HYBRID SAFETY

Hino 300 Series Hybrid (Power Down Procedure)

For Body Builders - Prior to any form off welding or ellectrical work to the vehicle

HINO

PPE Required

HIGH VOLTAGE PPE

What PPE should be used?

GLOVES LAYER 1	GLOVES LAYER 2	GLOVES LAYER 3	BOOTS
Cotton Gloves	HV Gloves	Leather Over Gloves	Non-Ground Type Boots
			
Absorbs sweat, eases fitting, removing outer gloves easier, protects outer gloves from internal damage. Cheap to replace.	High voltage insulation. Must be rated at Class 0 (minimum of 1000V) Handle, use and store with great care.	Protects HV Gloves from damage, oil, rips and tears. Kangaroo leather is ideal, as it is thin – important for retaining dexterity.	Prevents an electrical circuit completing through your body to ground. An insulating mat can also be used if grounding boots are worn.

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DEPOWERING PROCEDURE

Before you begin working on a Hybrid vehicle, print off the warning sign and place it prominently on the vehicle.

This notifies all other Technicians and staff in the area that a Hybrid vehicle is under repair and there is a potential high voltage hazard.

This document can be found in the Hybrid section of the repair manual, under the **Cautions** tab.

DEPOWERING PROCEDURE

Turn the ignition key to the LOCK position and remove it from the vehicle, storing it securely.

The only person who should access the key is the Technician performing the work.

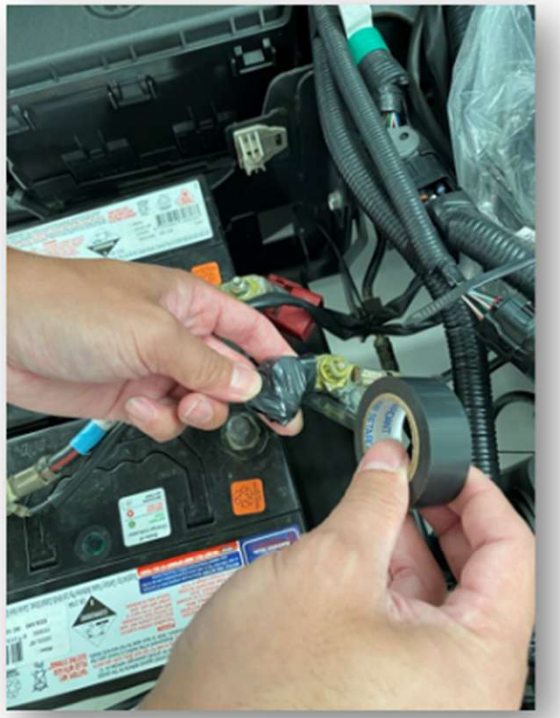
If someone switches on the ignition while you are operating on the vehicle, there is potential for exposure to high voltage.

DEPOWERING PROCEDURE

- Remove the negative battery terminal from the 24V battery system.

This will prevent the Hybrid System from switching on by disabling the HV ECU, which controls the System Main Relays.

DEPOWERING PROCEDURE



Place Insulating Tape over the removed battery terminal to prevent it being accidentally reconnected.

This also serves as a warning to other Technicians who might try to reconnect the battery without considering the vehicle is under repair

DEPOWERING PROCEDURE

Inspect the high voltage gloves for moisture, damage and leaks.

It only takes a pin-hole in the glove for current to pass through. Trap air inside the gloves and roll up. Squeeze to check for leaks.

DO NOT blow air into the gloves, as the moisture in your breath can change their resistance.

DEPOWERING PROCEDURE

Remove 4 X 10mm bolts to access HV service plug from Hybrid PCU

DEPOWERING PROCEDURE

With gloves fitted, you may now remove the Service Plug cover and remove the Service Plug.

Store the Service Plug in your pocket or in a safe location. Again, the only person who should be accessing the Service Plug is the Technician performing the work.

DEPOWERING PROCEDURE

Wait at least 7 minutes for the Inverter Capacitors to discharge.

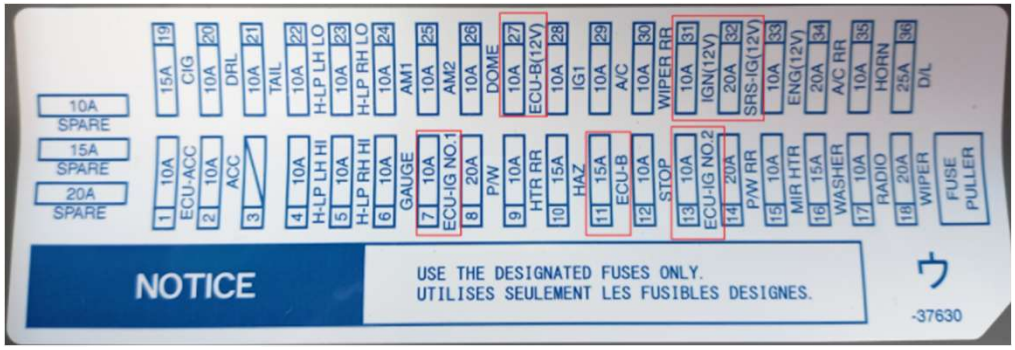
Time it.

DEPOWERING PROCEDURE

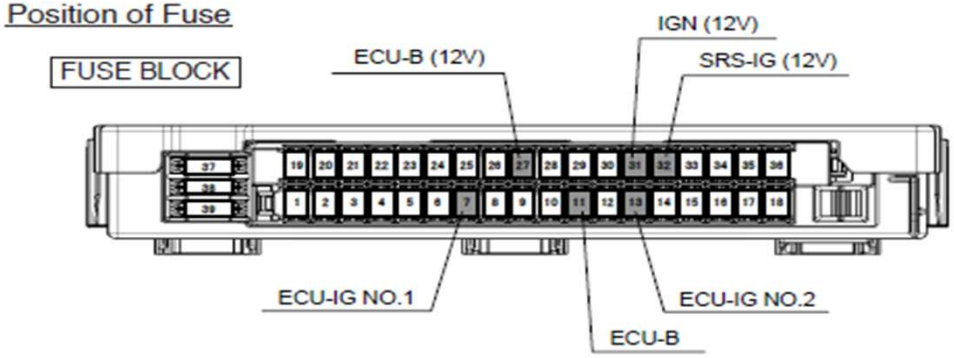
Behind the passenger side seat, disconnect the horizontal mounted DC/DC convertor (Black Plug).

!Failing to do so can result in a DC/DC convertor becoming damaged and warning lights on the dash!

DEPOWERING PROCEDURE



Position of Fuse



Fuse block installing position is inside installment panel.

Remove designated fuses from inside cab fuse block (located lower side off the center off dash panel)

Welding and other electrical work can now commence

- Reconnection will be in reverse as per below steps:

1 – Fit back all fuses to correct location (verify fuse amperage is correct)

2 - Reconnect DC/DC convertor plug behind passenger seat (black connector)

3 – Reconnect HV orange service plug and mount back cover with 4 x 10mm bolts.

4 – Remove insulation tape from negative terminal and securely tighten ground/earth cable.

5 – Start vehicle and ensure there a NO fault codes or warning HV light displayed on instrument cluster.

Procedure to remove and reconnect the vehicles 24V primary batteries to prevent arching and mixing up incorrect polarity.

- Disconnection :Always disconnect the negative terminal 1st (this can be identified by visually looking at the negative sign (-) then remove the positive side after (+) .

- Reconnection : Always fit the (+) terminal to the (+) battery post and lastly fit the negative terminal to the (-) negative post on the battery

BATTERY CONNECTIONS