil passages in the oil transfer plate area.
 - Former oil transfer plates are two separate pieces.
 - Current oil transfer plates are a single piece component.



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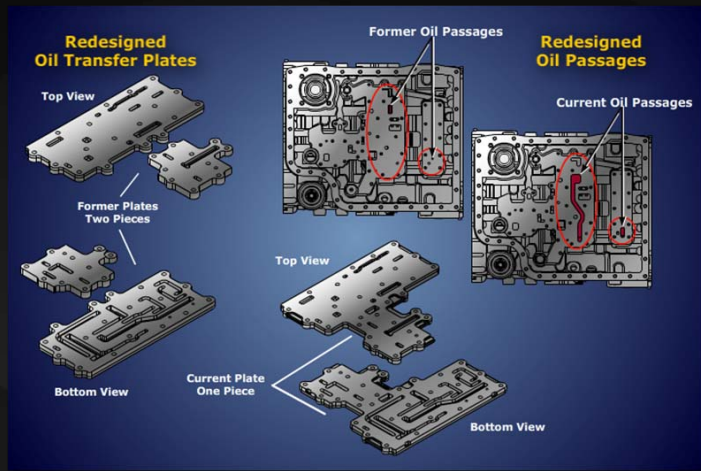


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Drive Unit Updates

Oil Transfer Plate Update (cont'd)

- The former two-piece oil transfer plate components have been completely cancelled.
 - *The current single piece-oil transfer plate is backward compatible if both of the former oil transfer plates are removed.*
- Two stator housing service kits have been completely cancelled but can be used until stock is exhausted.



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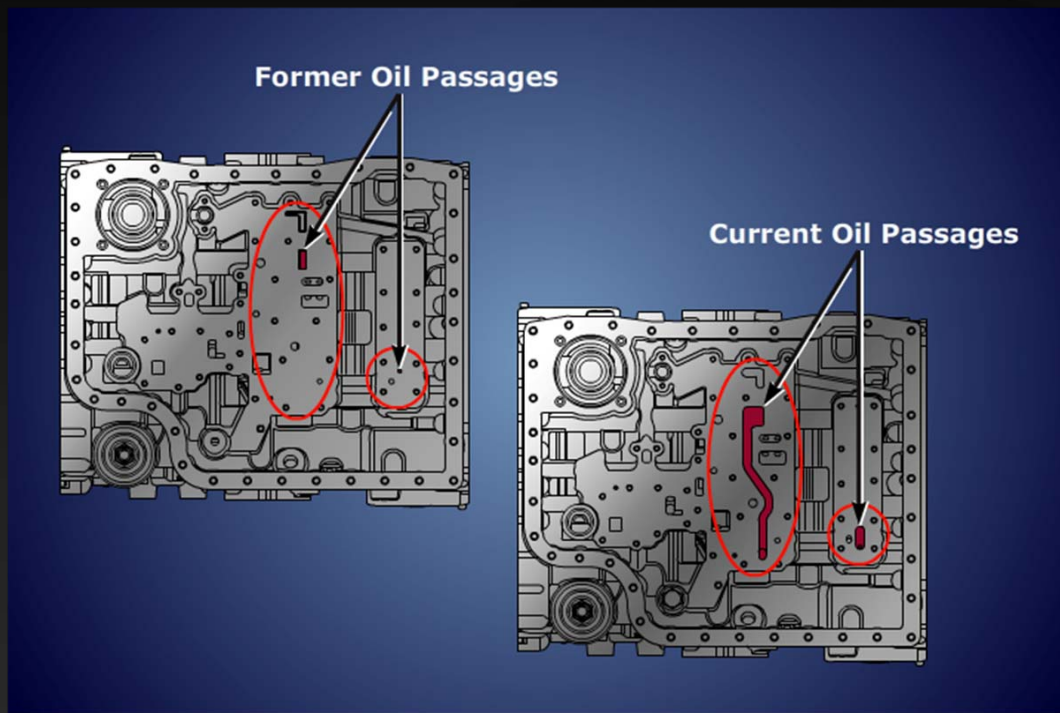


RESOURCES: Stator Housing Oil Passages



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Stator Housing Oil Passages



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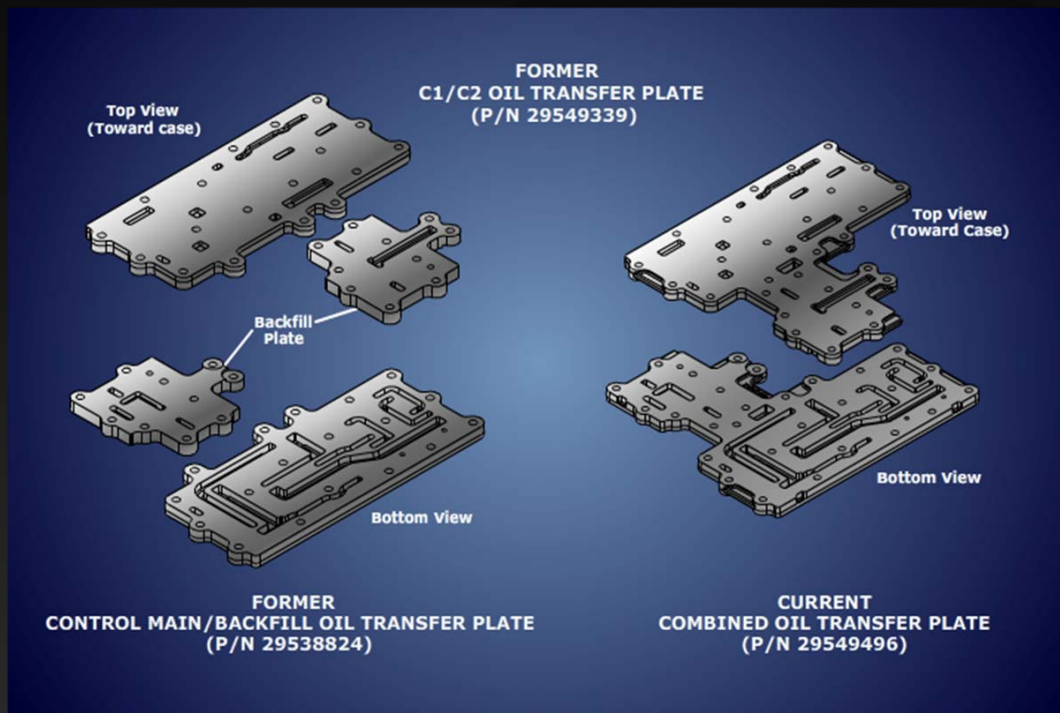
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RESOURCES: Oil Transfer Plates



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Oil Transfer Plates



RESOURCES

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RESOURCES: Affected Service Kits



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Affected Service Kits

Two Stator Housing Service Kits have been completely cancelled but individual parts are available

Units built with two-piece Oil Transfer Plate

P/N	Description	Status	Service With
29550777	Stator Housing Kit	Cancelled	Use stock until exhausted then see below
29549665	Stator Housing Assembly	Serviceable	Self
29549496	Oil Transfer Plate	Serviceable	29550061 Supplemental kit
29541080	DPIM Bypass Washer	Serviceable	
29550768	Bearing Inner Race	Serviceable	

P/N	Description	Status	Service With
29551539	Stator Housing Kit	Cancelled	Use stock until exhausted then see below
29549665	Stator Housing Assembly	Serviceable	Self
29541080	DPIM Bypass Washer	Serviceable	Self
29550768	Bearing Inner Race	Serviceable	Self

Units equipped with single-piece Oil Transfer Plate

NOTE: Always replace the inner bearing races and DPIM Bypass Washer when replacing the stator housing

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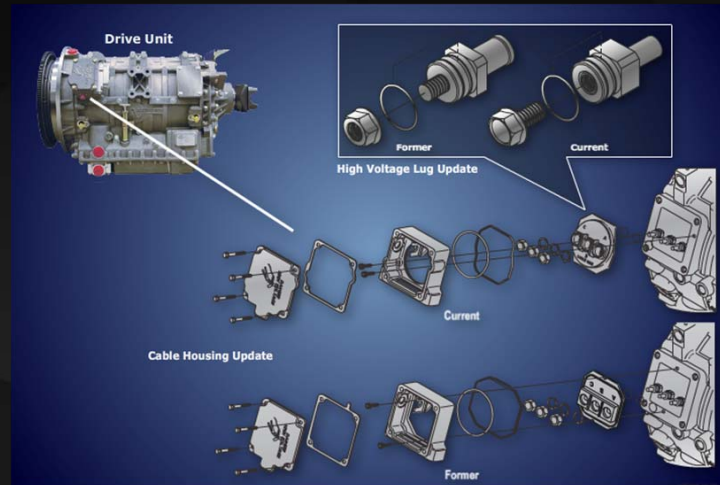


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Drive Unit Updates

Cable Housing and High Voltage Lug Changes

- The drive unit cable housing was updated effective October 2009.
 - Changes were implemented to components and service procedures.
 - Current components are backward compatible, but only as a group (components must be installed as a group, not individually).
 - Reference SIL 18-EP-09 for component and service procedure details.



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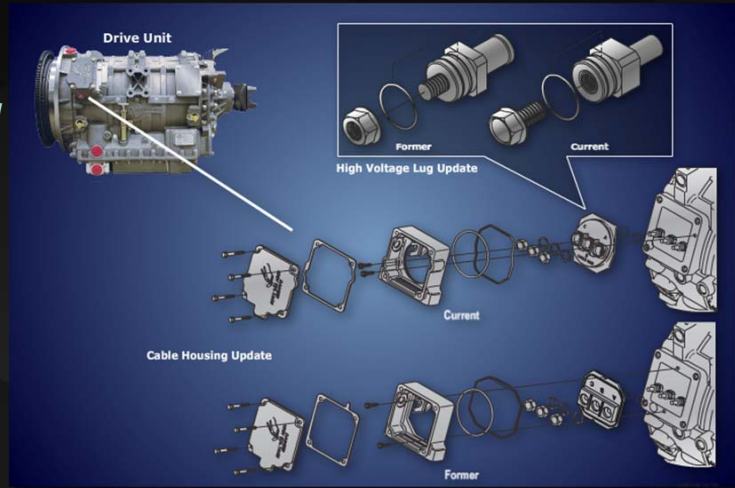


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Drive Unit Updates

Cable Housing and High Voltage Lug Changes (cont'd)

- High voltage lugs were updated effective May 2010.
 - The design changed from a stud and nut to a threaded lug and bolt.
 - The current design enables an increased torque value.
 - The current bolt cannot be substituted – use the designated bolt only.
 - Reference SIL 2-EP-10 for design update details.
 - Lug replacement procedures are detailed in SIL 6-EP-10 and in a separate Allison E-Learn module.



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DRIVE UNIT UPDATES



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Drive Unit Updates

Availability of Remanufactured Stator Housings

- Remanufactured stator housings became available in April 2010.

- Variations (Groups A, B, C and D) are available to cover four serial number ranges.
- Exact replacement is not necessary, but external dimensional differences may cause clearance issues during installation.
- A supplemental service kit is required to complete the repair procedure.

- The components in this kit must replace the original components or DPIM and drive unit damage will result.

- Reference SIL 4-EP-10 for details.

SIL 4-EP-10
April 2010
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SUBJECT: Availability of Remanufactured EP 40/50 Drive Unit Stator Housing

MODELS AFFECTED: EP 40/50 Drive Units

SERIAL NUMBERS AFFECTED:

Group	Serial Numbers	Description of Drive Unit
Group A	Group A - Prior to 7110002113	Group A Stator Housing has unused cable housing openings opposite the A and B cable housings. Some Group A Stator Housings have been unused cable housing openings covered by a bolted plate while some have the openings cast shut, but the protrusions are still noticeable. The original control deck design is used in Group A. After identifying your Drive Unit, refer to Figure 1 to verify you have a Group A housing.
Group B	Group B - Starting with 7110002113 thru 7110002202	Group B Stator Housing is the same as Group A housing. Refer to Figure 1 for Group A. In Figure 2 for Group C to identify which remanufactured Stator Housing should be ordered.
Group C	Group C - Starting with 7110002203 thru 7110002992	Group C only has two cable housing openings. Control deck design is used in Group C. After identifying your Drive Unit, refer to Figure 3 to verify the Group C housing. Group C housing has two cable housing openings. Control deck design is used in Group C. After identifying your Drive Unit, refer to Figure 3 to verify the Group C housing.

NOTE: For information to match the correct remanufactured Stator Housing with the Drive Unit serial number, refer to the Allison Transmission Parts Policy Letter 10-TPPL-02 for additional information.



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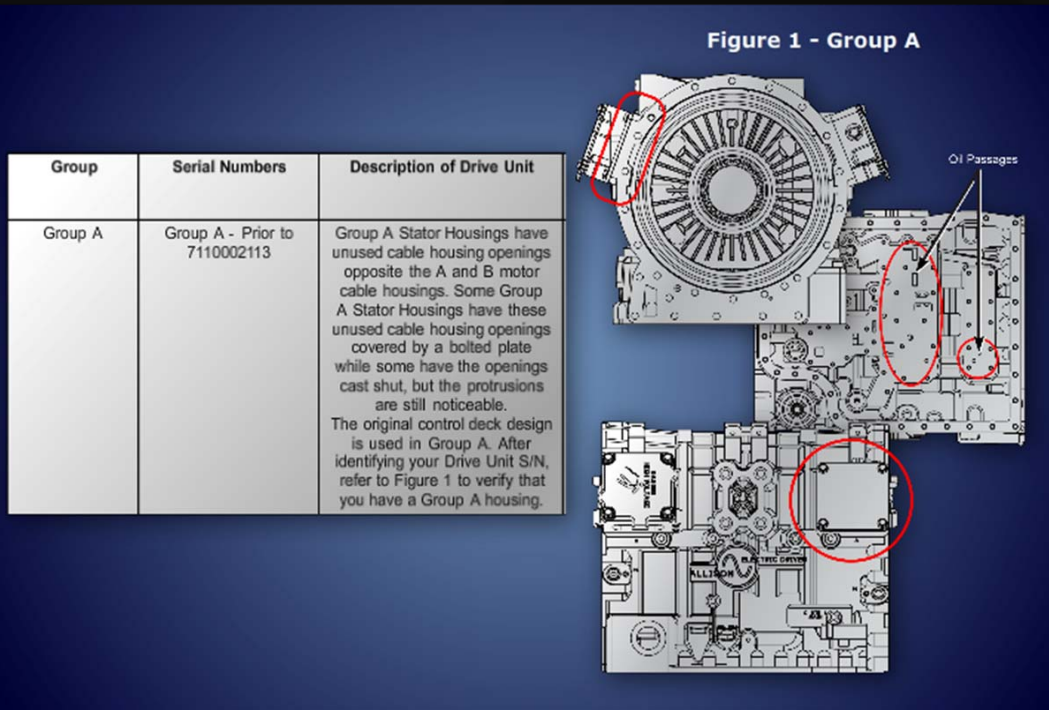
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RESOURCES: Group A Detail



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Group A Detail



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RESOURCES: Group B Detail



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Group B Detail

Figure 1 - Group A

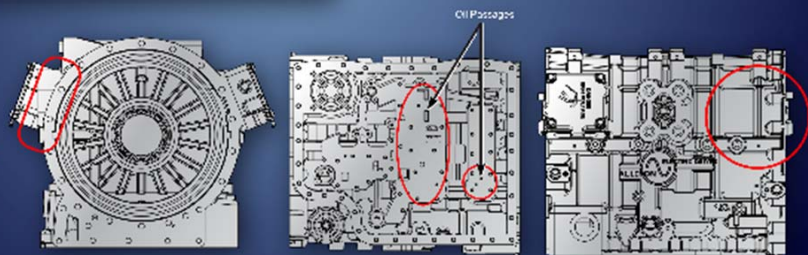


Group B

Group B - Starting
with 7110002113 thru
7110002202

Group B Stator Housings may be
the same as Group A housings or
the same as Group C housings.
Refer to Figure 1 for Group A and
Figure 2 for Group C to identify
which remanufactured Stator
Housing should be ordered.

Figure 2 - Group C



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RESOURCES: Group C Detail

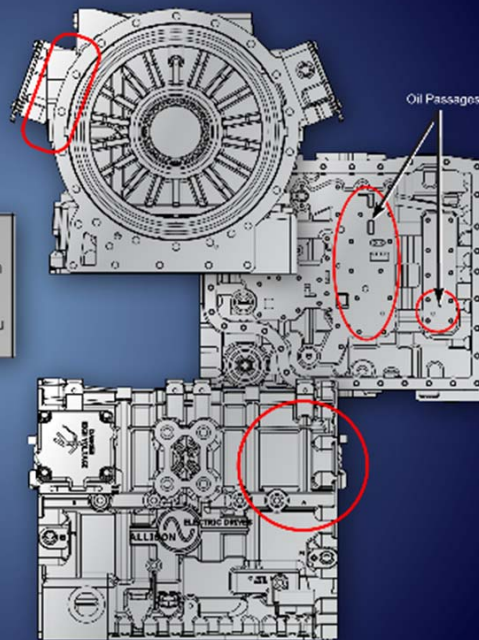


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Group C Detail

Figure 2 - Group C

Group C	Group C - Starting with 7110002203 thru 7110002992	Group C only has two cable housing openings. The original control deck design is used in Group C. After identifying your Drive Unit S/N, refer to Figure 2 to verify that you have a Group C housing.
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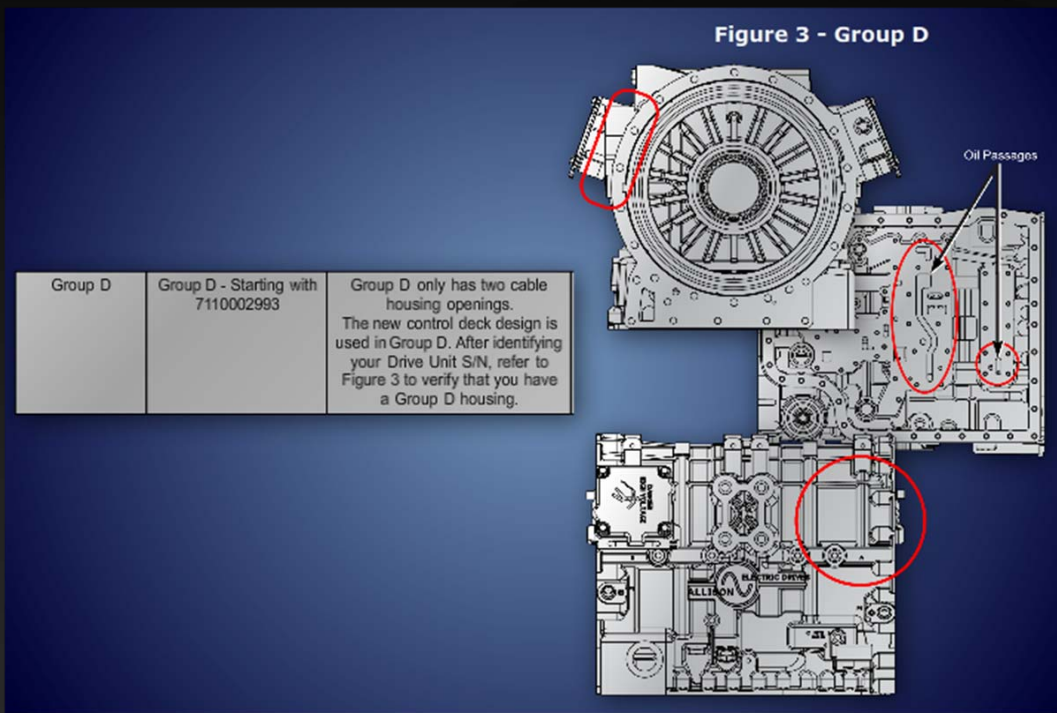
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RESOURCES: Group D Detail



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Group D Detail



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RESOURCES: Supplemental Service Kit



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Supplemental Service Kit

Combined Oil Transfer Plate only required when removed unit is equipped with former two-piece design.

Always replace the inner races and DPIM Bypass Washer when replacing the stator housing.

Part Name	Part Number	Quantity
DPIM Bypass Washer	29541080	1
Combined Oil Transfer Plate	29549496	1
Bearing Inner Race	29550768	2
Instruction Sheet #345	29550062	1

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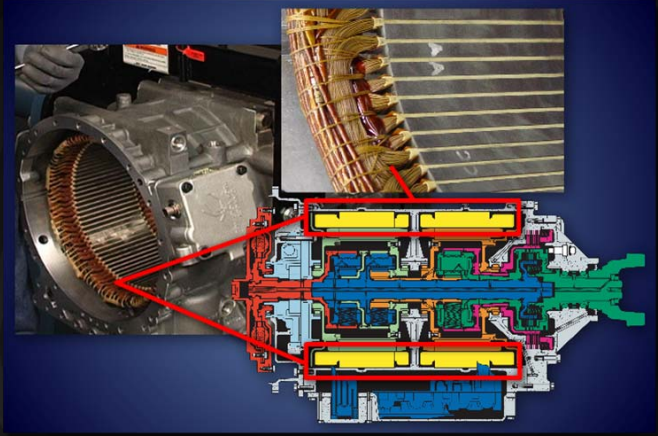
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Drive Unit Updates

Stator Replacement

- Drive unit stator replacement procedures were implemented effective July 2010.

- The procedure requires an industrial oven to heat the stator housing.
- The replacement stator is installed to a specific depth, then the housing is allowed to cool.
- Stator retention bolt installation requires a drill guide available from SPX Corporation (there are two bolts for each stator on each side of the housing).
- Stators must be replaced one at a time if both stators are being replaced.
- After reassembly, install new high voltage lugs onto the lead wires as described in SIL 6-EP-10.



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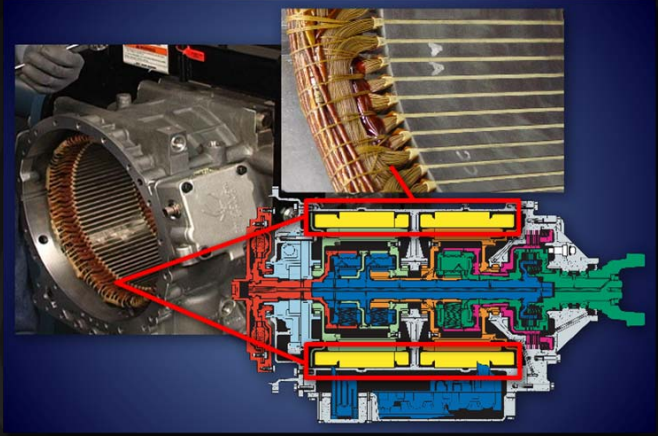


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Drive Unit Updates

Stator Replacement (cont'd)

- Electrical qualification tests must be performed after stator replacement.
 - The unit must be between 66 and 86 degrees Fahrenheit when tested
 - Perform the following tests:
 - Hi-Pot test.
 - Surge test.
 - Corona test.
 - Phase-to-Phase resistance for both motors.
 - RTD resistance for both motors.
- Reference SIL 16-EP-10 for details.



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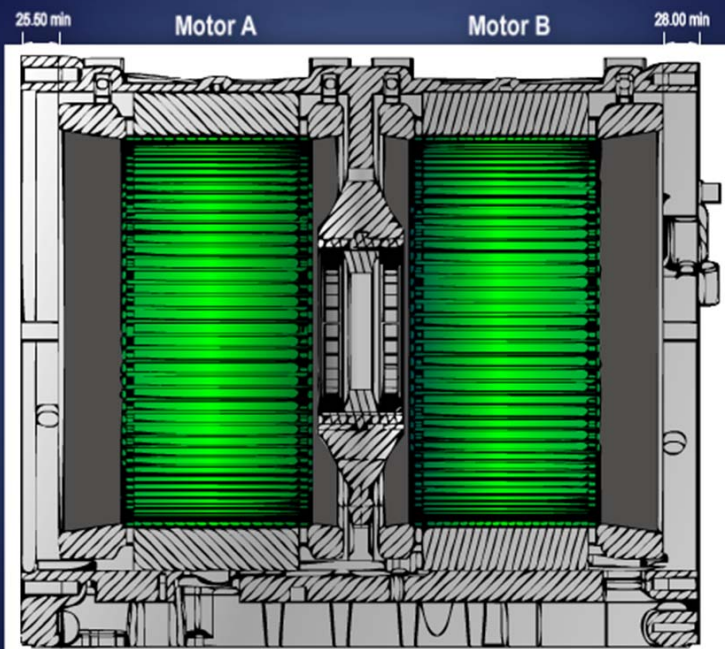
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RESOURCES: Installed Stator Location



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Installed Stator Location



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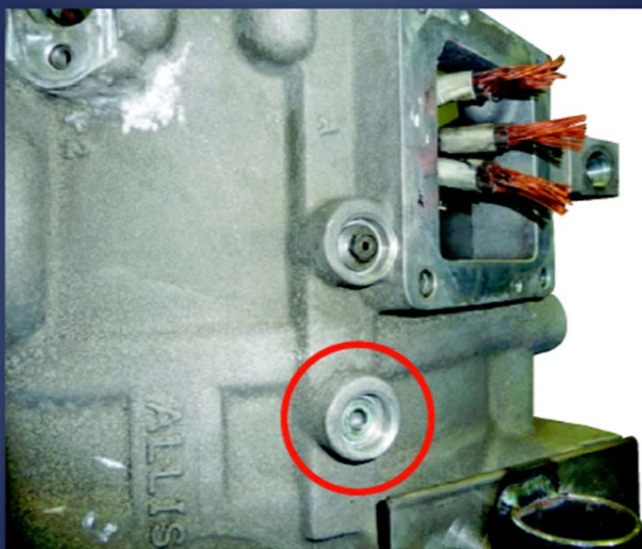
RESOURCES:

Stator Retention Bolt Hole Location



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ALLISON HYBRID H 40/50 EP Stator Retention Bolt Hole Location



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