TCU DTC Troubleshooting Data

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Change History

Ver.	Change details
1.0	**First Release –** DTC related information – 49 DTC included.
1.1	Review comments fixed from TML.
1.2	List of Masked DTCs added.
1.3	3 new DTCs added in 'List of DTCs masked in the Tool' table
1.4	1 new DTCs added in 'List of DTCs masked in the Tool' table
1.5	1 new DTC added in 'List of DTCs masked in the Tool' section
1.6	2 new DTCs added in 'List of DTCs masked in the Tool' section
1.7	1 new DTC added in 'List of DTCs masked in the Tool' section
1.8	2 new DTC added in 'List of DTCs masked in the Tool' section
1.9	Added following Phase 02 DTCs: B2844 – 13, B2843 – 11, B2843 – 12, B2843 – 13, B2842 – 11, B2842 – 12, B2842 – 13 Added following Phase 01 DTCs: B2802 – 95, B281B – 00, U0127 – 08 DTC Masking list Section Updated
1.10	DTC Masking list Section Updated for Challenger EV
1.11	DTC Masking list Section Updated for CVP 2.5 Pin Details for Gen2, Gen2i & Gen2i+ TCM explained
1.12	DTC Masking list Section Updated for Altroz/ Punch MY23

Contents

IVN DTCs

To be updated

CAN Bus Architecture

To be updated

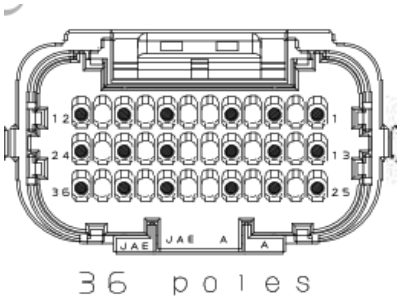
CAN Wiring Harness Diagram

To be updated

Abbreviation

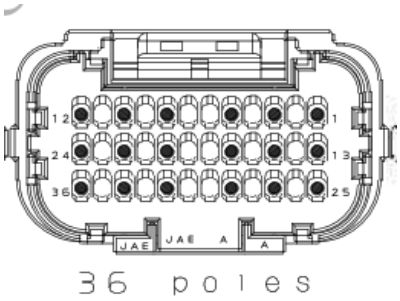
Name	Abbreviation
BCM	Body control module
IPC	Instrument Panel Cluster
HVAC	Heating Ventilating and Air conditioning
RCM	Restraint Control Module
DTC	Diagnostic trouble code
ABS	Antilock braking system
VICM	Vehicle immobilizer control module
HU	Head unit
CAN	Controller area network
ECU	Electronic control unit
N.A	Not Applicable
OBD	On Board diagnostic
CAN_H	CAN high
CAN_L	CAN low
ECM	Engine control module
EPAS	Electric power assistance system
TCU	Telematics Control Unit
PSC	Power Steering Control
TCM	Transmission Control Module
EBD	Electronic brake force distribution
VCU	Vehicle Control Unit
PEPS	Passive Entry Passive Start

Pin Diagram and Description for Gen2 Telematics



Pin #	Signal Name	Signal Description
1	MC_MIC_IN_P	Audio input
2	MC_MIC_IN_N	Audio input
3	GND_MAIN	GND
4	uC_DIG_ANG_3	Digital/analog Signal I/P
5	CAN Shield	CAN GND
6	CAN1_L	Diagnostic CAN
7	CAN1_H	Diagnostic CAN
8	uC_DIG_ANG_2	Digital/analog Signal I/P
9	uC_DIG_ANG_1	Digital/analog Signal I/P
10	RESERVED	Reserved
11	GND_MAIN	GND
12	Batt_IN_24V	BATTERY+
13	MC_SPK_OUT_P	Audio output
14	MC_SPK_OUT_N	Audio output
15	GND_MAIN	GND
16	RESERVED	Reserved for E-Call LED - Active Low - Component to be interfaced info needed (TML)
17	CAN Shield	CAN GND
18	CAN2_L	Vehicle CAN
19	CAN2_H	Vehicle CAN
20	RESERVED	Reserved
21	RESERVED	Reserved
22	MC_DIG_OP4(High side)	HW wake output for BCM
23	RESERVED	Reserved for E-Call LED - Active High - Component to be interfaced info needed (TML)
24	IGN_KL15	Ignition input
25	MC_MIC_OUT_P	Audio out
26	MC_MIC_OUT_N	Audio out
27	GND_MAIN	GND
28	uC_DIG_ANG_4	Digital/analog Signal I/P
29	uC_DIG_ANG_5	Digital/analog Signal I/P
30	RS485_D+	Signal
31	RS485_D-	Signal
32	MC_ANG/eCALL	Wake input from VCU (Applicable only for EVs) -- To be Splice Short with Pin 36
33	MC_ANG/b CALL	Signal
34	MC_DIG_OP1(Low side)	Digital O/P
35	MC_DIG_OP6(High side)	Digital O/P
36	MC_ANG/eCALL	Wake input from VCU (Applicable only for EVs) - To be Splice Short with Pin 32

Pin Diagram and Description for Gen2i & Gen2i+ Telematics



Pin #	Signal Name	Signal Description
1	MC_MIC_IN_P	MIC input positive
2	MC_MIC_IN_N	MIC input negative
3	GND_MAIN	Ground
4	uC_DIG_I/P3	Digital input 3
5	CAN_SH1	CAN1 shield
6	CAN1_L	CAN1 Low - Diagnostic CAN
7	CAN1_H	CAN1 high - Diagnostic CAN
8	uC_DIG_I/P2	Digital input 2
9	MC_SOS_I/P	Digital input (E-CALL SW Input) with Wake-up feature
10	MC_DLED_OP3	Digital Output 3 (HS) (GREEN LED Output for E-CALL)
11	No Connection	No Connection
12	V_V_BAT_KL_30	Vbatt
13	MC_SPK_OUT_P	Speaker output positive
14	MC_SPK_OUT_N	Speaker output negative
15	GND_MAIN	Ground
16	MC_DALLAS_I/P	Dallas input
17	CAN_SH2	CAN2 shield
18	CAN2_L	CAN2 low - Vehicle CAN - W/ithout wake up
19	CAN2_H	CAN2 High - Vehicle CAN - Without wake up

20	MC_DIG_PWM	Frequency input
21	No Connection	No Connection
22	MC_Wake_OP5	Digital Output 5 (HS) (Wake input for BCM)
23	MC_CSU_OP4	Digital Output 4 (HS) (RED LED Output for E-CALL)
24	IGN_KL15	Ignition
25	MC_MIC_OUT_P	MIC output positive
26	MC_MIC_OUT_N	MIC output negative
27	uC_DIG_I/P4	Digital input 4 (Horn Input - Active low)
28	MC_ANG_I/P1	Analog input 1 (ECALL Diagnostics input)
29	MC_ANG_I/P2	Analog input 2 (TML to provide Specification)
30	RS485_D+	RS485 positive
31	RS485_D-	RS485 negative
32	uC_DIG_I/P1	Digital input 1
33	MC_BCALL	Breakdown call (Input for BCALL and ICALL switch)
34	MC_DIG_OP1	Telmute Output
35	MC_SOS_OP6	Digital output 6 (HS) (SOS LED drive)
36	Wake_I/P	Digital input (Input wake up from VCU) -Only for EVs

Preliminary Check

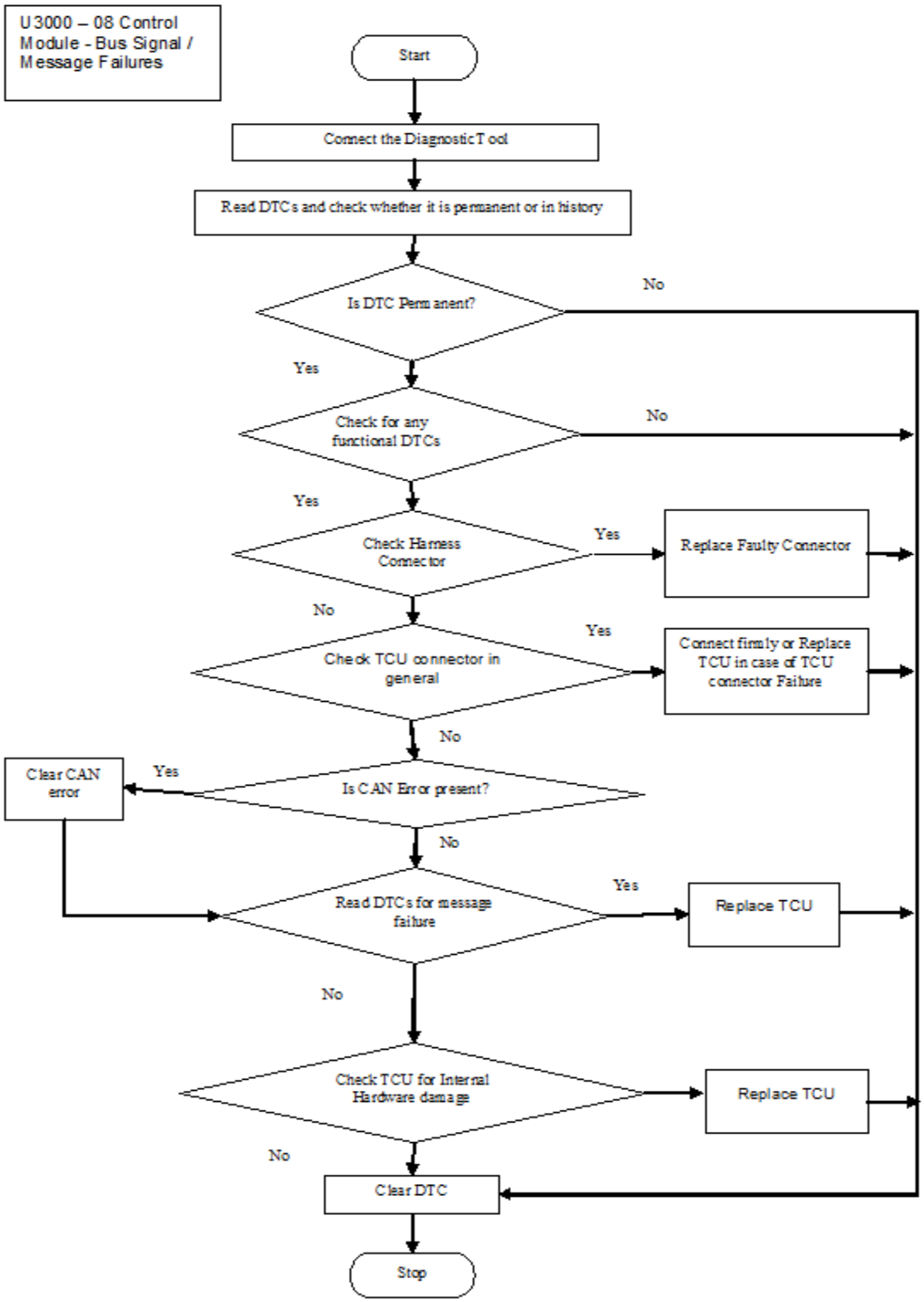
1. Check resistance in Diagnostic CAN pin no. 6 and 7. It should be 120ohm.
2. Check for short conditions between CAN_H-CAN_L, CAN_H-GND, CAN_L-GND, CAN_H-Vbatt and CAN_L-GND. There should not be any short circuit conditions.
3. Check continuity between TCU CAN_H (pin no. 19) vehicle side connector to OBD connector CAN_H (pin no. 6) and CAN_L (pin no. 18) vehicle side connector to ODB connector (pin no.14).
4. Turn ignition ON and Read IVN DTCs in TCU.

U3000 - 08:- Control Module - Bus Signal / Message Failures

Overview:

ISO Code	U3000 – 08 Control Module - Bus Signal / Message Failures
Customer Symptom	Telematics ECU features will not be working
Fault Effects (On Vehicle)	Remote , Vehicle security, Alerts and other telematics features will not be working
Fault Detection Condition	DTC is set in case of control module signal/message failure occurred
Normal Operating Condition	TCU communicates Properly with diagnostic tool and there is no signal/ message failure to the Partner ECU's
Probable Trouble Area	• CAN_H and CAN_L wires • Internal TCU hardware errors • Faulty TCU • CAN high / CAN low pins shorted/Open • CAN transceiver faulty
Healing Condition	1. Verify DTC ageing-Clear in case of ageing 2. Verify if any other functional DTCs present like Lost Communication between interfacing ECUs 3. Check the harness connector-Replace the harness in case of faulty connector 4. Check TCU connector in general, connect firmly in case of loose-Replace TCU in case of connector damage 5. Check pins 18(CAN_L) &19(CAN_H) for CAN failure-Replace TCU in case of connector damage 6. Verify the CAN terminal and correct the CAN termination and verify the CAN connection, retighten the TCU ground connections and retighten the battery negative. Read DTCs again, replace TCU in case of message failure after CAN correction in harness and termination side. 7. Replace TCU in case of internal hardware error

Trouble Shooting:-

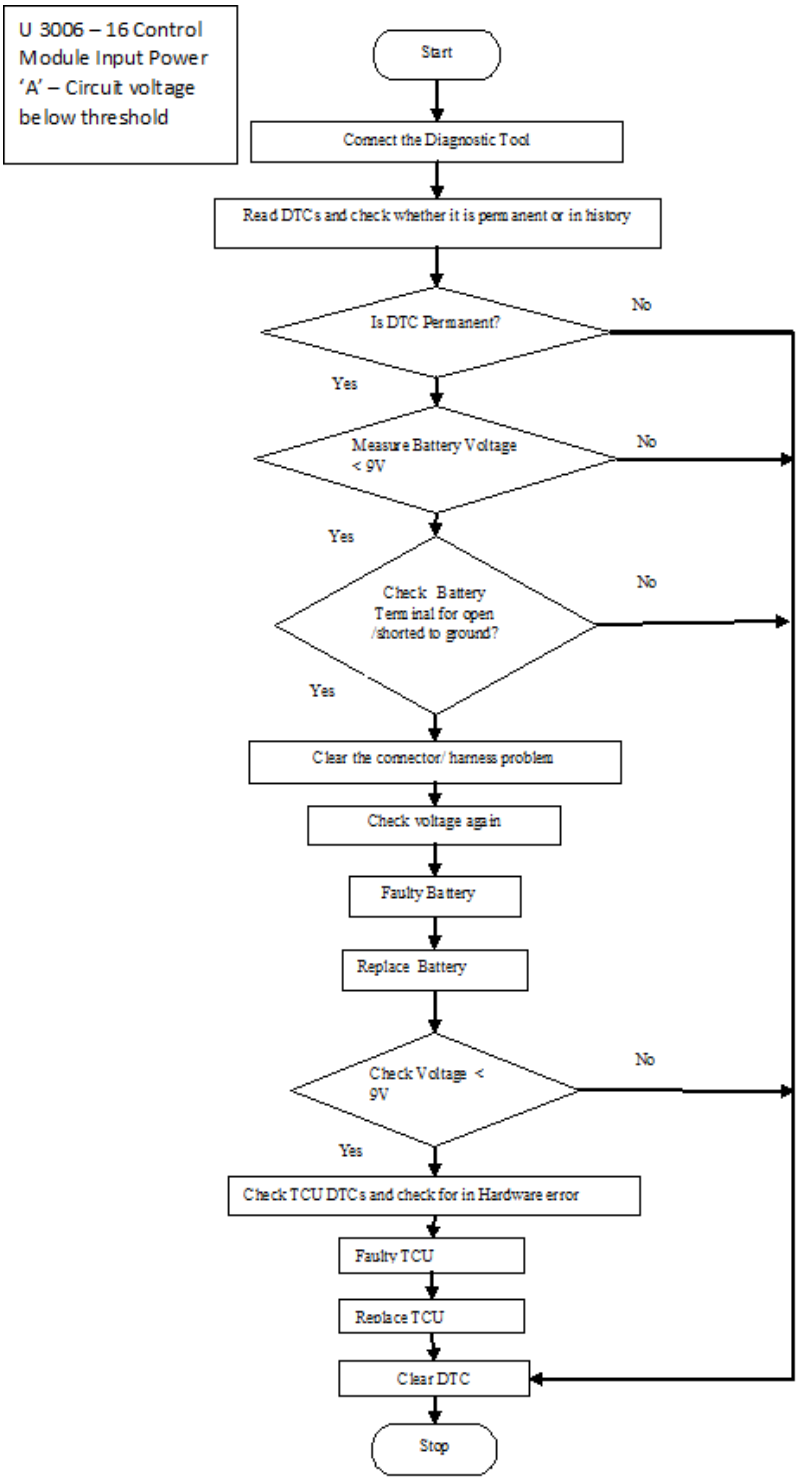


U3006 - 16:- Control Module Input Power "A" - circuit voltage below threshold

Overview:

ISO Code	U3006 – 16 Control Module Input Power "A" - circuit voltage below threshold
Customer Symptom	Telematics ECU features will not be working
Fault Effects (On Vehicle)	Remote , Vehicle security, Alerts and other telematics features will not be working
Fault Detection Condition	DTC is set in case of control module circuit voltage is below 9V
Normal Operating Condition	TCU ECU communicates properly with other partner ECU's in voltage range between 9V to16V
Probable Trouble Area	• Battery terminal short/open/ground • Battery Fault • Battery circuit poor electrical connection • Faulty TCU • TCU connector damage (Oxidation, bending) • Vehicle Battery Voltage below threshold of 9V
Healing Condition	1. Verify DTC ageing-Clear in case of ageing 2. Check the harness connector-Replace the harness in case of faulty harness 3. Check TCU connector in general, connect firmly in case of loose-Replace TCU in case of connector damage 4. Verify the voltage in the TCU connector and correct the harness in case of low voltage reading compared to battery reading at the terminal 5. Check pins 3,11,12,15,27 of the TCU main connector-Replace TCU in case of connector damage 6. Read the battery voltage ,if voltage less than 9V then check for open circuit or short to ground for battery terminals 7. If problem persists after above steps (from 1 to 6) then replace the vehicle battery. 8. Replace TCU in case of internal hardware error

Trouble Shooting:-

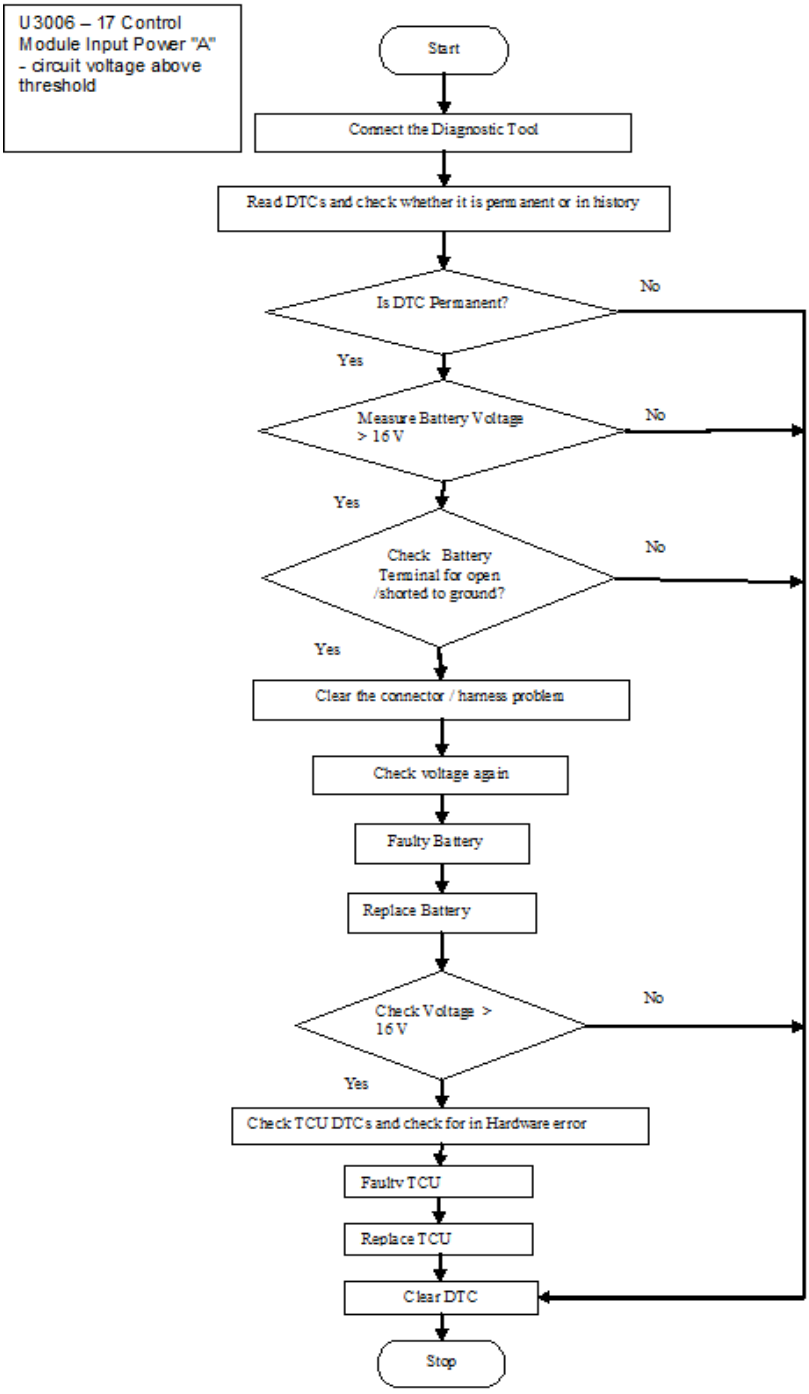


U3006 - 17:- Control Module Input Power "A" - circuit voltage above threshold

Overview:

ISO Code	U3006 – 17 Control Module Input Power "A" - circuit voltage above threshold
Customer Symptom	Telematics ECU features will not be working
Fault Effects (On Vehicle)	Remote , Vehicle security, Alerts and other telematics features will not be working
Fault Detection Condition	DTC is set in case of control module circuit voltage is above 16V
Normal Operating Condition	TCU ECU communicates properly with other partner ECU's under voltage range 9 to16V
Probable Trouble Area	• Battery terminal short/open/ground • Battery Fault • Battery circuit poor electrical connection • Faulty TCU • TCU connector damage (Oxidation, bending) • Vehicle Battery Voltage threshold of >16V
Healing Condition	1. Verify DTC ageing-Clear in case of ageing 2. Check the harness connector-Replace the harness in case of faulty harness 3. Check TCU connector in general, connect firmly in case of loose-Replace TCU in case of connector damage 4. Verify the voltage in the TCU connector and correct the harness in case of low voltage reading compared to battery reading at the terminal 5. Check pins 3,11,12,15,27 of the TCU main connector-Replace TCU in case of connector damage 6. Read the battery voltage ,if voltage is greater than 16V then check for open circuit or short to ground for battery terminals 7. If problem persists after above steps (from 1 to 6) then replace the vehicle battery. 8. Replace TCU in case of internal hardware error

Trouble Shooting:-

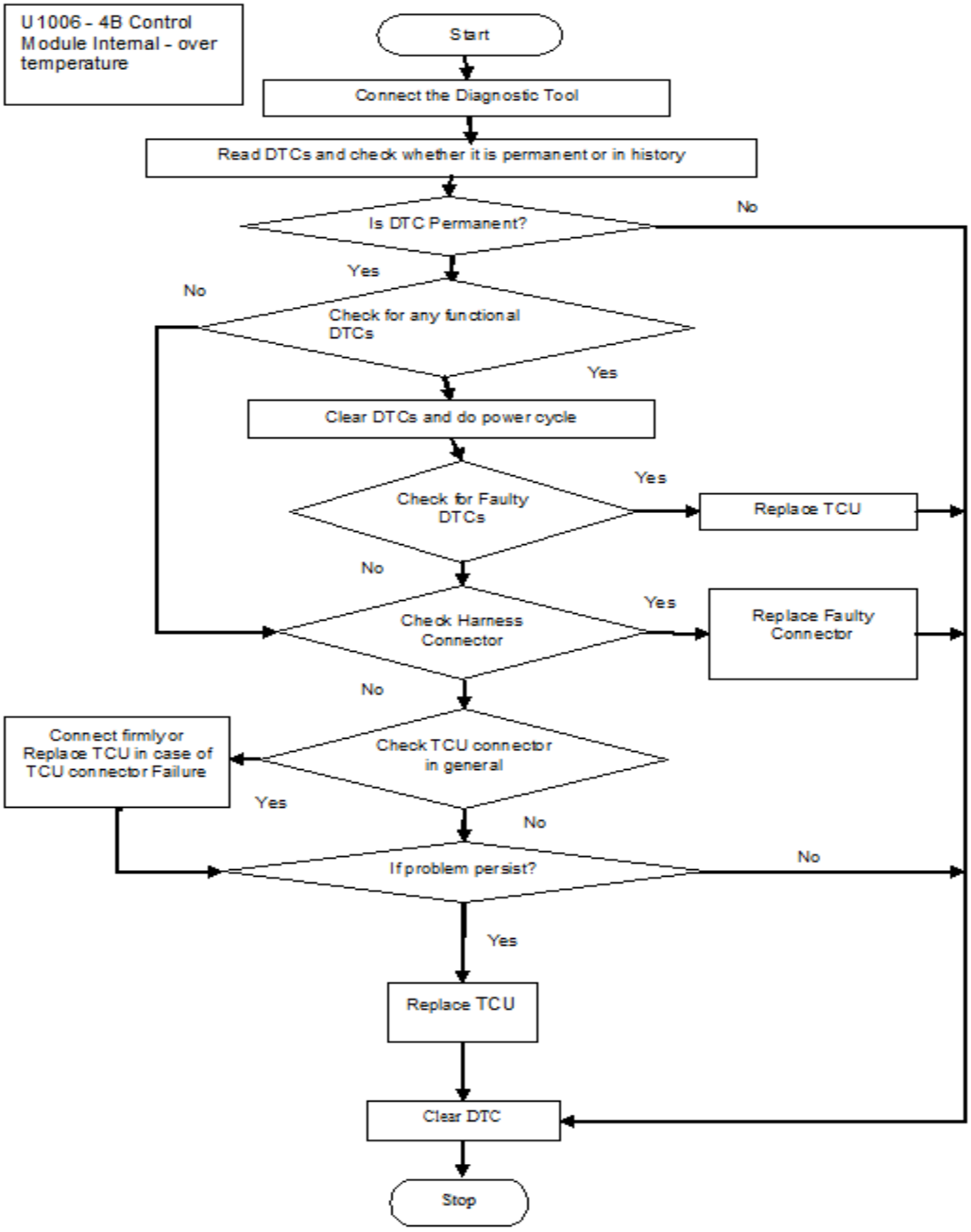


U1006 - 4B:- Control Module Internal - over temperature

Overview:

ISO Code	U1006 - 4B Control Module Internal - over temperature
Customer Symptom	Telematics ECU features will not be working
Fault Effects (On Vehicle)	Remote , Vehicle security, Alerts and other telematics features will not be working
Fault Detection Condition	DTC is set in case of control module internal temperature is high
Normal Operating Condition	TCU ECU communicates properly with other partner ECU's under normal temperature range with in <To be updated> to <To be updated>
Probable Trouble Area	• TCU internal hardware errors • TCU Faulty • Poor electrical connection • Temperature on TCU is high
Healing Condition	1. Verify DTC ageing-Clear in case of ageing 2. Verify if any other functional DTCs present like component failures, replace the TCU in case of faulty DTCs after clearing the DTCs and power cycle 3. Check the harness connector-Replace the harness in case of faulty harness 4. Check TCU connector in general, connect firmly in case of loose-Replace TCU in case of connector damage 5. If problem persists after above steps (from 1 to 4) then replace TCU

Trouble Shooting:-

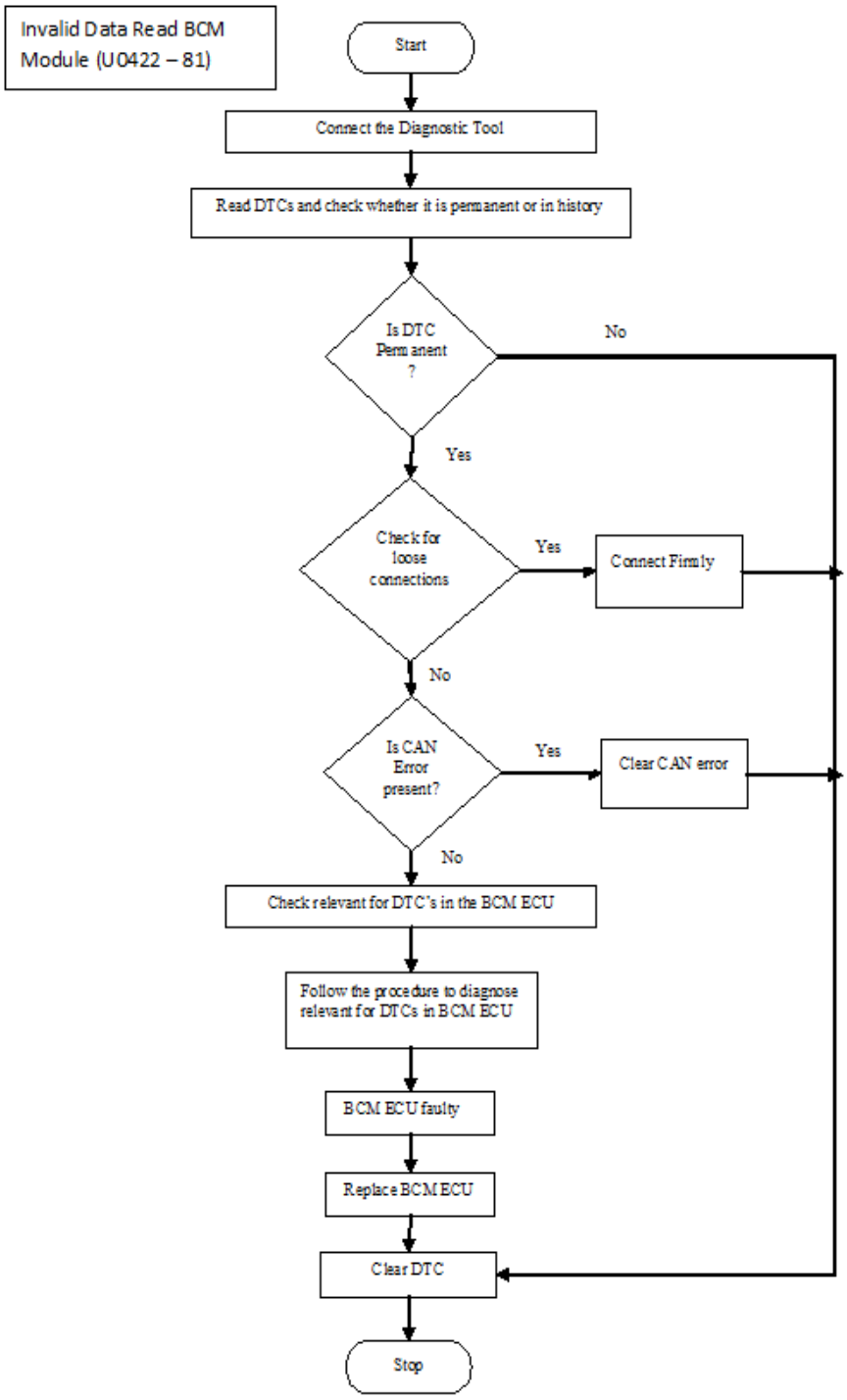


U0422 - 81:- Invalid Data Received From Body Control Module - invalid serial data received

Overview:

ISO Code	U0422 – 81 Invalid Data Received From Body Control Module - invalid serial data received
Customer Symptom	Following Telematics features will not be working:- Remote Lock/Unlock, Remote Lights on/off, Remote climate/HVAC control, Remote charging On/Off, Unauthorized Car Access Alert - Intrusion Alert, Alerts about critical car parameters (Including battery related alerts),View Trip details and Provide drive pattern analytics with Driver Score (Should be sharable on social media),EV range prediction - VCU Calculated, View Car Health Dashboard, Remote Horn, Panic Notification
Fault Effects (On Vehicle)	Remote features and other telematics features will not be working
Fault Detection Condition	Relevant functional DTCs present in TCU. TCU receives incorrect serial data from BCM.
Normal Operating Condition	BCM ECU sends correct serial data in normal condition.
Probable Trouble Area	• CAN_H and CAN_L wires • Incorrect serial data received from BCM • Faulty BCM • The TCU has detected a communication problem on the CAN regarding the Body Control Module. • CAN high / CAN low pins shorted to Battery/Open/ shorted to Ground • CAN transceiver faulty
Healing Condition	1. Verify DTC ageing-Clear in case of ageing 2. Verify BCM DTCs and check for any related DTCs 3. Follow BCM trouble shooting guideline 4. Check CAN H and CAN L connections for short/open 5. Check for CAN transceiver faulty ,if it is fault then replace 6. Power down the device, power up again and wait for at least one minute. If the problem reoccurs, check whether any other CAN-related DTCs are set in the TCU. In that case, check for problems with the CAN hardware (TCU and bus) 7. Clear the DTC 8. If problem persists after above steps (from 1 to7) then follow BCM DTC trouble shooting guide

Trouble Shooting:-

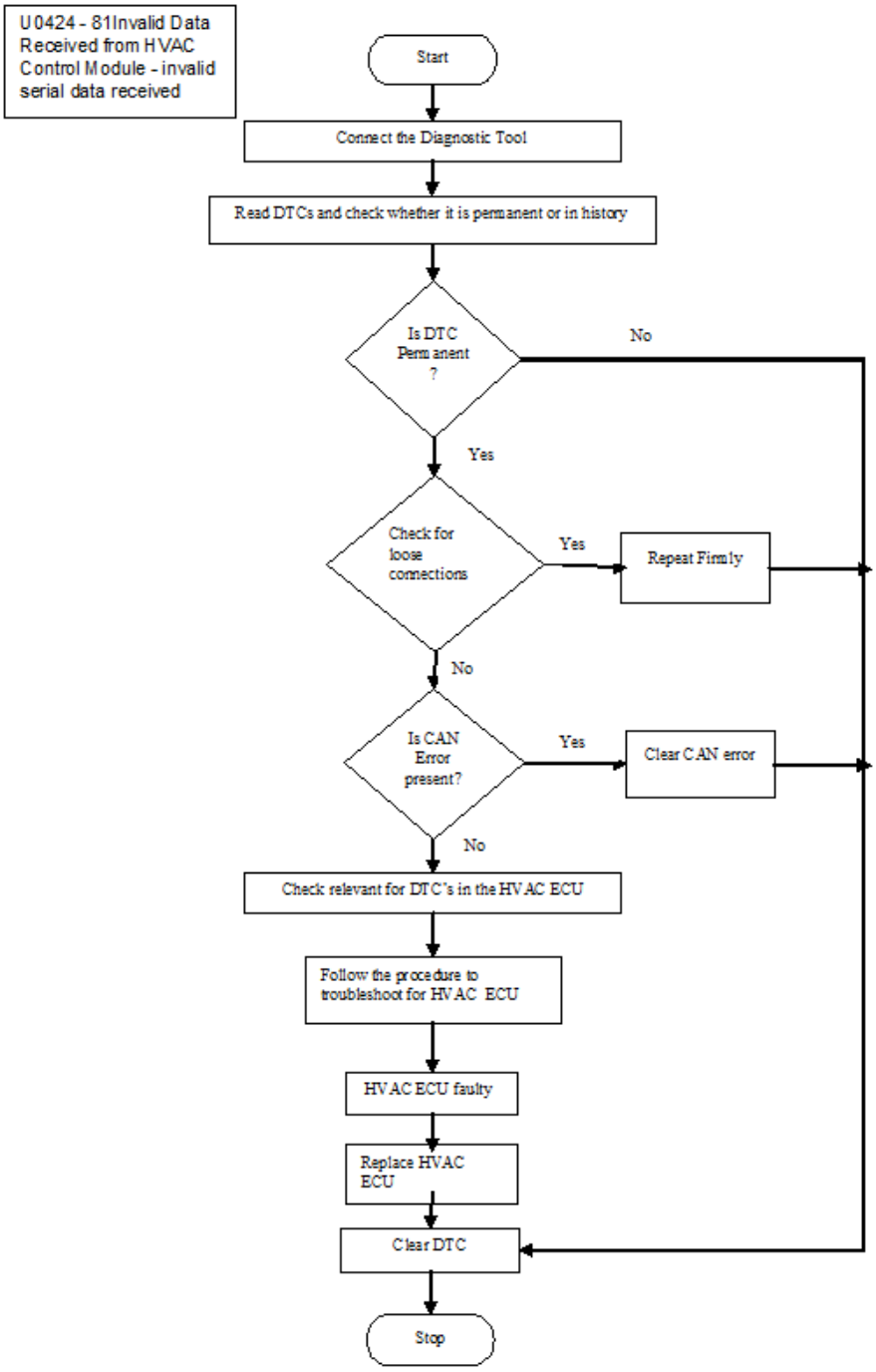


U0424 - 81:- Invalid Data Received From HVAC Control Module - invalid serial data received

Overview:

ISO Code	U0424 – 81 Invalid Data Received From HVAC Control Module - invalid serial data received
Customer Symptom	Following Telematics features will not be working:- Remote climate/HVAC control, Alerts about critical car parameters (Including battery related alerts), View Trip details and Provide drive pattern analytics with Driver Score (Should be sharable on social media)
Fault Effects (On Vehicle)	Remote climate feature and other telematics features will not be working
Fault Detection Condition	Relevant functional DTCs present in TCU. TCU receives incorrect serial data from HVAC
Normal Operating Condition	HVAC ECU sends correct serial data in normal condition.
Probable Trouble Area	• CAN_H and CAN_L wires • Faulty HVAC • Incorrect serial data received from HVAC • The TCU has detected a communication problem on the CAN regarding the HVAC. • CAN high / CAN low pins shorted to Battery/Open/ shorted to Ground • CAN transceiver faulty
Healing Condition	1. Verify DTC ageing-Clear in case of ageing 2. Verify HVAC DTCs and check for any related DTCs 3. Follow HVAC trouble shooting guideline 4. Check CAN H and CAN L connections for short/open 5. Check for CAN transceiver faulty ,if it is fault then replace 6. Power down the device, power up again and wait for at least one minute. If the problem reoccurs, check whether any other CAN-related DTCs are set in the TCU. In that case, check for problems with the CAN hardware (TCU and bus) 7. Clear the DTC 8. If problem persists after above steps(from 1 to 7) then follow HVAC DTC trouble shooting guide

Trouble Shooting:-

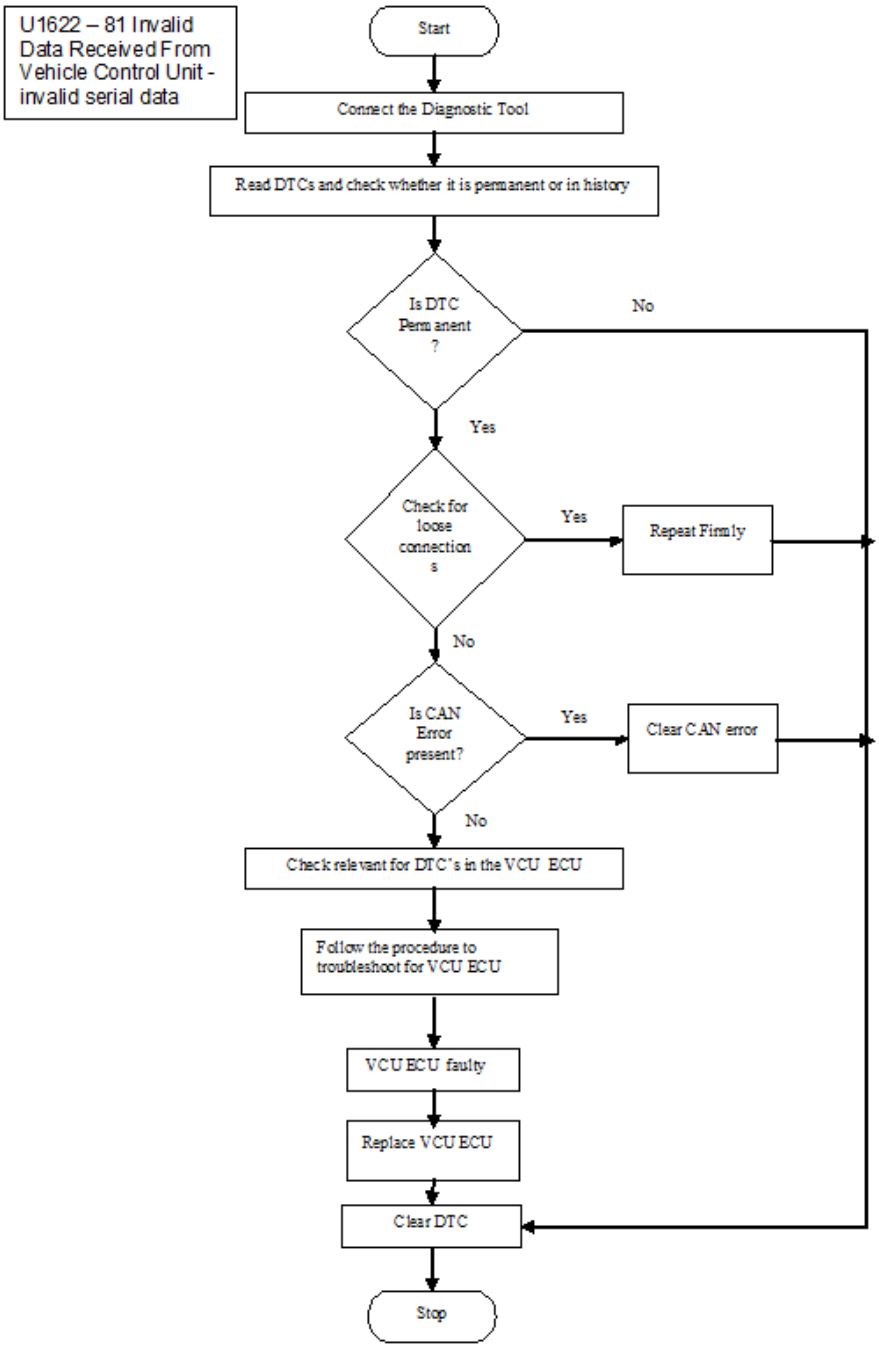


U1622 - 81:- Invalid Data Received From Vehicle Control Unit - invalid serial data received

Overview:

ISO Code	U1622 – 81 Invalid Data Received From Vehicle Control Unit - invalid serial data received
Customer Symptom	Following Telematics features will not be working:- Remote climate/HVAC control, Remote immobilization when car is stolen , Remote charging On/Off, Valet Mode , EV range prediction - VCU Calculated, View Car Health Dashboard, Time to charge (in Hrs and Mins), Remote SOC, EV motor check, one battery and DTE check
Fault Effects (On Vehicle)	Remote , Vehicle security, Alerts and other telematics features will not be working
Fault Detection Condition	Relevant functional DTCs present in TCU. TCU receives incorrect serial data from VCU
Normal Operating Condition	VCU ECU sends correct serial data in normal condition.
Probable Trouble Area	• CAN_H and CAN_L wires • Internal VCU hardware errors • Faulty VCU • The TCU has detected a communication problem on the CAN regarding the VCU. • CAN high / CAN low pins shorted to Battery/Open/ shorted to Ground • CAN transceiver faulty
Healing Condition	1. Verify DTC ageing-Clear in case of ageing 2. Verify VCU DTCs and check for any related DTCs 3. Follow VCU trouble shooting guideline 4. Check CAN H and CAN L connections for short/open 5. Check for CAN transceiver faulty ,if it is fault then replace 6. Power down the device, power up again and wait for at least one minute. If the problem reoccurs, check whether any other CAN-related DTCs are set in the TCU. In that case, check for problems with the CAN hardware (TCU and bus) 7. Clear the DTC 8. If problem persists after above steps (from 1 to 7) then follow VCU DTC trouble shooting guide

Trouble Shooting:-

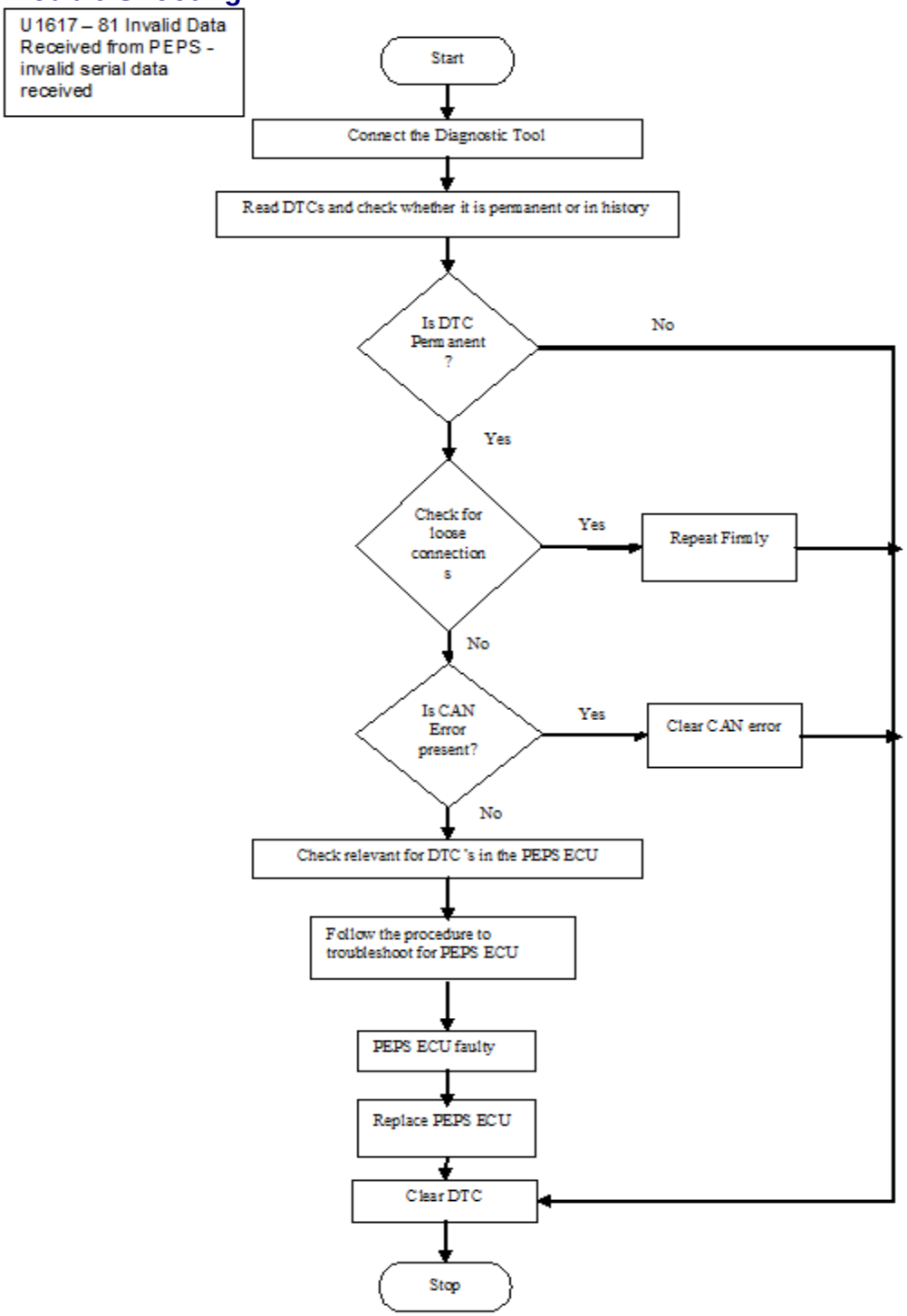


U1617 - 81:- Invalid Data Received From PEPS - invalid serial data received

Overview:

ISO Code	U1617 – 81 Invalid Data Received From PEPS - invalid serial data received
Customer Symptom	Following Telematics features will not be working:- Remote immobilization when car is stolen , Alerts about critical car parameters (Including battery related alerts), View Car Health Dashboard
Fault Effects (On Vehicle)	Vehicle security, Alerts and other telematics features will not be working
Fault Detection Condition	Relevant functional DTCs present in TCU. TCU receives incorrect serial data from PEPS
Normal Operating Condition	PEPS ECU sends correct serial data in normal condition.
Probable Trouble Area	• CAN_H and CAN_L wires • Internal PEPS hardware errors • Faulty PEPS • The TCU has detected a communication problem on the CAN regarding the PEPS. • CAN high / CAN low pins shorted to Battery/Open/ shorted to Ground • CAN transceiver faulty
Healing Condition	1. Verify DTC ageing-Clear in case of ageing 2. Verify PEPS DTCs and check for any related DTCs 3. Follow PEPS trouble shooting guideline 4. Check CAN H and CAN L connections for short/open 5. Check for CAN transceiver faulty ,if it is fault then replace 6. Power down the device, power up again and wait for at least one minute. If the problem reoccurs, check whether any other CAN-related DTCs are set in the TCU. In that case, check for problems with the CAN hardware (TCU and bus) 7. Clear the DTC 8. If problem persists after above steps (from 1 to 7) then follow PEPS DTC trouble shooting guide

Trouble Shooting:-

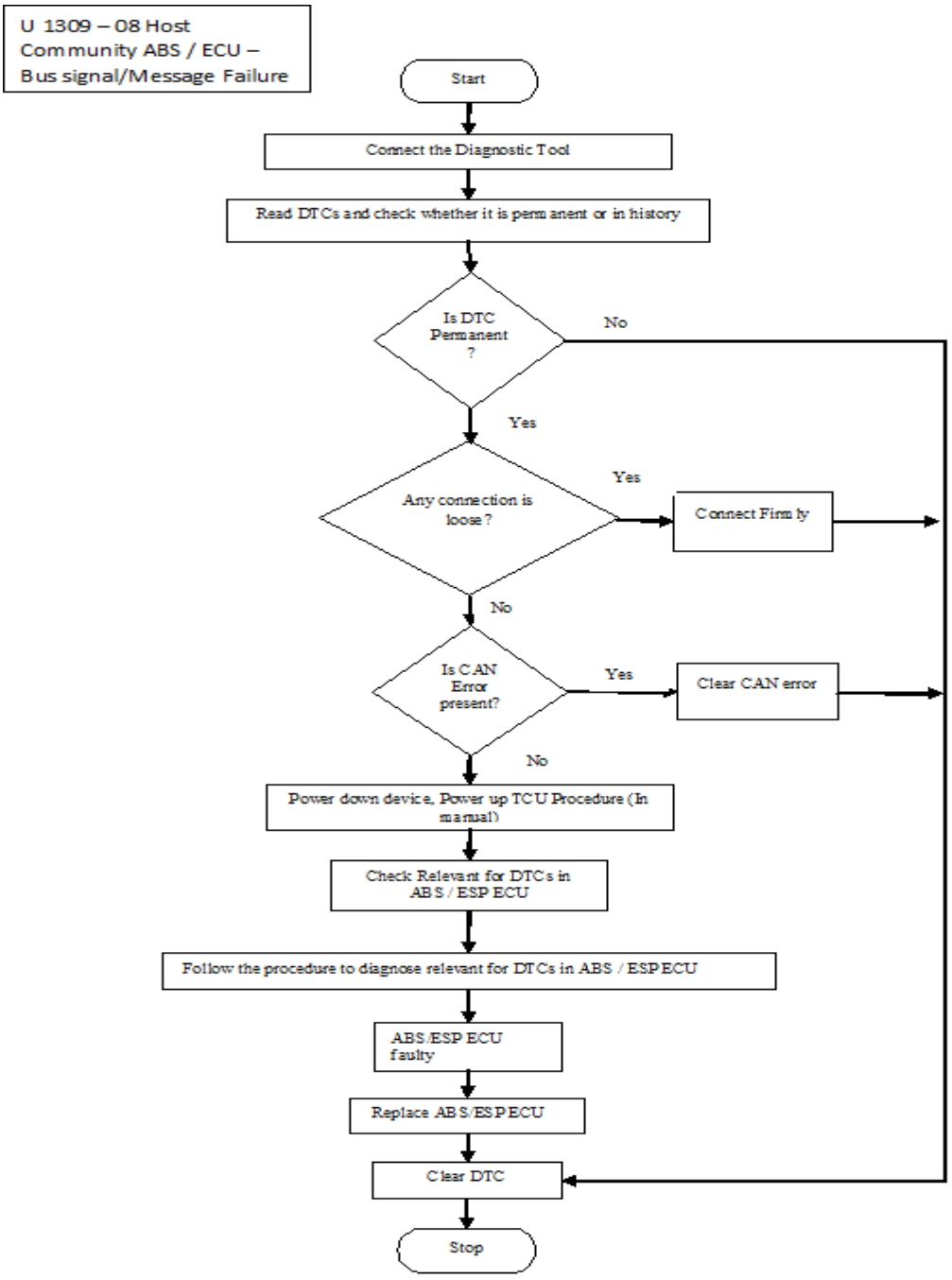


U1309 - 08:- Lost Communication with Antilock Braking System/Electronic Stability Program (ABS/ESP) Control Module - Bus Signal / Message Failures

Overview:

ISO Code	U1309 – 08 Lost Communication With Antilock Braking System/Electronic Stability Program (ABS/ESP) Control Module - Bus Signal / Message Failures
Customer Symptom	Following Telematics features will not be working:- Alerts about critical car parameters (Including battery related alerts), View Car Health Dashboard
Fault Effects (On Vehicle)	N/A
Fault Detection Condition	Relevant functional DTCs present in TCU .DTC is set in case of Lost Communication With Antilock Braking System/Electronic Stability Program (ABS/ESP) Control Module
Normal Operating Condition	ABS/ESP ECU communicates properly with TCU in normal condition.
Probable Trouble Area	• CAN_H and CAN_L wires • CAN transceiver faulty • Faulty ABS/ESP ECU • The TCU has detected a communication problem on the CAN regarding the ABS/ESP Module • CAN high / CAN low pins shorted to Battery/Open/ shorted to Ground • CAN transceiver faulty • DTC is to be logged when the subscribed message is not available on the CAN bus from ABS/ESP module
Healing Condition	1. Verify DTC ageing-Clear in case of ageing 2. Verify ABS/ESP DTCs and check for any related DTCs 3. Follow ABS/ESP trouble shooting guideline 4. Check CAN H and CAN L connections for short/open 5. Check for CAN transceiver faulty ,if it is fault then replace 6. Power down the device, power up again and wait for at least one minute. If the problem reoccurs, check whether any other CAN-related DTCs are set in the TCU. In that case, check for problems with the CAN hardware (TCU and bus) 7. Clear the DTC 8. If problem persists after above steps (from 1 to7) then Follow ABS/ESP ECU DTC trouble shooting guide

Trouble Shooting:-

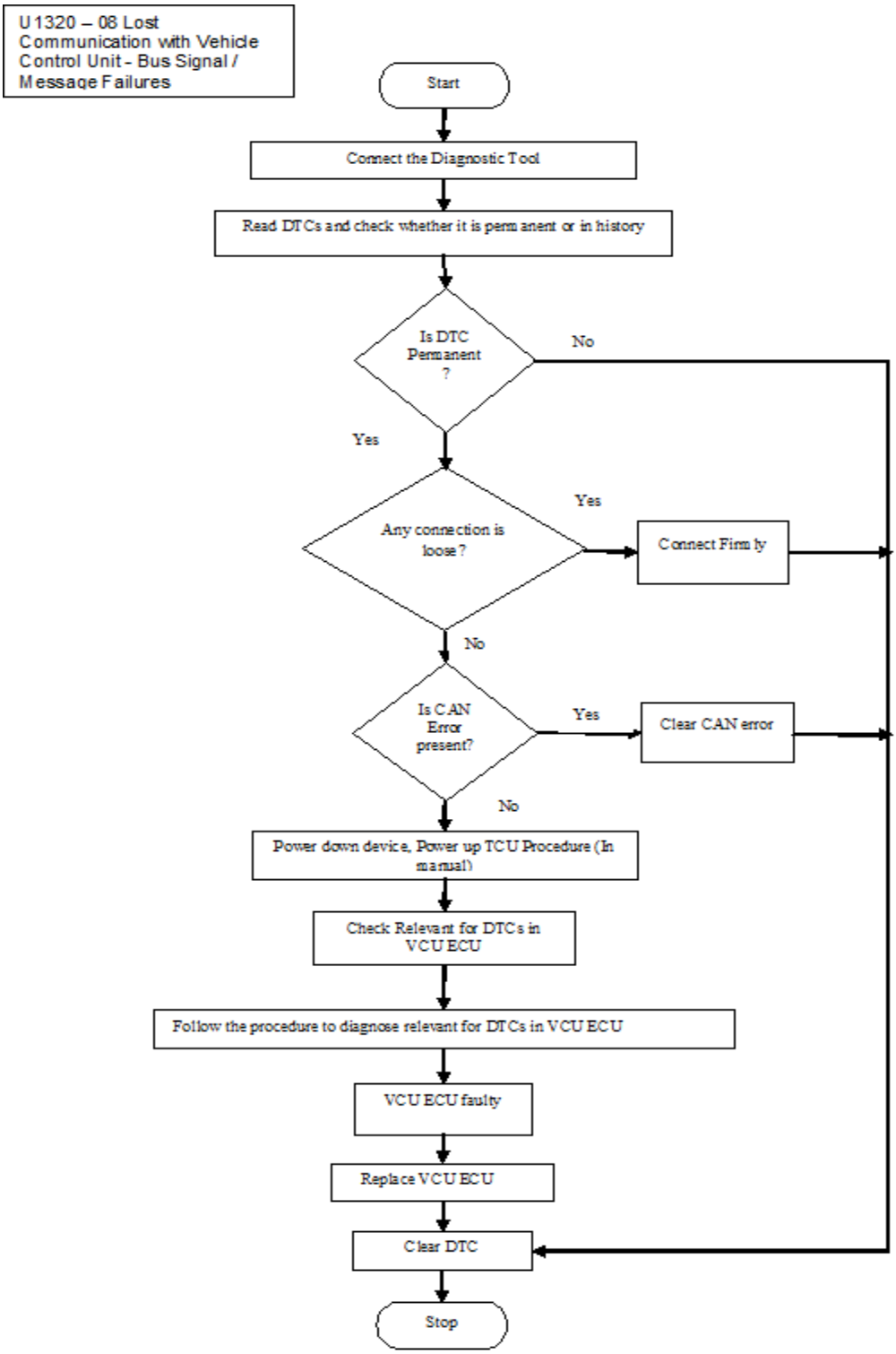


U1320 - 08:- Lost Communication with Vehicle Control Unit - Bus Signal / Message Failures

Overview:

ISO Code	U1320 – 08Lost Communication With Vehicle Control Unit - Bus Signal / Message Failures
Customer Symptom	Following Telematics features will not be working:- Remote climate/HVAC control, Remote immobilization when car is stolen , Remote charging On/Off, Valet Mode , EV range prediction - VCU Calculated, View Car Health Dashboard, Time to charge (in Hrs and Mins), Remote SOC, EV motor check, one battery and DTE check
Fault Effects (On Vehicle)	Remote , Vehicle security, Alerts and other telematics features will not be working
Fault Detection Condition	Relevant DTC is set in case of Lost Communication With VCU - Bus Signal / Message Failures
Normal Operating Condition	VCU ECU communicates properly with TCU in normal condition.
Probable Trouble Area	• CAN_H and CAN_L wires • Internal VCU hardware errors or faulty ECU • CAN transceiver faulty • The TCU has detected a communication problem on the CAN regarding the VCU Module • CAN high / CAN low pins shorted to Battery/Open/ shorted to Ground • CAN transceiver faulty • DTC is to be logged when the subscribed message is not available on the CAN bus from VCU module
Healing Condition	1. Verify DTC ageing-Clear in case of ageing 2. Verify VCU DTCs and check for any related DTCs 3. Follow VCU trouble shooting guideline 4. Check CAN H and CAN L connections for short/open 5. Check for CAN transceiver faulty ,if it is fault then replace 6. Power down the device, power up again and wait for at least one minute. If the problem reoccurs, check whether any other CAN-related DTCs are set in the TCU. In that case, check for problems with the CAN hardware (TCU and bus) 7. Clear the DTC 8. If problem persists after above steps(from 1 to7) then follow VCU ECU DTC trouble shooting guide

Trouble Shooting:-



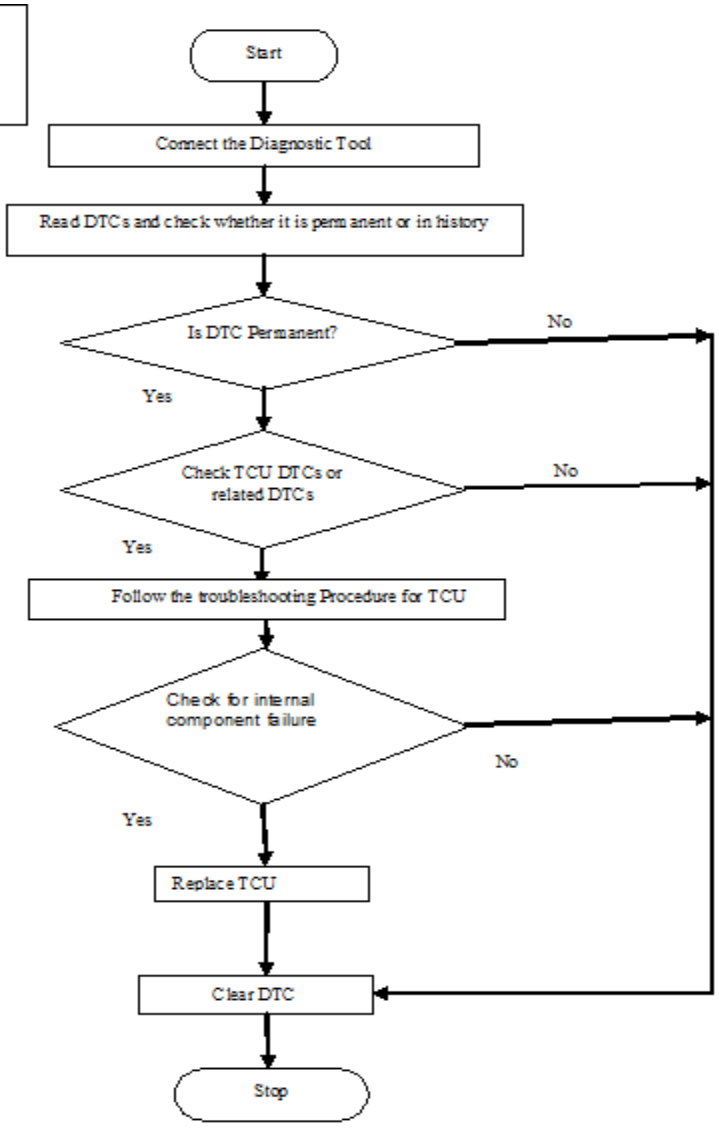
U1611 - 57:- Master Electronic Control Module Communication from Backup Electronic Control Module - missing message

Overview:

ISO Code	U1611 – 57 Master Electronic Control Module Communication From Backup Electronic Control Module - missing message
Customer Symptom	All features related to telematics ECU will not be working
Fault Effects (On Vehicle)	Remote , Vehicle security, Alerts and other telematics features will not be working
Fault Detection Condition	DTC is set in case of error in master electronic control module communication from backup electronic control module
Normal Operating Condition	TCU communicates Properly with diagnostic tool and there is no signal/ message failure to the Partner ECU's
Probable Trouble Area	• Faulty TCU • TCU internal circuit error
Healing Condition	1. Verify DTC ageing-Clear in case of ageing 2. Verify any other communication related DTCs present 3. Verify TCU DTCs and check for any related DTCs 4. Follow TCU trouble shooting guideline to clear the relevant functional DTCs 5. Check for internal component failure 6. If problem persists after above steps (from 1 to5) then replace TCU

Trouble Shooting:-

U1611 – 57 Master Electronic Control Module Communication

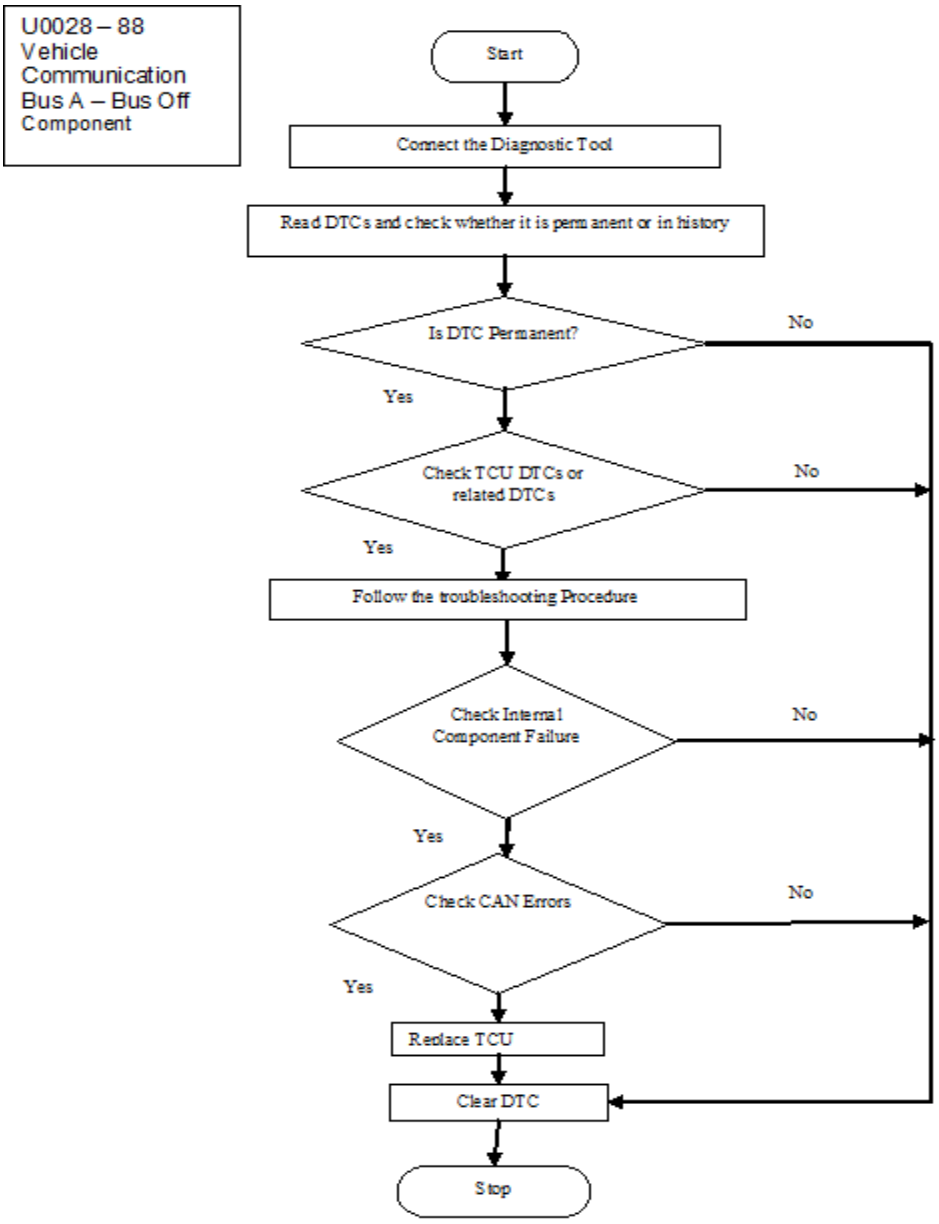


U0028 - 88 :- Vehicle Communication Bus A - bus off

Overview:

ISO Code	U0028 – 88 Vehicle Communication Bus A – Bus Off
Customer Symptom	All features related to telematics ECU will not be working
Fault Effects (On Vehicle)	Remote , Vehicle security, Alerts and other telematics features will not be working
Fault Detection Condition	Short circuit between CAN_H -CAN_L, CAN_H -GND, CAN_L-Vbatt lines. This DTC may also get logged in case of CANH or CAN L open circuit.
Normal Operating Condition	TCU communicates Properly with diagnostic tool and there is no signal/ message failure to the Partner ECU's
Probable Trouble Area	• Faulty TCU • Internal Component failure • CAN transceiver faulty • CAN H and CAN L pins(pin:18 and 19) are shorted /open/ground • TCU pin have problem with oxidation, bending & damage
Healing Condition	1. Verify DTC ageing-Clear in case of ageing 2. Verify any other communication related DTCs present 3. Verify TCU DTCs and check for any related DTCs 4. Follow TCU trouble shooting guideline to clear the relevant functional DTCs 5. Check for internal component failure 6. Check CAN errors on vehicle CAN communication 7. If problem persists after above steps (from 1 to 6) then replace TCU

Trouble Shooting:-



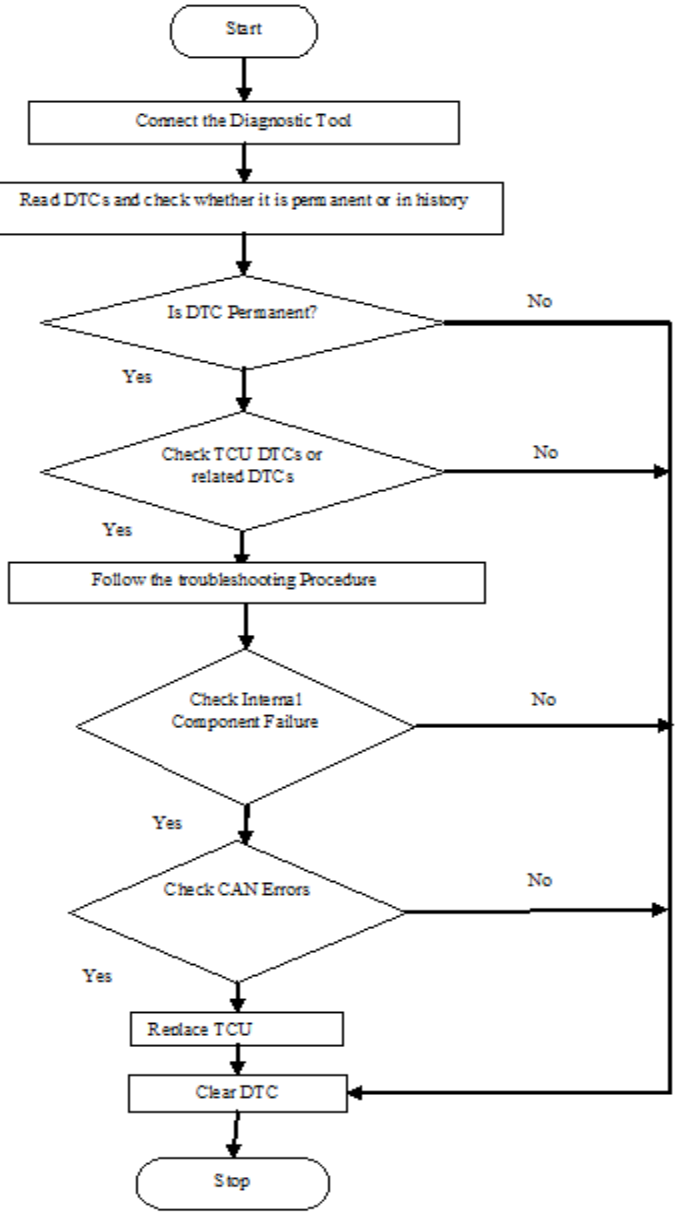
U0037 - 88 :- Vehicle Communication Bus B - bus off

Overview:

ISO Code	U0037 – 88 Vehicle Communication Bus B – Bus Off
Customer Symptom	All features related to telematics ECU will not be working
Fault Effects (On Vehicle)	Remote , Vehicle security, Alerts and other telematics features will not be working
Fault Detection Condition	Short circuit between CAN_H -CAN_L, CAN_H -GND, CAN_L-Vbatt lines. This DTC may also get logged in case of CANH or CAN L open circuit.
Normal Operating Condition	TCU communicates Properly with diagnostic tool and there is no signal/ message failure to the Partner ECU's
Probable Trouble Area	• Faulty TCU • Internal Component failure • CAN transceiver faulty • CAN H and CAN L pins(pin:6 and 7) are shorted /open/ground • TCU pin have problem with oxidation, bending & damage
Healing Condition	1. Verify DTC ageing-Clear in case of ageing 2. Verify any other communication related DTCs present 3. Verify TCU DTCs and check for any related DTCs 4. Follow TCU trouble shooting guideline to clear the relevant functional DTCs 5. Check for internal component failure 6. Check CAN errors on vehicle CAN communication 7. If problem persists after above steps(from 1 to 6) then replace TCU

Trouble Shooting:-

U0037 – 88
Vehicle
Communication
Bus B – Bus Off

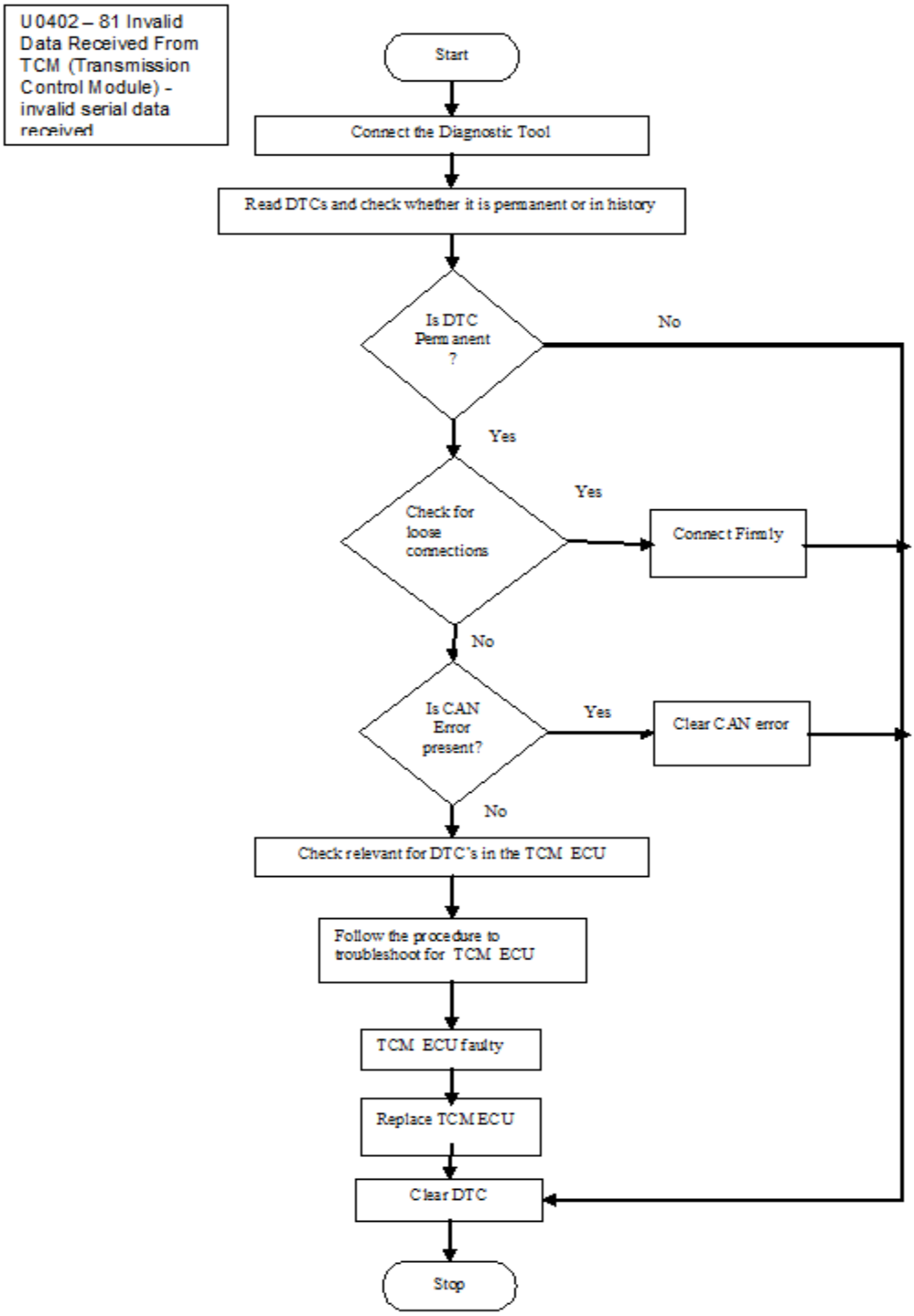


U0402 - 81 :- Invalid Data Received From TCM (Transmission Control Module) - invalid serial data received

Overview:

ISO Code	U0402 – 81 Invalid Data Received From TCM - invalid serial data received
Customer Symptom	Following Telematics features will not be working :- Alerts about critical car parameters (Including battery related alerts), View Car Health Dashboard
Fault Effects (On Vehicle)	N/A
Fault Detection Condition	Relevant functional DTCs present in TCU. TCU receives incorrect serial data from TCM
Normal Operating Condition	TCM ECU sends correct serial data in normal condition.
Probable Trouble Area	• CAN_H and CAN_L wires • Internal TCM hardware errors • Faulty TCM • The TCU has detected a communication problem on the CAN regarding the TCM. • CAN high / CAN low pins shorted to Battery/Open/ shorted to Ground • CAN transceiver faulty
Healing Condition	1. Verify DTC ageing-Clear in case of ageing 2. Verify TCM DTCs and check for any related DTCs 3. Follow TCM trouble shooting guideline 4. Check CAN H and CAN L connections for short/open 5. Check for CAN transceiver faulty ,if it is fault then replace 6. Power down the device, power up again and wait for at least one minute. If the problem reoccurs, check whether any other CAN-related DTCs are set in the TCU. In that case, check for problems with the CAN hardware (TCU and bus) 7. Clear the DTC 8. If problem persists after above steps (from 1 to 7) then follow TCM DTC trouble shooting guide.

Trouble Shooting:-

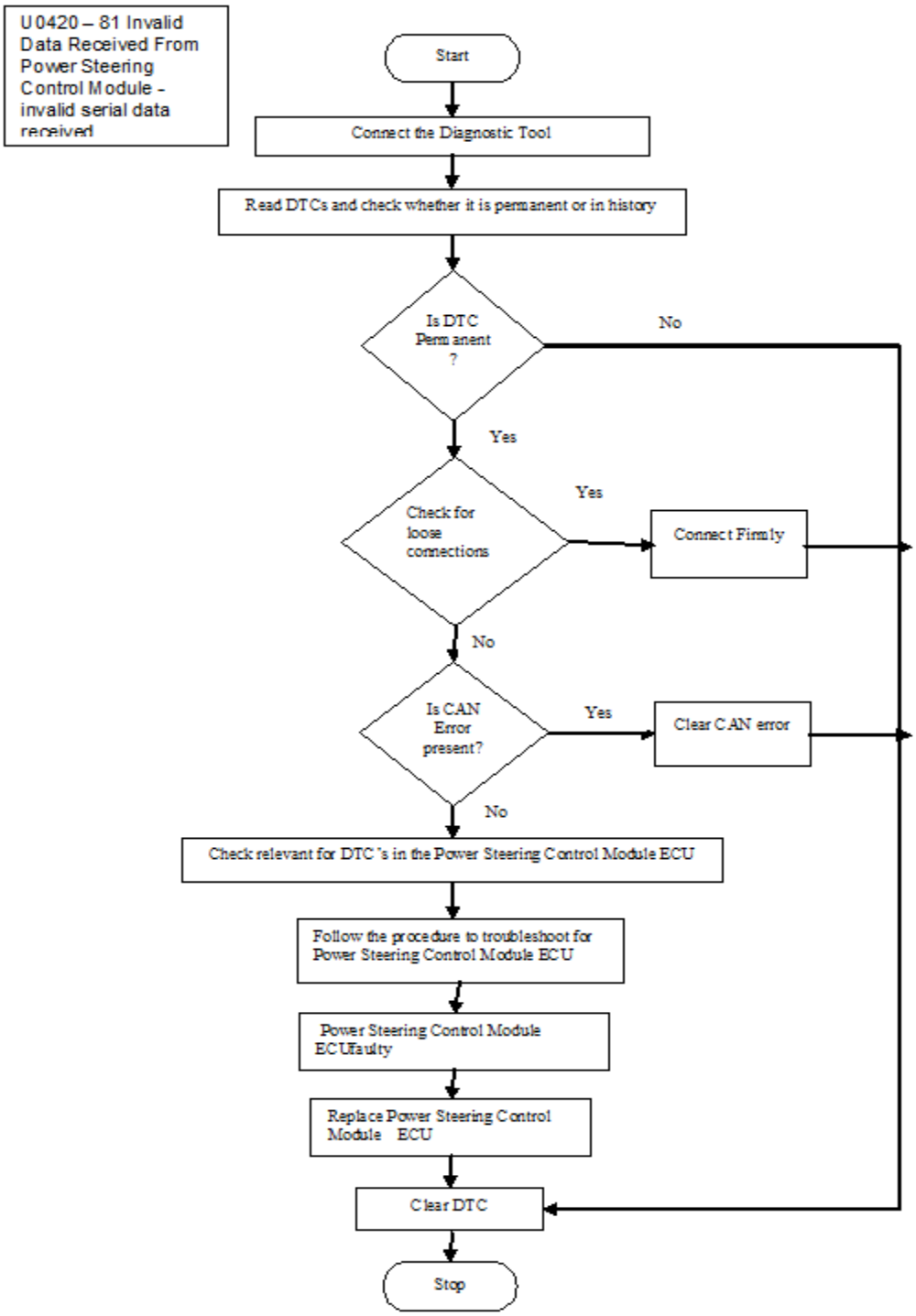


U0420 - 81 :- Invalid Data Received From Power Steering Control Module - invalid serial data received

Overview:

ISO Code	U0420 – 81 Invalid Data Received From Power Steering Control(PSC) Module - invalid serial data received
Customer Symptom	Following Telematics features will not be working:- Alerts about critical car parameters (Including battery related alerts), View Car Health Dashboard
Fault Effects (On Vehicle)	N/A
Fault Detection Condition	Relevant functional DTCs present in TCU.TCU receives incorrect serial data from PSC Module
Normal Operating Condition	PSC ECU sends correct serial data in normal condition.
Probable Trouble Area	• CAN_H and CAN_L wires • Internal PSC hardware errors • Faulty PSC • The TCU has detected a communication problem on the CAN regarding the PSC. • CAN high / CAN low pins shorted to Battery/Open/ shorted to Ground • CAN transceiver faulty
Healing Condition	1. Verify DTC ageing-Clear in case of ageing 2. Verify PSC DTCs and check for any related DTCs 3. Follow PSC trouble shooting guideline 4. Check CAN H and CAN L connections for short/open 5. Check for CAN transceiver faulty ,if it is fault then replace 6. Power down the device, power up again and wait for at least one minute. If the problem reoccurs, check whether any other CAN-related DTCs are set in the TCU. In that case, check for problems with the CAN hardware (TCU and bus) 7. Clear the DTC 8. If problem persists after above steps(from 1 to 7) then follow PSC DTC trouble shooting guide

Trouble Shooting:-

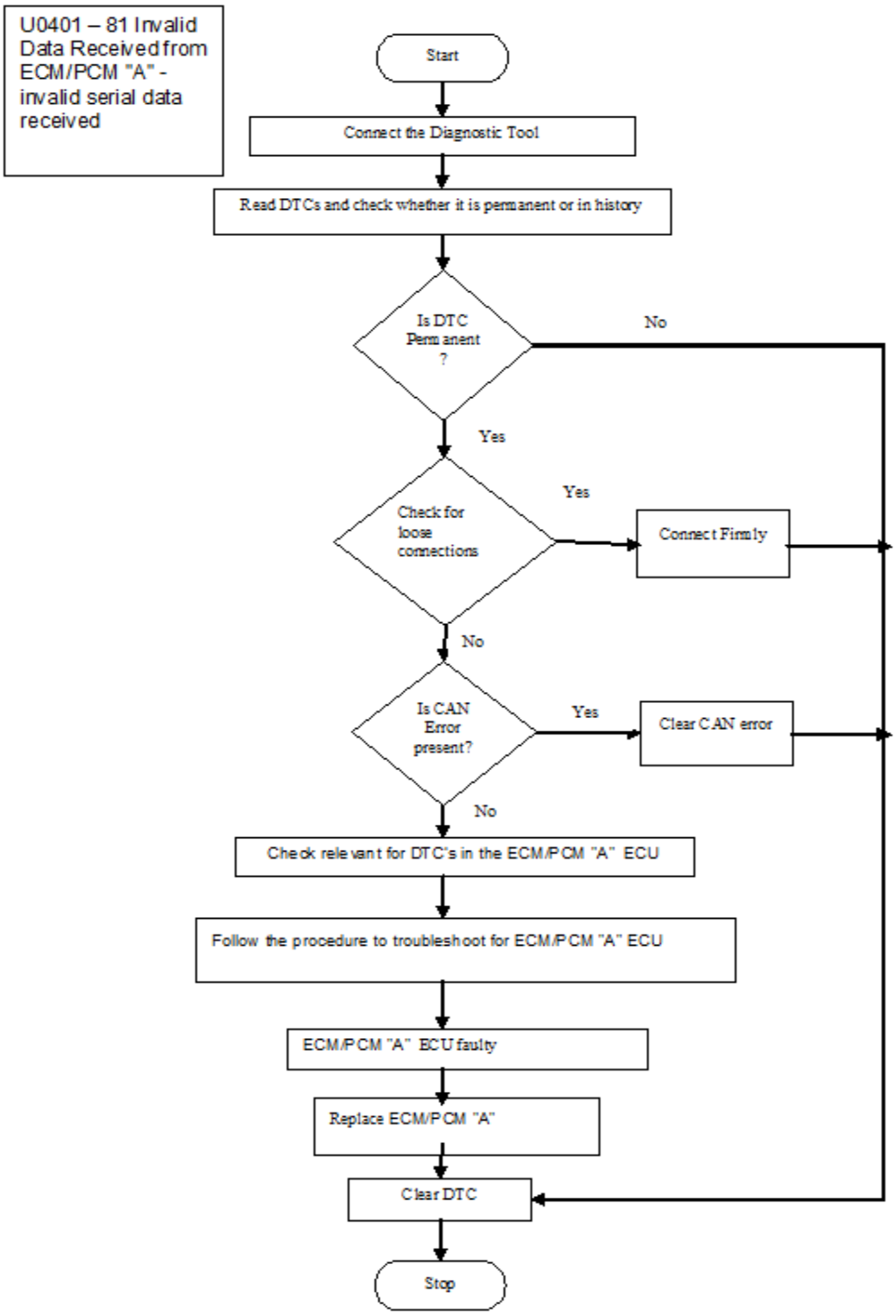


U0401 - 81:- Invalid Data Received From ECM/PCM "A" - invalid serial data received

Overview:

ISO Code	U0401 – 81 Invalid Data Received From ECM/PCM "A" - invalid serial data received
Customer Symptom	Following Telematics features will not be working:- Alerts about critical car parameters (Including battery related alerts), Valet Mode , View Car Health Dashboard
Fault Effects (On Vehicle)	N/A
Fault Detection Condition	Relevant functional DTCs present in TCU. TCU receives incorrect serial data from ECM/PCM “A”
Normal Operating Condition	ECM/PCM “A” ECU sends correct serial data in normal condition.
Probable Trouble Area	• CAN_H and CAN_L wires • Internal ECM/PCM “A” hardware errors • Faulty ECM/PCM “A” • The TCU has detected a communication problem on the CAN regarding the ECM/PCM “A”. • CAN high / CAN low pins shorted to Battery/Open/ shorted to Ground • CAN transceiver faulty
Healing Condition	1. Verify DTC ageing-Clear in case of ageing 2. Verify ECM/PCM “A” DTCs and check for any related DTCs 3. Follow ECM/PCM “A” trouble shooting guideline 4. Check CAN H and CAN L connections for short/open 5. Check for CAN transceiver faulty ,if it is fault then replace 6. Power down the device, power up again and wait for at least one minute. If the problem reoccurs, check whether any other CAN-related DTCs are set in the TCU. In that case, check for problems with the CAN hardware (TCU and bus) 7. Clear the DTC 8. If problem persists after above steps(from 1 to 7) then follow ECM/PCM DTC trouble shooting guide

Trouble Shooting:-

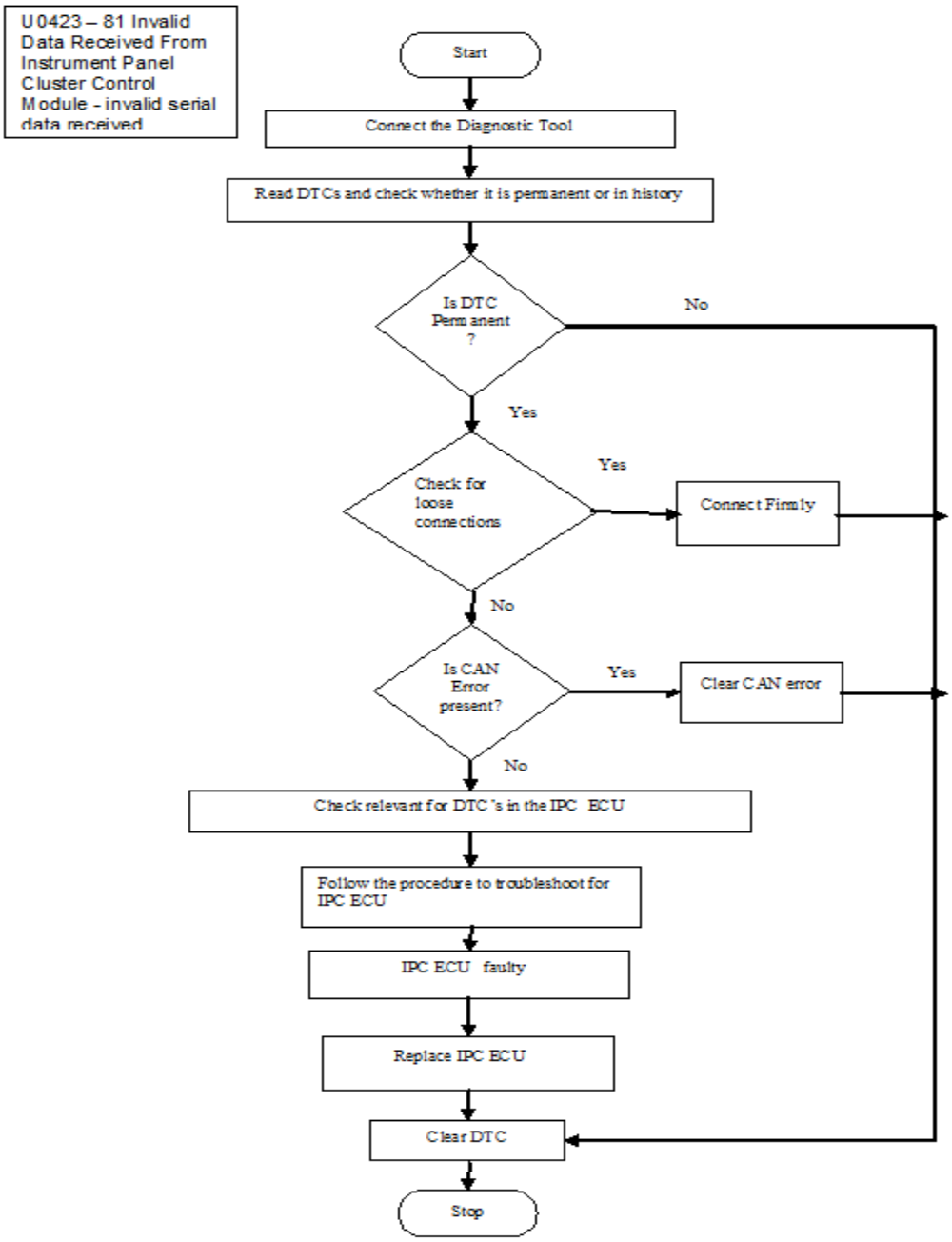


U0423 - 81:- Invalid Data Received From Instrument Panel Cluster Control Module - invalid serial data received

Overview:

ISO Code	U0423 – 81 Invalid Data Received From Instrument Panel Cluster Control (IPC) Module - invalid serial data received
Customer Symptom	Following Telematics features will not be working:- Remote climate/HVAC control, Alerts about critical car parameters (Including battery related alerts), View Trip details and Provide drive pattern analytics with Driver Score (Should be sharable on social media), Custom messages (e.g. "Happy Birthday") on cluster, Speed Alert, Idle alert
Fault Effects (On Vehicle)	Remote , Vehicle security, Alerts and other telematics features will not be working
Fault Detection Condition	Relevant functional DTCs present in TCU.TCU receives incorrect serial data from IPC
Normal Operating Condition	IPC ECU sends correct serial data in normal condition.
Probable Trouble Area	• CAN_H and CAN_L wires • Internal IPC hardware errors • Faulty IPC • The TCU has detected a communication problem on the CAN regarding the IPC. • CAN high / CAN low pins shorted to Battery/Open/ shorted to Ground • CAN transceiver faulty
Healing Condition	1. Verify DTC ageing-Clear in case of ageing 2. Verify IPC DTCs and check for any related DTCs 3. Follow IPC trouble shooting guideline 4. Check CAN H and CAN L connections for short/open 5. Check for CAN transceiver faulty ,if it is fault then replace 6. Power down the device, power up again and wait for at least one minute. If the problem reoccurs, check whether any other CAN-related DTCs are set in the TCU. In that case, check for problems with the CAN hardware (TCU and bus) 7. Clear the DTC 8. If problem persists after above steps(from 1 to 7) then follow IPC DTC trouble shooting guide

Trouble Shooting:-

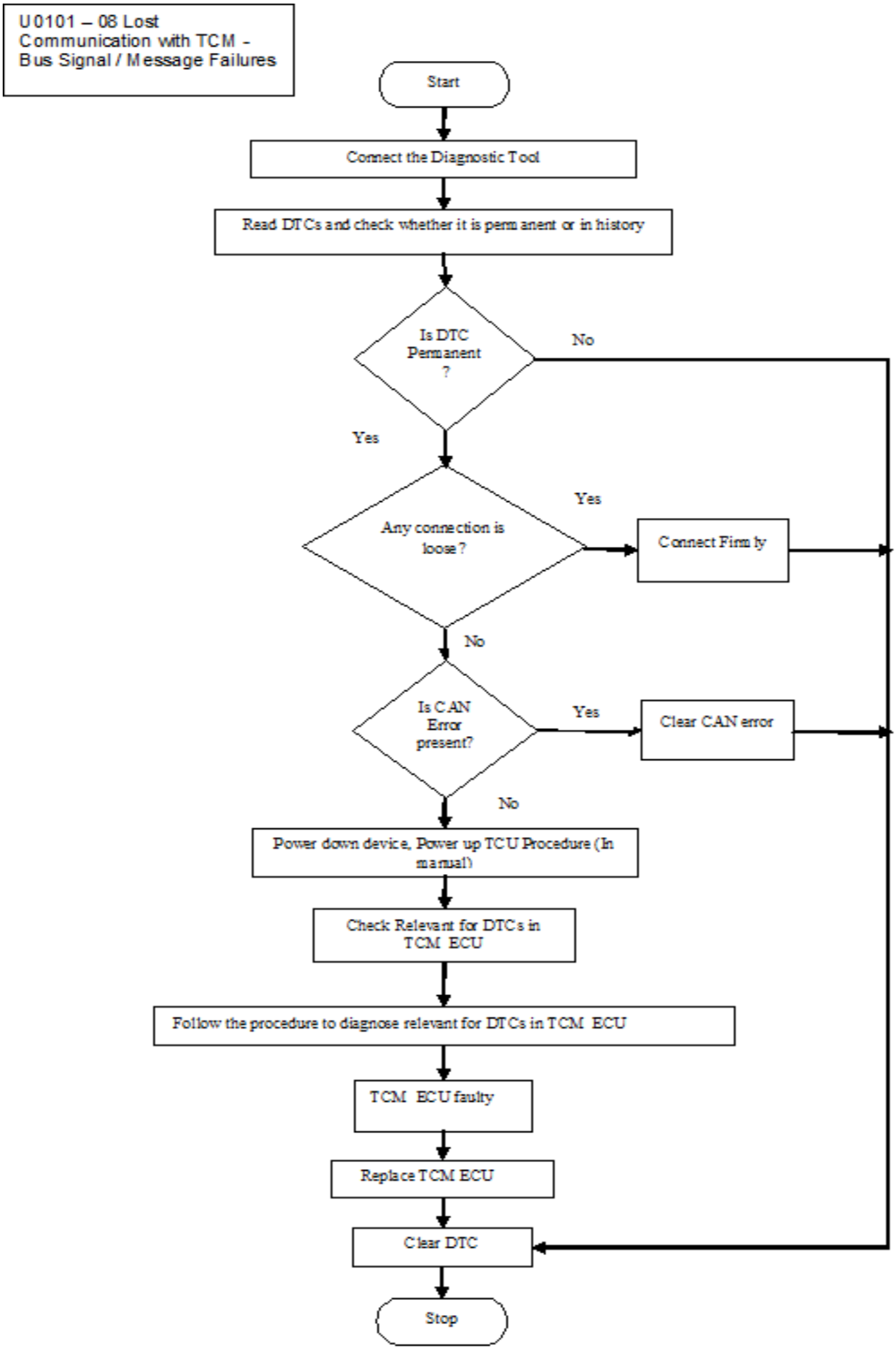


U0101 - 08 :- Lost Communication With TCM - Bus Signal / Message Failures

Overview:

ISO Code	U0101 – 08 Lost Communication With TCM - Bus Signal / Message Failures
Customer Symptom	Following Telematics features will not be working:- Alerts about critical car parameters (Including battery related alerts), View Car Health Dashboard
Fault Effects (On Vehicle)	N/A
Fault Detection Condition	Relevant functional DTCs present in TCU .DTC is set in case of Lost Communication With TCM Control Module
Normal Operating Condition	TCM ECU communicates properly with TCU in normal condition.
Probable Trouble Area	• CAN_H and CAN_L wires • CAN transceiver faulty • Faulty TCM ECU • The TCU has detected a communication problem on the CAN regarding the TCM Module • CAN high / CAN low pins shorted to Battery/Open/ shorted to Ground • CAN transceiver faulty • DTC is to be logged when the subscribed message is not available on the CAN bus from TCM module
Healing Condition	1. Verify DTC ageing-Clear in case of ageing 2. Verify TCM DTCs and check for any related DTCs 3. Follow TCM trouble shooting guideline 4. Check CAN H and CAN L connections for short/open 5. Check for CAN transceiver faulty ,if it is fault then replace 6. Power down the device, power up again and wait for at least one minute. If the problem reoccurs, check whether any other CAN-related DTCs are set in the TCU. In that case, check for problems with the CAN hardware (TCU and bus) 7. Clear the DTC 8. If problem persists after above steps (from 1 to 7) then follow TCM ECU DTC trouble shooting guide.

Trouble Shooting:-

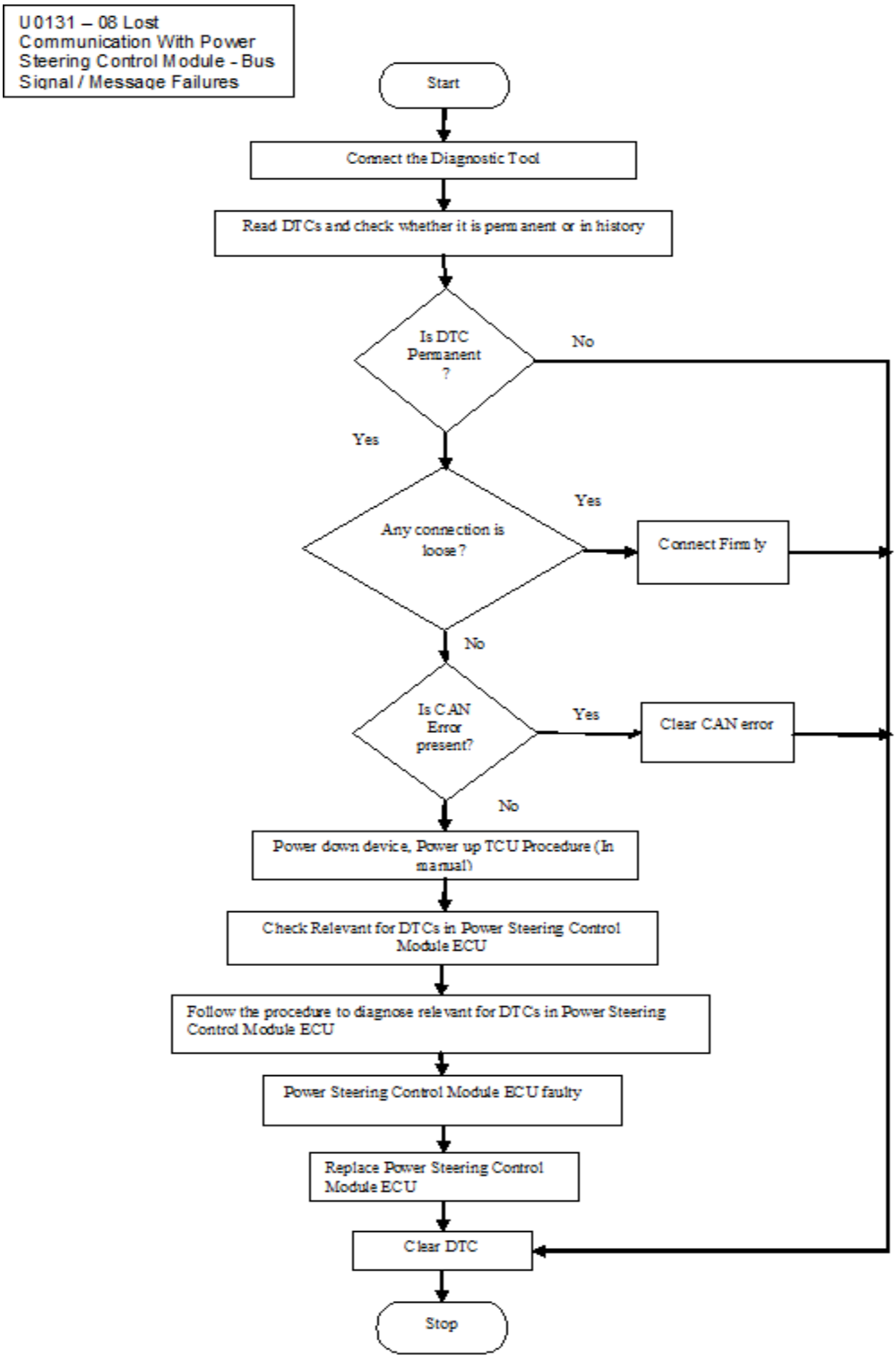


U0131 - 08 :- Lost Communication With Power Steering Control Module - Bus Signal / Message Failures

Overview:

ISO Code	U0131 – 08 Lost Communication With Power Steering Control (PSC) Module - Bus Signal / Message Failures
Customer Symptom	Following Telematics features will not be working:- Alerts about critical car parameters (Including battery related alerts), View Car Health Dashboard
Fault Effects (On Vehicle)	N/A
Fault Detection Condition	Relevant functional DTCs present in TCU .DTC is set in case of Lost Communication With PSC Control Module
Normal Operating Condition	PSC ECU communicates properly with TCU in normal condition.
Probable Trouble Area	• CAN_H and CAN_L wires • CAN transceiver faulty • Faulty PSC ECU • The TCU has detected a communication problem on the CAN regarding the PSC Module • CAN high / CAN low pins shorted to Battery/Open/ shorted to Ground • CAN transceiver faulty • DTC is to be logged when the subscribed message is not available on the CAN bus from PSC module
Healing Condition	1. Verify DTC ageing-Clear in case of ageing 2. Verify PSC DTCs and check for any related DTCs 3. Follow PSC trouble shooting guideline 4. Check CAN H and CAN L connections for short/open 5. Check for CAN transceiver faulty ,if it is fault then replace 6. Power down the device, power up again and wait for at least one minute. If the problem reoccurs, check whether any other CAN-related DTCs are set in the TCU. In that case, check for problems with the CAN hardware (TCU and bus) 7. Clear the DTC 8. If problem persists after above steps(from 1 to 7) then follow PSC ECU DTC trouble shooting guide

Trouble Shooting:-

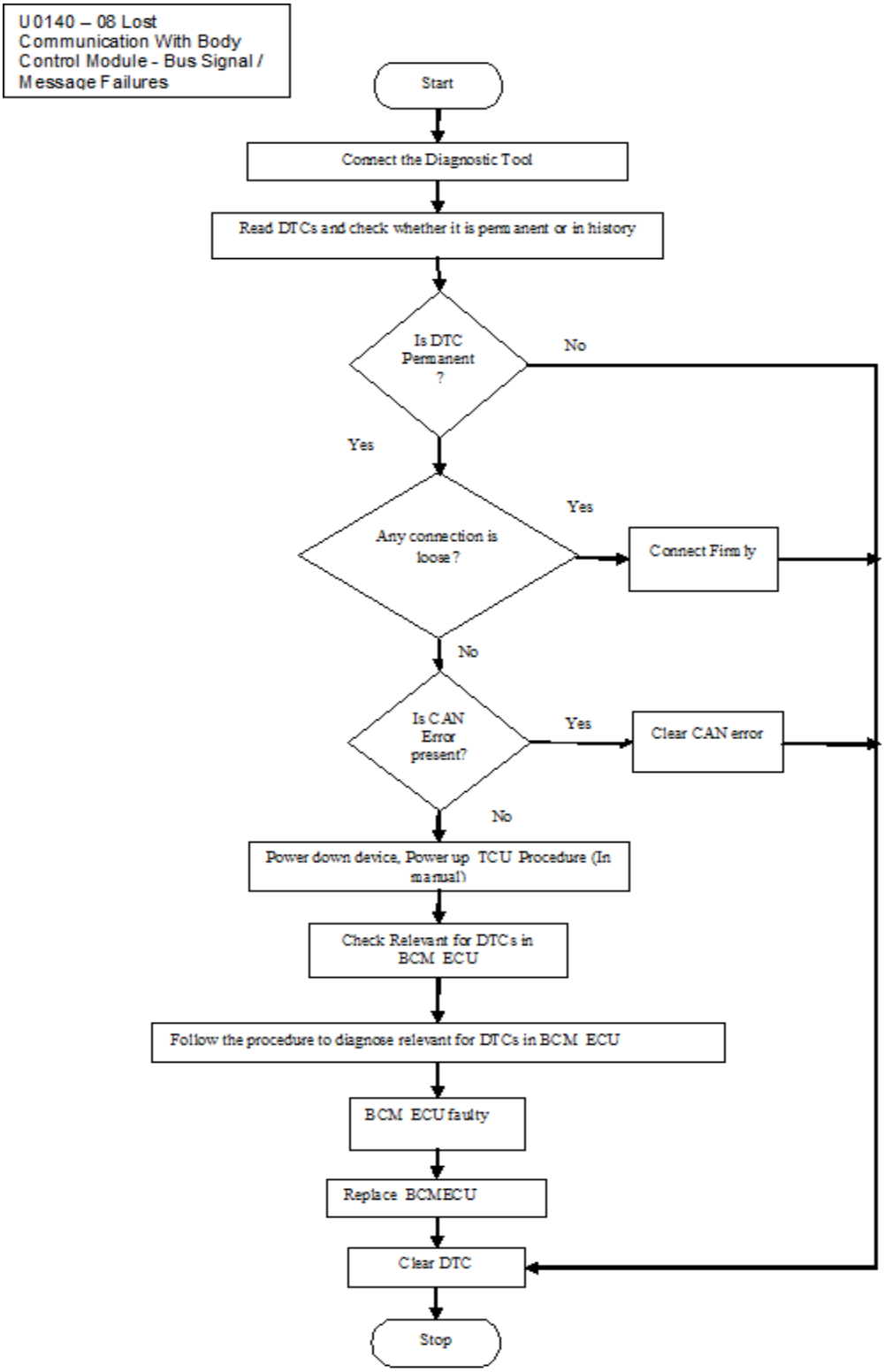


U0140 - 08 :- Lost Communication With Body Control Module - Bus Signal / Message Failures

Overview:

ISO Code	U0140 – 08 Lost Communication With Body Control Module - Bus Signal / Message Failures
Customer Symptom	Following Telematics features will not be working:- Remote Lock/Unlock, Remote Lights on/off, Remote climate/HVAC control, Remote charging On/Off, Unauthorized Car Access Alert - Intrusion Alert, Alerts about critical car parameters (Including battery related alerts),View Trip details and Provide drive pattern analytics with Driver Score (Should be sharable on social media),EV range prediction - VCU Calculated, View Car Health Dashboard, Remote Horn, Panic Notification
Fault Effects (On Vehicle)	Remote , Vehicle security, Alerts and other telematics features will not be working
Fault Detection Condition	Relevant functional DTCs present in TCU .DTC is set in case of Lost Communication With BCM Module
Normal Operating Condition	BCM ECU communicates properly with TCU in normal condition.
Probable Trouble Area	• CAN_H and CAN_L wires • CAN transceiver faulty • Faulty BCM ECU • The TCU has detected a communication problem on the CAN regarding the BCM Module • CAN high / CAN low pins shorted to Battery/Open/ shorted to Ground • CAN transceiver faulty • DTC is to be logged when the subscribed message is not available on the CAN bus from BCM module
Healing Condition	1. Verify DTC ageing-Clear in case of ageing 2. Verify BCM DTCs and check for any related DTCs 3. Follow BCM trouble shooting guideline 4. Check CAN H and CAN L connections for short/open 5. Check for CAN transceiver faulty ,if it is fault then replace 6. Power down the device, power up again and wait for at least one minute. If the problem reoccurs, check whether any other CAN-related DTCs are set in the TCU. In that case, check for problems with the CAN hardware (TCU and bus) 7. Clear the DTC 8. If problem persists after above steps (from 1 to 7) then follow BCM ECU DTC trouble shooting guide

Trouble Shooting:-



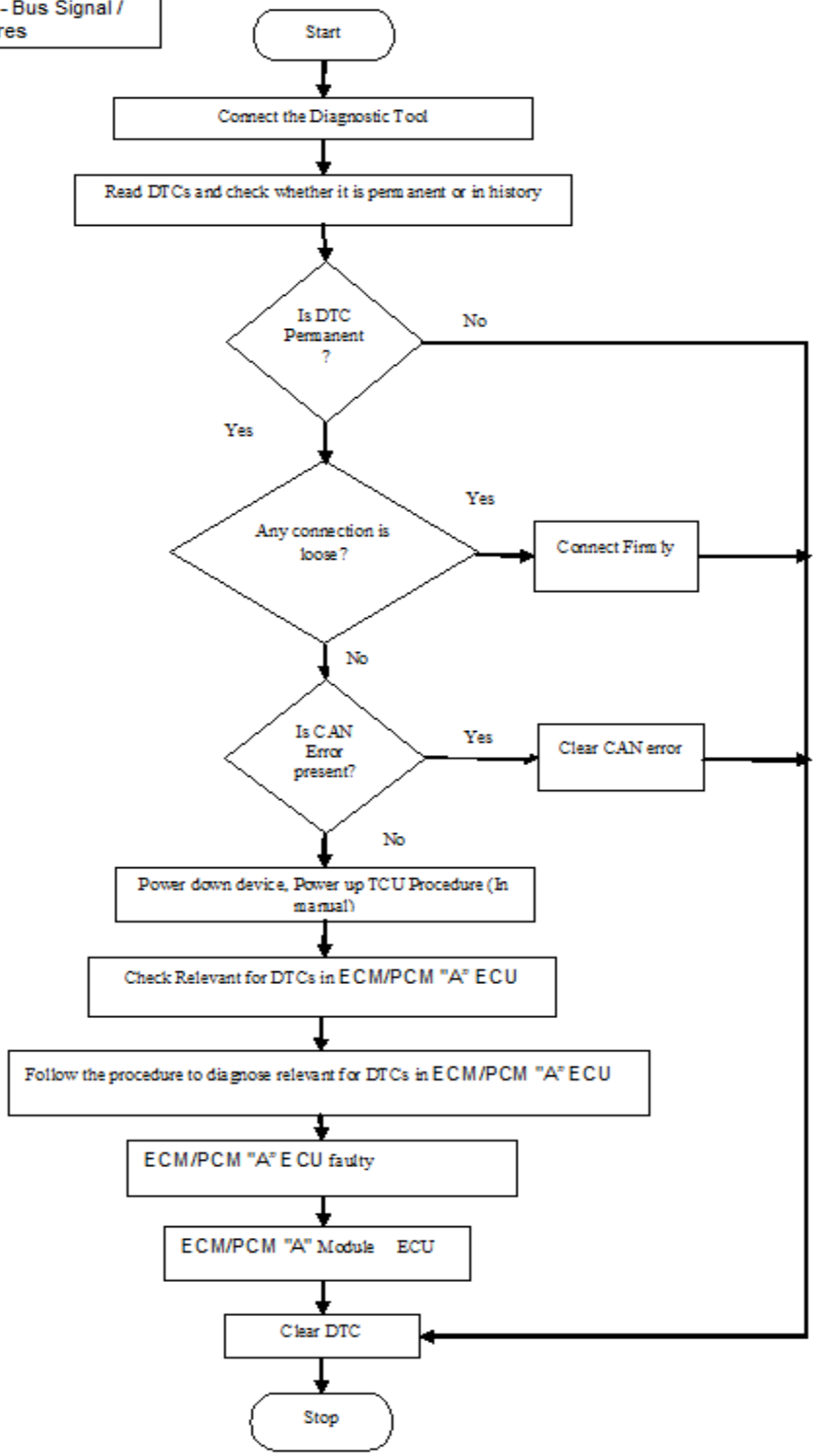
U0100 - 08:- Lost Communication with ECM/PCM "A" - Bus Signal / Message Failures

Overview:

ISO Code	U0100 – 08 Lost Communication With ECM/PCM "A" - Bus Signal / Message Failures
Customer Symptom	Following Telematics features will not be working:- Alerts about critical car parameters (Including battery related alerts), Valet Mode , View Car Health Dashboard
Fault Effects (On Vehicle)	N/A
Fault Detection Condition	Relevant functional DTCs present in TCU .DTC is set in case of Lost Communication With ECM/PCM "A"
Normal Operating Condition	ECM/PCM "A" ECU communicates properly with TCU in normal condition.
Probable Trouble Area	• CAN_H and CAN_L wires • CAN transceiver faulty • Faulty ECM/PCM "A" ECU • The TCU has detected a communication problem on the CAN regarding the ECM/PCM "A" Module • CAN high / CAN low pins shorted to Battery/Open/ shorted to Ground • CAN transceiver faulty • DTC is to be logged when the subscribed message is not available on the CAN bus from ECM/PCM "A" module
Healing Condition	1. Verify DTC ageing-Clear in case of ageing 2. Verify ECM/PCM "A" DTCs and check for any related DTCs 3. Follow ECM/PCM "A" trouble shooting guideline 4. Check CAN H and CAN L connections for short/open 5. Check for CAN transceiver faulty ,if it is fault then replace 6. Power down the device, power up again and wait for at least one minute. If the problem reoccurs, check whether any other CAN-related DTCs are set in the TCU. In that case, check for problems with the CAN hardware (TCU and bus) 7. Clear the DTC 8. If problem persists after above steps (from 1 to 7) then follow ECM/PCM "A" ECU DTC trouble shooting guide.

Trouble Shooting:-

U0100 – 08 Lost Communication with ECM/PCM "A" - Bus Signal / Message Failures

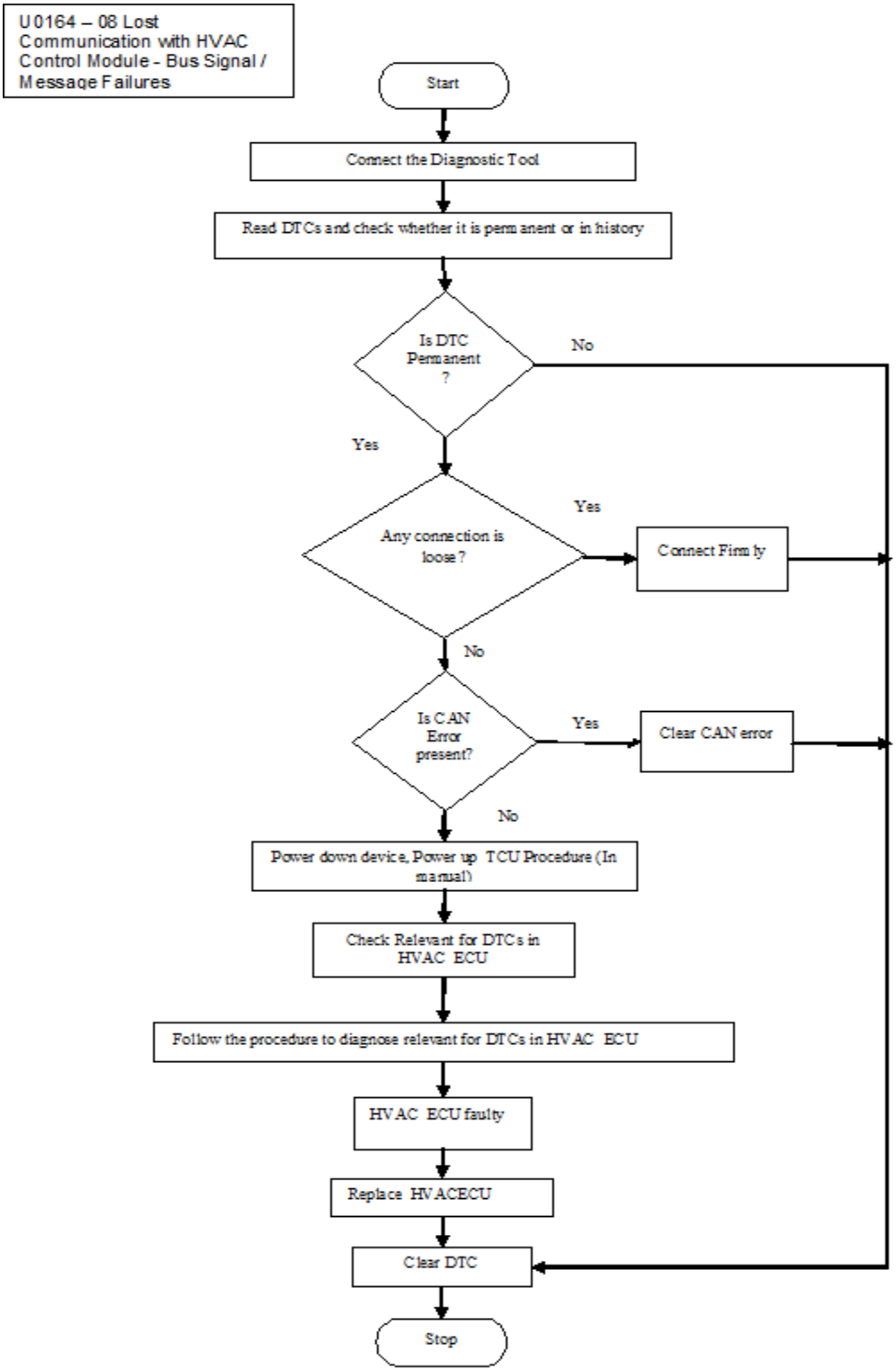


U0164 - 08 :- Lost Communication With HVAC Control Module - Bus Signal / Message Failures

Overview:

ISO Code	U0164 – 08 Lost Communication With HVAC Control Module - Bus Signal / Message Failures
Customer Symptom	Telematics features not working:- Remote climate/HVAC control, Alerts about critical car parameters (Including battery related alerts), View Trip details and Provide drive pattern analytics with Driver Score (Should be sharable on social media)
Fault Effects (On Vehicle)	Remote , Vehicle security, Alerts and other telematics features will not be working
Fault Detection Condition	Relevant functional DTCs present in TCU .DTC is set in case of Lost Communication With HVAC Module
Normal Operating Condition	HVAC ECU communicates properly with TCU in normal condition.
Probable Trouble Area	• CAN_H and CAN_L wires • CAN transceiver faulty • Faulty HVAC ECU • The TCU has detected a communication problem on the CAN regarding the HVAC Module • CAN high / CAN low pins shorted to Battery/Open/ shorted to Ground • CAN transceiver faulty • DTC is to be logged when the subscribed message is not available on the CAN bus from HVAC module
Healing Condition	1. Verify DTC ageing-Clear in case of ageing 2. Verify HVAC DTCs and check for any related DTCs 3. Follow HVAC trouble shooting guideline 4. Check CAN H and CAN L connections for short/open 5. Check for CAN transceiver faulty ,if it is fault then replace 6. Power down the device, power up again and wait for at least one minute. If the problem reoccurs, check whether any other CAN-related DTCs are set in the TCU. In that case, check for problems with the CAN hardware (TCU and bus) 7. Clear the DTC 8. If problem persists after above steps (from 1 to 7) then follow HVAC ECU DTC trouble shooting guide

Trouble Shooting:-



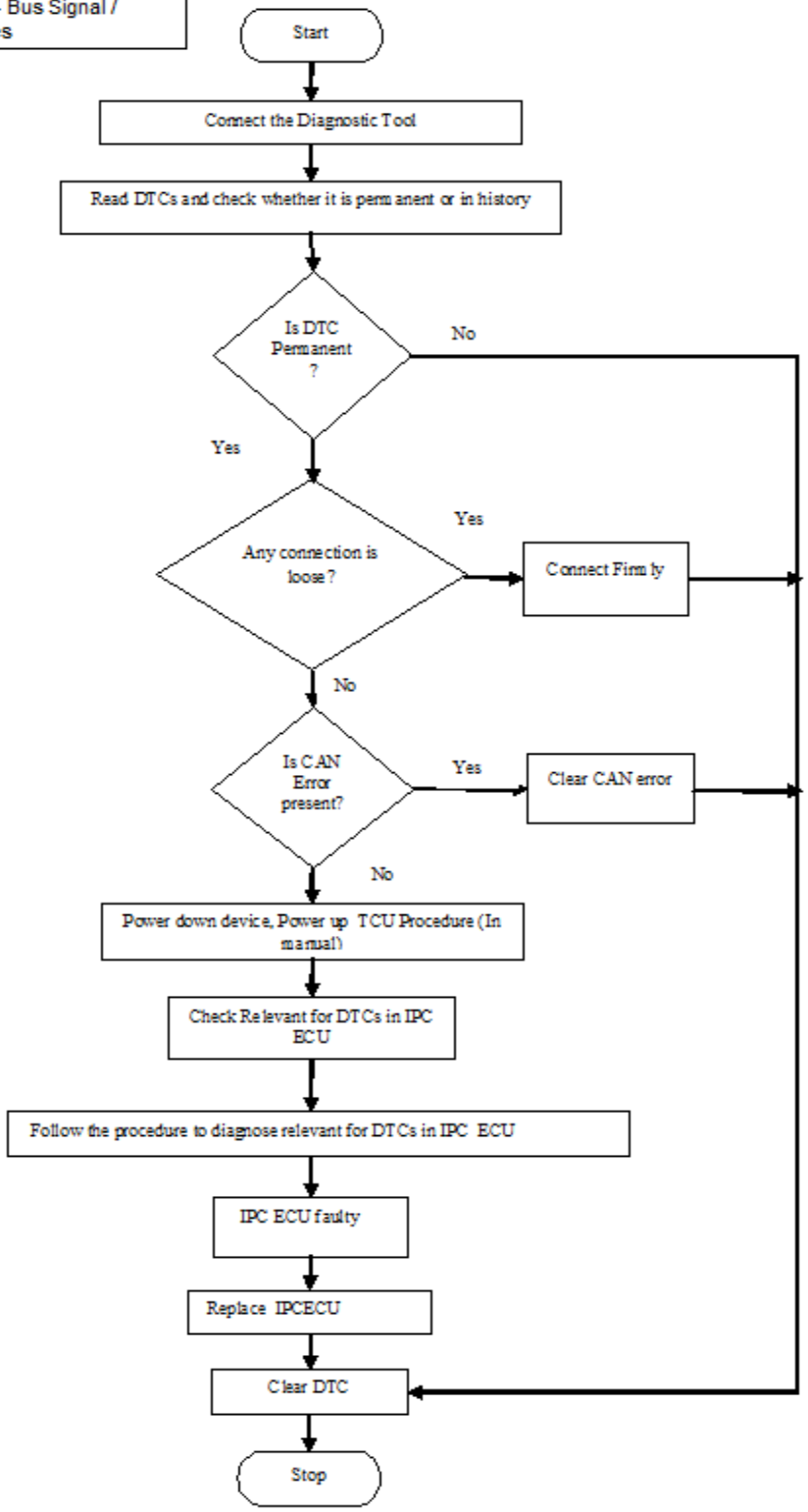
U0155 - 08:- Lost Communication With Instrument Panel Cluster Control Module - Bus Signal / Message Failures

Overview:

ISO Code	U0155 – 08 Lost Communication With Instrument Panel Cluster Control Module - Bus Signal / Message Failures
Customer Symptom	Following Telematics features will not be working:- Remote climate/HVAC control, Alerts about critical car parameters (Including battery related alerts), View Trip details and Provide drive pattern analytics with Driver Score(Should be sharable on social media), Custom messages (e.g. "Happy Birthday") on cluster, Speed Alert, Idle alert
Fault Effects (On Vehicle)	Remote , Vehicle security, Alerts and other telematics features will not be working
Fault Detection Condition	Relevant functional DTCs present in TCU .DTC is set in case of Lost Communication With IPC Module
Normal Operating Condition	IPC ECU communicates properly with TCU in normal condition.
Probable Trouble Area	• CAN_H and CAN_L wires • CAN transceiver faulty • Faulty IPC ECU • The TCU has detected a communication problem on the CAN regarding the IPC Module • CAN high / CAN low pins shorted to Battery/Open/ shorted to Ground • CAN transceiver faulty • DTC is to be logged when the subscribed message is not available on the CAN bus from IPC module
Healing Condition	1. Verify DTC ageing-Clear in case of ageing 2. Verify IPC DTCs and check for any related DTCs 3. Follow IPC trouble shooting guideline 4. Check CAN H and CAN L connections for short/open 5. Check for CAN transceiver faulty ,if it is fault then replace 6. Power down the device, power up again and wait for at least one minute. If the problem reoccurs, check whether any other CAN-related DTCs are set in the TCU. In that case, check for problems with the CAN hardware (TCU and bus) 7. Clear the DTC 8. If problem persists after above steps (from 1 to 7) then follow IPC ECU DTC trouble shooting guide

Trouble Shooting:-

U0155 – 08 Lost Communication with Instrument Panel Cluster Control Module - Bus Signal / Message Failures

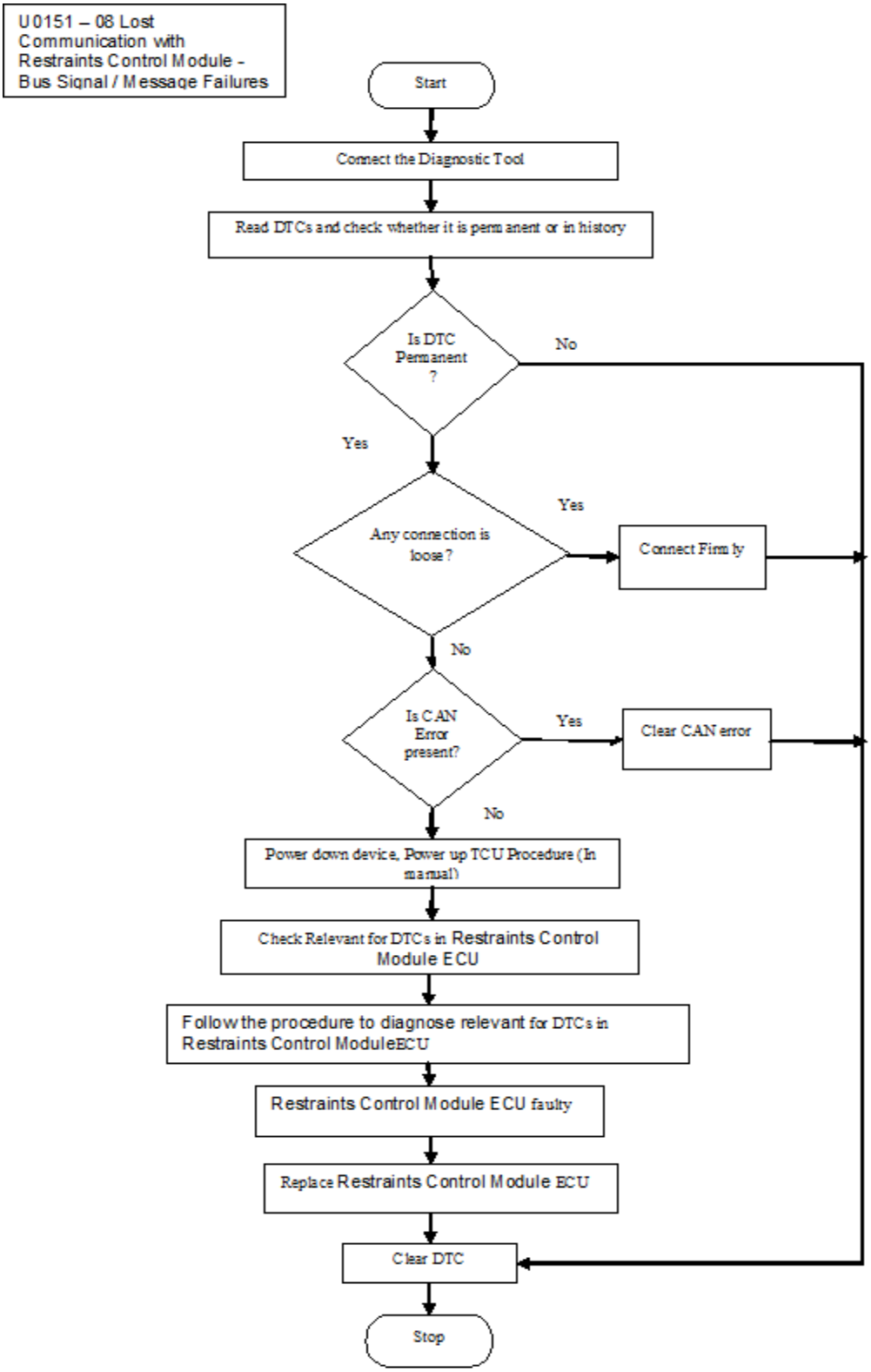


U0151 - 08:- Lost Communication with Restraints Control Module - Bus Signal / Message Failures

Overview:

ISO Code	U0151 – 08 Lost Communication With Restraints Control Module - Bus Signal / Message Failures
Customer Symptom	Following Telematics features will not be working:- Alerts about critical car parameters (Including battery related alerts), SOS SMS to emergency contact in case of accident, View Car Health Dashboard
Fault Effects (On Vehicle)	N/A
Fault Detection Condition	Relevant functional DTCs present in TCU .DTC is set in case of Lost Communication With RCM Control Module
Normal Operating Condition	RCM ECU communicates properly with TCU in normal condition.
Probable Trouble Area	• CAN_H and CAN_L wires • CAN transceiver faulty • Faulty RCM ECU • The TCU has detected a communication problem on the CAN regarding the RCM Module • CAN high / CAN low pins shorted to Battery/Open/ shorted to Ground • CAN transceiver faulty • DTC is to be logged when the subscribed message is not available on the CAN bus from RCM module
Healing Condition	1. Verify DTC ageing-Clear in case of ageing 2. Verify RCM DTCs and check for any related DTCs 3. Follow RCM trouble shooting guideline 4. Check CAN H and CAN L connections for short/open 5. Check for CAN transceiver faulty ,if it is fault then replace 6. Power down the device, power up again and wait for at least one minute. If the problem reoccurs, check whether any other CAN-related DTCs are set in the TCU. In that case, check for problems with the CAN hardware (TCU and bus) 7. Clear the DTC 8. If problem persists after above steps (from 1 to 7) then follow RCM ECU DTC trouble shooting guide

Trouble Shooting:-

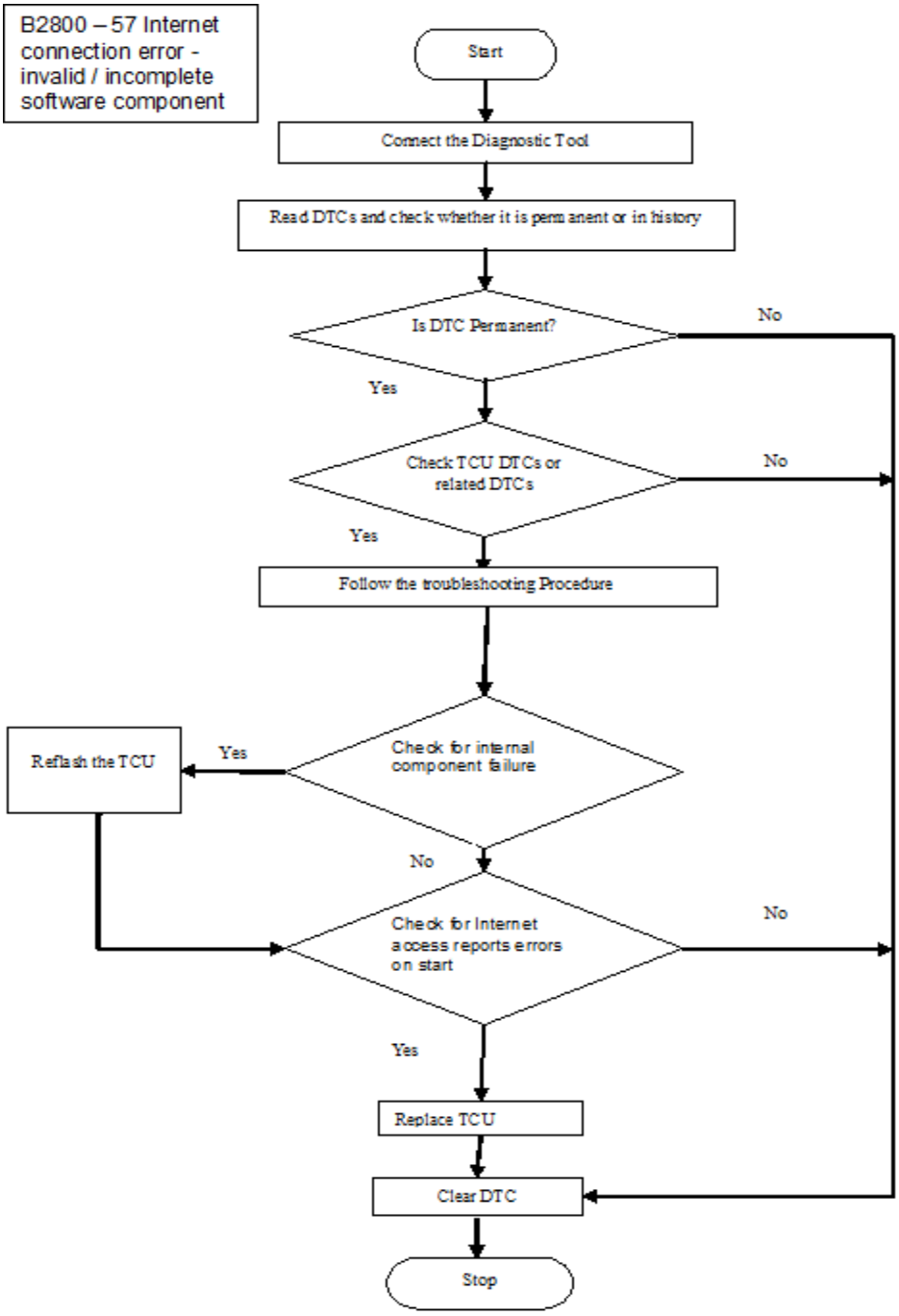


B2800 - 57:- Internet connection error - invalid / incomplete software component

Overview:

ISO Code	B2800 – 57 Internet connection error - invalid / incomplete software component
Customer Symptom	Telematics ECU features will not be working
Fault Effects (On Vehicle)	Remote , Vehicle security, Alerts and other telematics features will not be working
Fault Detection Condition	Relevant functional DTCs present in TCU .DTC is set in case of internet connection error with TCU.
Normal Operating Condition	TCU have proper internet connection in normal condition.
Probable Trouble Area	• Faulty TCU • Internal Component failure • Component for Internet access reports errors on start
Healing Condition	1. Verify DTC ageing-Clear in case of ageing 2. Verify any other communication related DTCs present 3. Verify TCU DTCs and check for any related DTCs 4. Follow TCU trouble shooting guideline to clear the relevant functional DTCs 5. Check for internal component failure 6. Check for Internet access reports errors on start 7. Reflash TCU 8. If problem persists after above steps (from 1 to 7) then follow TCU

Trouble Shooting:-

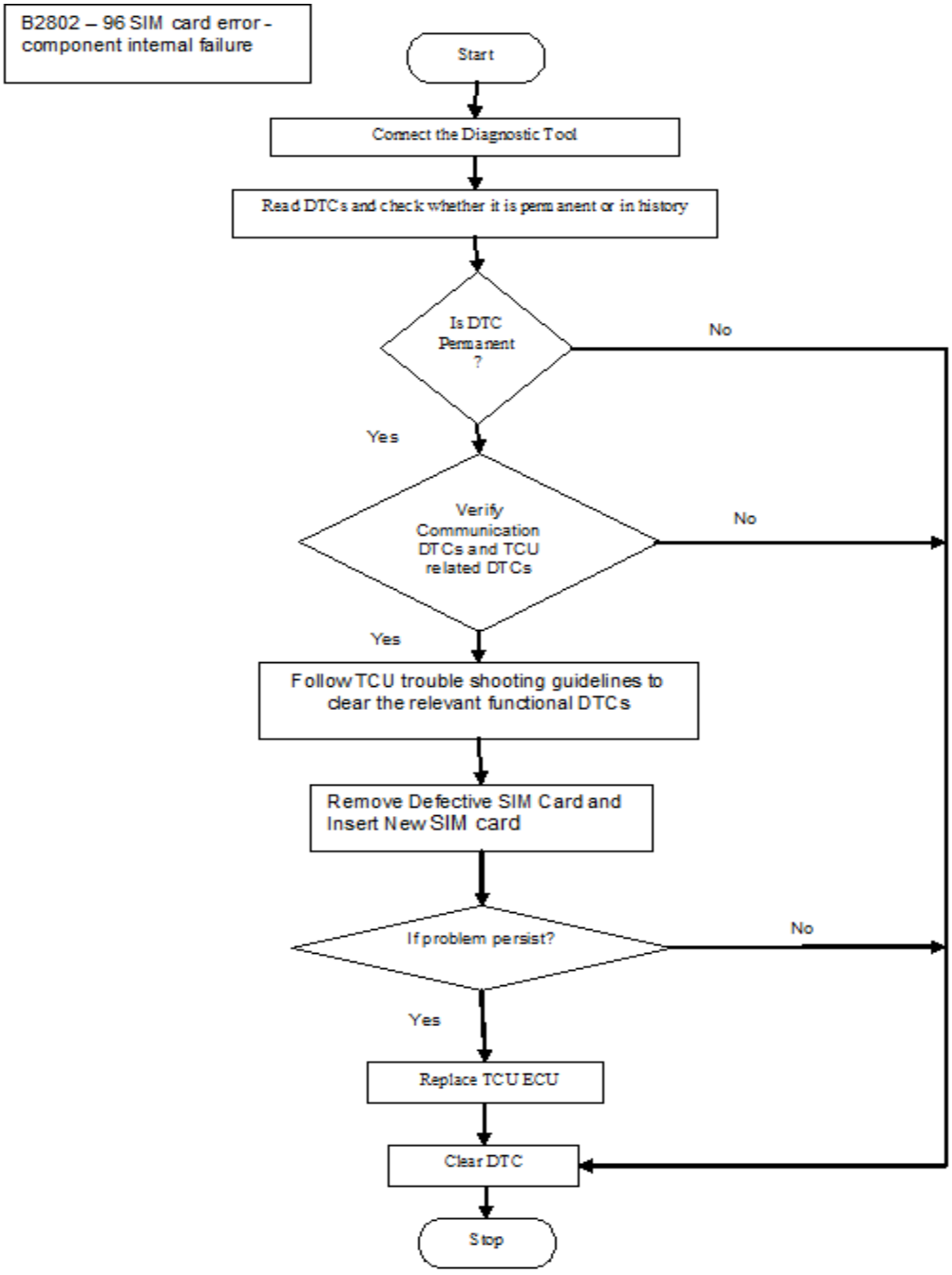


B2802 - 96:- SIM card error - component internal failure

Overview:

ISO Code	B2802 – 96 SIM card error - component internal failure
Customer Symptom	Telematics ECU features will not be working
Fault Effects (On Vehicle)	Remote , Vehicle security, Alerts and other telematics features will not be working
Fault Detection Condition	Relevant functional DTCs present in TCU .DTC is set in case of SIM card error with TCU.
Normal Operating Condition	TCU having proper SIM card in normal condition.
Probable Trouble Area	• Faulty SIM card • SIM dislocated in slot • Internal Component failure • Defective SIM card • GPS synchronization fails with TCU
Healing Condition	1. Verify DTC ageing-Clear in case of ageing 2. Verify any other communication related DTCs present 3. Verify TCU DTCs and check for any related DTCs 4. Follow TCU trouble shooting guideline to clear the relevant functional DTCs 5. Replace Defective SIM Card and insert new

Trouble Shooting:-



B2806 - 09:- Acceleration Sensor - Component Failures

Overview:

ISO Code	B2806 – 09 Acceleration Sensor - Component Failures
Customer Symptom	Telematics ECU features will not be working
Fault Effects (On Vehicle)	Remote , Vehicle security, Alerts and other telematics features will not be working
Fault Detection Condition	Relevant functional DTCs present in TCU .DTC is set in case of Acceleration sensor failure with TCU.
Normal Operating Condition	TCU having proper Acceleration sensor in normal condition.
Probable Trouble Area	• hardware problem with the acceleration sensor occurred • Faulty TCU • Internal Component failure • Improper flashing of TCU
Healing Condition	1. Verify DTC ageing-Clear in case of ageing 2. Verify any other communication related DTCs present 3. Verify TCU DTCs and check for any related DTCs 4. Follow TCU trouble shooting guideline to clear the relevant functional DTCs 5. Replace acceleration sensor 6. Reflash TCU and clear DTC 7. If problem persists after above steps (from 1 to 6) then replace TCU

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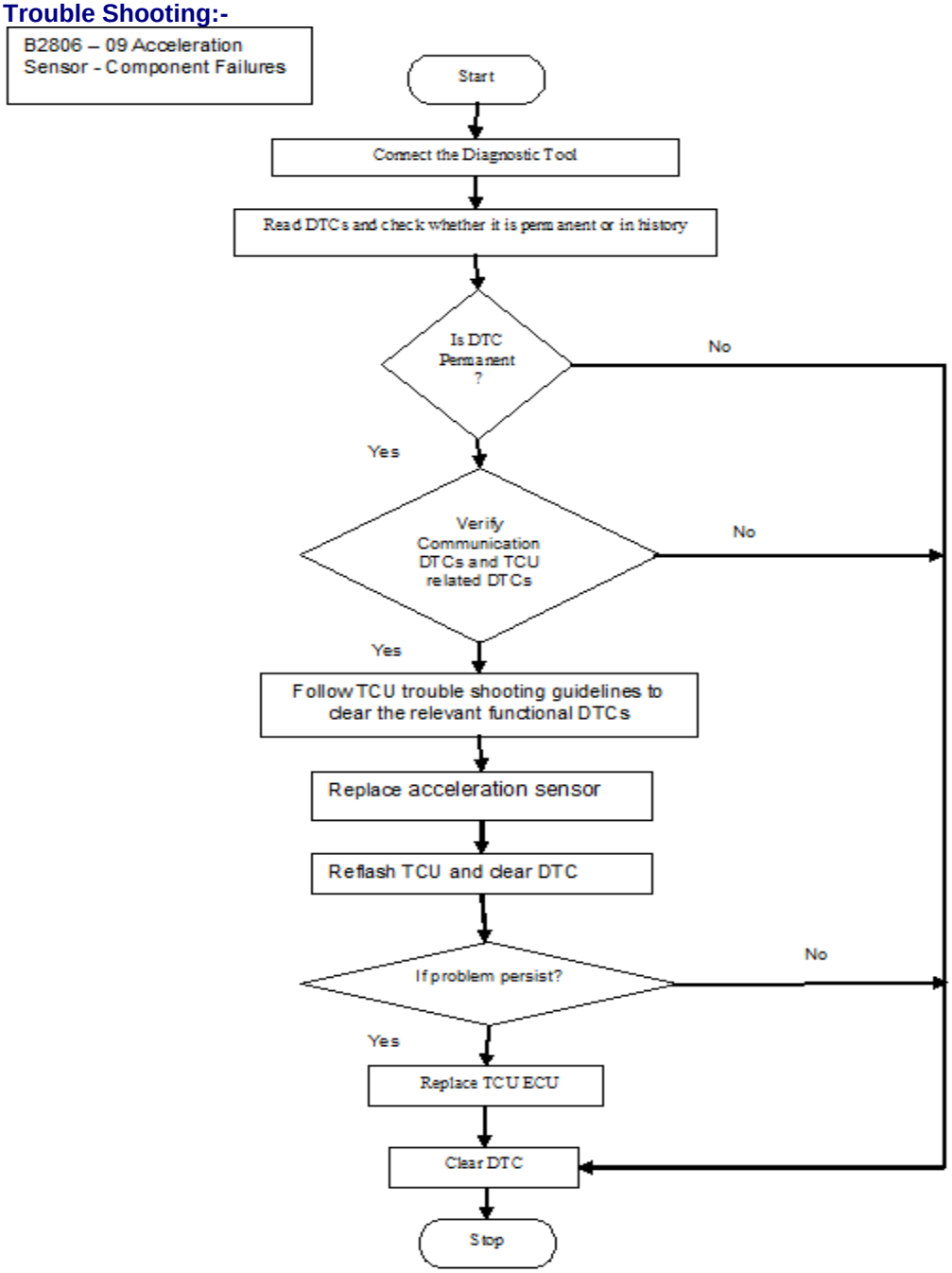
Trouble Shooting:-

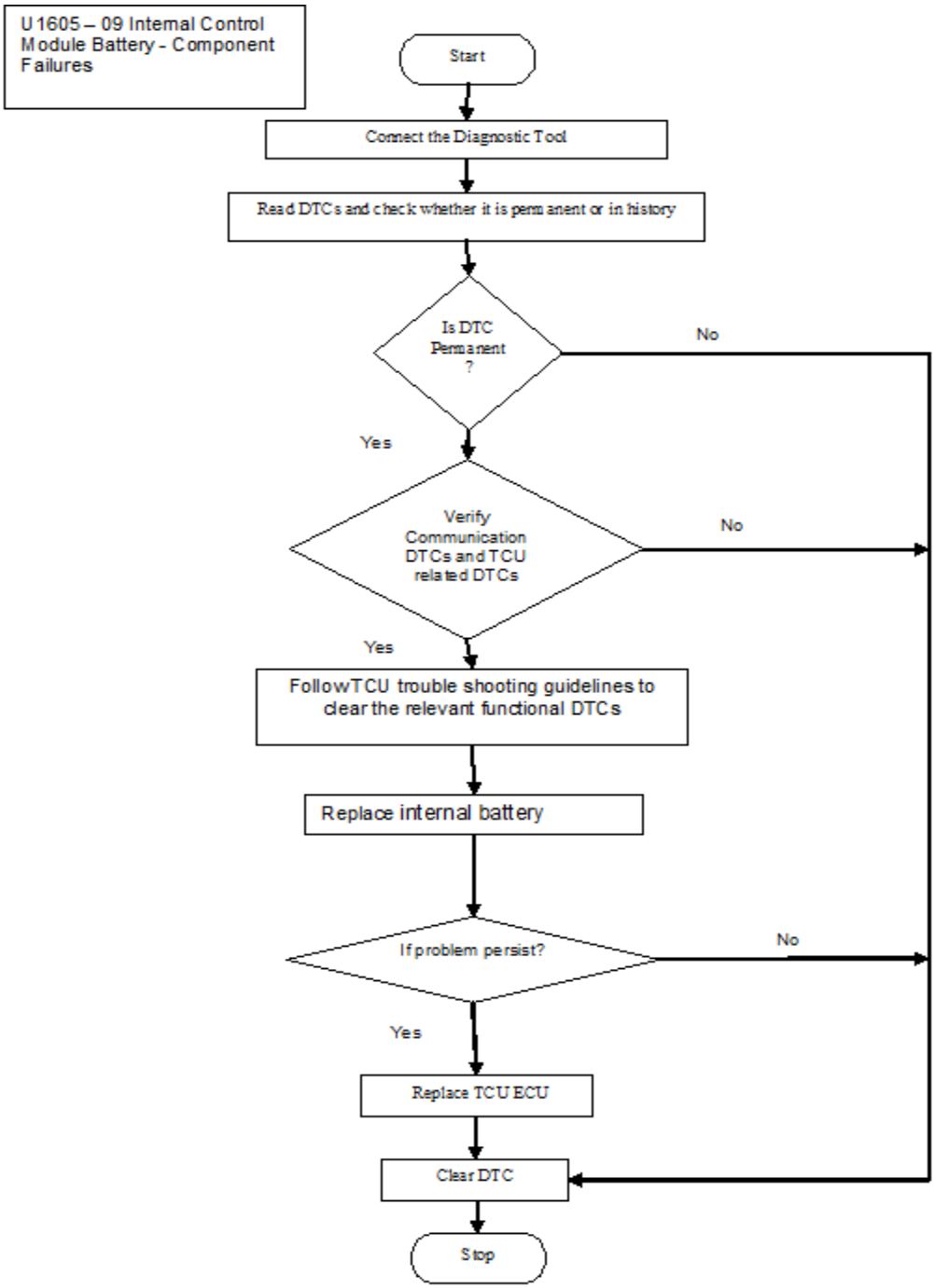


U1605 - 09:- Internal Control Module Battery - Component Failures

Overview:

ISO Code	U1605 – 09 Internal Control Module Battery - Component Failures
Customer Symptom	Telematics ECU features will not be working
Fault Effects (On Vehicle)	Remote , Vehicle security, Alerts and other telematics features will not be working
Fault Detection Condition	DTC is set in case of component failure on Internal Control Module Battery
Normal Operating Condition	TCU having proper internal battery in normal condition.
Probable Trouble Area	• Internal battery is damaged • Faulty TCU • Internal Component failure • connector problem with internal battery • Internal battery connector is open/short
Healing Condition	1. Verify DTC ageing-Clear in case of ageing 2. Verify any other communication related DTCs present 3. Verify TCU DTCs and check for any related DTCs 4. Follow TCU trouble shooting guideline to clear the relevant functional DTCs 5. Replace internal battery 6. If problem persists after above steps (from 1 to 5) then replace TCU

Trouble Shooting:-

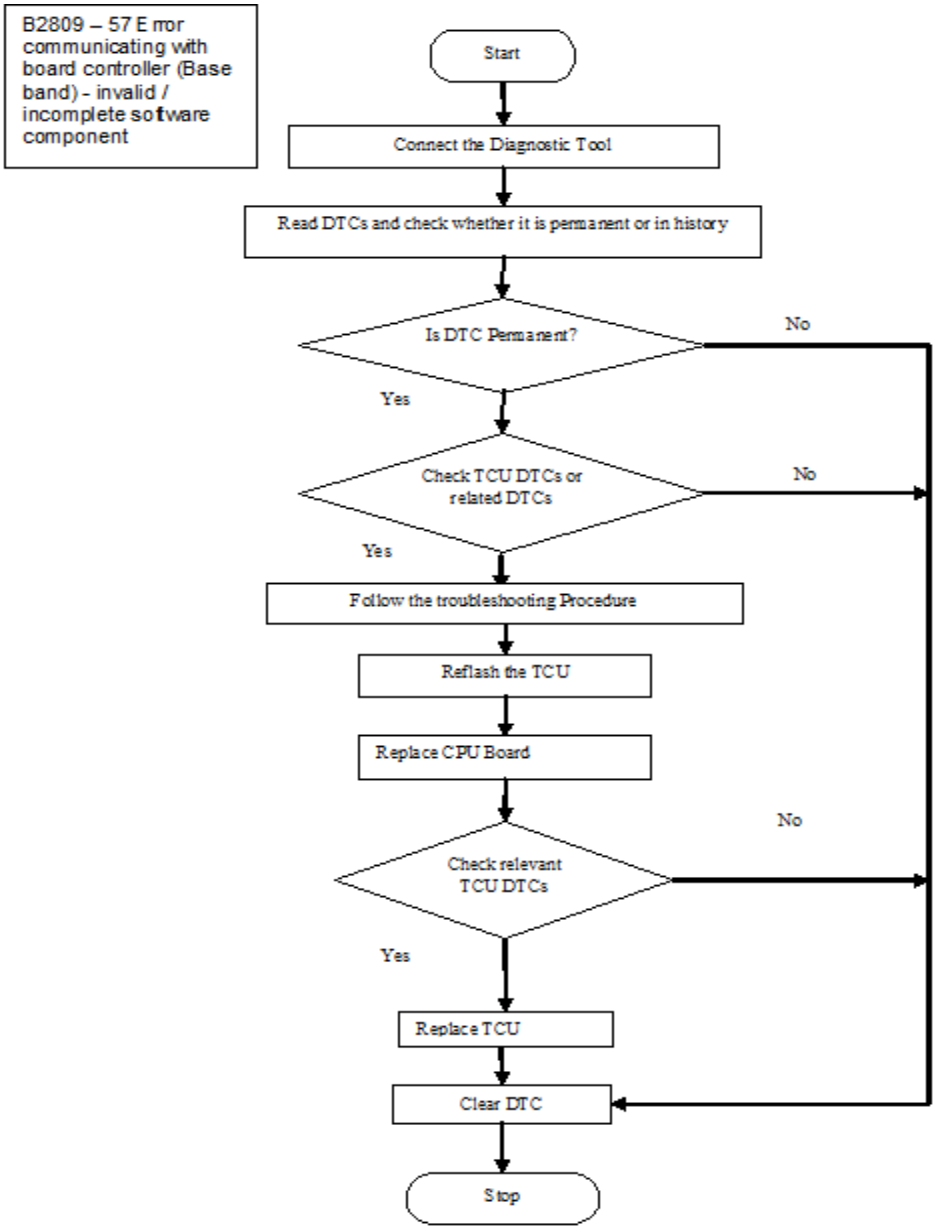


B2809 - 57:- Error communicating with board controller (Base band) - invalid / incomplete software component

Overview:

ISO Code	B2809 – 57 Error communicating with board controller (Base band) - invalid / incomplete software component
Customer Symptom	Telematics ECU features will not be working
Fault Effects (On Vehicle)	Remote , Vehicle security, Alerts and other telematics features will not be working
Fault Detection Condition	Relevant functional DTCs present in TCU .DTC is set in case of error communicating with board controller (Base band) within TCU.
Normal Operating Condition	Inside TCU doesn't have error in communicating with board controller (Base band) in normal condition.
Probable Trouble Area	• Internal hardware errors or faulty TCU • Faulty TCU • The communication between the application processor and the board controller is problematic.
Healing Condition	1. Verify DTC ageing-Clear in case of ageing 2. Verify any other communication related DTCs present 3. Verify TCU DTCs and check for any related DTCs 4. Follow TCU trouble shooting guideline to clear the relevant functional DTCs 5. Clear DTC and reflash TCU 6. Replace CPU board 7. If problem persists after above steps (from 1 to 6) then replace TCU

Trouble Shooting:-

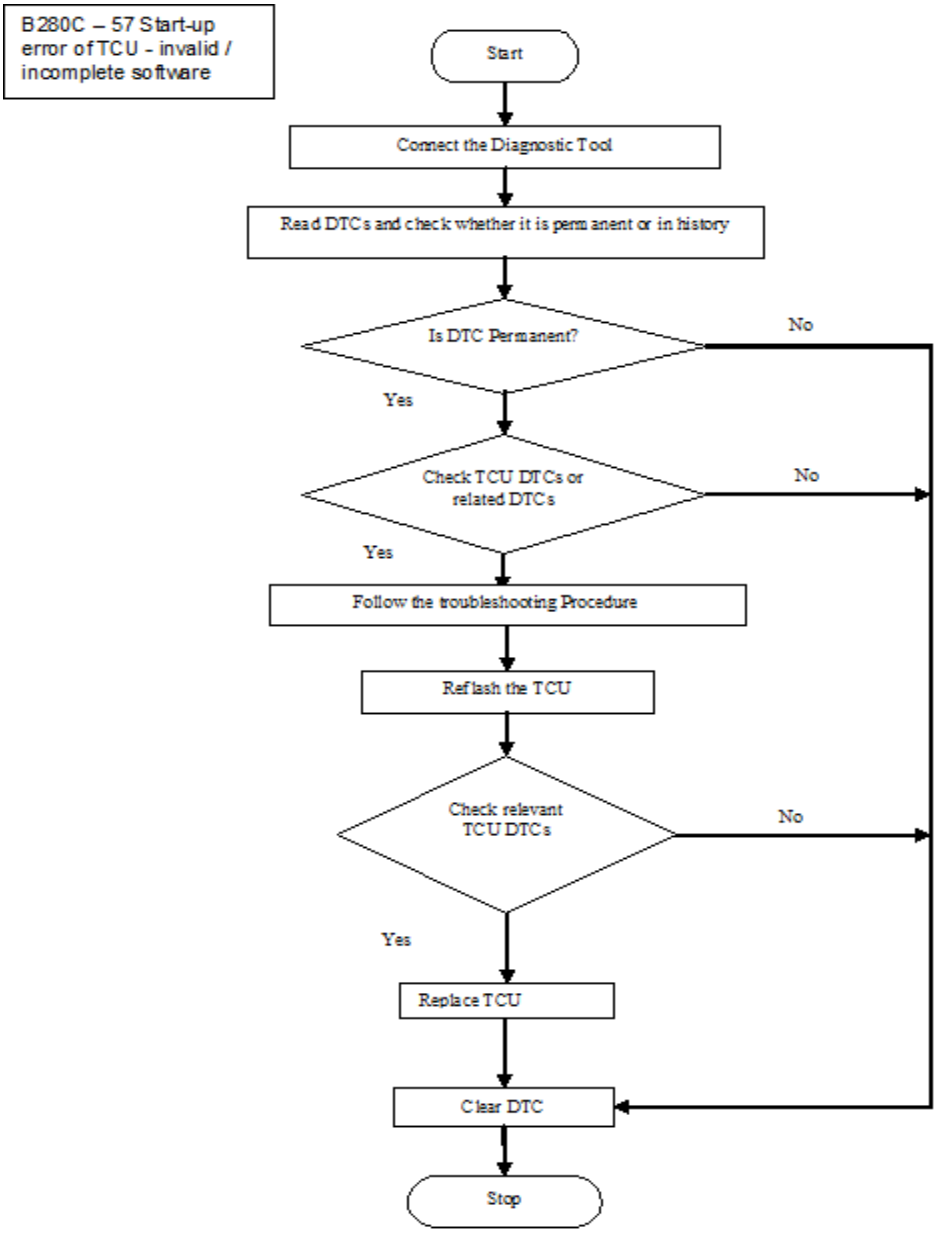


B280C - 57:- Startup error of TCU - invalid / incomplete software component

Overview:

ISO Code	B280C – 57 Start-up error of TCU - invalid / incomplete software component
Customer Symptom	Telematics ECU features will not be working
Fault Effects (On Vehicle)	Remote , Vehicle security, Alerts and other telematics features will not be working
Fault Detection Condition	Relevant functional DTCs present in TCU .DTC is set in case of Start-up error of TCU.
Normal Operating Condition	TCU doesn't have Start-up error of TCU in normal condition.
Probable Trouble Area	• Improper flashing of TCU • Faulty TCU • Internal Component failure
Healing Condition	1. Verify DTC ageing-Clear in case of ageing 2. Verify any other communication related DTCs present 3. Verify TCU DTCs and check for any related DTCs 4. Follow TCU trouble shooting guideline to clear the relevant functional DTCs 5. Clear DTC and reflash TCU 6. If problem persists after above steps (from 1 to 5) then replace TCU

Trouble Shooting:-

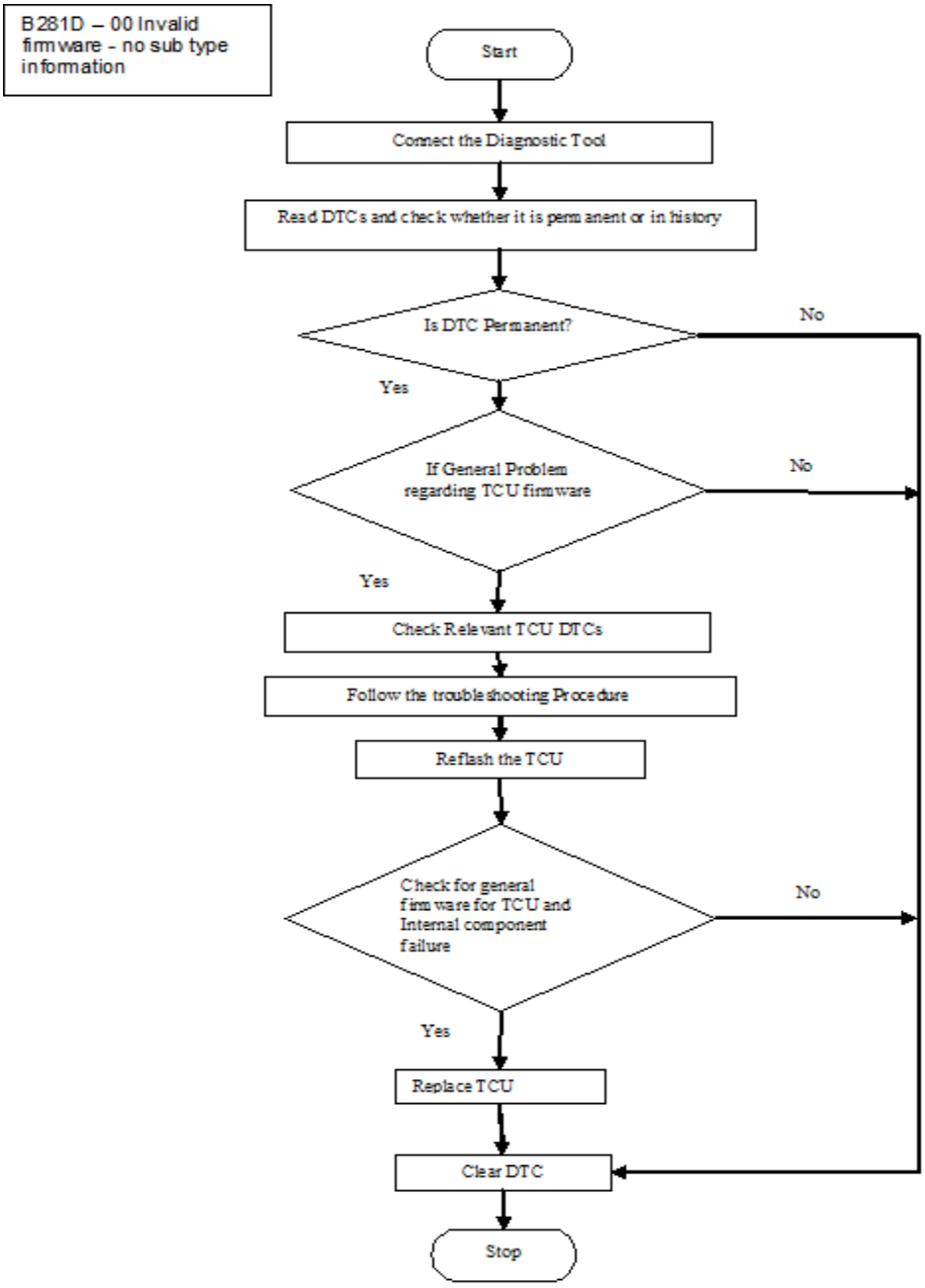


B281D - 00:- Invalid firmware - no sub type information

Overview:

ISO Code	B281D – 00 Invalid firmware - no sub type information
Customer Symptom	Telematics ECU features will not be working
Fault Effects (On Vehicle)	Remote , Vehicle security, Alerts and other telematics features will not be working
Fault Detection Condition	Relevant functional DTCs present in TCU .DTC is set in case of Invalid firmware of TCU.
Normal Operating Condition	TCU properly flashed with valid firmware in normal condition.
Probable Trouble Area	• Improper flashing of TCU • General problems regarding TCU firmware • Faulty TCU • Internal Component failure
Healing Condition	1. Verify DTC ageing-Clear in case of ageing 2. Verify any other communication related DTCs present 3. Verify TCU DTCs and check for any related DTCs 4. Follow TCU trouble shooting guideline to clear the relevant functional DTCs 5. Clear DTC and reflash TCU 6. If problem persists after above steps (from 1 to 5) then replace TCU

Trouble Shooting:-

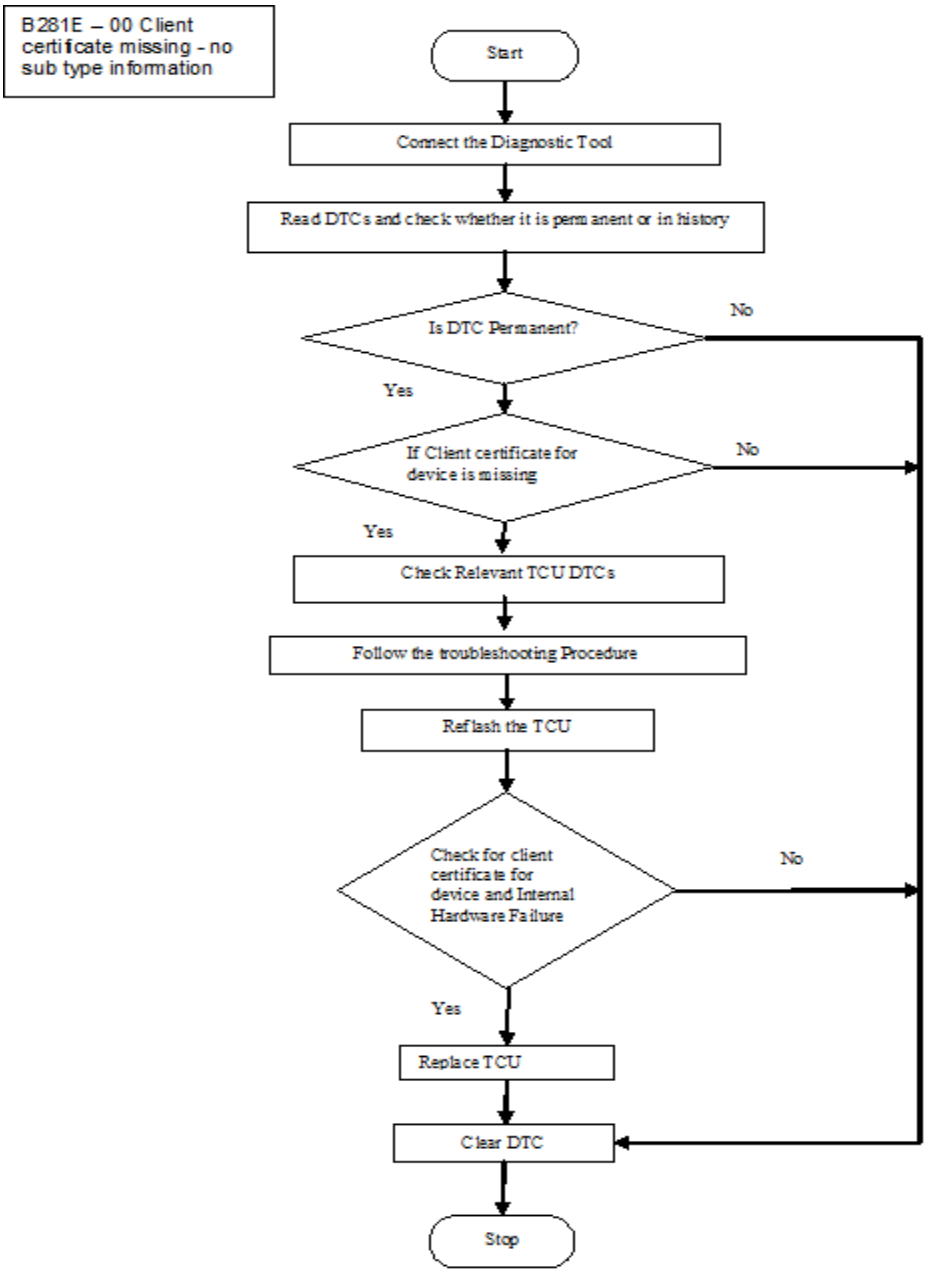


B281E - 00:- Client certificate missing - no sub type information

Overview:

ISO Code	B281E – 00 Client certificate missing - no sub type information
Customer Symptom	Telematics ECU features will not be working
Fault Effects (On Vehicle)	Remote , Vehicle security, Alerts and other telematics features will not be working
Fault Detection Condition	Relevant functional DTCs present in TCU .DTC is set in case of Client certificate missing of TCU.
Normal Operating Condition	TCU properly flashed with valid firmware in normal condition and proper client certificate
Probable Trouble Area	• Improper flashing of TCU • certificate on the device (i.e., the client for cloud connections) is missing • Faulty TCU • Internal Component failure
Healing Condition	1. Verify any other communication related DTCs present 2. Verify TCU DTCs and check for any related DTCs 3. Follow TCU trouble shooting guideline to clear the relevant functional DTCs 4. Clear DTC and reflash TCU 5. If problem persists after above steps (from 1 to 4) then replace TCU

Trouble Shooting:-

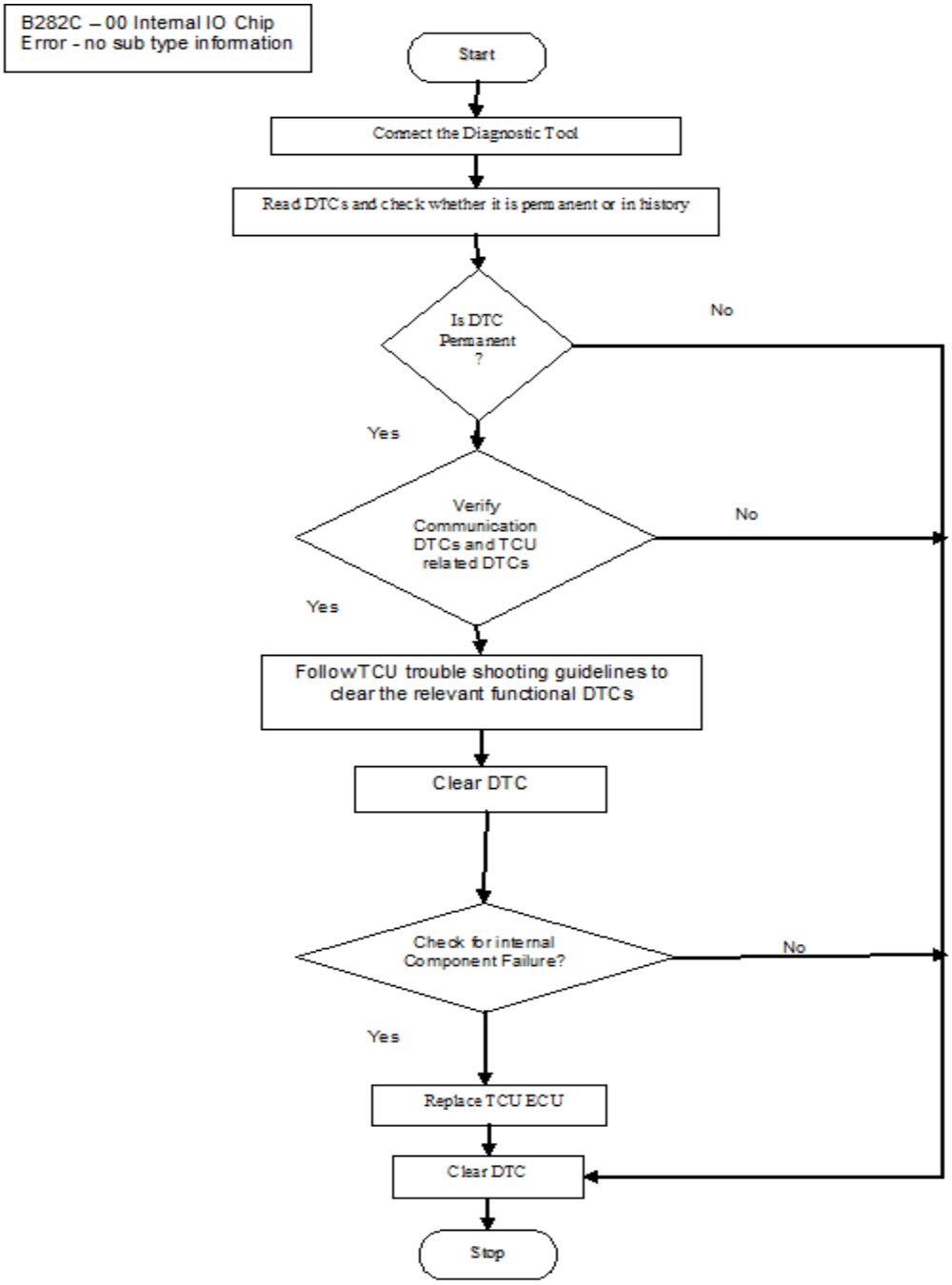


B282C - 00:- Internal IO Chip Error - no sub type information

Overview:

ISO Code	B282C – 00 Internal IO Chip Error - no sub type information
Customer Symptom	Telematics ECU features will not be working
Fault Effects (On Vehicle)	Remote , Vehicle security, Alerts and other telematics features will not be working
Fault Detection Condition	DTC is set in case of Internal IO Chip Error on TCU
Normal Operating Condition	TCU doesn't have internal IO chip error in normal condition
Probable Trouble Area	• Faulty TCU • TCU internal circuit error
Healing Condition	1. Verify DTC ageing-Clear in case of ageing 2. Verify any other communication related DTCs present 3. Verify TCU DTCs and check for any related DTCs 4. Follow TCU trouble shooting guideline to clear the relevant functional DTCs 5. If problem persists after above steps (from 1 to 4) then replace TCU

Trouble Shooting:-

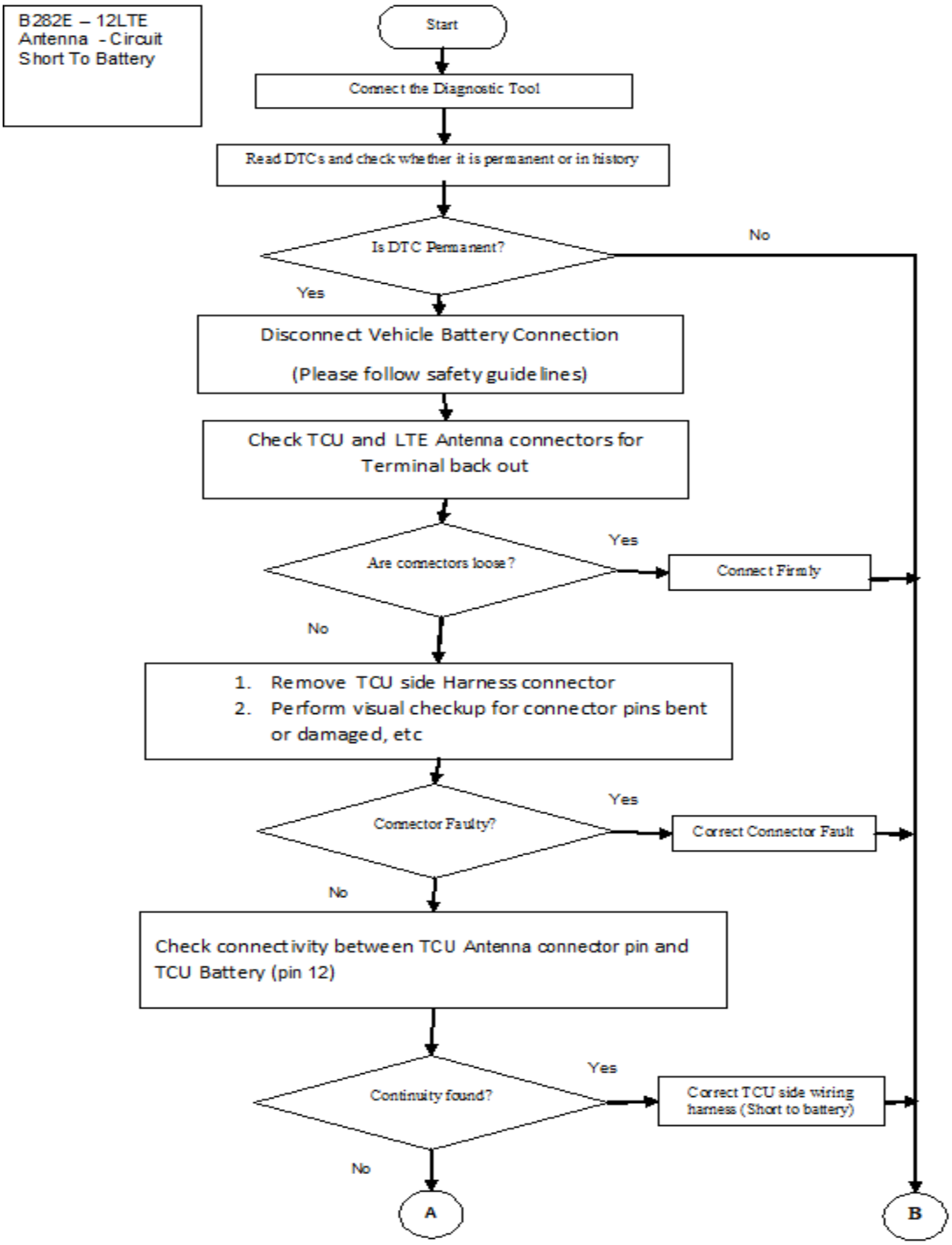


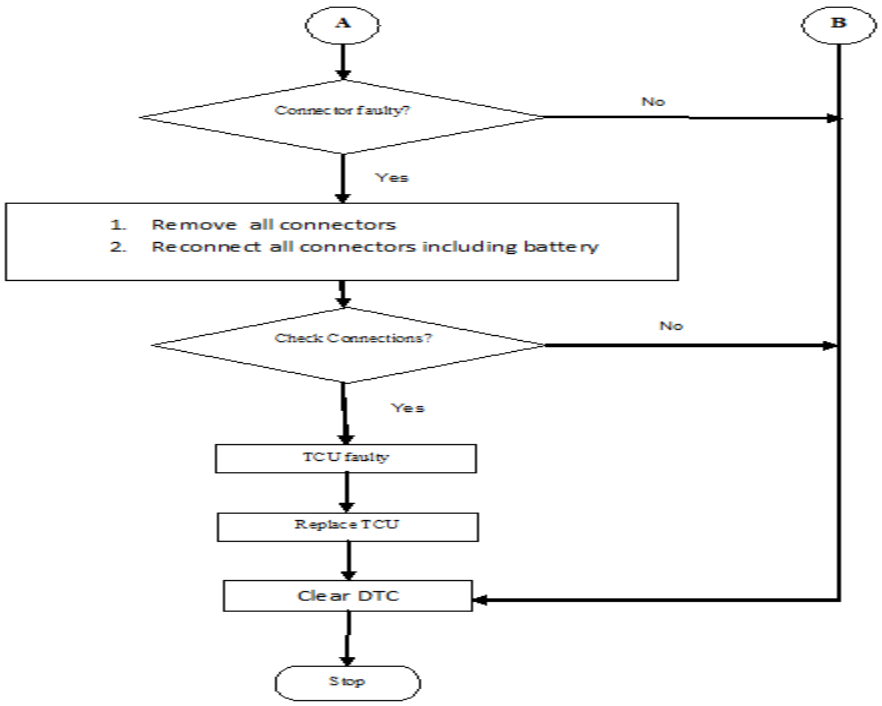
B282E - 12 :- LTE Antenna - Circuit Short To Battery

Overview:

ISO Code	B282E – 12 LTE Antenna - Circuit Short To Battery
Customer Symptom	Telematics ECU features will not be working
Fault Effects (On Vehicle)	Remote , Vehicle security, Alerts and other telematics features will not be working
Fault Detection Condition	DTC is set in case of LTE Antenna circuit short to battery
Normal Operating Condition	TCU antenna connector is not shorted to battery in normal condition
Probable Trouble Area	• Faulty TCU • TCU Antenna connector is short to battery • Internal Component failure • TCU connector have problem with oxidation, bending & damage
Healing Condition	1. Verify DTC ageing-Clear in case of ageing 2. Verify any other communication related DTCs present 3. Verify TCU DTCs and check for any related DTCs 4. Follow TCU trouble shooting guideline to clear the relevant functional DTCs 5. Replace TCU antenna connector 6. If problem persists after above steps ((from 1 to 5) then replace TCU

Trouble Shooting:-





B282F - 00 :- Internal battery not found - no sub type information

Overview:

ISO Code	B282F – 00 Internal battery not found - no sub type information
Customer Symptom	Telematics ECU features will not be working
Fault Effects (On Vehicle)	Remote , Vehicle security, Alerts and other telematics features will not be working
Fault Detection Condition	DTC is set in case of component failure on Internal Control Module Battery
Normal Operating Condition	TCU having proper internal battery inserted in normal condition.
Probable Trouble Area	• Internal battery damaged • Internal battery is not inserted • Faulty TCU • Battery connector is broken • Internal Component failure
Healing Condition	1. Verify DTC ageing-Clear in case of ageing 2. Verify any other communication related DTCs present 3. Verify TCU DTCs and check for any related DTCs 4. Follow TCU trouble shooting guideline to clear the relevant functional DTCs 5. Replace internal battery 6. If problem persists after above steps(from 1 to 5) then replace TCU

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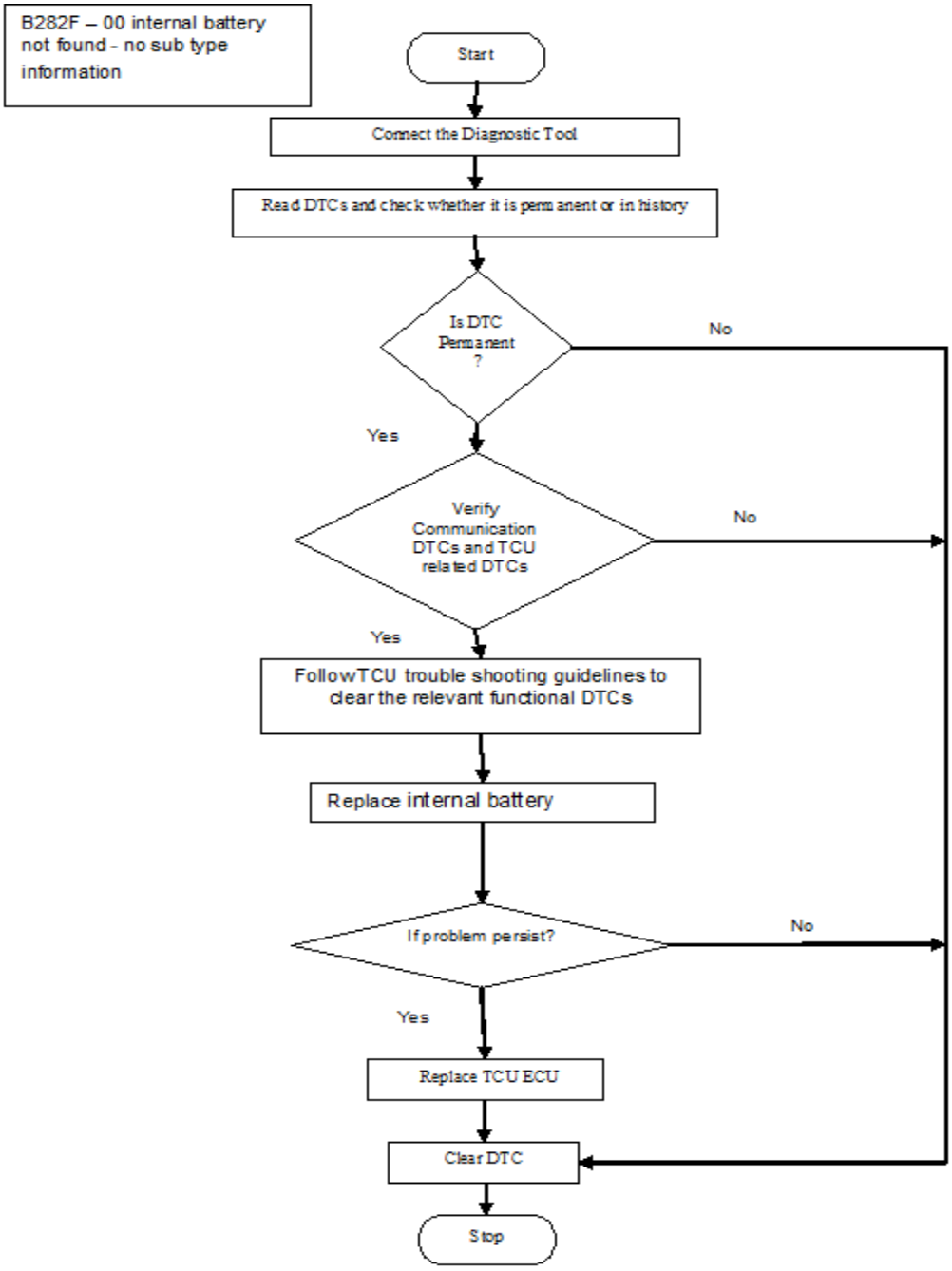
Trouble Shooting:-

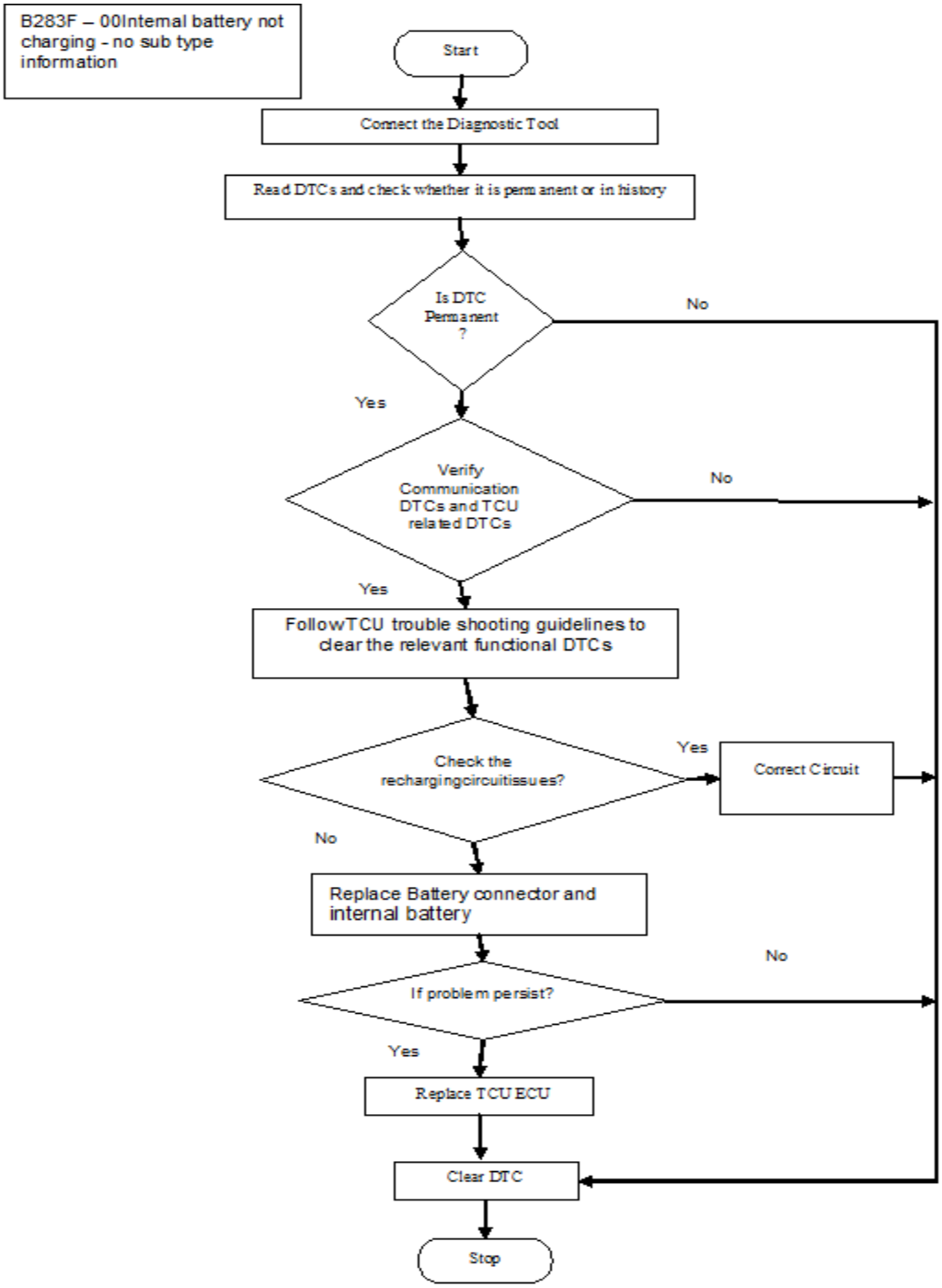


B283F - 00 :- Internal battery not charging - no sub type information

Overview:

ISO Code	B283F – 00 Internal battery not charging - no sub type information
Customer Symptom	Telematics ECU features will not be working
Fault Effects (On Vehicle)	Remote , Vehicle security, Alerts and other telematics features will not be working
Fault Detection Condition	DTC is set in case of Internal Control Module Battery is not charging
Normal Operating Condition	TCU having proper internal battery inserted in normal condition.
Probable Trouble Area	• Faulty TCU • Internal battery damaged • Internal component failure • Internal battery connector damaged • Internal battery terminals is open or shorted to ground
Healing Condition	1. Verify DTC ageing-Clear in case of ageing 2. Verify any other communication related DTCs present 3. Verify TCU DTCs and check for any related DTCs 4. Follow TCU trouble shooting guideline to clear the relevant functional DTCs 5. Check the recharging circuit issues 6. Replace battery connector and internal battery 7. If problem persists after above steps (from 1 to 6) then replace TCU

Trouble Shooting:-

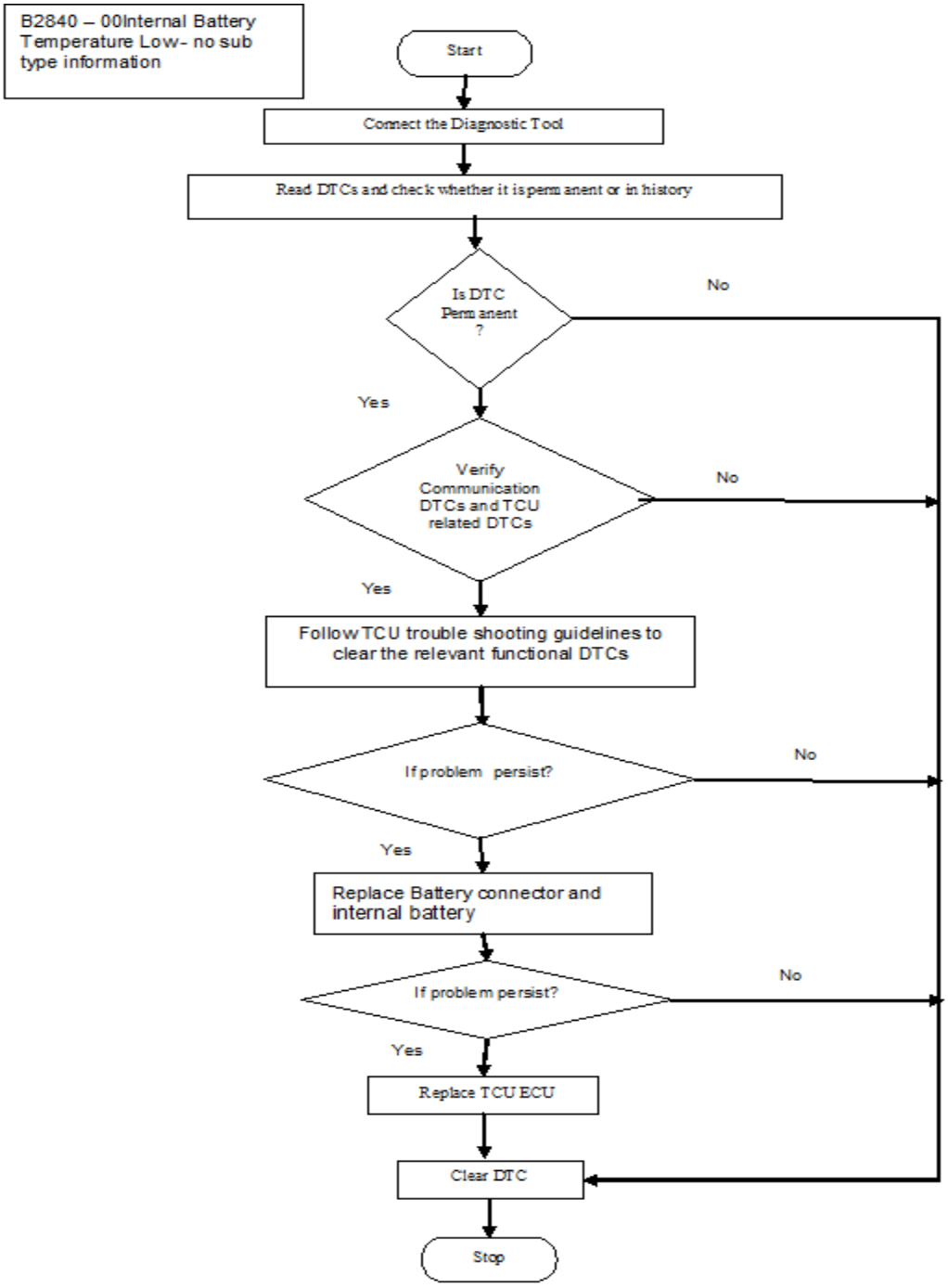


B2840 - 00 :- Internal Battery Temperature Low - no sub type information

Overview:

ISO Code	B2840 – 00 Internal Battery Temperature Low - no sub type information
Customer Symptom	Telematics ECU features will not be working
Fault Effects (On Vehicle)	Remote , Vehicle security, Alerts and other telematics features will not be working
Fault Detection Condition	DTC is set in case of Internal Control Module Battery temperature is low
Normal Operating Condition	TCU having proper internal battery inserted in normal condition and the temperature is in normal range (TO BE UPDATED)
Probable Trouble Area	• Faulty TCU • Internal battery damaged • Internal battery connector damaged
Healing Condition	1. Verify DTC ageing-Clear in case of ageing 2. Verify any other communication related DTCs present 3. Verify TCU DTCs and check for any related DTCs 4. Follow TCU trouble shooting guideline to clear the relevant functional DTCs 5. Replace battery connector and internal battery 6. If problem persists after above steps(from 1 to 5) then replace TCU

Trouble Shooting:-

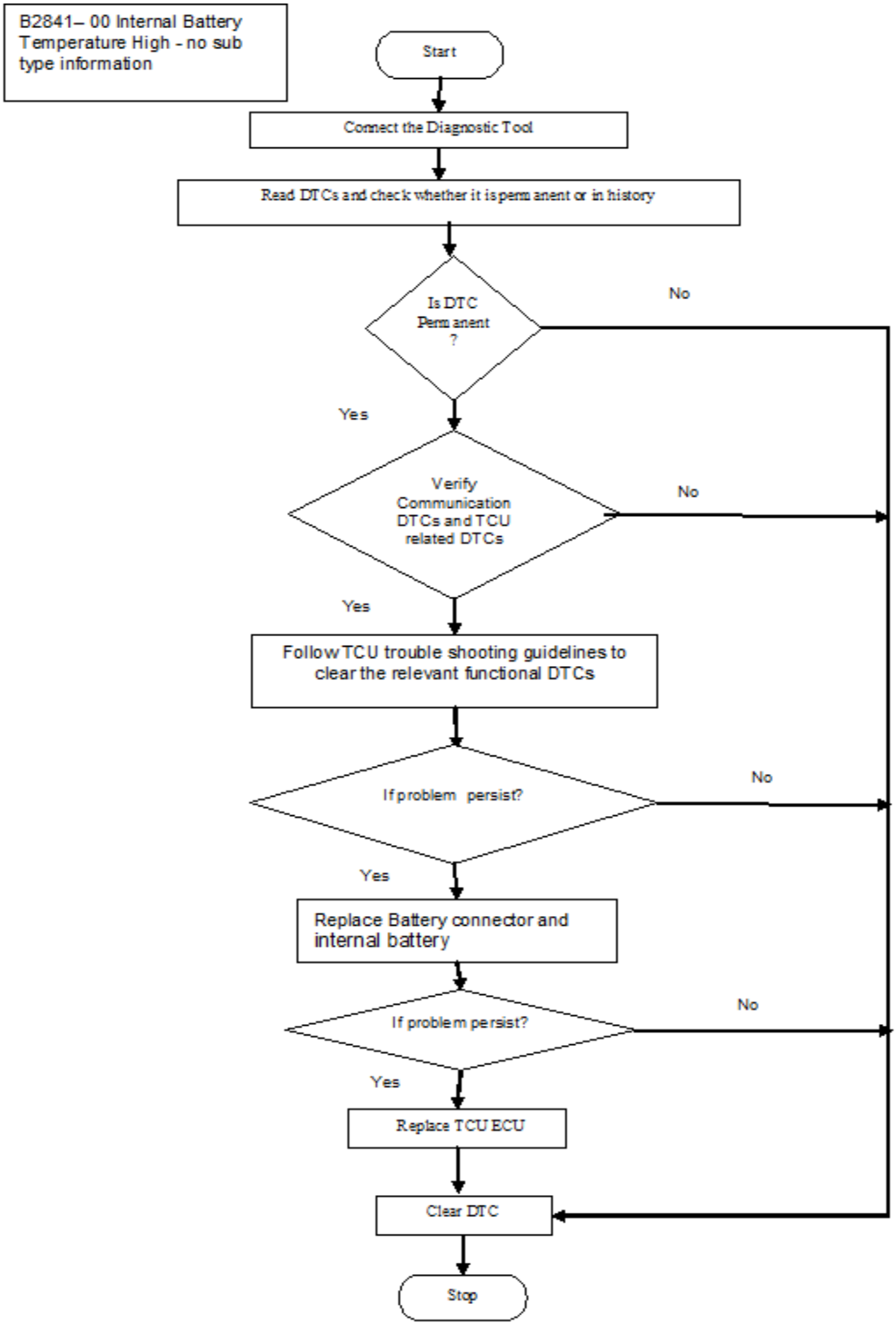


B2841 - 00 :- Internal Battery Temperature High - no sub type information

Overview:

ISO Code	B2841 – 00 Internal Battery Temperature High - no sub type information
Customer Symptom	Telematics ECU features will not be working
Fault Effects (On Vehicle)	Remote , Vehicle security, Alerts and other telematics features will not be working
Fault Detection Condition	DTC is set in case of Internal Control Module Battery temperature is high
Normal Operating Condition	TCU having proper internal battery inserted in normal condition and the temperature is in normal range (TO BE UPDATED)
Probable Trouble Area	• Faulty TCU • Internal battery damaged • Internal battery connector damaged • Internal battery terminals is open or shorted to ground
Healing Condition	1. Verify DTC ageing-Clear in case of ageing 2. Verify any other communication related DTCs present 3. Verify TCU DTCs and check for any related DTCs 4. Follow TCU trouble shooting guideline to clear the relevant functional DTCs 5. Replace battery connector and internal battery 6. If problem persists after above steps (from 1 to 5) then replace TCU

Trouble Shooting:-



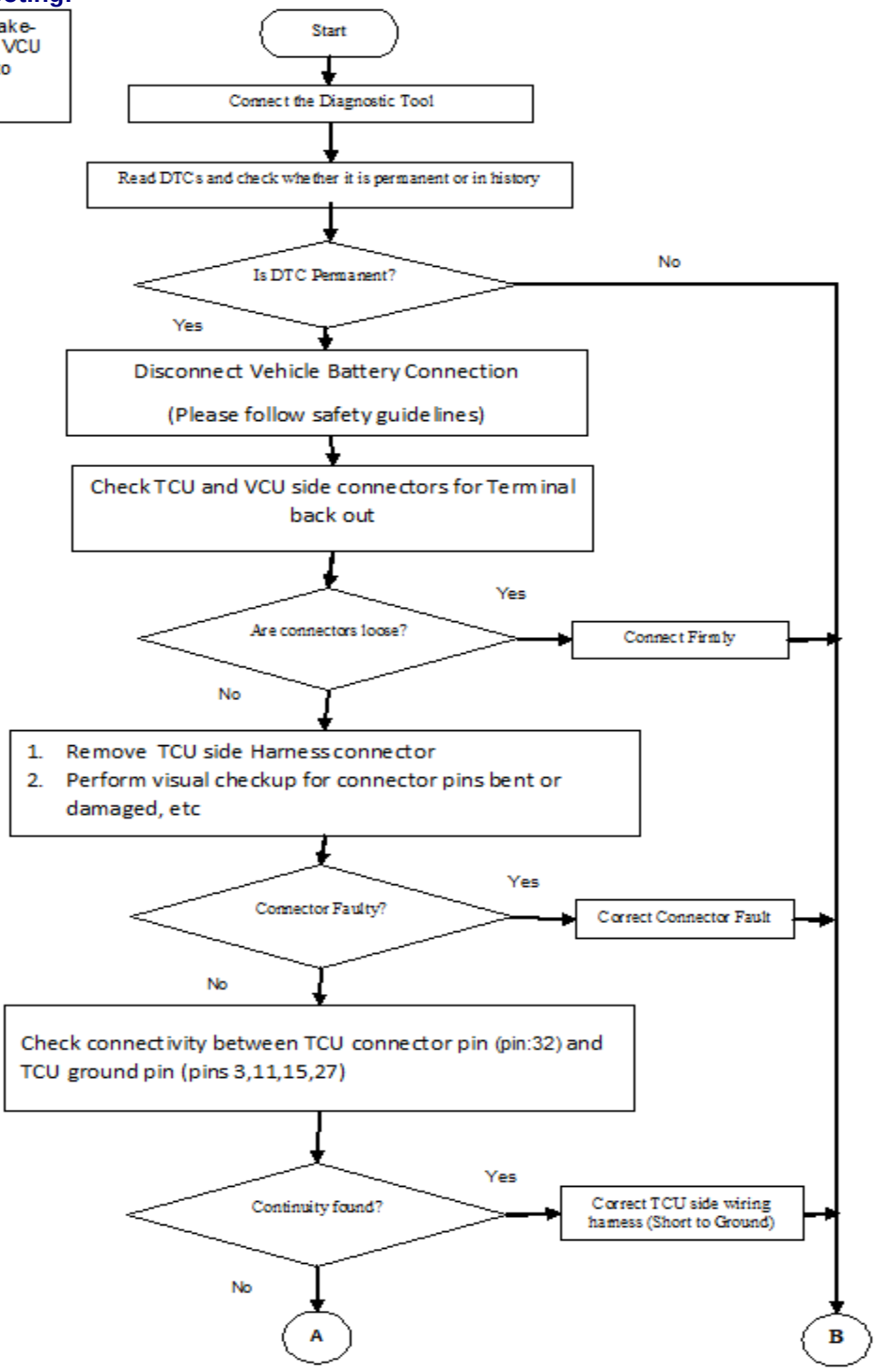
B2833 - 11 :- Wake-Up Input from VCU - circuit short to ground

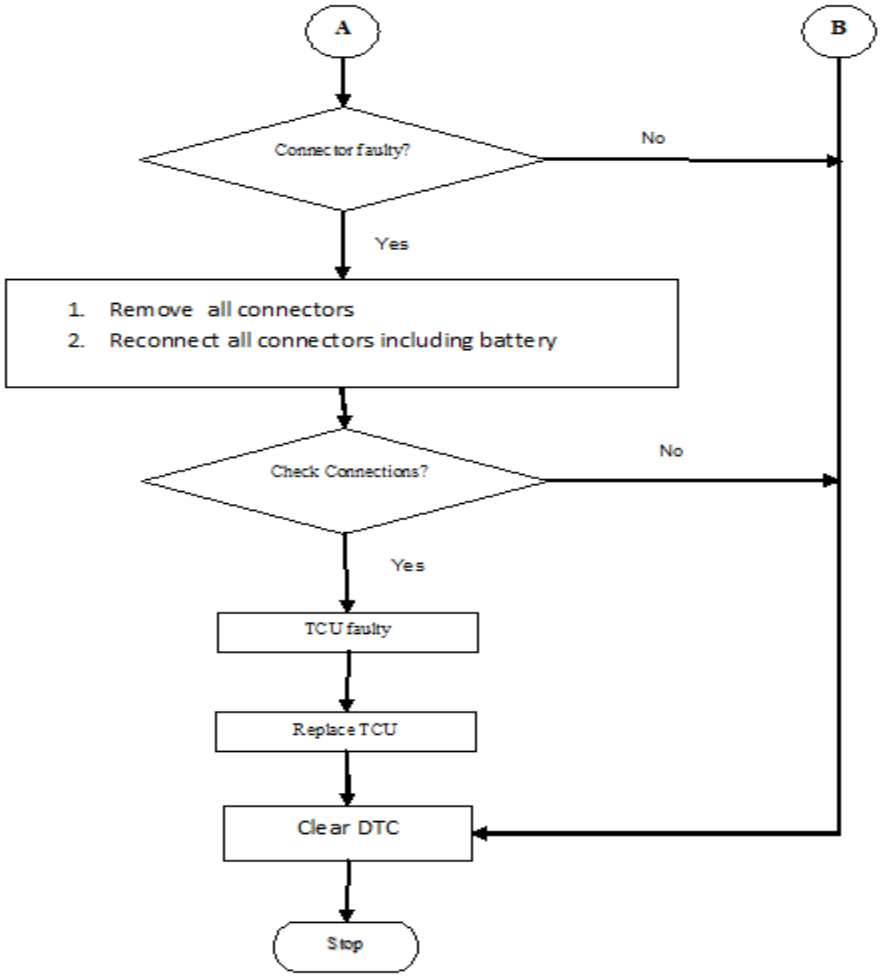
Overview:

ISO Code	B2833 - 11 Wake-Up Input from VCU - circuit short to ground
Customer Symptom	Following Telematics features will not be working:- Remote climate/HVAC control, Remote immobilization when car is stolen , Remote charging On/Off, Valet Mode , EV range prediction - VCU Calculated, View Car Health Dashboard, Time to charge (in Hrs and Mins), Remote SOC, EV motor check, one battery and DTE check
Fault Effects (On Vehicle)	Remote , Vehicle security, Alerts and other telematics features will not be working
Fault Detection Condition	DTC is set in case of TCU wake-up input from VCU pin is shorted to ground
Normal Operating Condition	TCU ECU receives proper wake-up input from VCU
Probable Trouble Area	• Faulty TCU • TCU Connector Fault • Wake-up input from VCU(pin:32) is shorted to ground • Internal Component failure • TCU pin have problem with oxidation, bending & damage
Healing Condition	1. Verify DTC ageing-Clear in case of ageing 2. Verify any other communication related DTCs present 3. Verify TCU DTCs and check for any related DTCs 4. Follow TCU trouble shooting guideline to clear the relevant functional DTCs 5. Replace TCU connector 6. If problem persists after above steps (from 1 to 5) then replace TCU

Trouble Shooting:-

B2833 - 11 Wake-Up Input from VCU - circuit short to ground





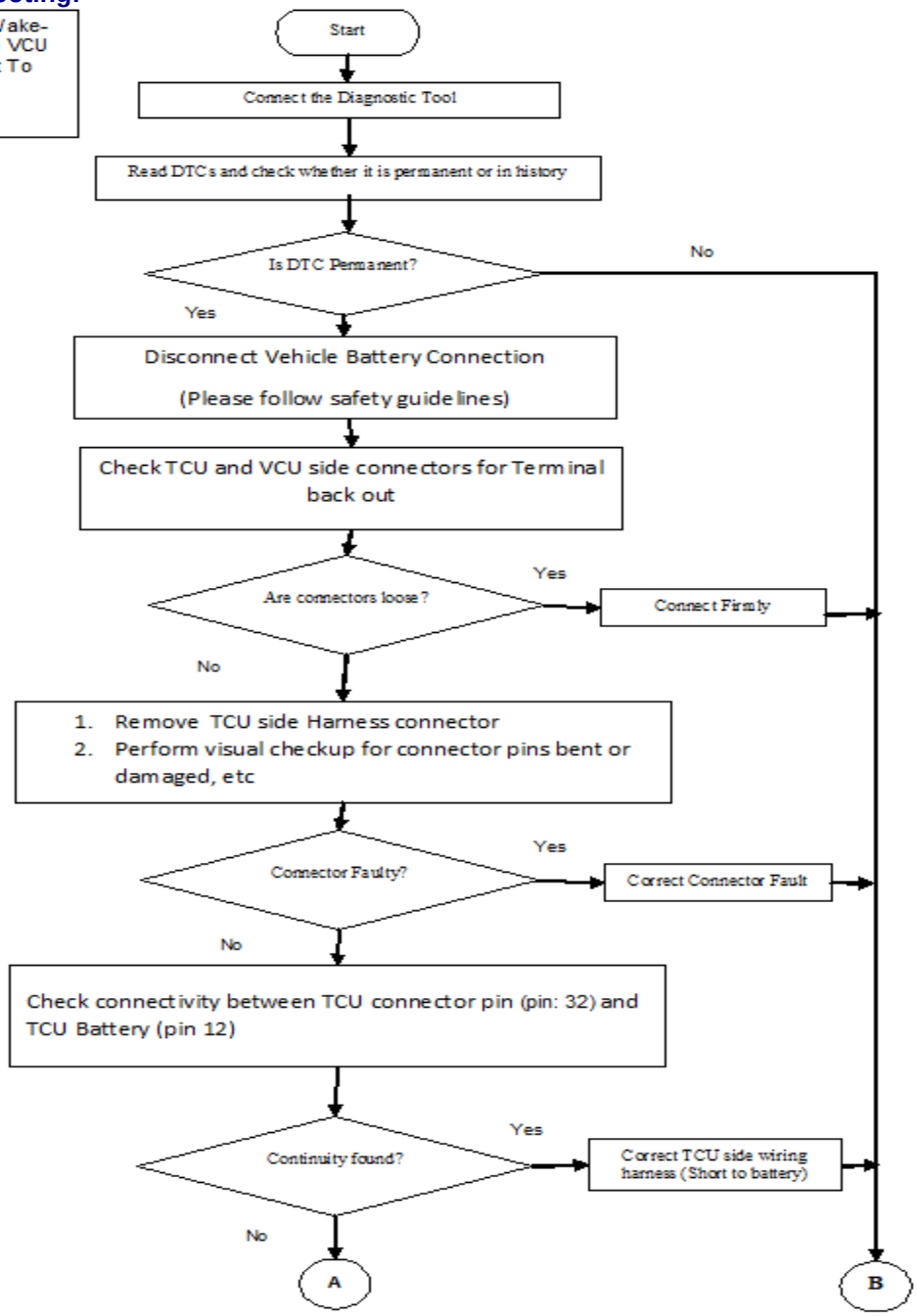
B2833 - 12 :- Wake-Up Input from VCU - Circuit Short To Battery:

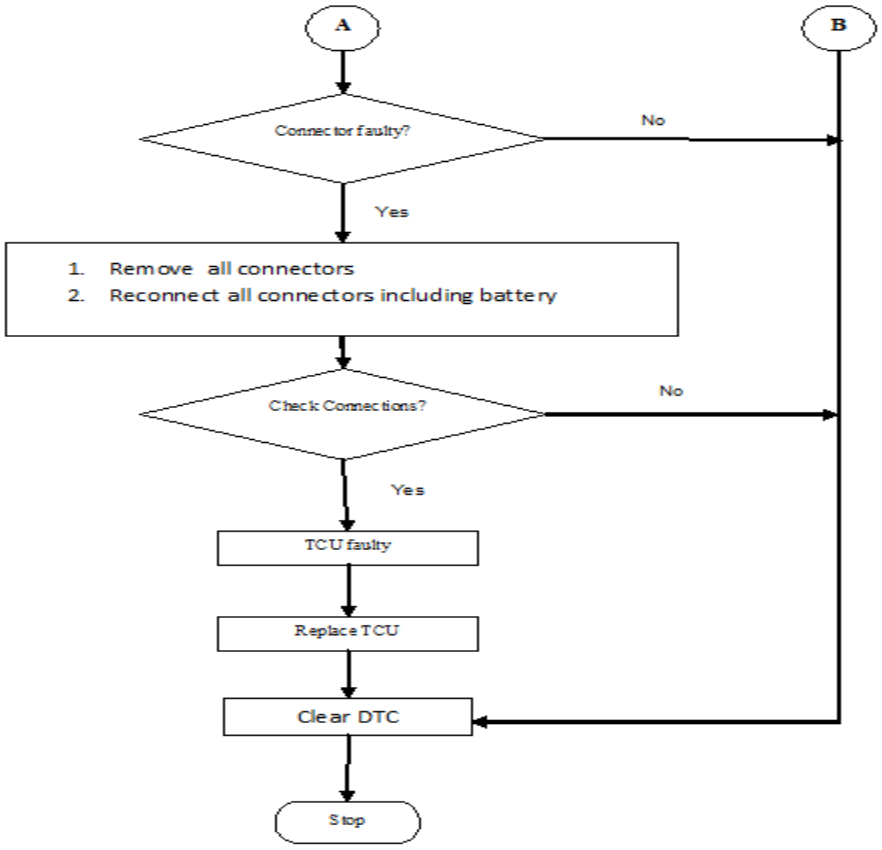
Overview:

ISO Code	B2833 – 12 Wake-Up Input from VCU - Circuit Short To Battery
Customer Symptom	Following Telematics features will not be working:- Remote climate/HVAC control, Remote immobilization when car is stolen , Remote charging On/Off, Valet Mode , EV range prediction - VCU Calculated, View Car Health Dashboard, Time to charge (in Hrs and Mins), Remote SOC, EV motor check, one battery and DTE check
Fault Effects (On Vehicle)	Remote , Vehicle security, Alerts and other telematics features will not be working
Fault Detection Condition	DTC is set in case of TCU wake-up input from VCU pin is shorted to battery
Normal Operating Condition	TCU ECU receives proper wake-up input from VCU
Probable Trouble Area	• Faulty TCU • TCU Connector Fault • Wake-up input from VCU (pin:32)is shorted to battery • Internal Component failure • TCU pin have problem with oxidation, bending & damage
Healing Condition	1. Verify DTC ageing-Clear in case of ageing 2. Verify any other communication related DTCs present 3. Verify TCU DTCs and check for any related DTCs 4. Follow TCU trouble shooting guideline to clear the relevant functional DTCs 5. Replace TCU connector 6. If problem persists after above steps (from 1 to 5) then replace TCU

Trouble Shooting:-

B2833 – 12 Wake-Up Input from VCU - Circuit Short To Battery





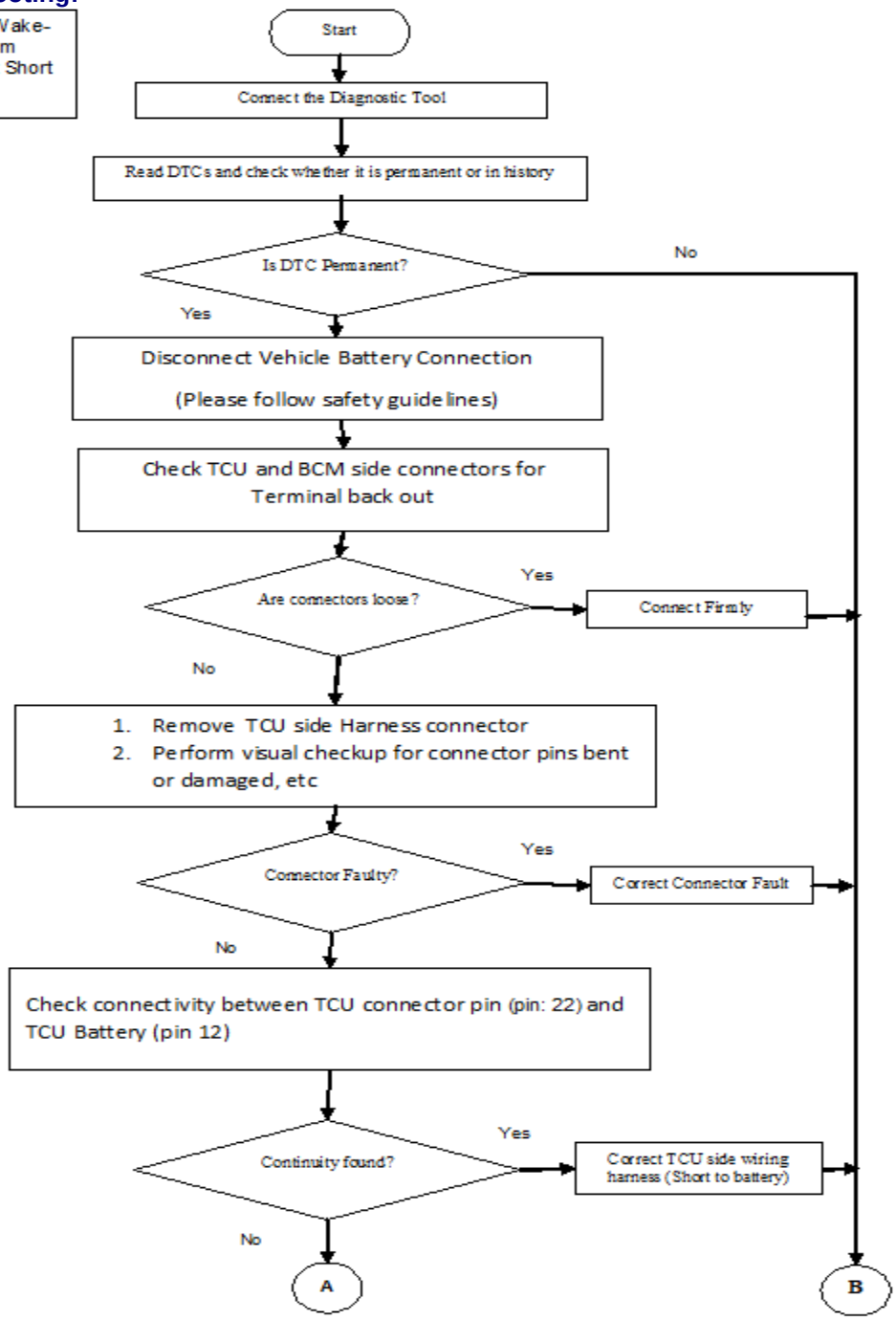
B283D - 12 :- Wake-Up Output from BCM - Circuit Short To Battery

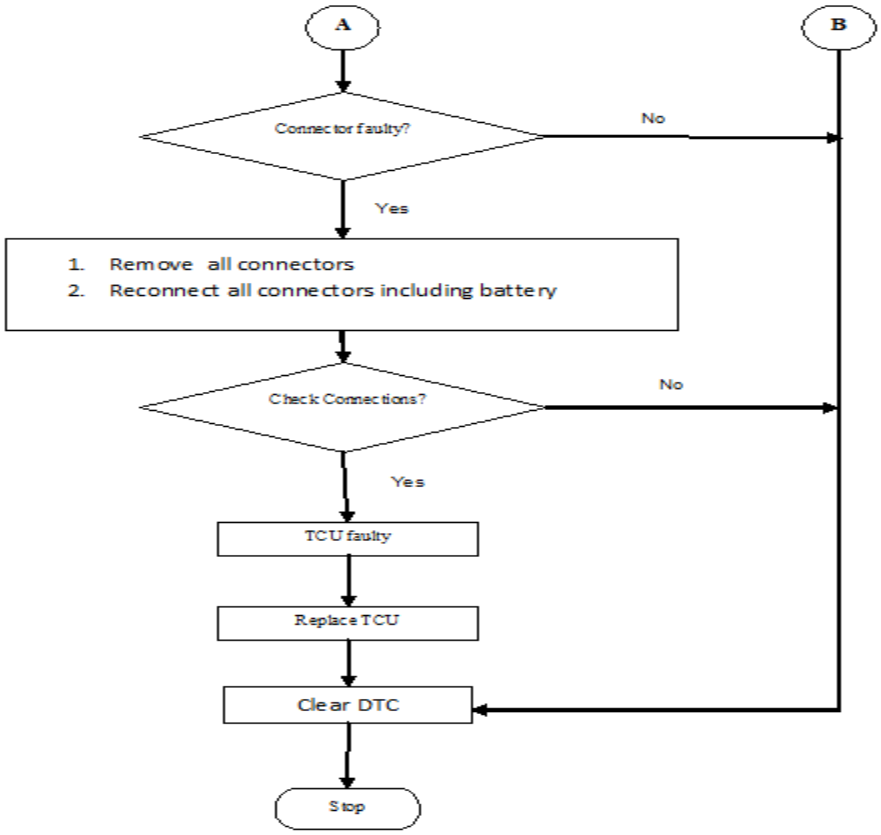
Overview:

ISO Code	B283D – 12 Wake-Up Output from BCM - Circuit Short To Battery
Customer Symptom	Following Telematics features will not be working:- Remote Lock/Unlock, Remote Lights on/off, Remote climate/HVAC control, Remote charging On/Off, Unauthorized Car Access Alert - Intrusion Alert, Alerts about critical car parameters (Including battery related alerts),View Trip details and Provide drive pattern analytics with Driver Score (Should be sharable on social media),EV range prediction - VCU Calculated, View Car Health Dashboard, Remote Horn, Panic Notification
Fault Effects (On Vehicle)	Remote , Vehicle security, Alerts and other telematics features will not be working
Fault Detection Condition	DTC is set in case of TCU wake-up input from BCM pin is shorted to battery
Normal Operating Condition	Wake-Up Output from BCM pin is working properly in normal condition
Probable Trouble Area	• Faulty TCU • TCU Connector Fault • Wake-up input from BCM (pin:22)is shorted to battery • Internal Component failure • TCU pin have problem with oxidation, bending & damage
Healing Condition	1. Verify DTC ageing-Clear in case of ageing 2. Verify any other communication related DTCs present 3. Verify TCU DTCs and check for any related DTCs 4. Follow TCU trouble shooting guideline to clear the relevant functional DTCs 5. Replace TCU connector 6. If problem persists after above steps (from 1 to 5) then replace TCU

Trouble Shooting:-

B283D – 12 Wake-Up Output from BCM - Circuit Short To Battery



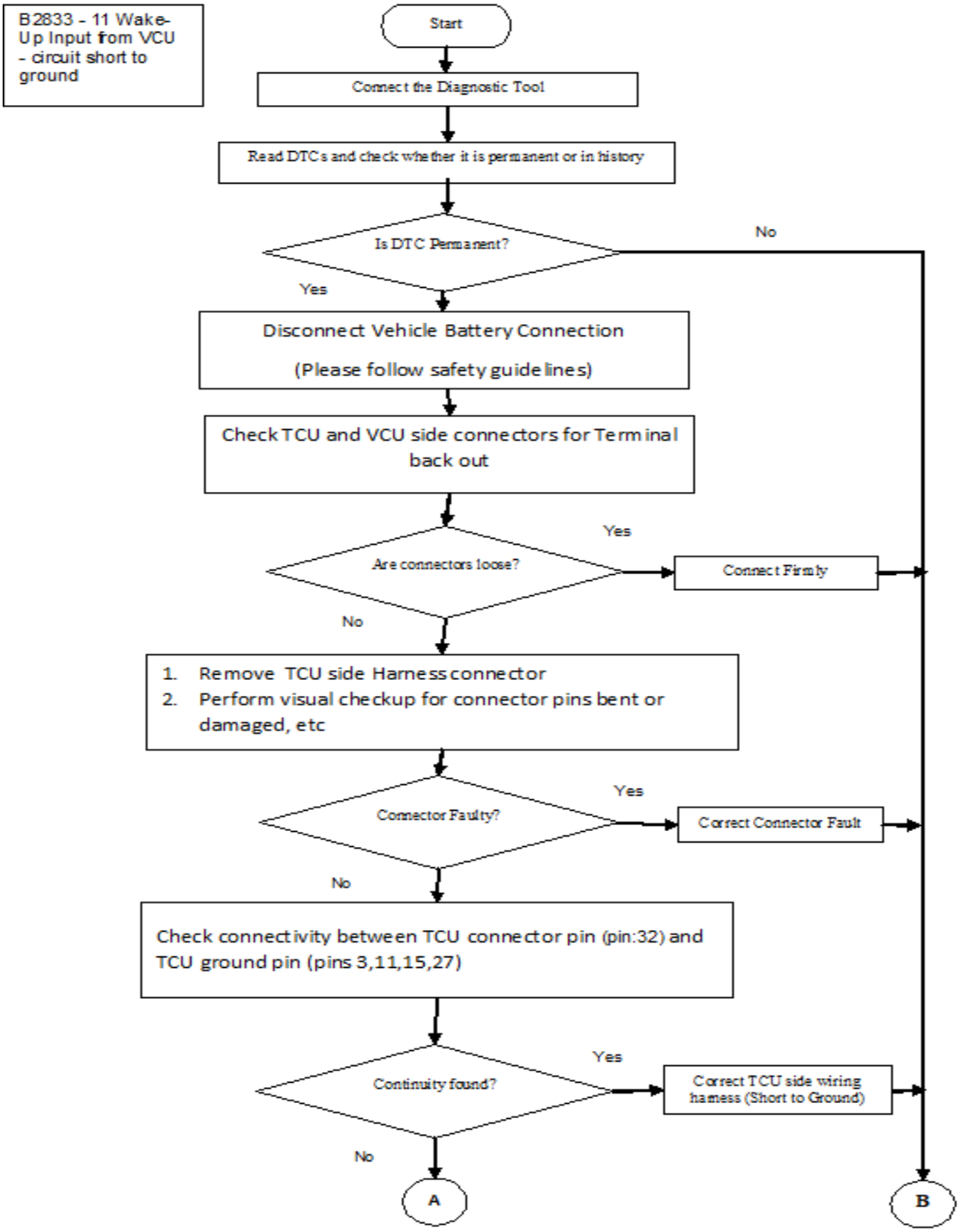


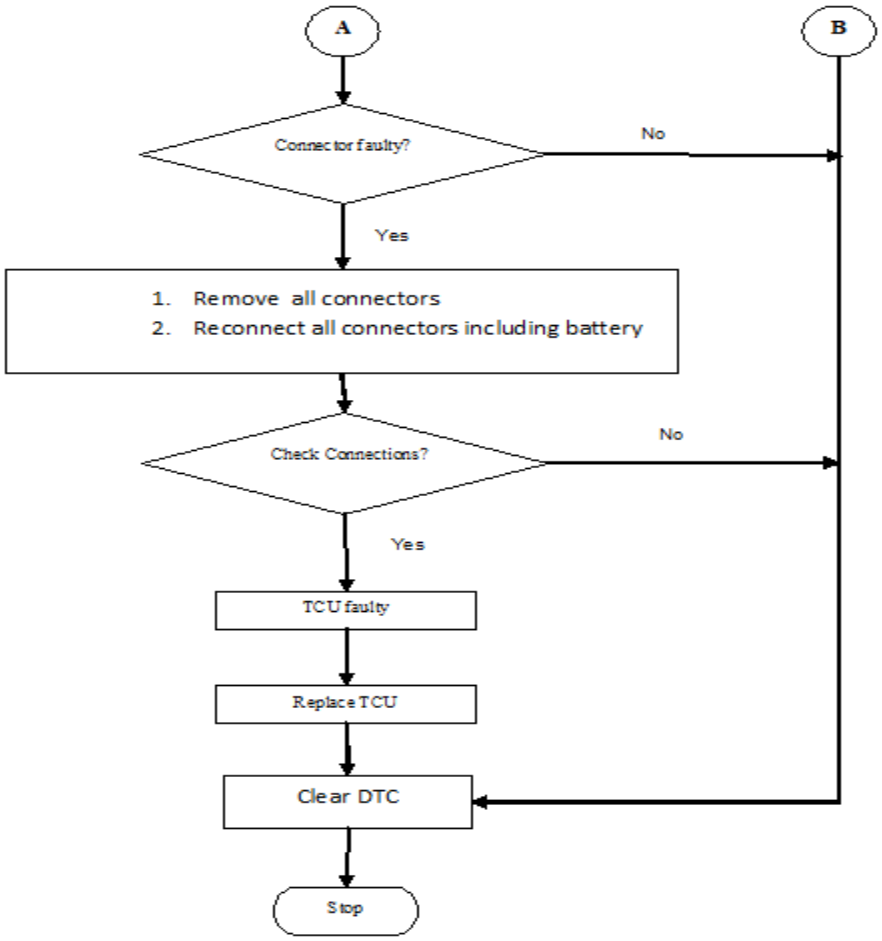
B283D - 11 :- Wake-Up Output from BCM - circuit short to ground

Overview:

ISO Code	B283D – 11 Wake-Up Output from BCM - circuit short to ground
Customer Symptom	Following Telematics features will not be working:- Remote Lock/Unlock, Remote Lights on/off, Remote climate/HVAC control, Remote charging On/Off, Unauthorized Car Access Alert - Intrusion Alert, Alerts about critical car parameters (Including battery related alerts),View Trip details and Provide drive pattern analytics with Driver Score (Should be sharable on social media),EV range prediction - VCU Calculated, View Car Health Dashboard, Remote Horn, Panic Notification
Fault Effects (On Vehicle)	Remote , Vehicle security, Alerts and other telematics features will not be working
Fault Detection Condition	DTC is set in case of TCU wake-up input from BCM pin is shorted to ground
Normal Operating Condition	Wake-Up Output from BCM pin is working properly in normal condition
Probable Trouble Area	• Faulty TCU • TCU Connector Fault • Wake-up input from BCM(pin:22) is shorted to battery • Internal Component failure • TCU pin have problem with oxidation, bending & damage
Healing Condition	1. Verify DTC ageing-Clear in case of ageing 2. Verify any other communication related DTCs present 3. Verify TCU DTCs and check for any related DTCs 4. Follow TCU trouble shooting guideline to clear the relevant functional DTCs 5. Replace TCU connector 6. If problem persists after above steps (from 1 to 5) then replace TCU

Trouble Shooting:-



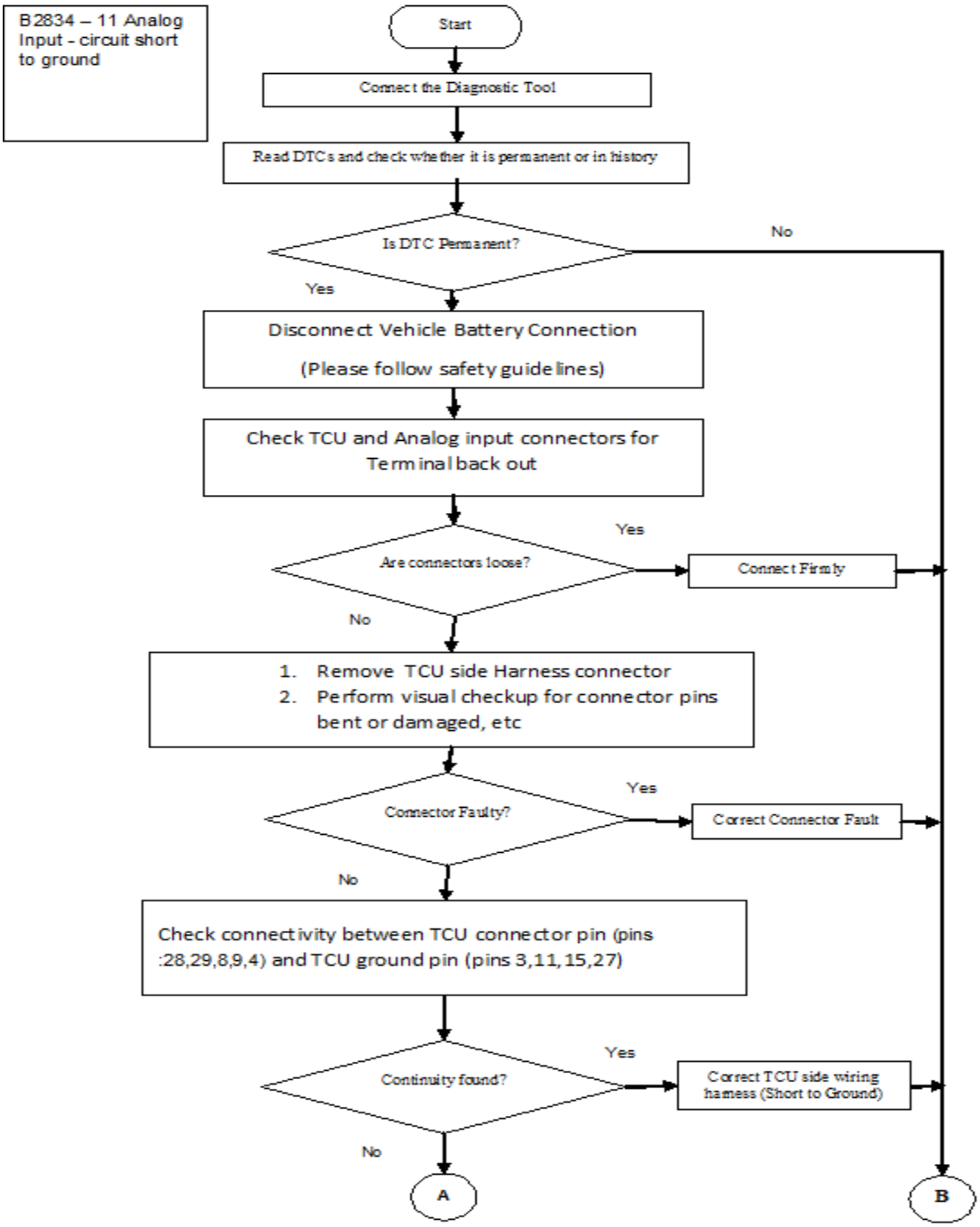


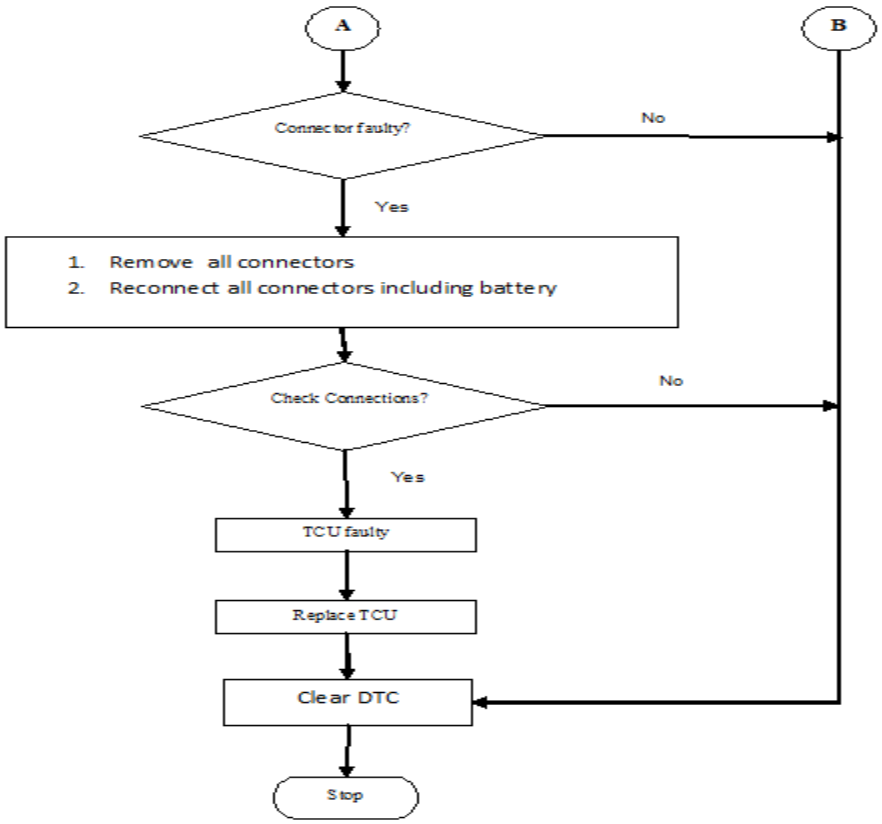
B2834 - 11 :- Analog Input - circuit short to ground

Overview:

ISO Code	B2834 – 11 Analog Input - circuit short to ground
Customer Symptom	Telematics ECU features will not be working
Fault Effects (On Vehicle)	Remote , Vehicle security, Alerts and other telematics features will not be working
Fault Detection Condition	DTC is set in case of TCU analog input pin is shorted to ground
Normal Operating Condition	Analog input pin is working properly in normal condition
Probable Trouble Area	• Faulty TCU • TCU Connector Fault • Analog input pin (pin :28/29/8/9/4)is shorted to ground • Internal Component failure • TCU pin have problem with oxidation, bending & damage
Healing Condition	1. Verify DTC ageing-Clear in case of ageing 2. Verify any other communication related DTCs present 3. Verify TCU DTCs and check for any related DTCs 4. Follow TCU trouble shooting guideline to clear the relevant functional DTCs 5. Replace TCU connector 6. If problem persists after above steps (from 1 to 5) then replace TCU

Trouble Shooting:-





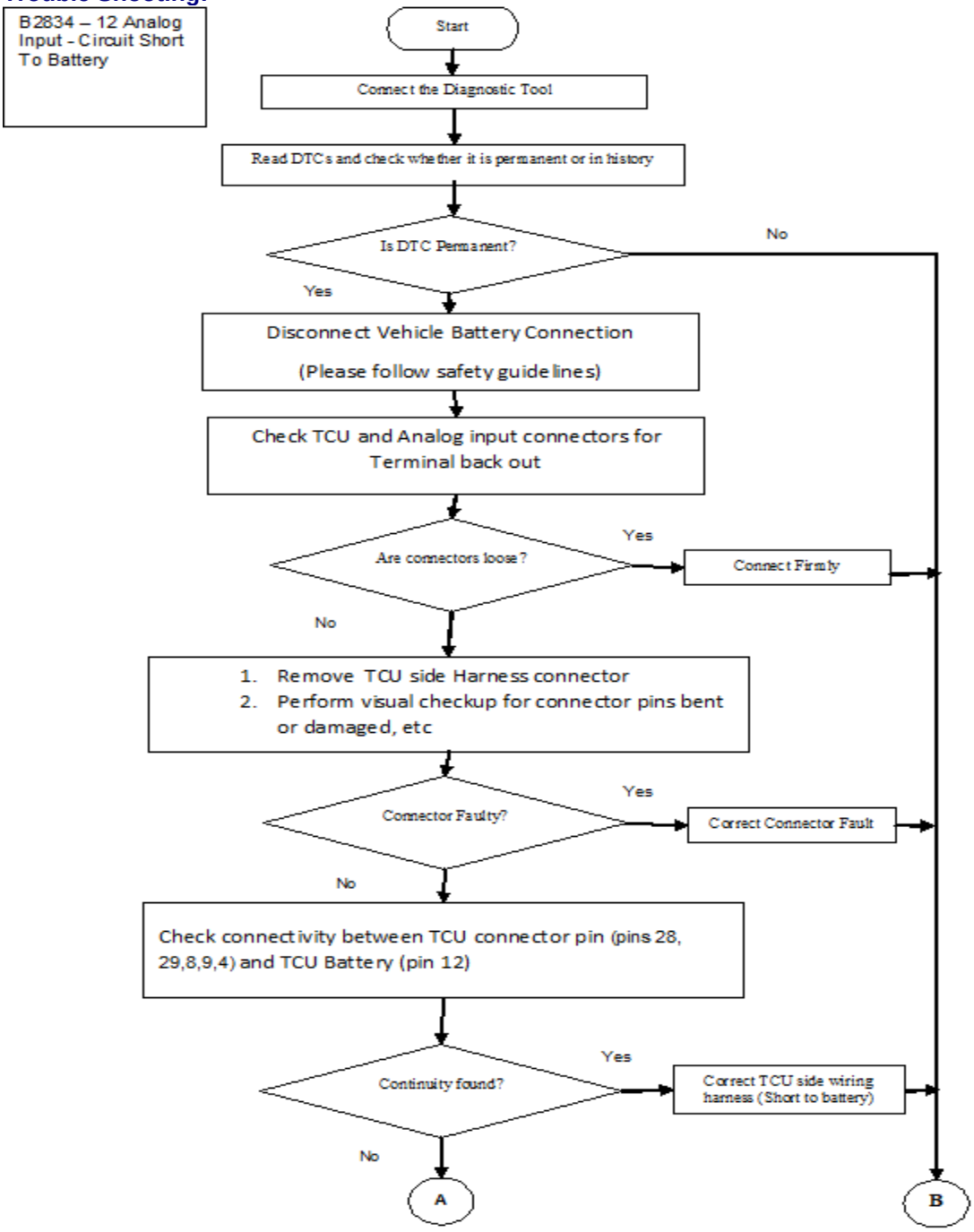
B2834 - 12 :- Analog Input - Circuit Short To Battery

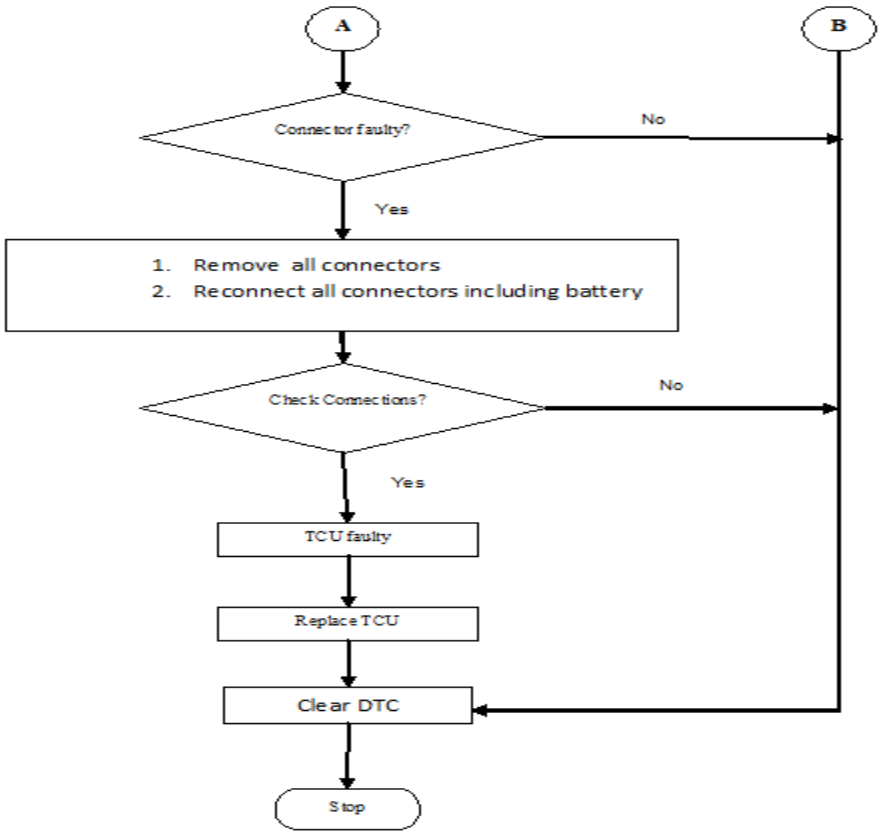
Overview:

ISO Code	B2834 – 12 Analog Input - Circuit Short To Battery
Customer Symptom	Telematics ECU features will not be working
Fault Effects (On Vehicle)	Remote , Vehicle security, Alerts and other telematics features will not be working
Fault Detection Condition	DTC is set in case of TCU analog input pin is shorted to battery
Normal Operating Condition	Analog input pin is working properly in normal condition
Probable Trouble Area	• Faulty TCU • TCU Connector Fault • Analog input pin (pin :28/29/8/9/4)is shorted to battery • Internal Component failure • TCU pin have problem with oxidation, bending & damage
Healing Condition	1. Verify DTC ageing-Clear in case of ageing 2. Verify any other communication related DTCs present 3. Verify TCU DTCs and check for any related DTCs 4. Follow TCU trouble shooting guideline to clear the relevant functional DTCs 5. Replace TCU connector 6. If problem persists after above steps (from 1 to 5) then replace TCU

Trouble Shooting:-

B2834 – 12 Analog Input - Circuit Short To Battery



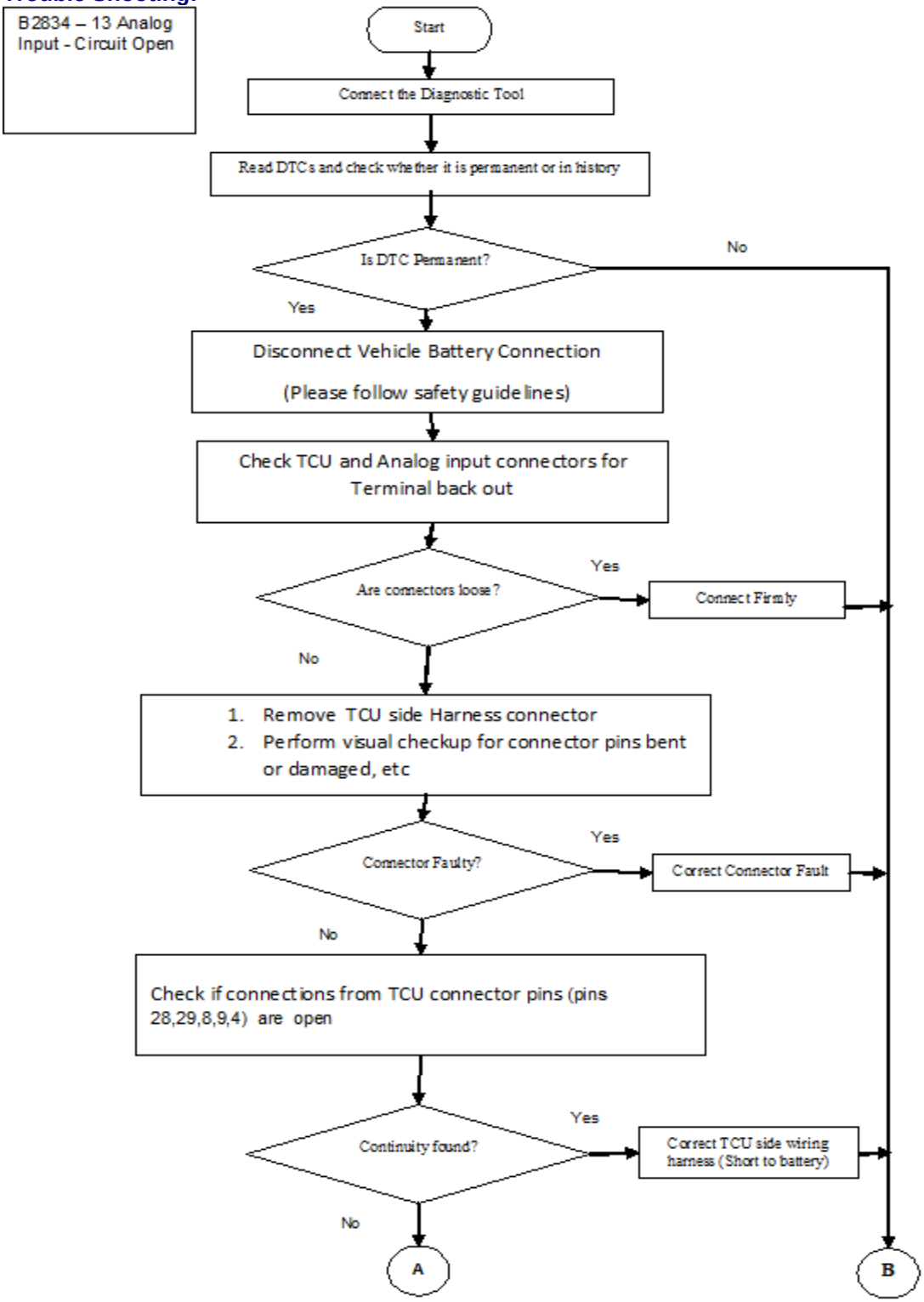


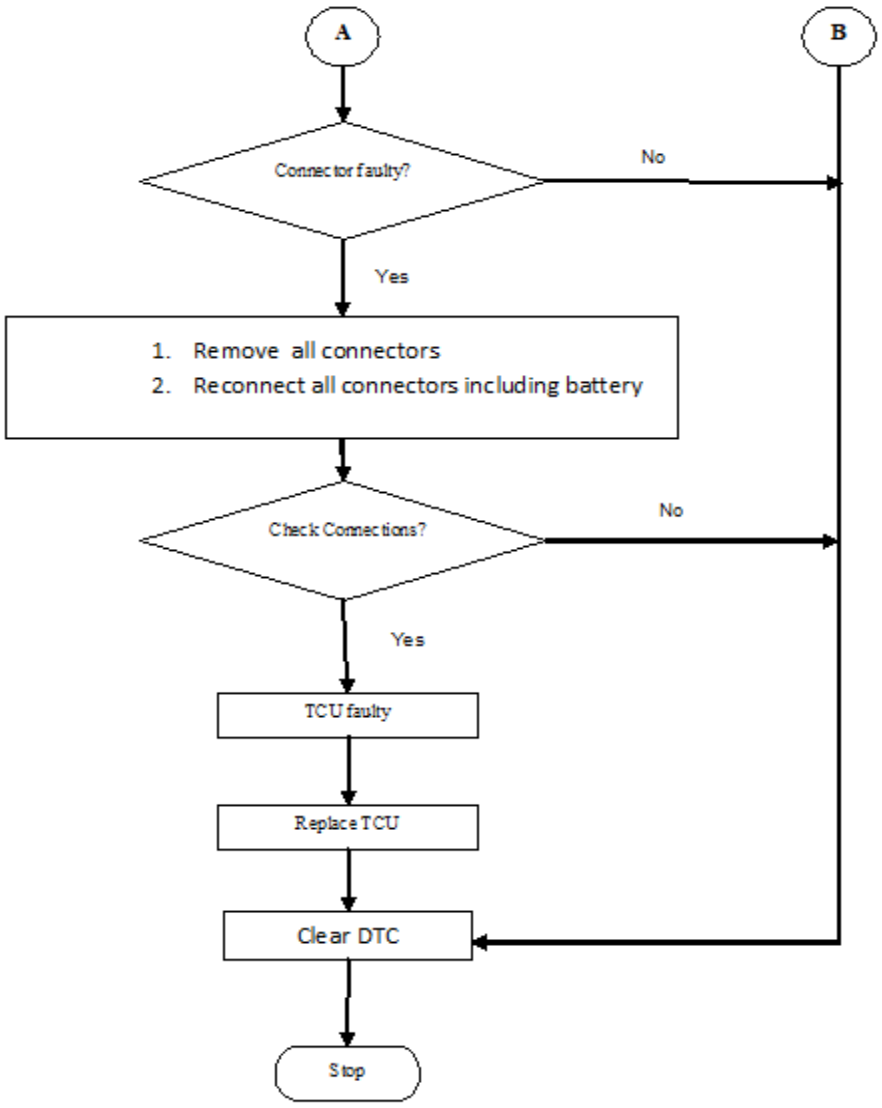
B2834 - 13 :- Analog Input - Circuit Open

Overview:

ISO Code	B2834 – 13 Analog Input - Circuit Open
Customer Symptom	Telematics ECU features will not be working
Fault Effects (On Vehicle)	Remote , Vehicle security, Alerts and other telematics features will not be working
Fault Detection Condition	DTC is set in case of TCU analog input pin is open
Normal Operating Condition	Analog input pin is working properly in normal condition
Probable Trouble Area	• Faulty TCU • TCU Connector Fault • Analog input pin (pin :28/29/8/9/4) is open • Internal Component failure • TCU pin have problem with oxidation, bending & damage
Healing Condition	1. Verify DTC ageing-Clear in case of ageing 2. Verify any other communication related DTCs present 3. Verify TCU DTCs and check for any related DTCs 4. Follow TCU trouble shooting guideline to clear the relevant functional DTCs 5. Replace TCU connector 6. If problem persists after above steps (from 1 to 5) then replace TCU

Trouble Shooting:-



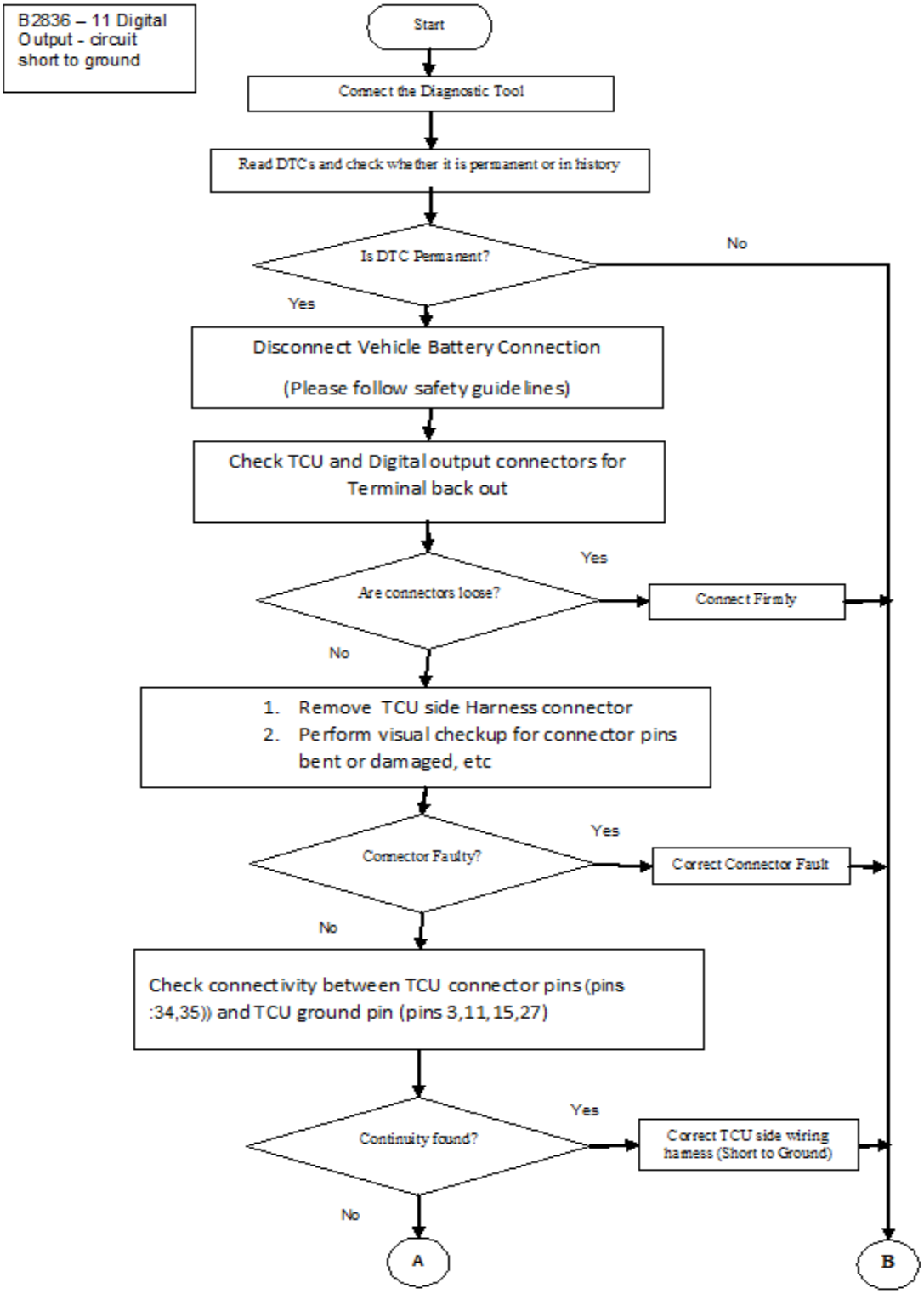


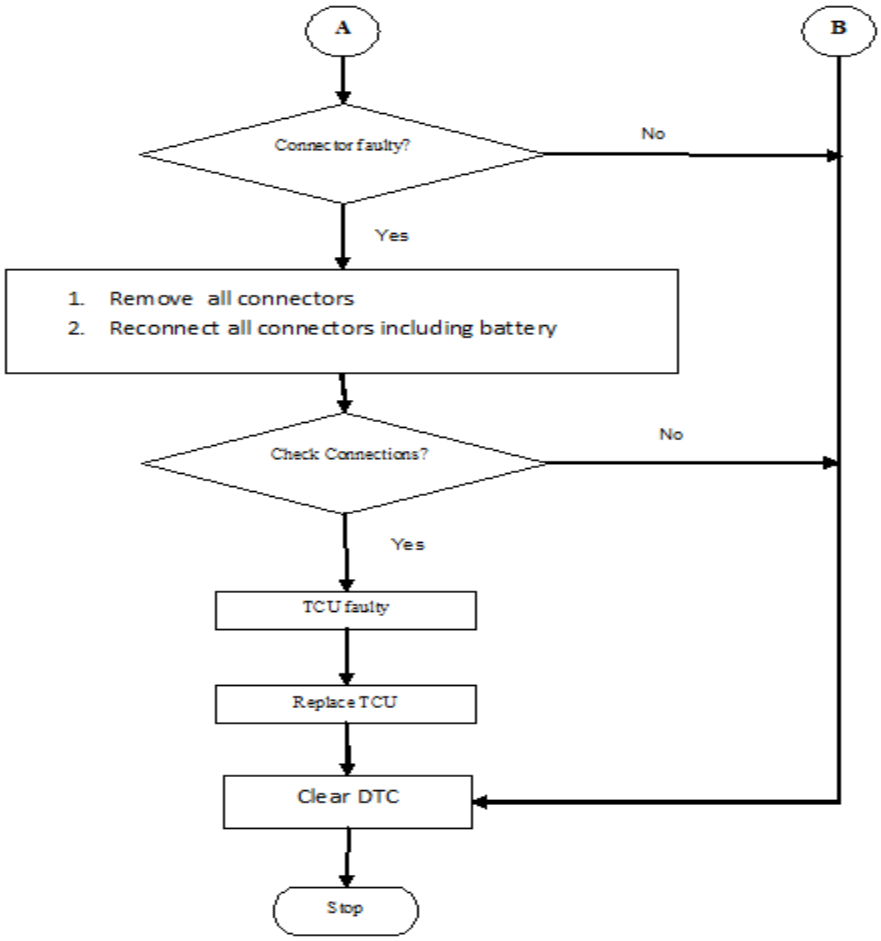
B2836 - 11 :- Digital Output - circuit short to ground

Overview:

ISO Code	B2836 – 11 Digital Output - circuit short to ground
Customer Symptom	Telematics ECU features will not be working
Fault Effects (On Vehicle)	Remote , Vehicle security, Alerts and other telematics features will not be working
Fault Detection Condition	DTC is set in case of TCU Digital output pin is shorted to ground
Normal Operating Condition	Digital Output data is properly transmitting in normal condition
Probable Trouble Area	• Faulty TCU • TCU Connector Fault • Digital output pin (pin :34/35) is shorted to ground • Internal Component failure • TCU pin have problem with oxidation, bending & damage
Healing Condition	1. Verify DTC ageing-Clear in case of ageing 2. Verify any other communication related DTCs present 3. Verify TCU DTCs and check for any related DTCs 4. Follow TCU trouble shooting guideline to clear the relevant functional DTCs 5. Replace TCU connector 6. If problem persists after above steps (from 1 to 5) then replace TCU

Trouble Shooting:-



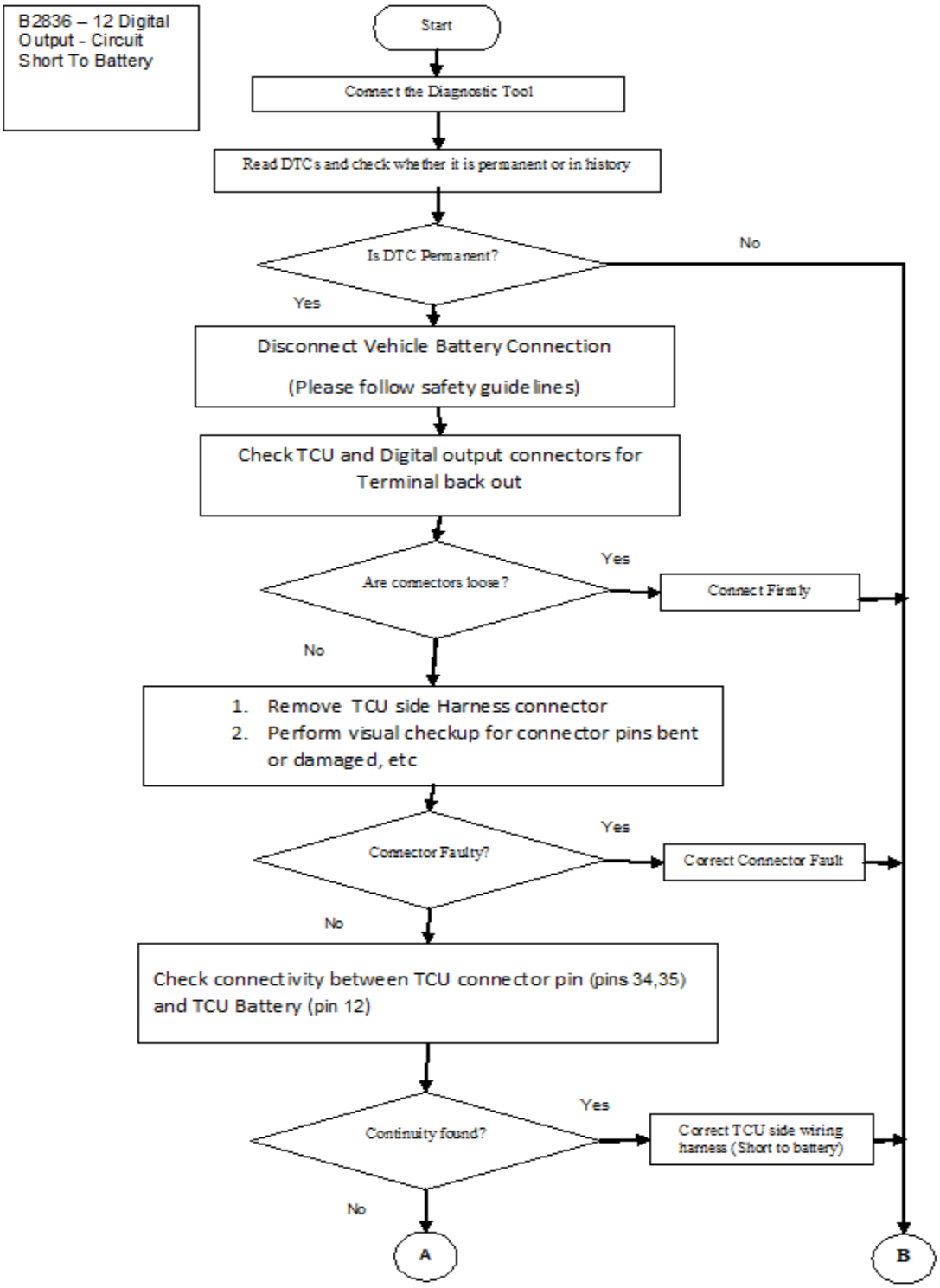


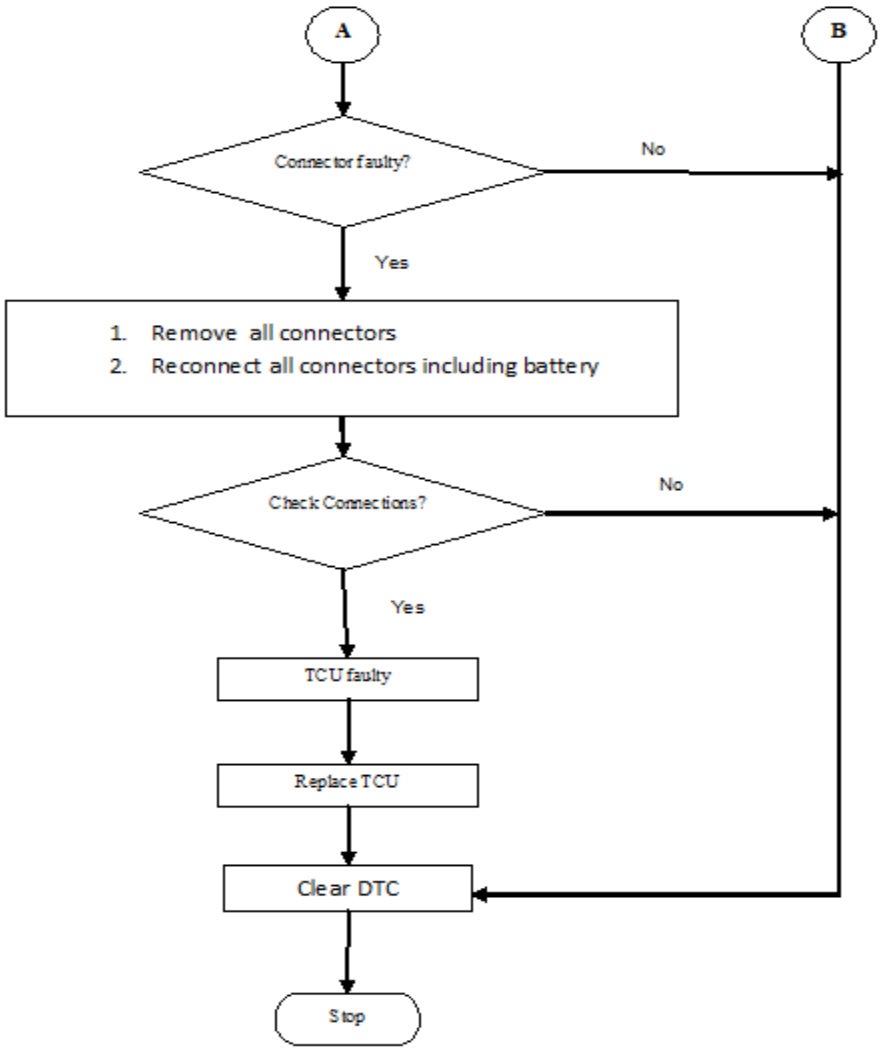
B2836 - 12 :- Digital Output - Circuit Short To Battery

Overview:

ISO Code	B2836 – 12 Digital Output - Circuit Short To Battery
Customer Symptom	Telematics ECU features will not be working
Fault Effects (On Vehicle)	Remote , Vehicle security, Alerts and other telematics features will not be working
Fault Detection Condition	DTC is set in case of TCU Digital output pin is shorted to battery
Normal Operating Condition	Digital Output data is properly transmitting in normal condition
Probable Trouble Area	• Faulty TCU • TCU Connector Fault • Digital output pin (pin :34/35) is shorted to battery • Internal Component failure • TCU pin have problem with oxidation, bending & damage
Healing Condition	• Verify DTC ageing-Clear in case of ageing • Verify any other communication related DTCs present • Verify TCU DTCs and check for any related DTCs • Follow TCU trouble shooting guideline to clear the relevant functional DTCs • Replace TCU connector • If problem persists after above steps then replace TCU

Trouble Shooting:-



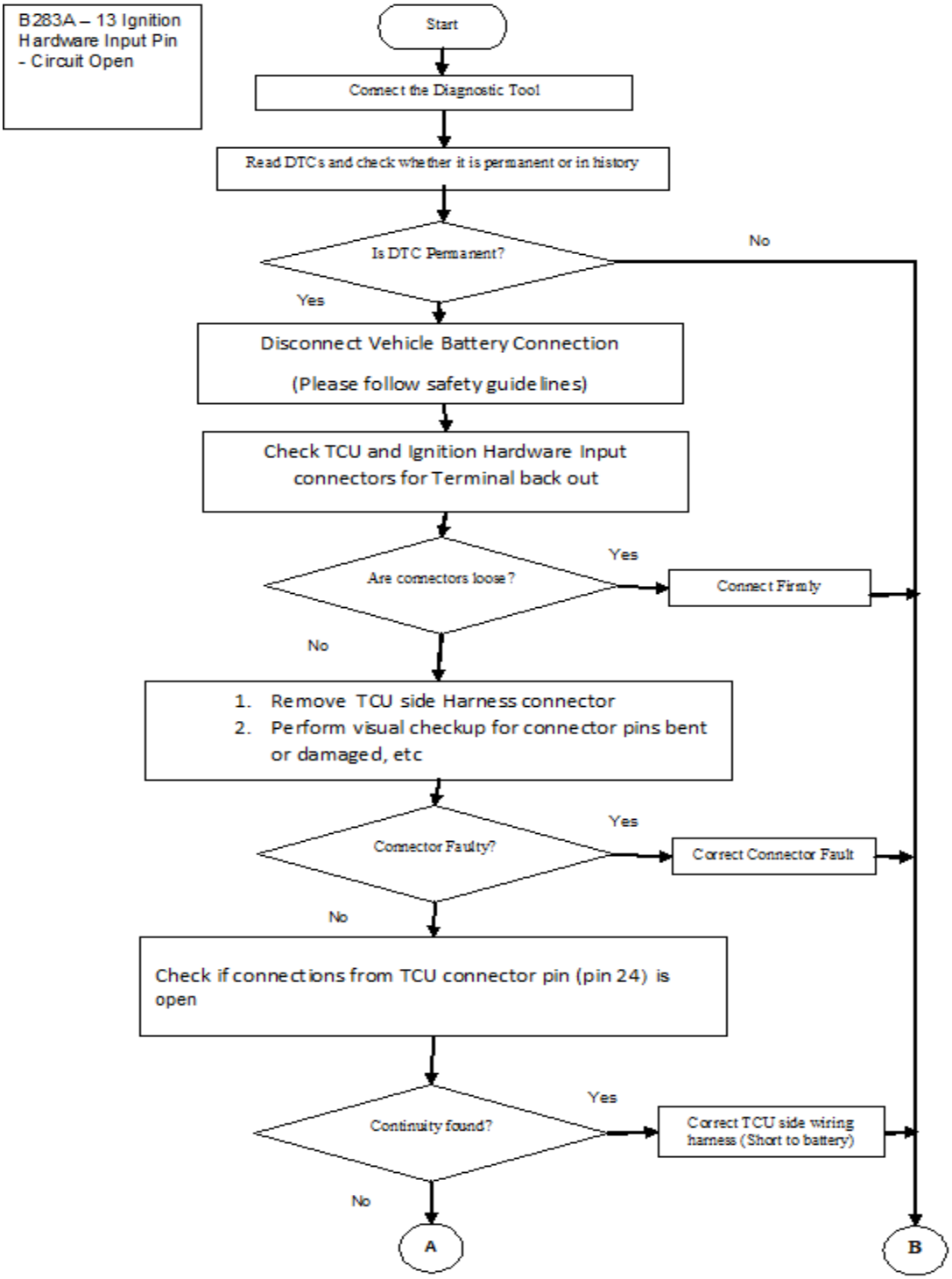


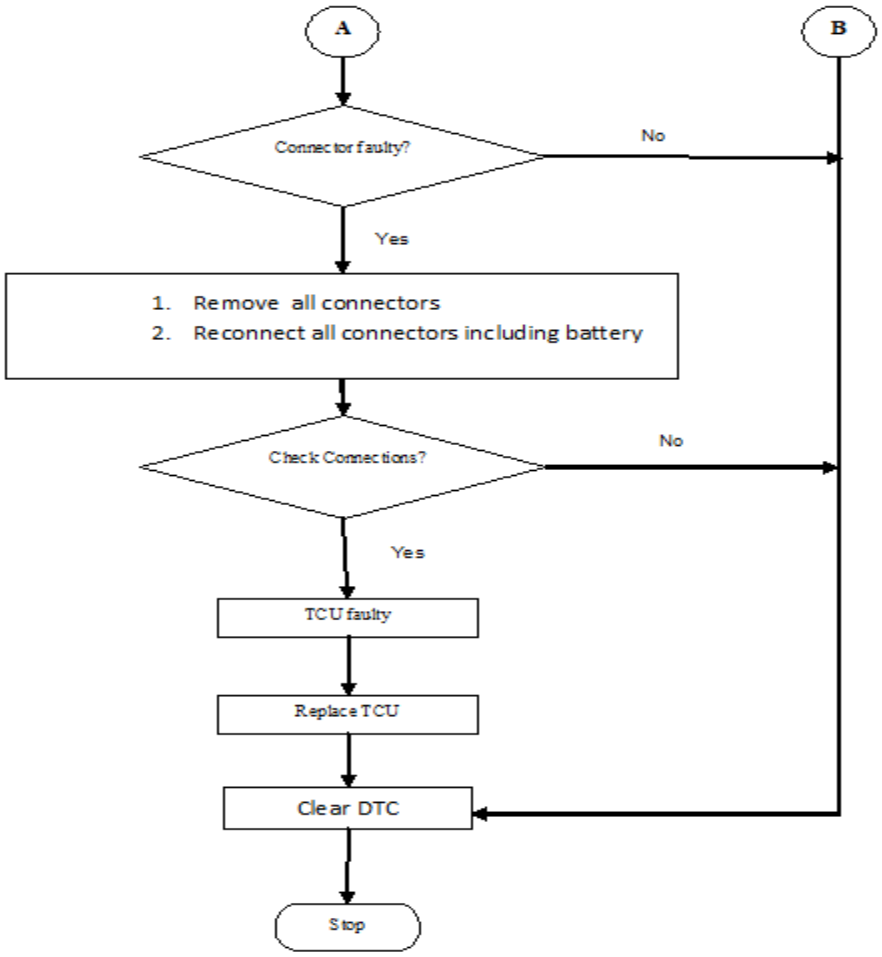
B283A - 13 :- Ignition Hardware Input Pin - Circuit Open

Overview:

ISO Code	B283A – 13 Ignition Hardware Input Pin - Circuit Open
Customer Symptom	Telematics ECU features will not be working
Fault Effects (On Vehicle)	Remote , Vehicle security, Alerts and other telematics features will not be working
Fault Detection Condition	DTC is set in case of TCU Hardware Input Pin is open
Normal Operating Condition	Ignition hardware input data is properly transmitting in normal condition
Probable Trouble Area	• Faulty TCU • TCU Connector Fault • Hardware Input pin (pin :24) is open • Internal Component failure • TCU pin have problem with oxidation, bending & damage
Healing Condition	1. Verify DTC ageing-Clear in case of ageing 2. Verify any other communication related DTCs present 3. Verify TCU DTCs and check for any related DTCs 4. Follow TCU trouble shooting guideline to clear the relevant functional DTCs 5. Replace TCU connector 6. If problem persists after above steps (from 1 to 5) then replace TCU

Trouble Shooting:-



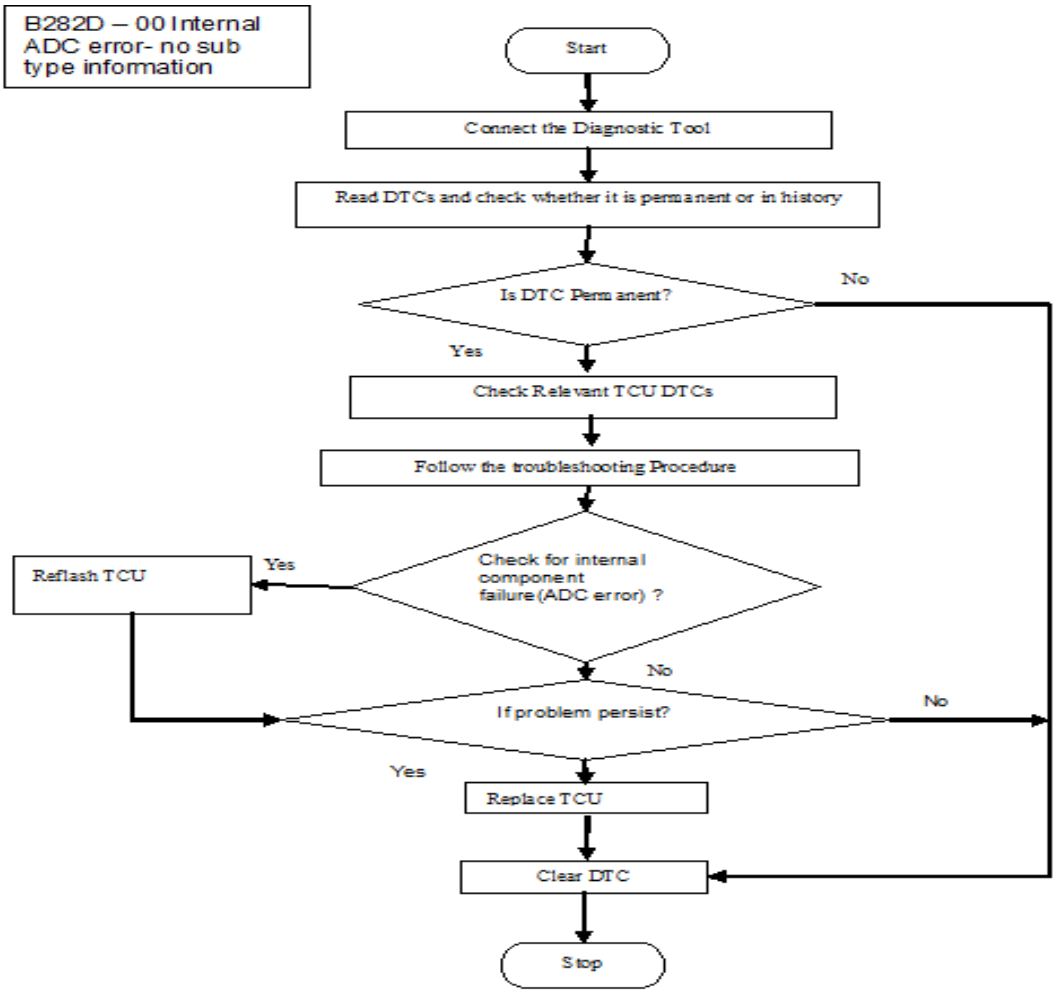


B282D – 00 :- Internal ADC error- no sub type information

Overview:

ISO Code	B282D – 00 Internal ADC error- no sub type information
Customer Symptom	Telematics ECU features will not be working
Fault Effects (On Vehicle)	Remote , Vehicle security, Alerts and other telematics features will not be working
Fault Detection Condition	DTC is set in case of internal ADC error occurred inside TCU
Normal Operating Condition	TCU working properly without internal ADC error in normal condition
Probable Trouble Area	• Faulty TCU • TCU internal circuit error
Healing Condition	1. Verify DTC ageing-Clear in case of ageing 2. Verify any other communication related DTCs present 3. Verify TCU DTCs and check for any related DTCs 4. Follow TCU trouble shooting guideline to clear the relevant functional DTCs 5. Check for internal component failure 6. If problem persists after above steps (from 1 to 5) then replace TCU

Trouble Shooting:-

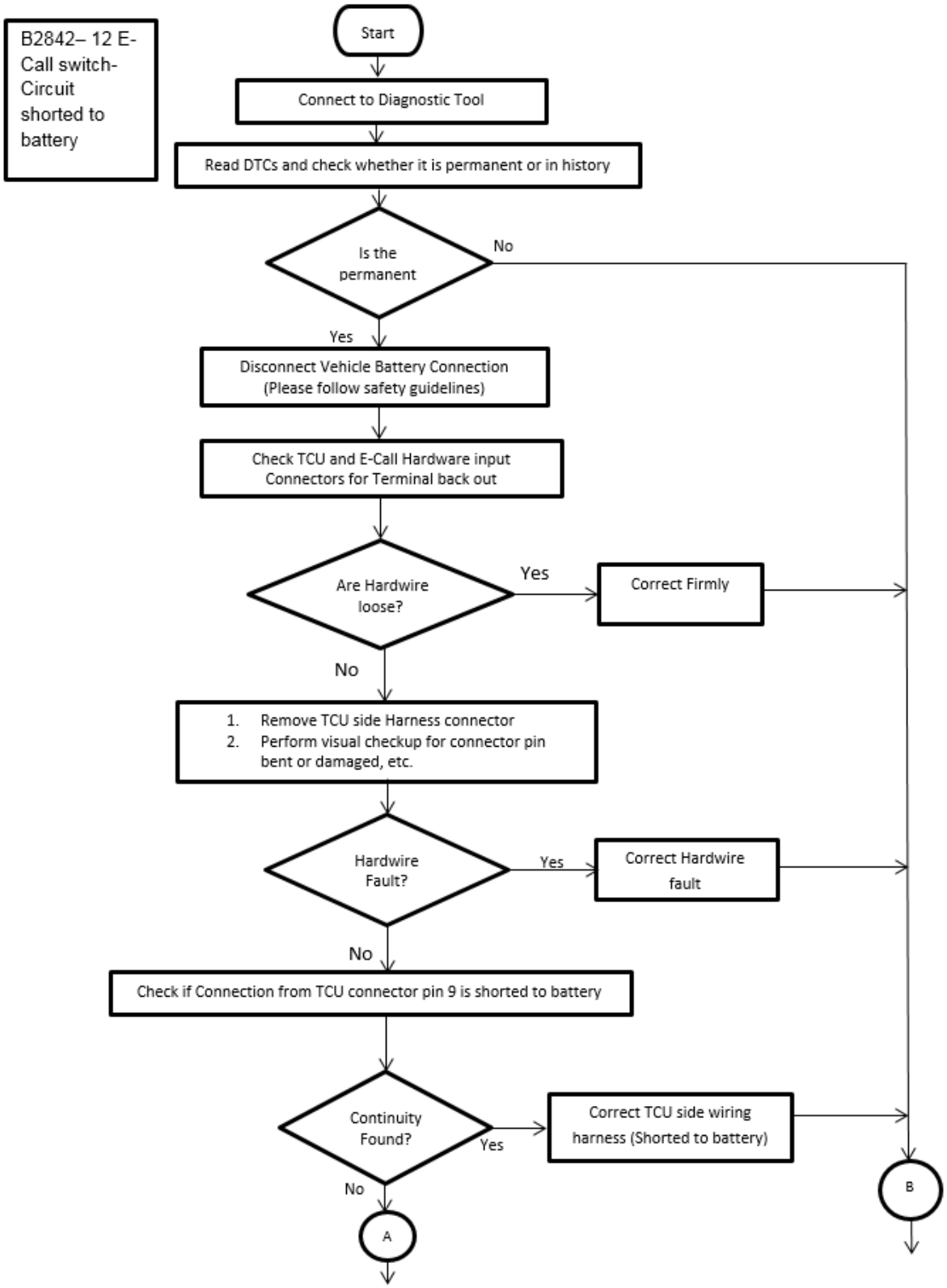


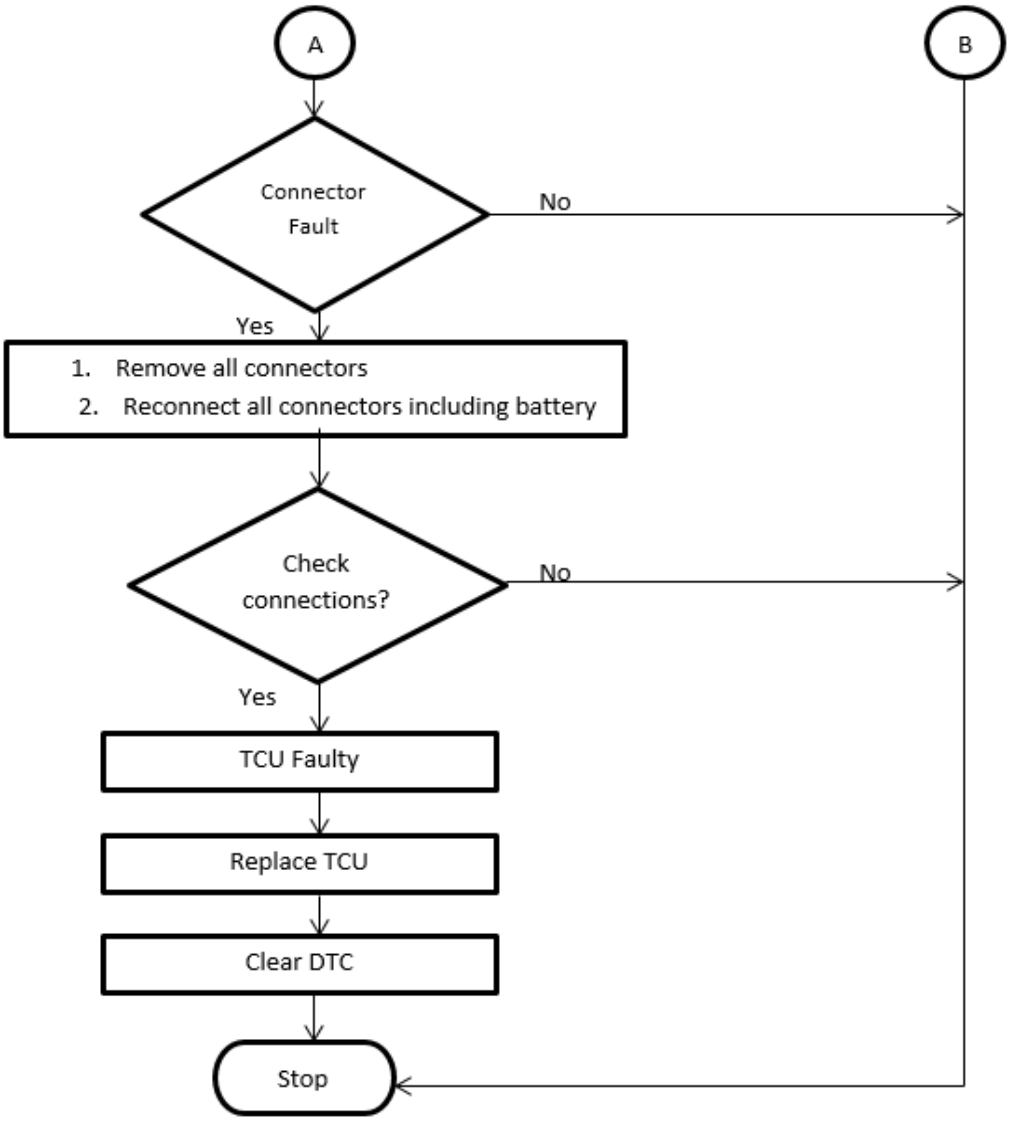
B2842- 12:E-Call switch – Circuit short to battery

Overview:

ISO Code	B2842–12 E-Call switch– Circuit short to battery
Customer Symptom	Telematics ECU features will not be working
Fault Effects (On Vehicle)	Following Telematics features will not be working: Not initiating e-Call event, MSD message, SOS SMS,Panic Notification.
Fault Detection Condition	DTC is set in case of E-Call input from BCM pin is shorted to battery
Normal Operating Condition	TCM receiving E-Call hardwired input by Hard button press in normal condition
Probable Trouble Area	Faulty E-Call switch Faulty TCM TCM Connector Fault E-Call input from BCM (pin:9) is shorted to battery Internal Component failure TCM pin have problem with oxidation, bending & damage
Healing Condition	Verify DTC ageing-Clear in case of ageing Verify any other communication related DTCs present Verify TCM DTCs and check for any related DTCs Follow TCM trouble shooting guideline to clear the relevant functional DTCs Replace TCM connector If problem persists after above steps (from 1 to 5) then replace TCM

Troubleshooting:-



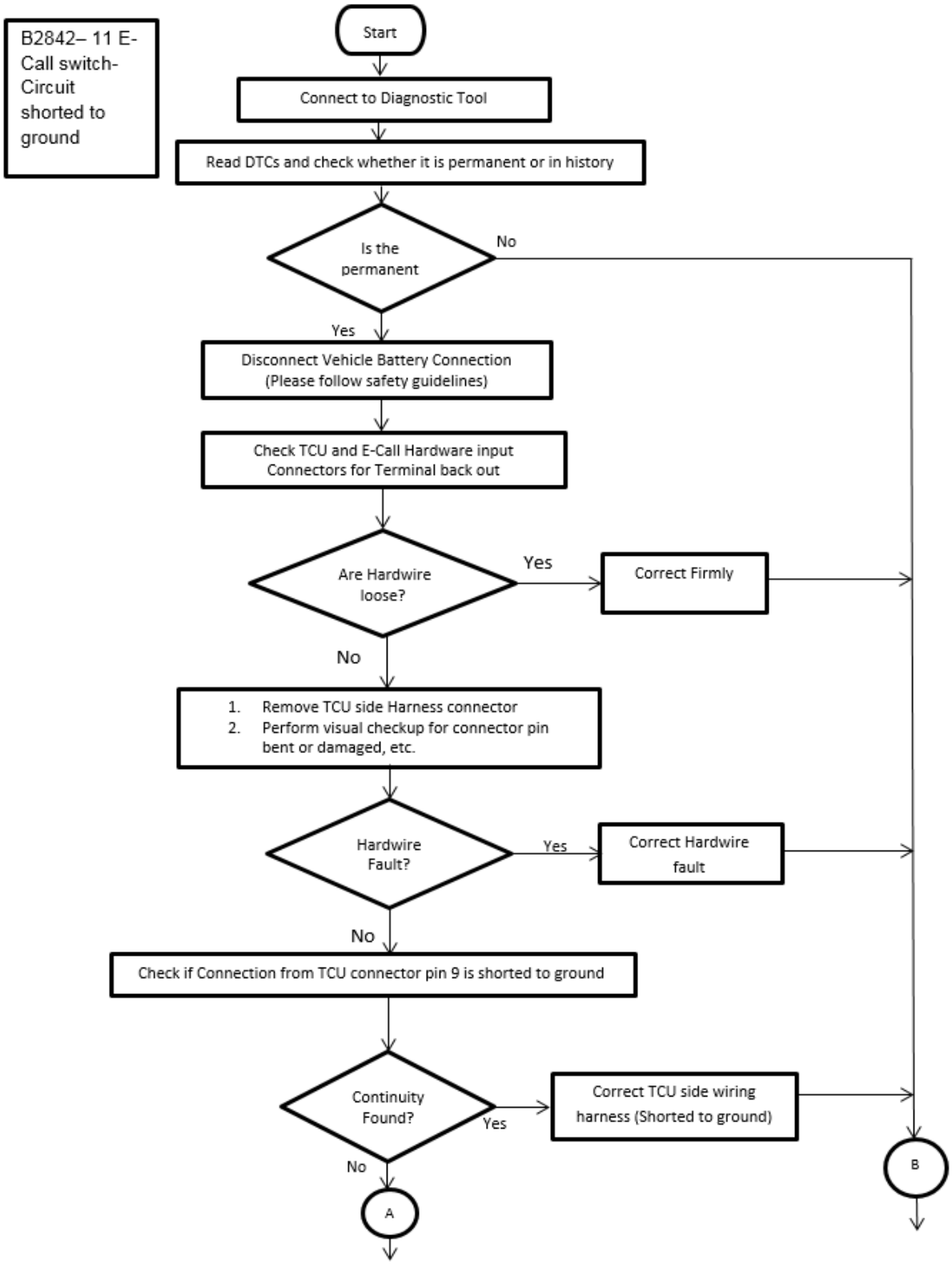


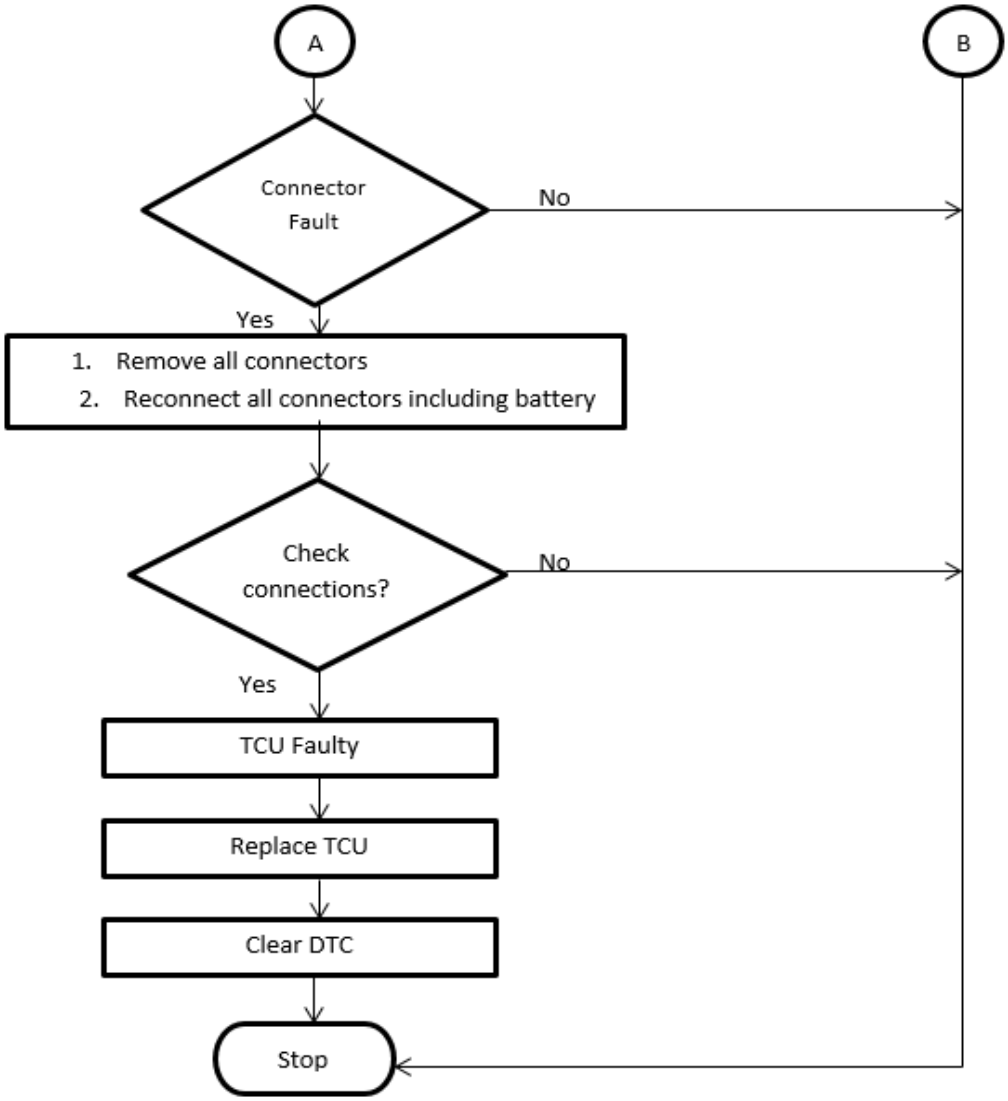
B2842- 11:E-Call switch – Circuit short to ground

Overview:

ISO Code	B2842–11 E-Call switch– Circuit short to ground
Customer Symptom	Telematics ECU features will not be working
Fault Effects (On Vehicle)	Following Telematics features will not be working: Not initiating e-Call event, MSD message, SOS SMS,Panic Notification.
Fault Detection Condition	DTC is set in case of E-Call input from BCM pin is shorted to ground
Normal Operating Condition	TCM receiving E-Call hardwired input by Hard button press in normal condition
Probable Trouble Area	Faulty E-Call switch Faulty TCM TCM Connector Fault E-Call input from BCM (pin:9) is shorted to ground Internal Component failure TCM pin have problem with oxidation, bending & damage
Healing Condition	Verify DTC ageing-Clear in case of ageing Verify any other communication related DTCs present Verify TCM DTCs and check for any related DTCs Follow TCM trouble shooting guideline to clear the relevant functional DTCs Replace TCM connector If problem persists after above steps (from 1 to 5) then replace TCM

Troubleshooting:



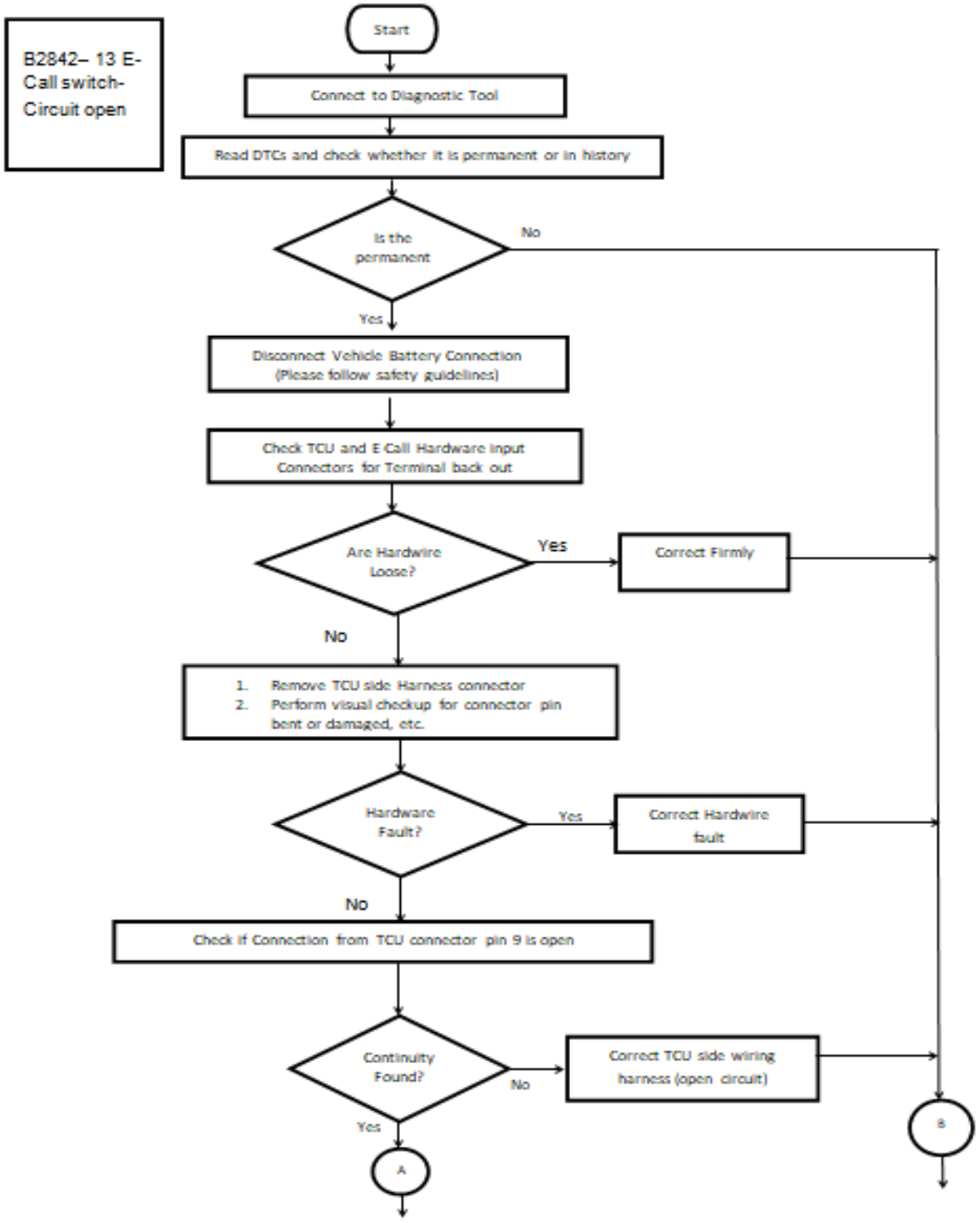


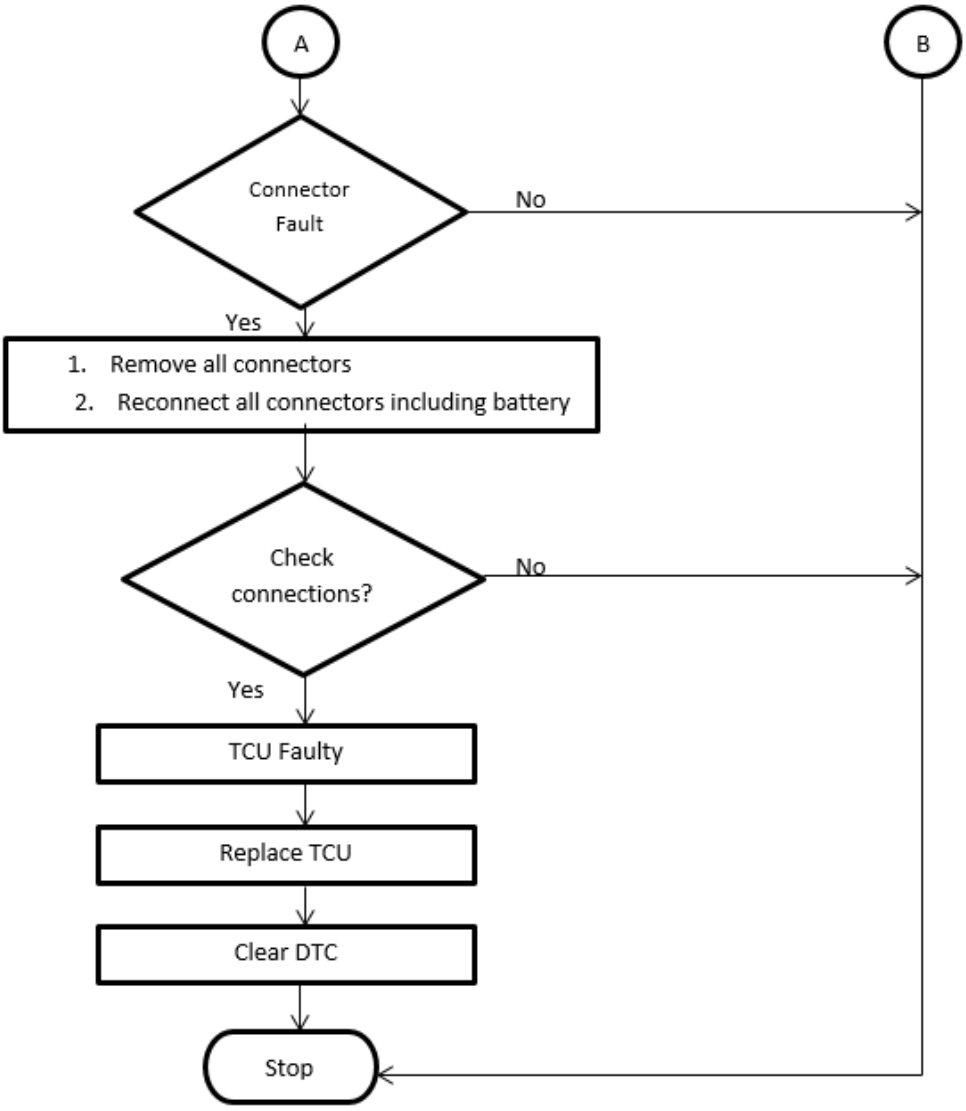
B2842- 13:E-Call switch – Circuit open

Overview:

ISO Code	B2842–13E-Call switch– Circuit open
Customer Symptom	Telematics ECU features will not be working
Fault Effects (On Vehicle)	Following Telematics features will not be working: Not initiating e-Call event, MSD message, SOS SMS,Panic Notification.
Fault Detection Condition	DTC is set in case of E-Call input from BCM pin is open
Normal Operating Condition	TCM receiving E-Call hardwired input by Hard button press in normal condition
Probable Trouble Area	Faulty E-Call switch Faulty TCM TCM Connector Fault E-Call input from BCM (pin:9) is open Internal Component failure TCM pin have problem with oxidation, bending & damage
Healing Condition	Verify DTC ageing-Clear in case of ageing Verify any other communication related DTCs present Verify TCM DTCs and check for any related DTCs Follow TCM trouble shooting guideline to clear the relevant functional DTCs Replace TCM connector If problem persists after above steps (from 1 to 5) then replace TCM

Troubleshooting:



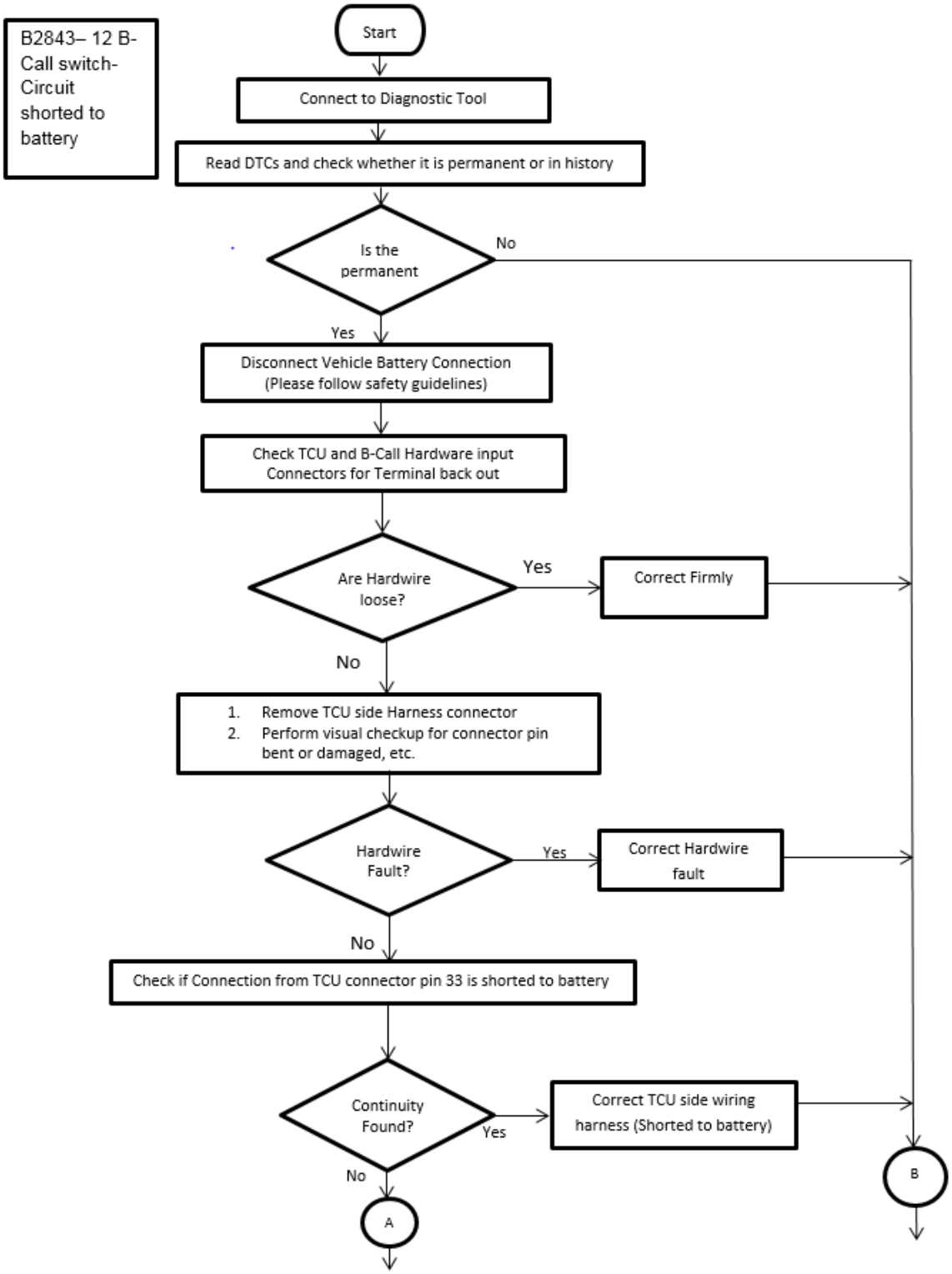


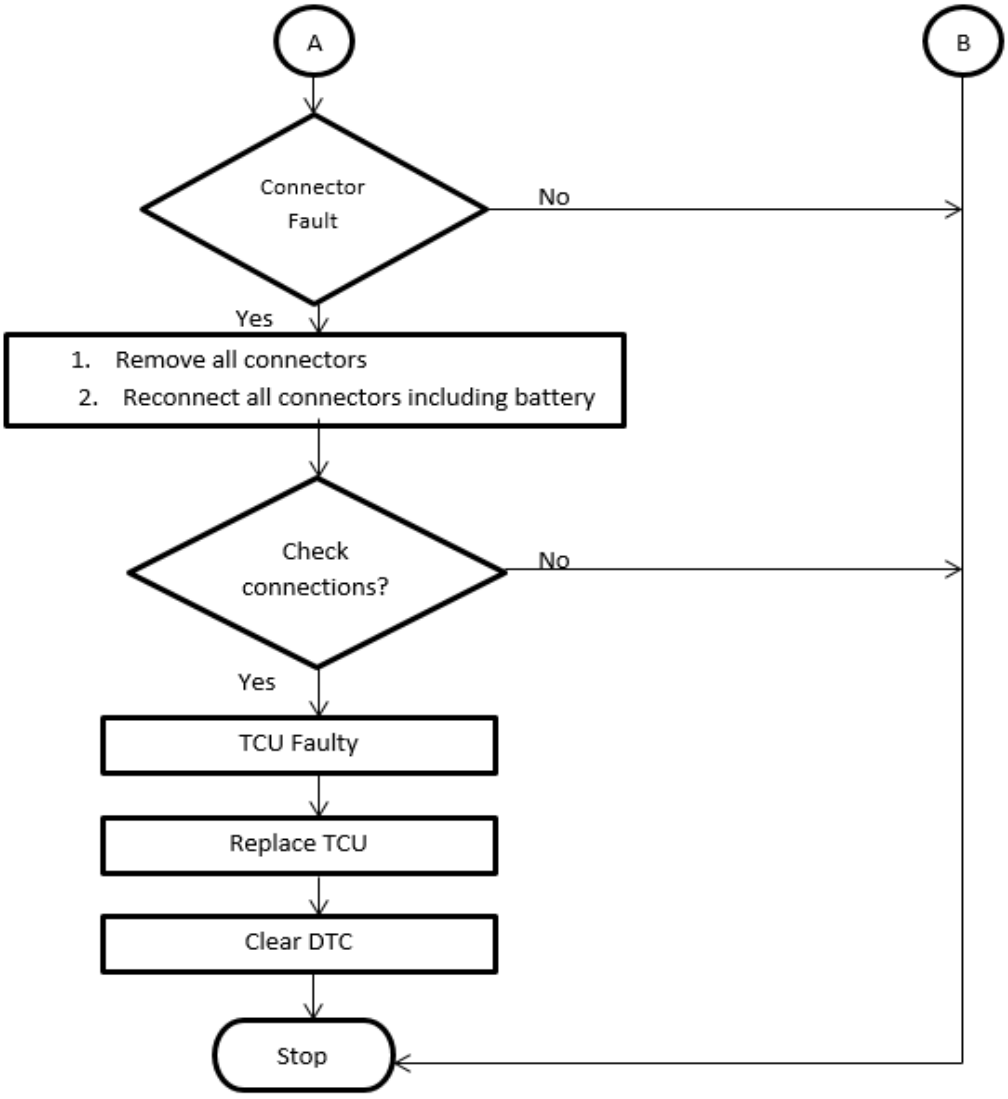
B2843- 12: B-Call switch – Circuit short to battery

Overview:

ISO Code	B2843–12 B-Call switch– Circuit short to battery
Customer Symptom	Telematics ECU features will not be working
Fault Effects (On Vehicle)	Following Telematics features will not be working: Not initiating b-Call event, MSD message, SOS SMS,Panic Notification.
Fault Detection Condition	DTC is set in case of B-Call input from BCM pin is shorted to battery
Normal Operating Condition	TCM receiving B-Call hardwired input by Hard button press in normal condition
Probable Trouble Area	Faulty B-Call switch Faulty TCM TCM Connector Fault B-Call input from BCM (pin:33) is shorted to battery Internal Component failure TCM pin have problem with oxidation, bending & damage
Healing Condition	Verify DTC ageing-Clear in case of ageing Verify any other communication related DTCs present Verify TCM DTCs and check for any related DTCs Follow TCM trouble shooting guideline to clear the relevant functional DTCs Replace TCM connector If problem persists after above steps (from 1 to 5) then replace TCM

Troubleshooting:



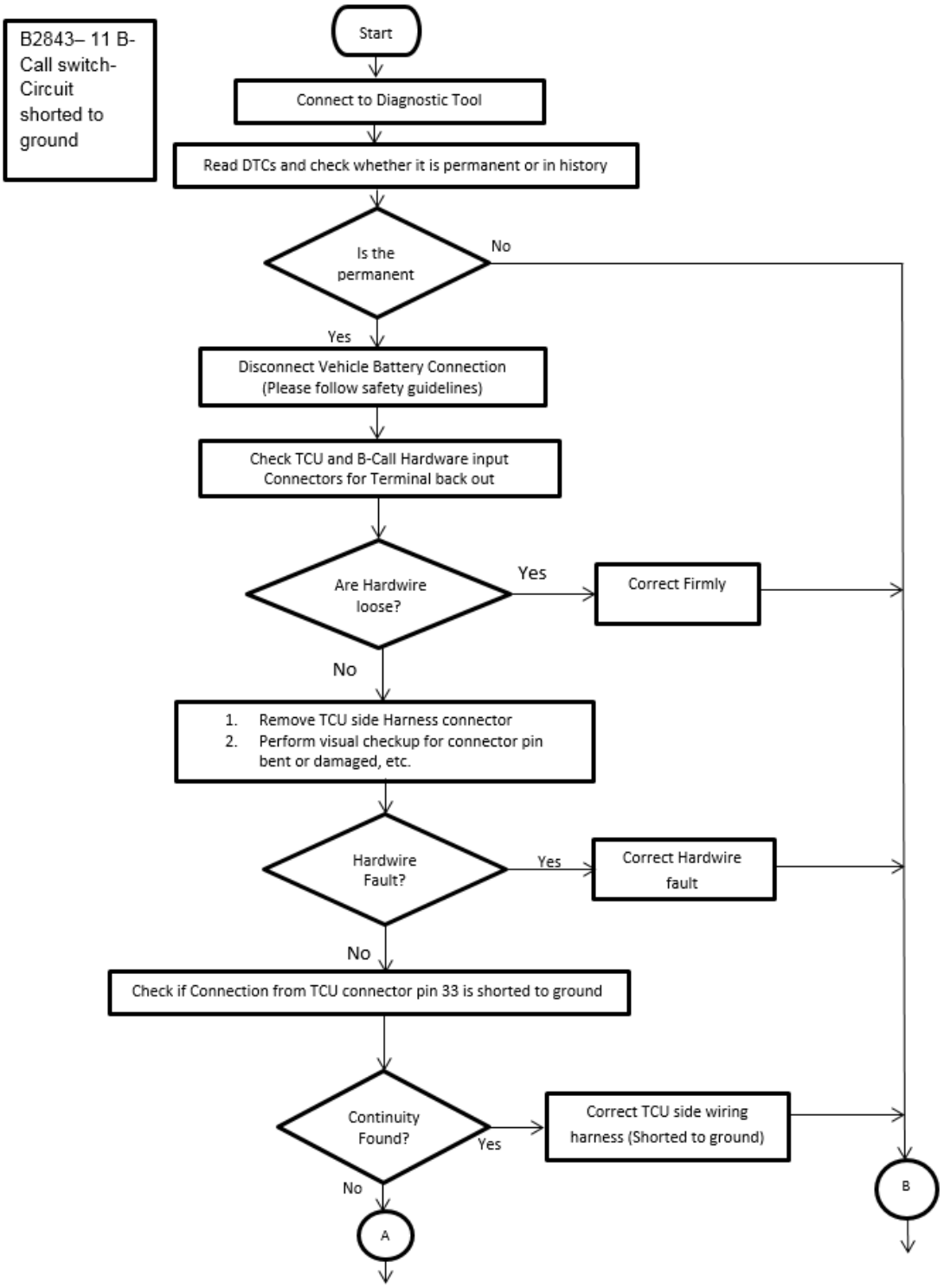


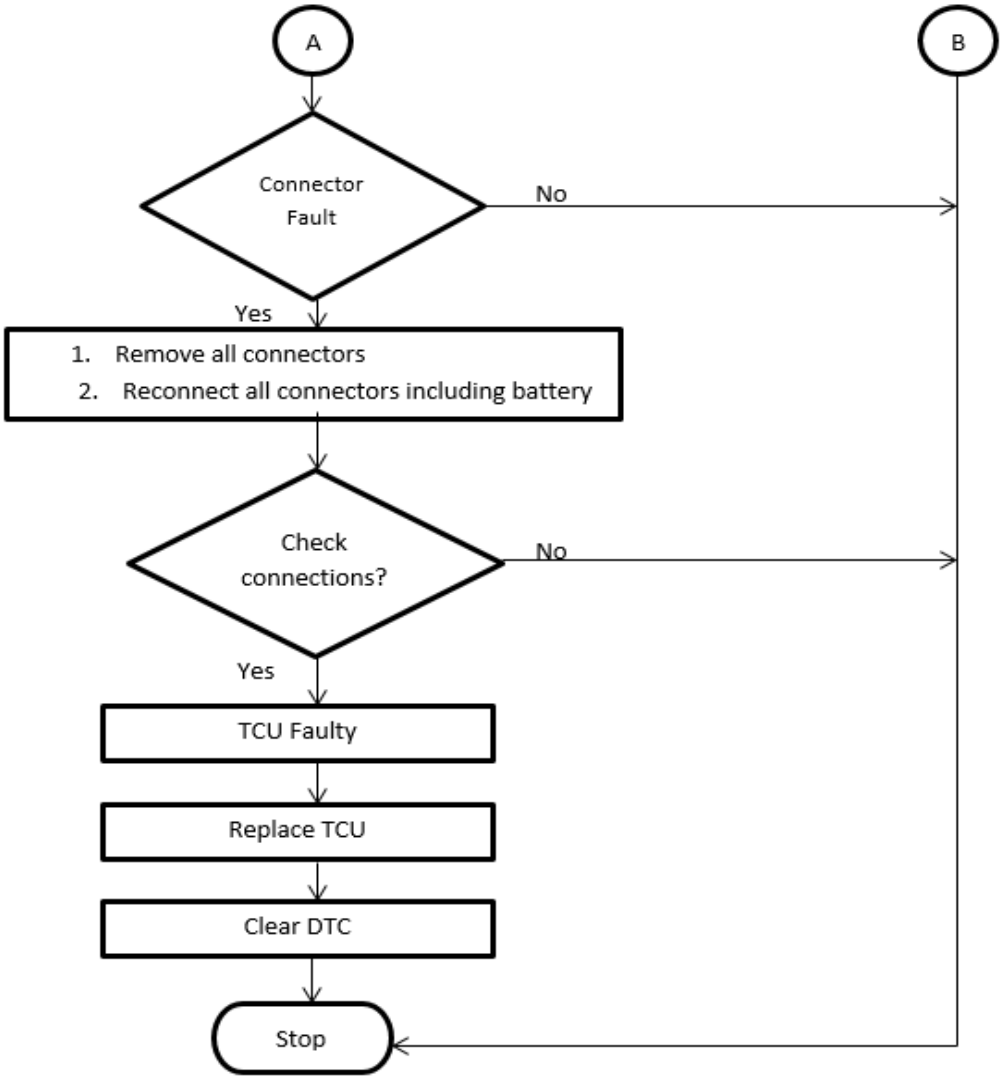
B2843- 11: B-Call switch – Circuit short to ground

Overview:

ISO Code	B2843–11 B-Call switch– Circuit short to ground
Customer Symptom	Telematics ECU features will not be working
Fault Effects (On Vehicle)	Following Telematics features will not be working: Not initiating b-Call event, MSD message, SOS SMS,Panic Notification.
Fault Detection Condition	DTC is set in case of B-Call input from BCM pin is shorted to ground
Normal Operating Condition	TCM receiving B-Call hardwired input by Hard button press in normal condition
Probable Trouble Area	Faulty B-Call switch Faulty TCM TCM Connector Fault B-Call input from BCM (pin:33) is shorted to ground Internal Component failure TCM pin have problem with oxidation, bending & damage
Healing Condition	Verify DTC ageing-Clear in case of ageing Verify any other communication related DTCs present Verify TCM DTCs and check for any related DTCs Follow TCM trouble shooting guideline to clear the relevant functional DTCs Replace TCM connector If problem persists after above steps (from 1 to 5) then replace TCM

Troubleshooting:



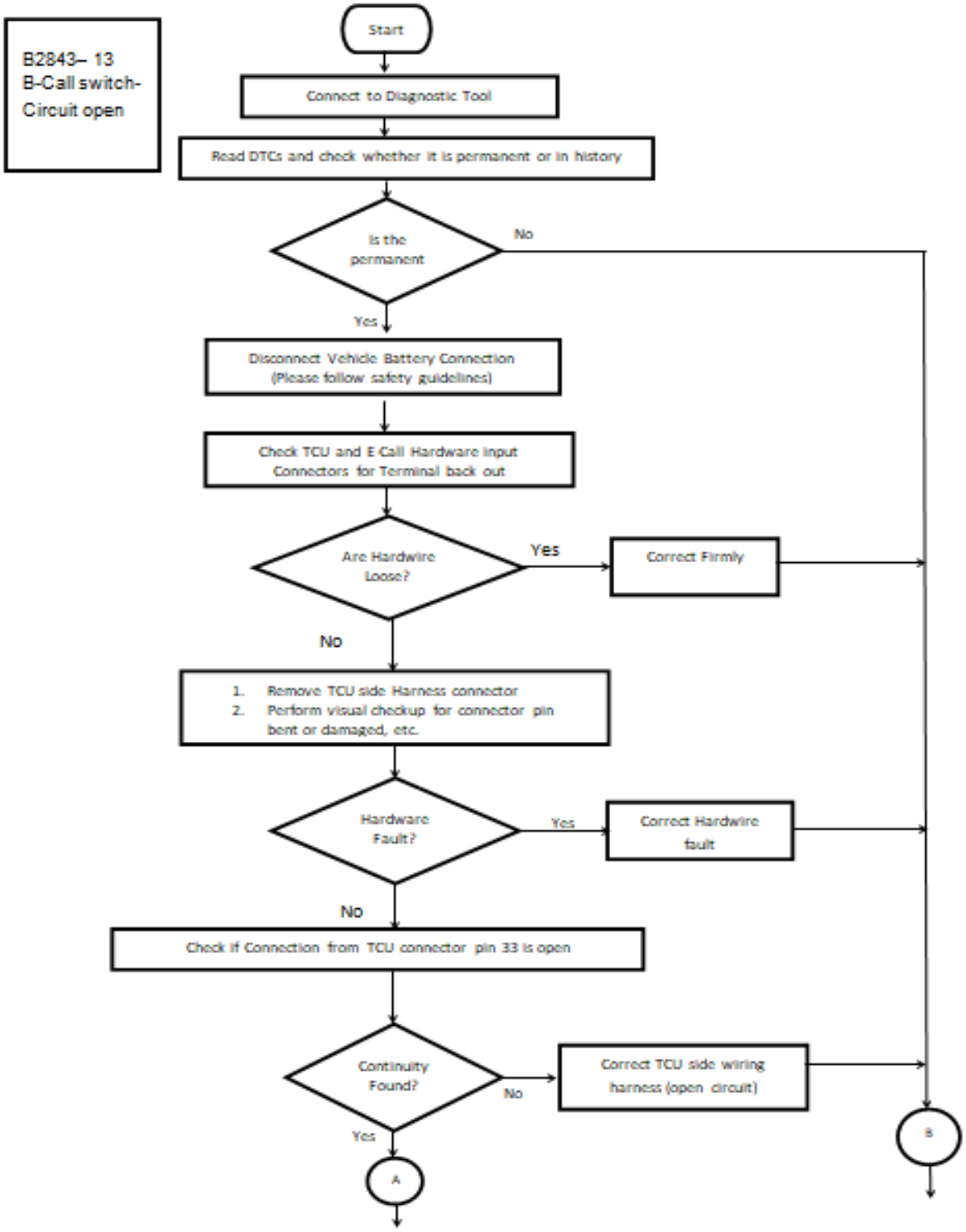


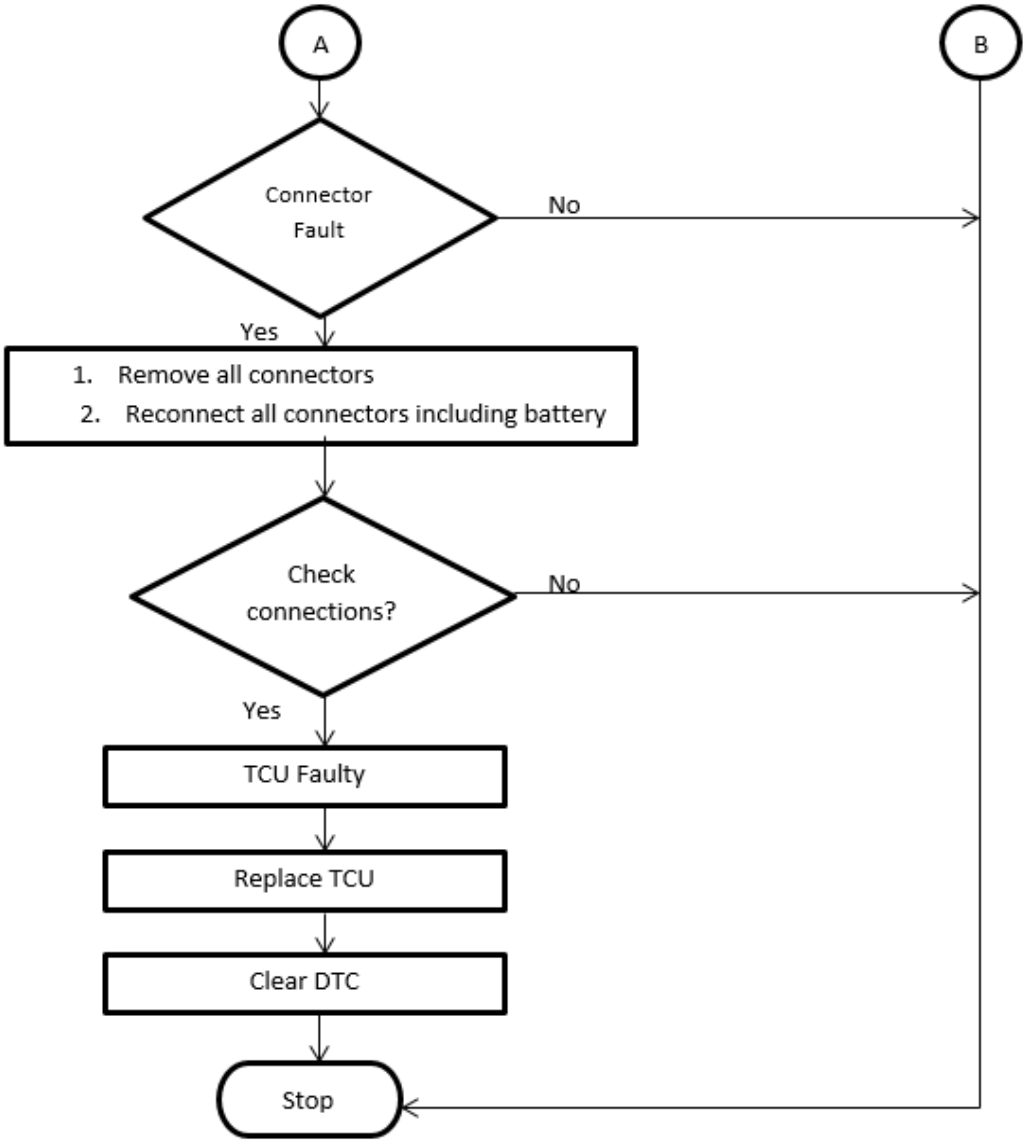
B2843- 13: B-Call switch – Circuit open

Overview:

ISO Code	B2843–13 B-Call switch– Circuit open
Customer Symptom	Telematics ECU features will not be working
Fault Effects (On Vehicle)	Following Telematics features will not be working: Not initiating b-Call event, MSD message, SOS SMS, Panic Notification.
Fault Detection Condition	DTC is set in case of B-Call input from BCM pin is open
Normal Operating Condition	TCM receiving B-Call hardwired input by Hard button press in normal condition
Probable Trouble Area	Faulty B-Call switch Faulty TCM TCM Connector Fault B-Call input from BCM (pin:33) is open Internal Component failure TCM pin have problem with oxidation, bending & damage
Healing Condition	Verify DTC ageing-Clear in case of ageing Verify any other communication related DTCs present Verify TCM DTCs and check for any related DTCs Follow TCM trouble shooting guideline to clear the relevant functional DTCs Replace TCM connector If problem persists after above steps (from 1 to 5) then replace TCM

Troubleshooting:



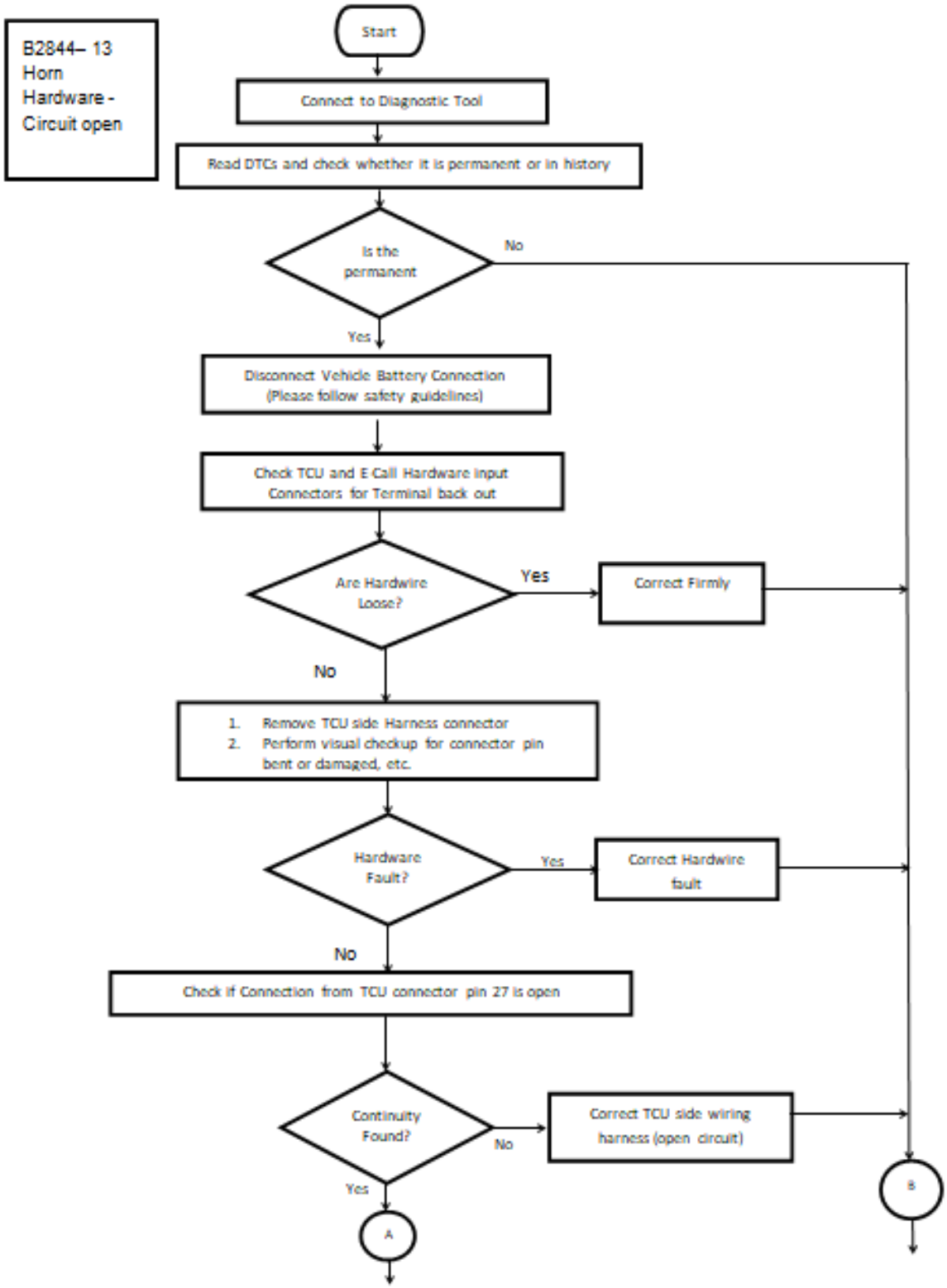


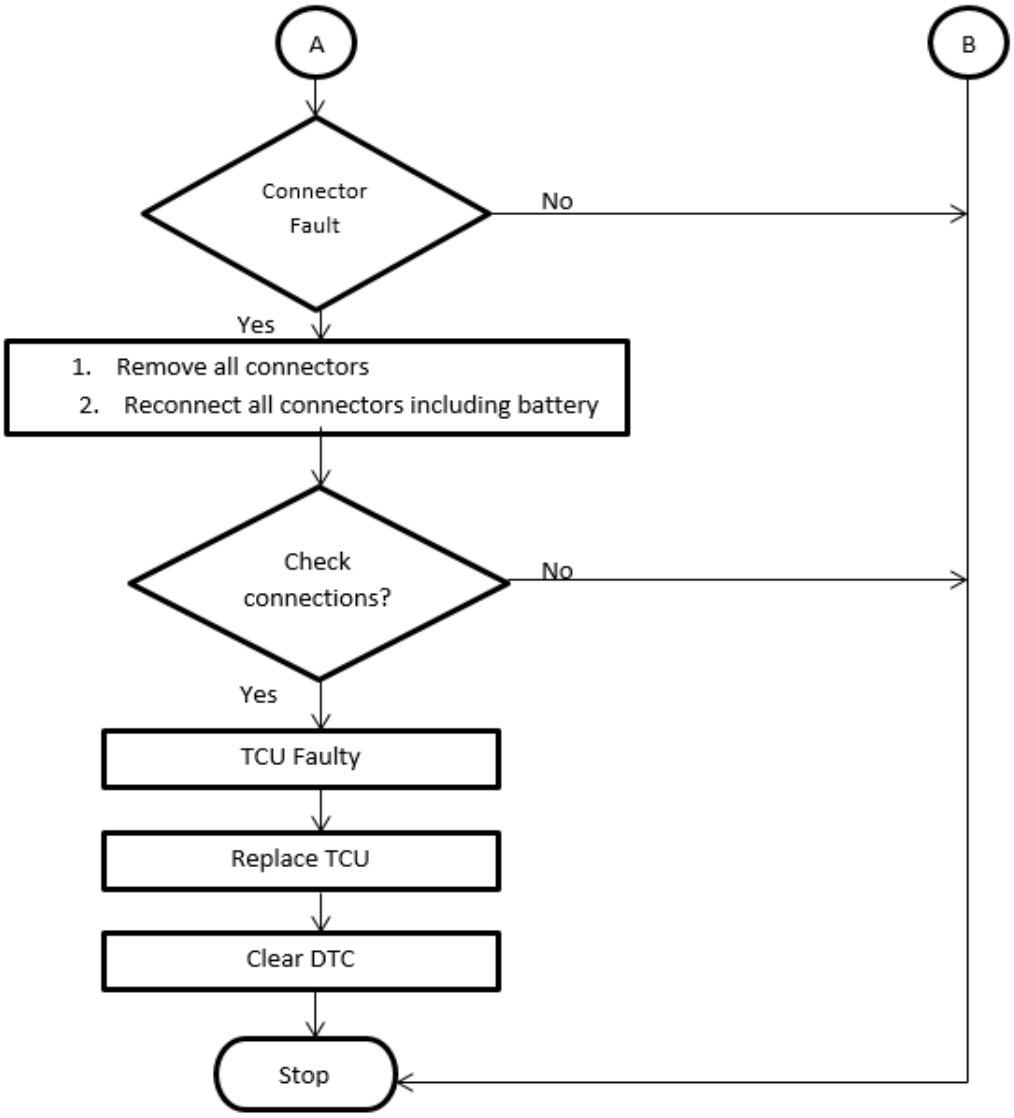
B2844- 13:Horn Hardwired- Circuit open

Overview:

ISO Code	B2844–13 Horn Hardwired - Circuit open
Customer Symptom	Telematics ECU features will not be working
Fault Effects (On Vehicle)	Following Telematics features will not be working: Vehicle Feature Usage Analytics
Fault Detection Condition	DTC is set in case of Horn Hardwired Input Pin is open
Normal Operating Condition	Horn hardwired input data is properly transmitting in normal condition
Probable Trouble Area	Faulty TCM TCM Connector Fault Horn Hardwired Input pin (pin:27) is open Internal Component failure TCM pin have problem with oxidation, bending & damage
Healing Condition	Verify DTC ageing-Clear in case of ageing Verify any other communication related DTCs present Verify TCM DTCs and check for any related DTCs Follow TCM trouble shooting guideline to clear the relevant functional DTCs Replace TCM connector If problem persists after above steps (from 1 to 5) then replace TCM

Troubleshooting:



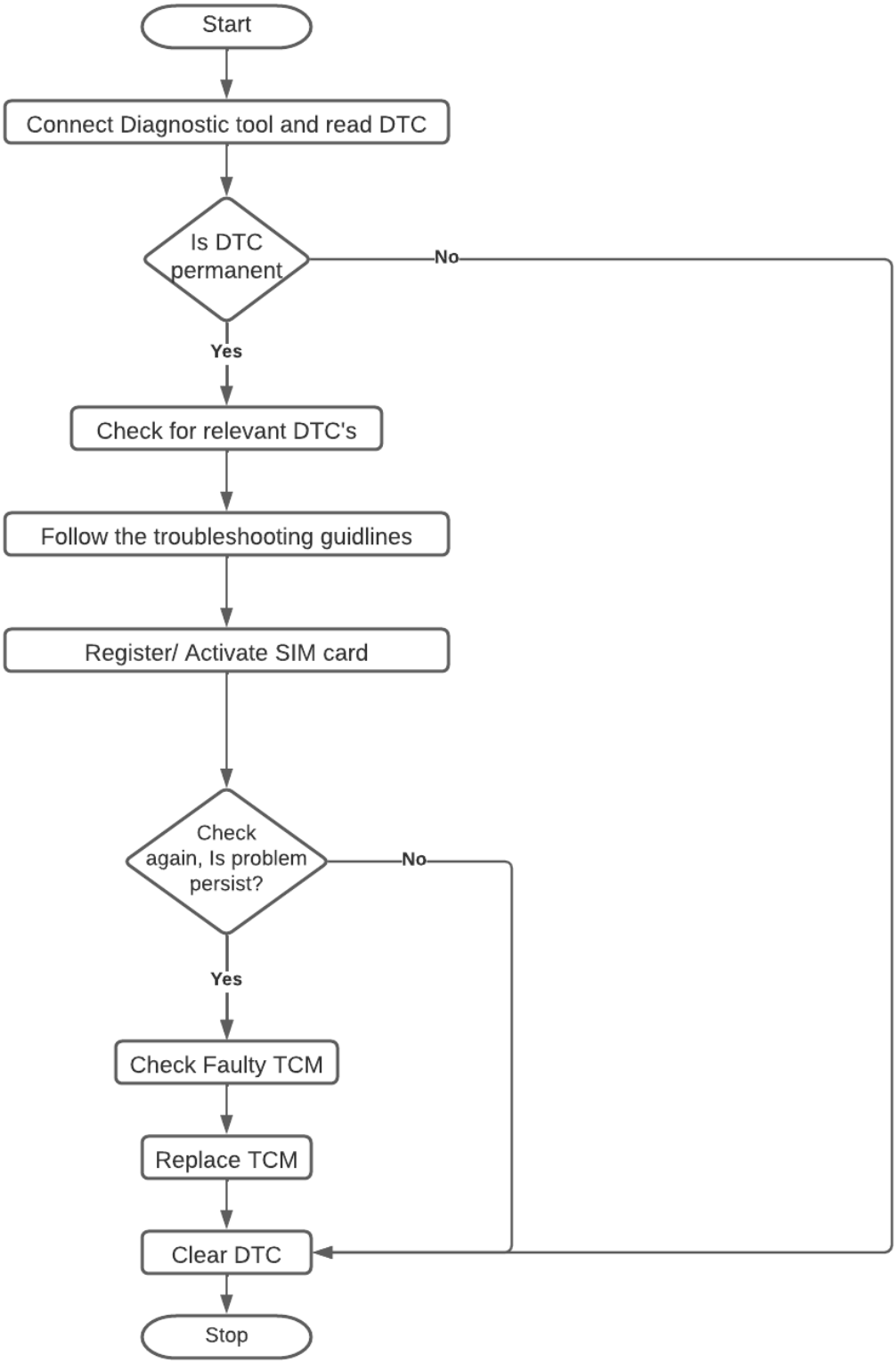


B2802 - 95:- SIM card not registered – Incorrect Assembly

Overview:

ISO Code	B2802 – 95 SIM card not registered – Incorrect Assembly
Customer Symptom	Telematics ECU features will not be working
Fault Effects (On Vehicle)	Remote , Vehicle security, Alerts and other telematics features will not be working
Fault Detection Condition	Relevant functional DTCs present in TCU .DTC is set in case of SIM card error with TCU.
Normal Operating Condition	TCU having proper functioning SIM card in normal condition.
Probable Trouble Area	• SIM card not registered/Activated • Faulty SIM card
Healing Condition	1. Verify DTC ageing-Clear in case of ageing 2. Verify any other communication related DTCs present 3. Verify TCU DTCs and check for any related DTCs 4. Follow TCU trouble shooting guideline to clear the relevant functional DTCs 5. Register/Activate SIM Card 6. If problem persists after above steps (from 1 to 5) then replace TCM

Troubleshooting:

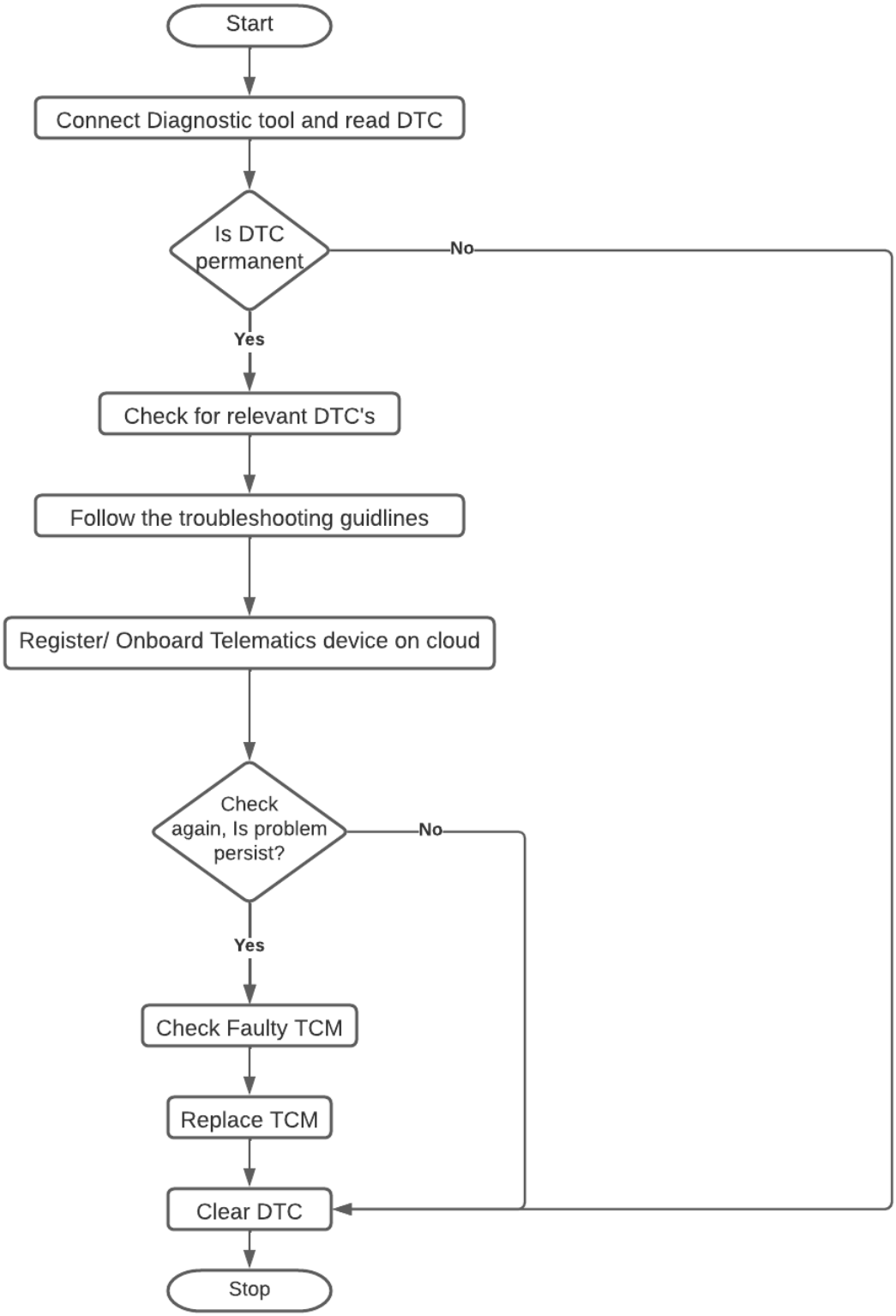


B281B - 00:- Cloud Communication Error – no subtype information

Overview:

ISO Code	B281B– 00 Cloud Communication Error – no subtype information
Customer Symptom	Telematics ECU features will not be working
Fault Effects (On Vehicle)	Remote , Vehicle security, Alerts and other telematics features will not be working
Fault Detection Condition	Relevant functional DTCs present in TCU .DTC is set in case of SIM card error with TCU.
Normal Operating Condition	TCU having proper functioning SIM card in normal condition.
Probable Trouble Area	• TCU is not registered or Onboarded on cloud platform • Faulty TCU
Healing Condition	7. Verify DTC ageing-Clear in case of ageing 8. Verify any other communication related DTCs present 9. Verify TCU DTCs and check for any related DTCs 10. Follow TCU trouble shooting guideline to clear the relevant functional DTCs 11. Register/Onboard TCU device on cloud platform 12. If problem persists after above steps (from 1 to 5) then replace TCM

Troubleshooting:

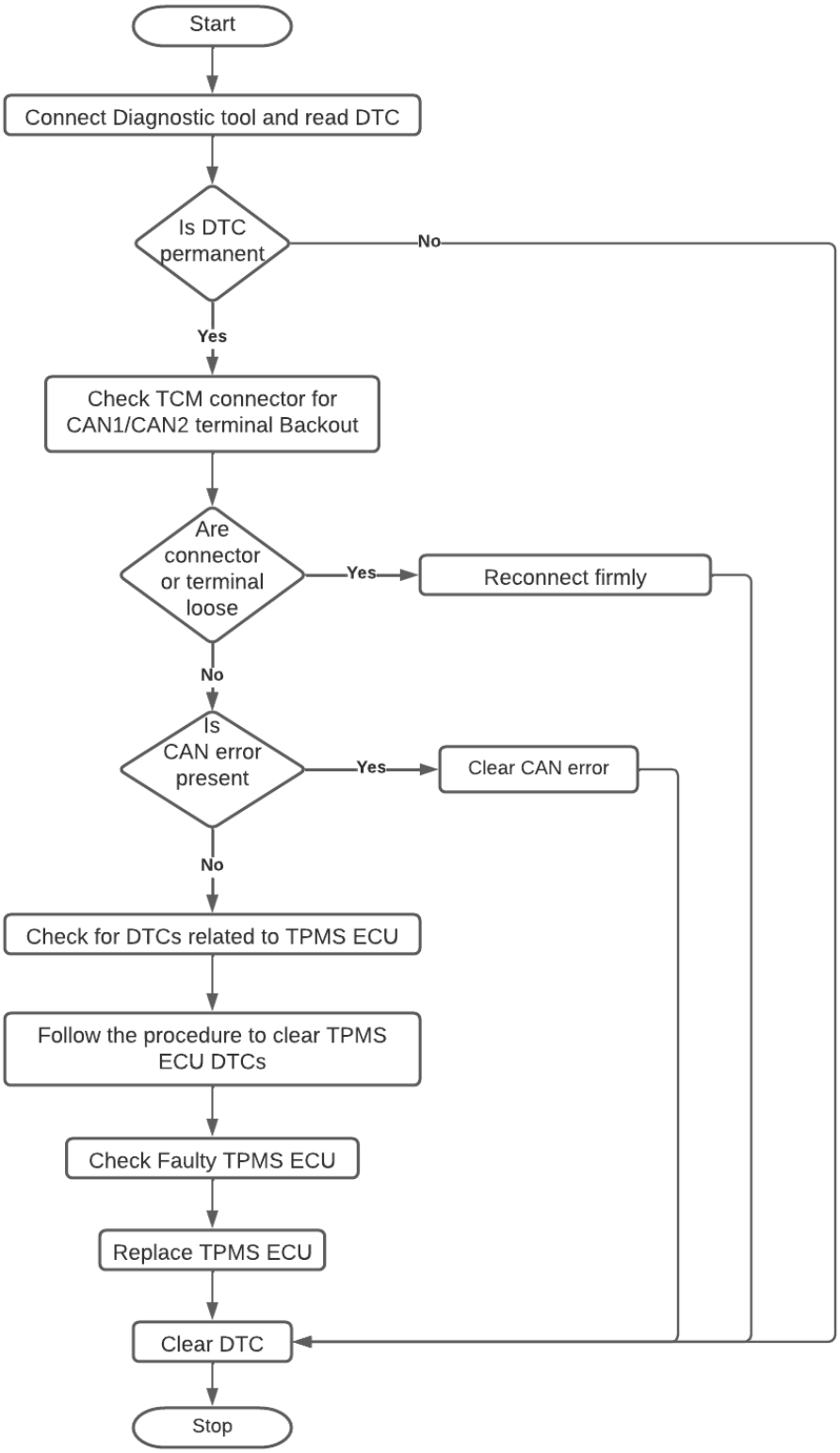


U0127 - 08:- Lost Communication With Tire Pressure Monitor Control Module - Bus Signal / Message Failures

Overview:

ISO Code	U0127 – 08 Lost Communication With Tire Pressure Monitor Control Module - Bus Signal / Message Failures
Customer Symptom	Following Telematics features will not be working:- Alerts about critical car parameters (Including battery related alerts), Tire pressure on cluster, Speed Alert, Idle alert
Fault Effects (On Vehicle)	TPMS related data will not export to cloud platform
Fault Detection Condition	Relevant functional DTCs present in TCU .DTC is set in case of Lost Communication With IPC Module
Normal Operating Condition	IPC ECU communicates properly with TCU in normal condition.
Probable Trouble Area	• CAN_H and CAN_L wires • CAN transceiver faulty • Faulty TPMS ECU • The TCU has detected a communication problem on the CAN regarding the TPMS Module • CAN high / CAN low pins shorted to Battery/Open/ shorted to Ground • DTC is to be logged when the subscribed message is not available on the CAN bus from TPMS module
Healing Condition	1. Verify DTC ageing-Clear in case of ageing 2. Check CAN H and CAN L connections for short/open 3. Check for CAN transceiver faulty ,if it is fault then replace 4. check whether any other CAN-related DTCs are set in the TCU. In that case, check for problems with the CAN hardware (TCU and bus) 5. Clear the DTC 6. Verify TPMS DTCs and check for any related DTCs 7. Follow TPMS trouble shooting guideline 8. If problem persists after above steps (from 1 to 7) then follow TPMS ECU DTC trouble shooting guide

Troubleshooting:



List of DTCs masked in the Tool:

Masking List									
S.No	DTC	Description	CVP Phase-1 EV Vehicles	CVP Phase-1 PV Vehicles	Nexon EV 2.0	Harrier MY22	Altroz/ Punch MY 23	Challenger EV	CVP 2.5
1	U0101-08	Lost Communication With TCM	Yes	Yes	No	No	No	No	No
2	U0131-08	Lost Communication With Power Steering Control Module	Yes	Yes	No	No	No	No	No
3	U0164-08	Lost Communication With HVAC Control Module	Yes	Yes	No	No	No	No	No
4	U0422-81	Invalid Data Received From Body Control Module	Yes	Yes	No	No	No	No	No
5	U0155-08	Lost Communication With Instrument Panel Cluster (IPC) Control Module	Yes	Yes	No	No	No	No	No
6	U1309-08	Lost Communication With Antilock Braking System/Electronic Stability Program (ABS/ESP) Control Module	Yes	Yes	No	No	No	No	No
7	U0140-08	Lost Communication With Body Control Module	Yes	Yes	No	No	No	No	No
8	U1320-08	Lost communication with VCU	Yes	Yes	No	No	No	No	No
9	U1622-81	Invalid Data Received From Body Control Module	Yes	Yes	No	No	No	No	No
10	U0401-81	Invalid Data Received From ECM/PCM "A"	Yes	Yes	No	No	No	No	No
11	U0100-08	Lost Communication With ECM/PCM "A"	Yes	Yes	No	No	No	No	No
12	U0423-81	Invalid Data Received From Instrument Panel Cluster Control Module	Yes	Yes	No	No	No	No	No
13	B2806-09	Acceleration Sensor-Component Failure	Yes	Yes	Yes	Yes	Yes	Yes	Yes
14	U0151-08	Lost Communication With Restraints Control Module	Yes	Yes	No	No	No	No	No
15	U0420-81	Invalid Data Received From Power Steering Control Module	Yes	Yes	No	No	No	No	No
16	U1306-08	Lost Communication With Steering Angle Sensor Module	Yes	Yes	No	No	No	No	No
17	U1315-87	Lost Communication with PEPs	Yes	Yes	No	No	No	No	No
18	B281D-00	Invalid firmware - no subtype information	Yes	Yes	No	No	No	No	No
19	U1617-81	Invalid data received from PEPS	Yes	Yes	No	No	No	No	No
20	U0424-81	Invalid Data Received From HVAC Control Module invalid serial data received	Yes	Yes	No	No	No	No	No
21	U0028-13	Vehicle Communication Bus A - Circuit Short To Battery	Yes	Yes	No	No	No	No	No
22	U0127-08	Lost Communication With Tire Pressure Monitor Module Bus Signal / Message Failures	Yes	Yes	No	No	No	No	No
23	U1328-08	Lost Communication With Dual Clutch Transmission (DCT) Bus Signal / Message Failures	Yes	Yes	No	No	No	No	No
24	U1609-81	Invalid Data Received From Antilock Braking System/Electronic Stability Program (ABS/ESP) Control Module invalid serial data received	Yes	Yes	No	No	No	No	No
25	B2802-95	SIM card error incorrect assembly	Yes	Yes	No	No	No	No	No
26	B281B-00	Cloud communication error no sub type information	Yes	Yes	No	No	No	No	No
27	U0037 - 88	Vehicle Communication Bus B - bus off	No	Yes	No	No	No	No	No
28	B2843 -12	B-CALL switch - circuit short to battery	NA	NA	NA	Yes	Yes	Yes	No
29	B2843 -11	B-CALL switch - circuit short to ground	NA	NA	NA	Yes	Yes	Yes	No
30	B2843 -13	B-CALL switch - circuit open	NA	NA	NA	Yes	Yes	Yes	No
31	B2842 -12	E-call switch - circuit short to battery	NA	NA	NA	Yes	Yes	Yes	No
32	B2842 11	E-call switch - circuit short to ground	NA	NA	NA	Yes	Yes	Yes	No
33	B2842 -13	E-call switch - circuit open	NA	NA	NA	Yes	Yes	Yes	No