SERVICE MANUAL

FR480 / FR550 / FR650 / FR780 Tier 4B (final)
FR850 Tier 2

Forage Harvester

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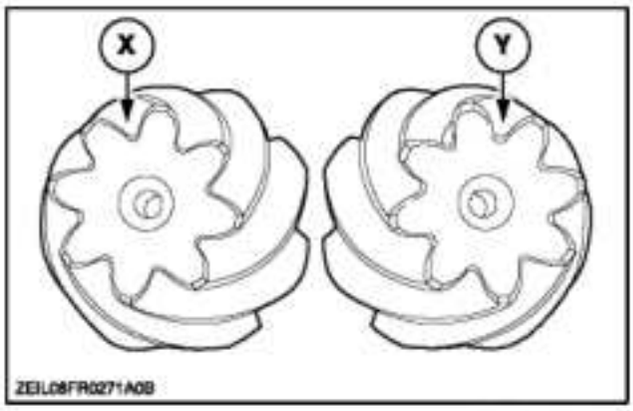
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Differential carrier assembly - Install

FR480 Forage Cruiser	NA
FR550 Forage Cruiser	NA
FR650 Forage Cruiser	NA
FR780 Forage Cruiser	NA
FR850 Forage Cruiser	NA

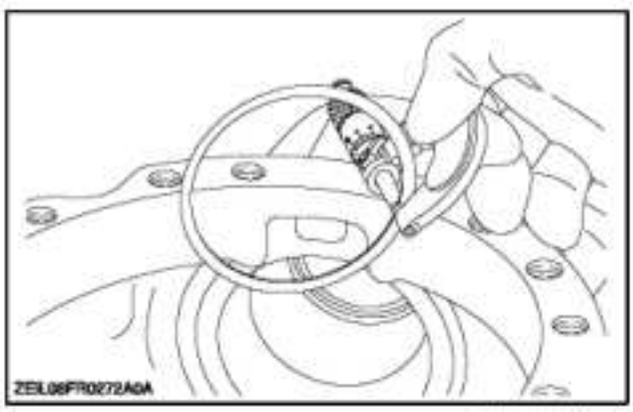
NOTICE: *Make sure that the material or parts are not damaged.*

1. Check nominal dimension "I" as marked on the pinion. Subtract from "I" marked on old pinion **(X)** the value indicated as "I" marked on new pinion **(Y)** to obtain the difference "D".
   EXAMPLE: "D" = "I" on old pinion **(X)** - "I" on new pinion **(Y)** = "D" = 0 - 0,1 = **-0.1 mm** (**-0.004 in**)
   "D" = **-0.1 mm** (**-0.004 in**).



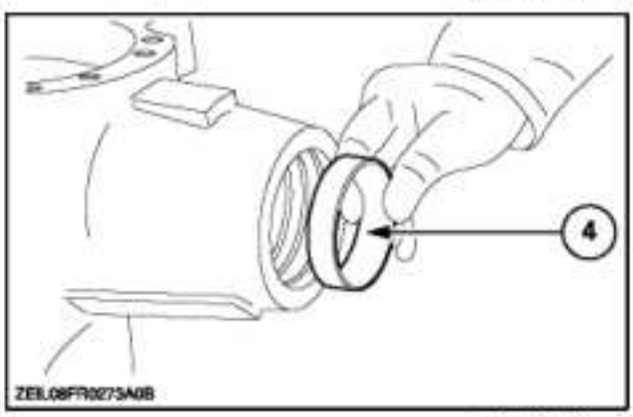
1

2. Calculate shims "S" for insertion under the thrust block of the inner bearing using the following formula:
   S = S old - **(D)**:
   D = difference
   S old = first time installation shims
   EXAMPLE: S = 1,25 - (-0,1) = S = **1.35 mm** (**0.053 in**).



2

3. Insert the thrust block **(4)** of the external bearing.



3

NOTE: *Apply grease to hold the shim "S" **(5)** in position.*

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Wiring harnesses - Electrical schematic sheet 22 SH22 - SIGNAL INPUTS, FCM2 (55.100.DP-C.20.E.22)
Wiring harnesses - Electrical schematic sheet 73 SH73 - OPTION: INTELLIFILLâ ¢ (55.100.DP-C.20.E.73)

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E1328-05-Spout deflector up slow, Current below normal or open circuit

FR480 Forage Cruiser	NA
FR550 Forage Cruiser	NA
FR650 Forage Cruiser	NA
FR780 Forage Cruiser	NA
FR850 Forage Cruiser	NA

Control Module : RHM

NOTE: *The forage harvester monitor diagnostic capability can be used to assist in troubleshooting the electrical system, for further information refer to* ***Instrument cluster - Detailed view (55.408)****.*

NOTE: *When the cause of the error code has been rectified, clear the error code and test the system for normal operation.*

Possible failure modes:

1. Faulty connector
2. Faulty wiring harness
3. Faulty command grip **A-009**
4. Faulty controller **A-004**

Solution:

1. Before proceeding, clear the error code with the approved diagnostic equipment. Run the machine under normal conditions and retest.

   A. If the error code is not indicated, check that the system is operating correctly.

   B. If the error code is indicated, continue to Step **2**.

2. Using the command grip **A-009**, operate the following controls and check for the corresponding error codes:
   spout deflector up slow, (error code E1328-5)
   header up slow, (error code E1325-5)
   spout setpoint middle, (error code E1320-5)
   spout deflector up fast, (error code E1336-5)

   A. If all four error codes are displayed, continue to Step **4**.

   B. If only error code E1328-5 is displayed, continue to Step **3**.

3. Using the command grip **A-009**, operate the following controls and check for the corresponding error codes:
   spout rotation cw slow, (error code E1330-5)
   spout deflector down slow, (error code E1329-5)
   spout deflector up slow, (error code E1328-5)
   feedrolls reverse, (error code E1333-3)
   spout rotation ccw slow, (error code E1331-5)
   feedrolls forward, (error code E1332-5)
   emergency stop, (error code E1340-5)

   A. If all seven error codes are displayed, continue to Step **5**.

   B. If only error code E1328-5 is displayed, remove and replace the command grip **A-009**.

4. Check for an open circuit.
   Disconnect the command grip **A-009** connectors and the controller **A-004** connector **X-004C**. Check between connector **X-004C (Female) pin 4** and the command grip **A-009** connector, wire WIR3 (GN).

   A. If an open circuit is indicated, repair or replace the wiring harness as required.

   B. If the wiring harness is okay, remove and replace the command grip **A-009**. If the fault is still present, download the correct level of software. If the fault recurs, remove and replace the controller **A-004**.

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Main control valve - Test – Regulated pressure circuit

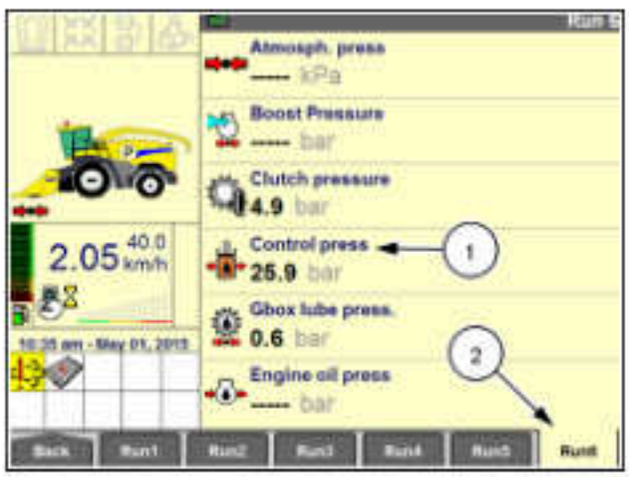
FR480 Forage Cruiser	NA
FR550 Forage Cruiser	NA
FR650 Forage Cruiser	NA
FR780 Forage Cruiser	NA
FR850 Forage Cruiser	NA

NOTE: *Alarm A-2203 will be active if the control pressure is less than* ***20.0 bar*** *(****290.0 psi****). Alarms A-3007, and A-3008 will be active is there is an issue with the main clutch.*

1. Press the run screen button located on the home screen of the display.



2. Select the Run6 tab **(2)**. Monitor the control pressure **(1)**.
3. If the pressure is less than **35.0 bar** (**507.5 psi**), adjust the low pressure regulating valve to **35.0 - 37.0 bar** (**507.5 - 536.5 psi**). See **Main control valve - Adjust (35.359)**.



4. Monitor the control pressure on the display.
   - If the pressure maintains **35.0 - 37.0 bar** (**507.5 - 536.5 psi**), return the machine to service.
   - If the pressure is still less than **35.0 bar** (**507.5 psi**), continue with step **5**.
5. Test the following low pressure functions:
   - Engage the park brake.
   - Engage the reverse clutch.
   - Engage the main clutch.
   - Engage the spout flipper.
   - Engage the 4WD.

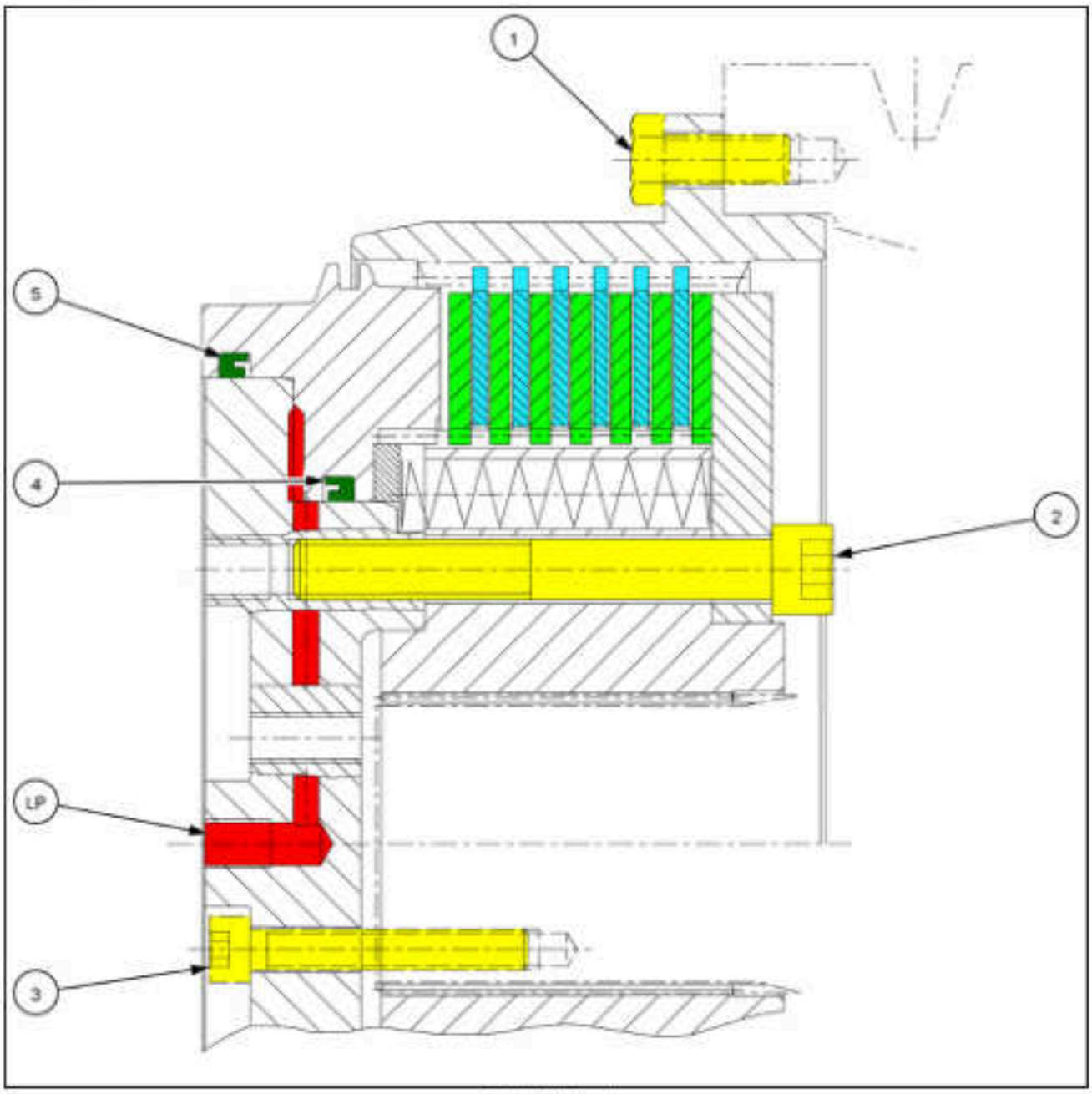
   If one of the functions does not operate, check the failed circuit.

   If all functions do not operate, continue with step **6**.
6. Turn the machine OFF.

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Main clutch - Sectional view

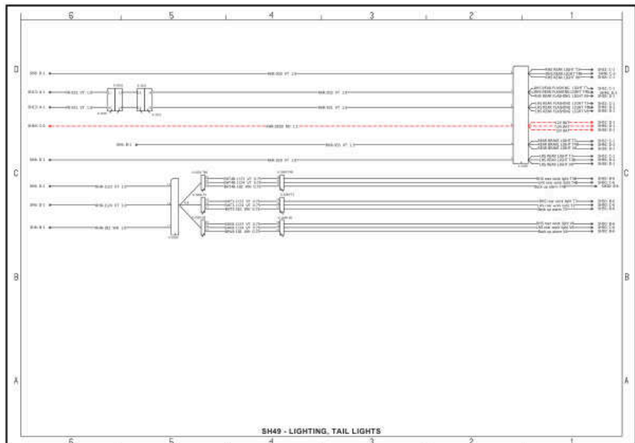
FR480 Forage Cruiser	NA
FR550 Forage Cruiser	NA
FR650 Forage Cruiser	NA
FR780 Forage Cruiser	NA
FR850 Forage Cruiser	NA



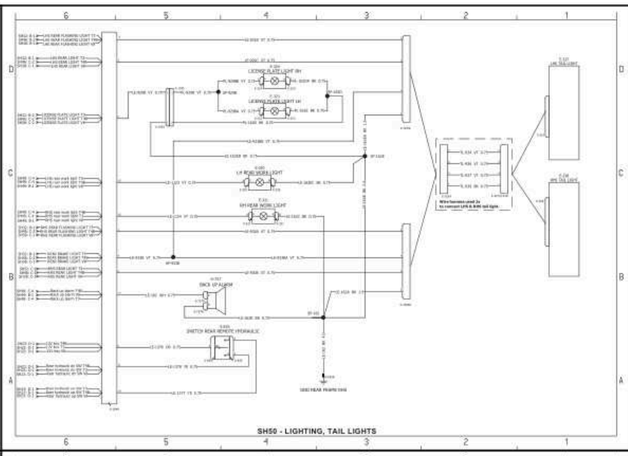
Item	Description	Quantity	Remark
1	Bolt M10 Class 10.9	12	–
2	Hex socket screw	6	Torque: **86 N·m (63.43 lb ft)** Apply **LOCTITE® 243™**
3	Bolt M8 Class 8.8	4	–
4	Seal	1	–
5	Seal	1	–
LP	Low pressure port	–	–

Before assembling the friction discs follow the procedure described in **Main clutch - Service instruction (14.100)**.

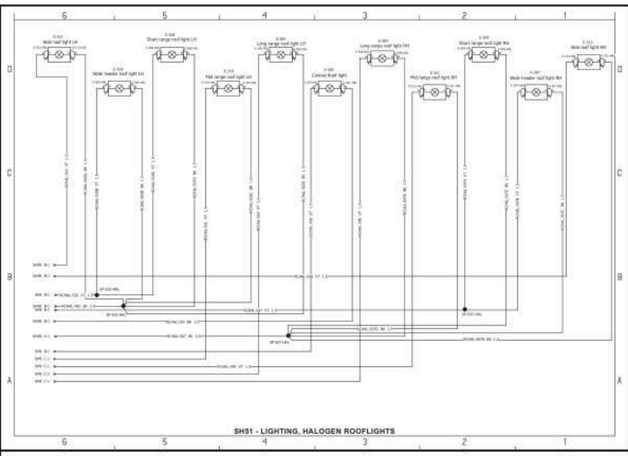
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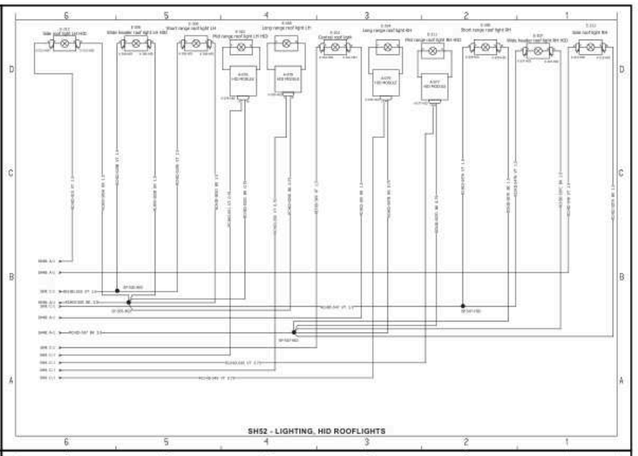
SH49 - LIGHTING, TAIL LIGHTS



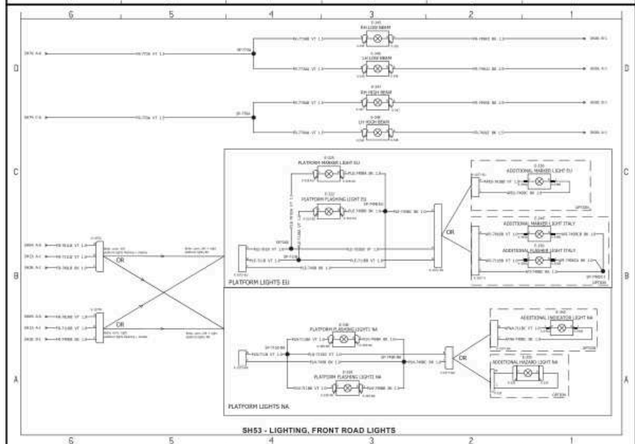
SH50 - LIGHTING, TAIL LIGHTS



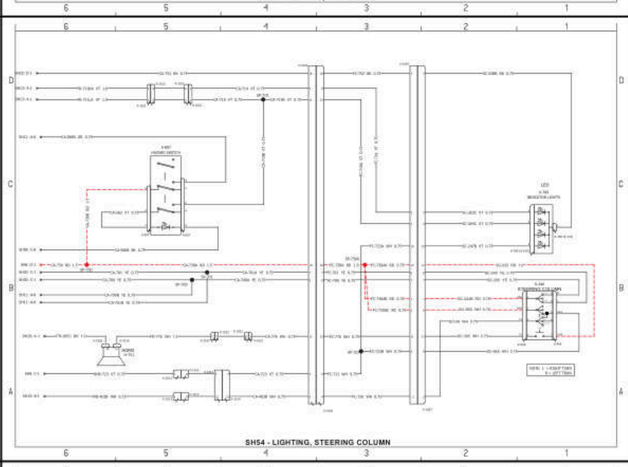
SH51 - LIGHTING, HALOGEN ROOFLIGHTS



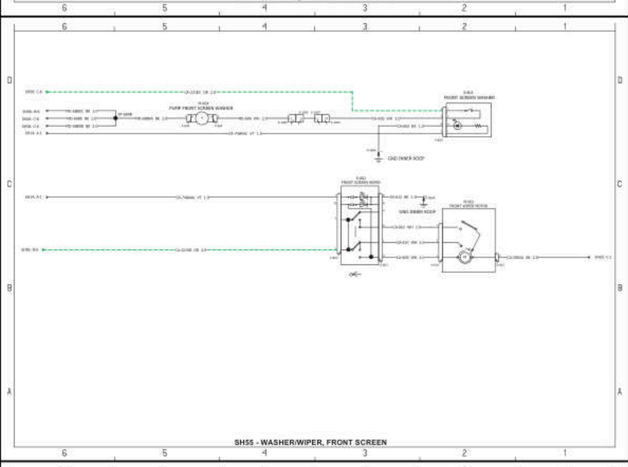
SH52 - LIGHTING, HID ROOFLIGHTS



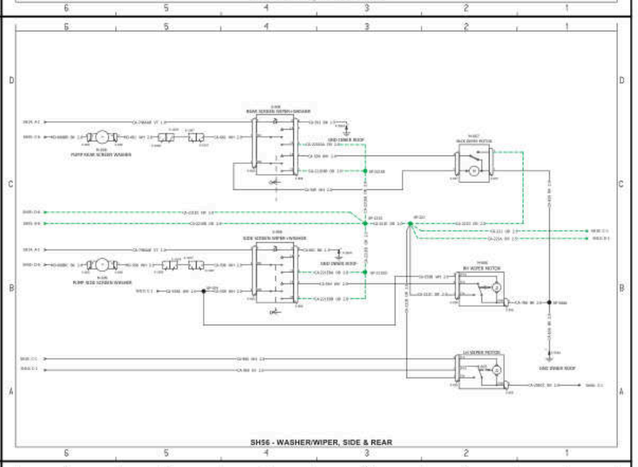
SH53 - LIGHTING, FRONT ROAD LIGHTS



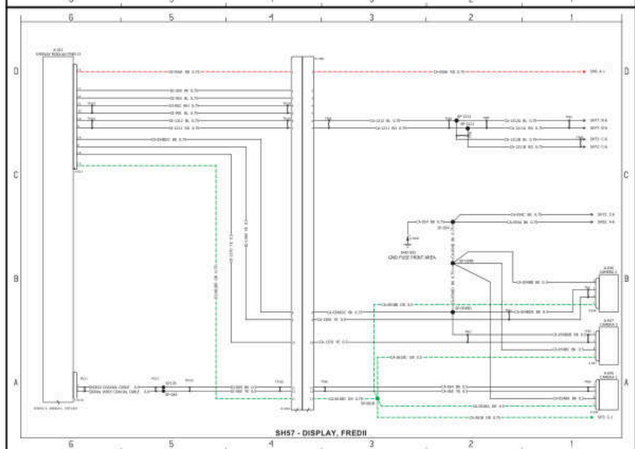
SH54 - LIGHTING, STEERING COLUMN



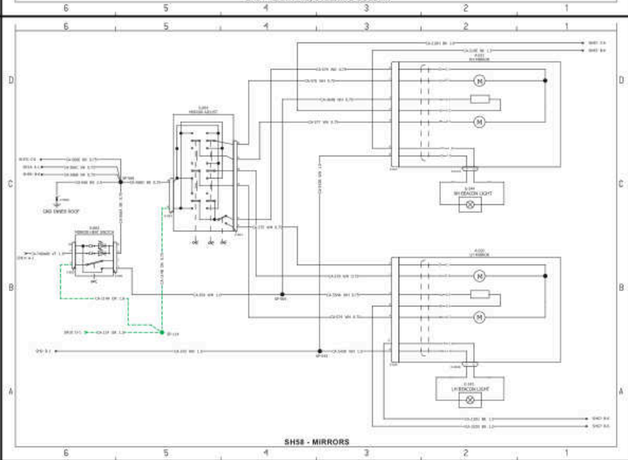
SH55 - WASHER/WIPER, FRONT SCREEN



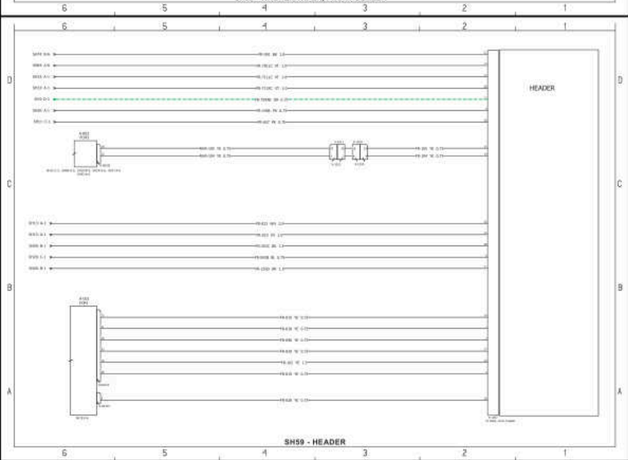
SH56 - WASHER/WIPER, SIDE & REAR



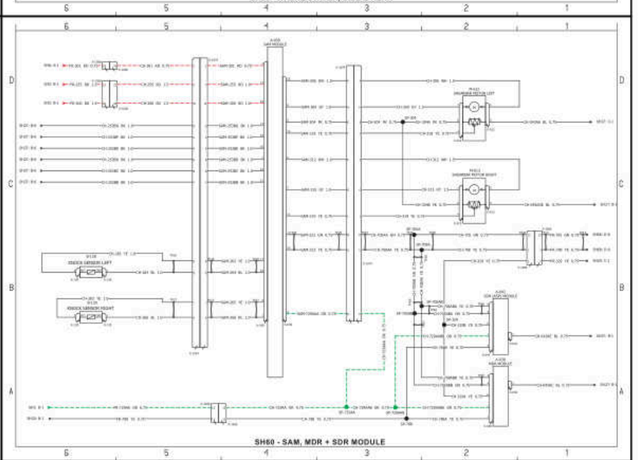
SH57 - DISPLAY, FREDII



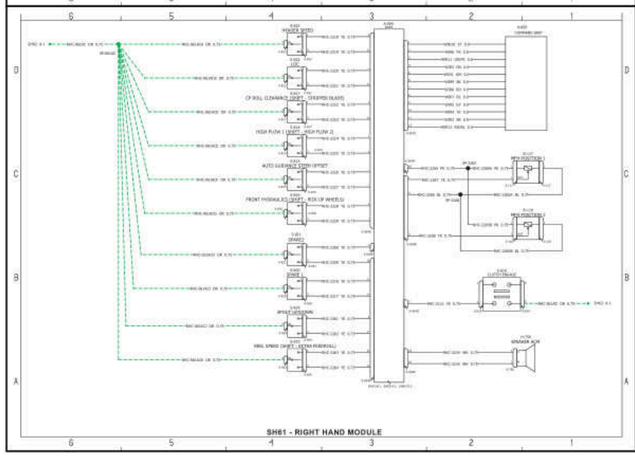
SH58 - MIRRORS



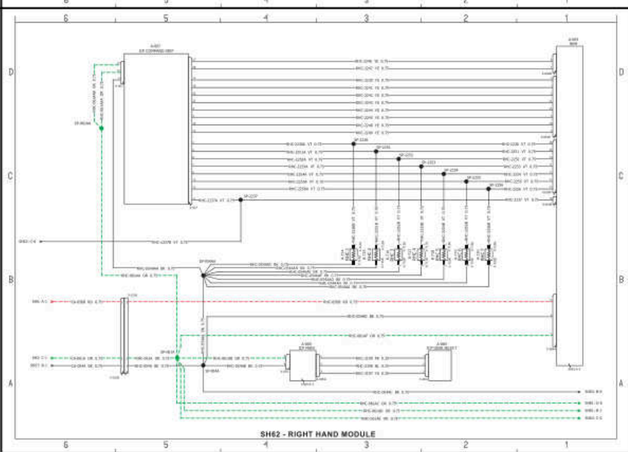
SH59 - HEADER



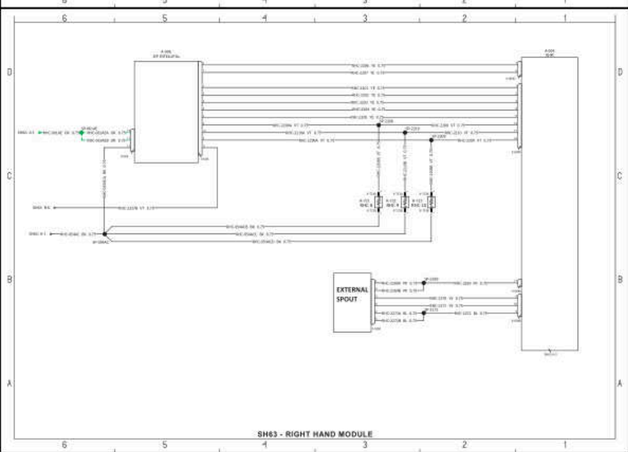
SH60 - SAM, MDR + SDR MODULE



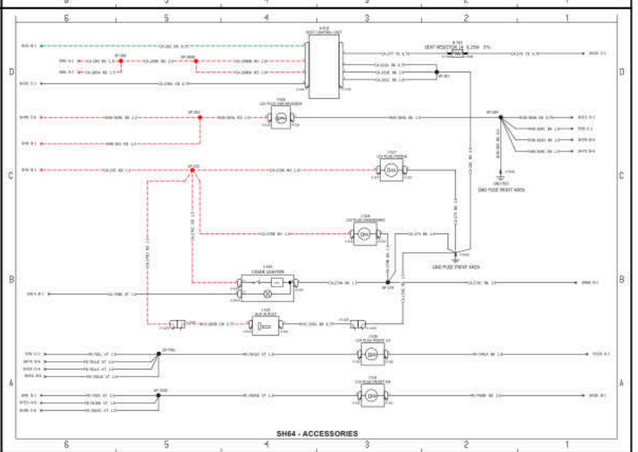
SH61 - RIGHT HAND MODULE



SH62 - RIGHT HAND MODULE



SH63 - RIGHT HAND MODULE



SH64 - ACCESSORIES

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