2019 TECHNICAL SEMINAR TOPICS

GENERAL
GM
Transmission ID
Swapping Computers, GM Global Electrical Systems
Redesigned TP/APP Sensors
Low Voltage Issues, Transmission Issues

GM 6L50
2015-2019 Colorado/Canyon V6, Transmission R&R

GM
Loss of Engine Power, Intermittent Loss of 5V Reference
DTC C0306 w/ the AAM Transfer Case

Ford
Transfer Case Noise When Shifting In/Out of Low Range

Honda/Toyota/Subaru
5V Reference Issues

GM
4T65E
P0842, Hard Shifts, Other Shift Complaints

4L60E/65E/70E
No Forward Movement

GM 6T40/45/50, Ford 6F35
Intermittent Hard 3-2 Downshift

6T40
Intermittent 2-3 Double Bump

GM 6T70/75/80, Ford 6F50
No Reverse, 3rd or 5th, Possible ISS DTCs Set

6L45/6L50
TCC Slip Code P0741

6L80/90
No or Slipping 1st Gear, Ratio DTC

6L45/6L50/6L80/6L90
Bump Shifts, Bind Up, Harsh Engagement, 2-3 and/or 3-4 Shifts, Flare Shifts

LCT 1000/2000
Gen 1-3 Various Shift and Operational Issues
Various Issues, Gen 4 Applications

Allison LCT 1000
2015-2016 Updates
Pump Gear Update

8L45/8L90
Specifications
Tag Information
Clutch Identification
Clutch Apply Chart
TCM/T87 Controller
Input, Clutch Input and Output Speed Sensors
Transmission Temperature Sensor
Internal Mode Switch
Internal Mode Switch, Connector Pin ID
1-2-7-8-R Feed Hole and Case Seal
4-5-6-7-8-R, 2-3-4-6-8 Clutch Housing Master Spline
Piston Removal, Air Testing, Clutch Travel Testing Tool
Clutch Locating Tabs
Making Sure the Components are Fully Installed

**GM 9T, Ford 8F Series Units**

Introduction
Specifications
Clutch Identification
1-R One Way Clutch
Oil Pump
Solenoids
Solenoid Application (Hydraulic) with ETRS
Linear Solenoid Location
VFS and On/Off Solenoid Location
PUN/TUN Solenoid Characterization (MCVM)
Valve Body Layout
ISS, OSS Location
Transmission Temperature Sensor
Internal Mode Switch
9T Series Tips

**AF50 Aisin 8 Speed**

Transaxle Identification

TCM and NSW Integrated
Gear Ratios/Specifications
Solenoid/Clutch/Band Chart
Electro-Magnetic Oil Pump (EMOP)
EMOP Operation
EMOP Location
Line Pressure Check/Specifications
Component Operation and Tap Locations
Transmission Disassembly
Valve Body Removal
Transmission Speed Sensors
Solenoid Identification
Small Parts Lower Valve Body
Lower Valve Body Identification
Small Parts Middle Valve Body
Valve ID Middle Valve Body
Valve Body Bolt ID
Air Check Locations
Case Bolt Identification
Pump and Filter Removal
Pump Bolt ID
Pump Gear ID
Park Linkage ID
Disassembly
Drum ID
Support Removal
Rear Planetary Gear Assembly
B-2 Brake/1st and Reverse Clutch
C-2 Clutch/Direct Clutch
L & R Clutch Piston Removal
Servo Stuff
Fluid Level Check
Level Check
Transmission Adaptive Functions
Relearn Procedure
Initial Learning

**FORD SECTION**

**4F27E**

Intermittent Direct Clutch Leakage
Fluid Leakage from the Bellhousing
Final Drive Noise

**6R80**

1-2 Flair Light Throttle

**DPS6**

Engagement and Other Issues
Clutch A Stuck On, Possible DTCs Set

**10R80**

Erratic TCC Operation, TCC Shudder, Codes P0741 & P174

**5R110**

P0730, P0751 & P2700 Sets

**6F55**

Shift to Park/Transmission Not in Park Message Displayed, or Discharged Battery

**6F35**

Delayed Drive to Reverse Engagement or Shudder

**6R140**

No Movement

**6F35/50, 6R80, 6R140**

Solenoid Strategy Number

**10R80**

Introduction
Transmission Tag Identification
Clutch Apply Chart
Solenoid Apply Chart
CHRYSLER SECTION

42LE
Flare on the 1-2 Shift

41TE/62TE
TCC, Cruise Control Issues, Brake Switch DTCs Set

68RFE
TCC Staying on at a Stop, Engine Stall/Surge
No 4th, P0734 Set
Pump Damage

A568RC, A460, A465
No Reverse, Lack of Power, Slipping in 3rd, 5th, R
Slipping/Flair on the 2-3 Shift
Various Issues, DTCs Set

45/545/68RFE
Pump Check Valve

ZF8HP70
P0850, Intermittent No Park, Key Will Not Turn Off

ZF8HP45
No Movement, No Converter Fill After Overhaul
Fill Procedures
RFE Series
TRS Plate Identification and Interchange

IMPORT SECTION

VW 09G
No Movement Forward or Slips When Moving Forward After Repairs
Harsh Garage Shift and/or Harsh/Bump 5-4 after Repairs

Subaru AWD
Slips on Acceleration

U660
Gear Damage, Tie-Up on Shifts

Toyota Prius
Introduction Hybrid
Series Parallel Systems
Generations

**Toyota Hybrid Transmission**

Applications

**Hybrid**

Hybrid Personal Protection

Hybrid Tools

**Toyota Prius**

Power Down

Transmission Issues

Battery Voltage Scan Values

Battery Voltage Sensing Strip, Corrosion is a Common Issue

MG1, MG2 Motors for Service

**Toyota**

Resolver

Resolver Relearn

Motor/Stator Testing

Using an Insulation Meter to Check the Stator Windings - Prius

**CVT-7 JF015E, REFO11A, F1CJB**

Loose Reluctor Ring

**Acura MDX, MDKA**

Tie Up on the 1-2 Shift, Burnt Low Hold (M1), Low Clutch After Repair

**REF010A, REFO11A, JF011E, JF015E**

No Move, Erratic Operation, No Ratio Change, Possible DTCs P1586 or P1588

**TR580, TR690**

Bump Feel at Idle in Drive

**TR580**

Bump Feel at Idle in Drive

**TR580, TF690**

Unable to Remove Key from the Ignition

**TF690**

Erratic/Slipping Shifts When Cold

**722.6**

No Movement, Barely Moves

**Honda**

Erratic Main Shaft Speed Sensor

**Duonic**

Introduction

Initialization of the Duonic System

Initialization Preliminary Procedure

Initialization Procedure

**Honda/Acura**

J25343 Module Programming

ECM/PCM Idle Learn Procedure (A/T)

CKP Pattern Clear/CKP Pattern Learn