Service ID and Sub Functions

**31**(RoutineControl) 01(single)(00-ISOSAEReserved,01-startRoutine,02-stopRoutine,03-requestRoutineResults,04-7F - ISOSAEReserved)

**10**(DiagnosticSessionControl) 01 (00-ISOSAEReserved,01-defaultSession,02-programmingSession,03-extendedDiagnosticSession,04-safetySystemDiagnosticSession,05-3F - ISOSAEReserved,

40-5F - vehicleManufacturerSpecific,60-7E - systemSupplierSpecific,7F - ISOSAEReserved)

**10**(DiagnosticSessionControl) 03 (00-ISOSAEReserved,01-defaultSession,02-programmingSession,03-extendedDiagnosticSession,04-safetySystemDiagnosticSession,05-3F - ISOSAEReserved,

40-5F - vehicleManufacturerSpecific,60-7E - systemSupplierSpecific,7F - ISOSAEReserved)

**31**(RoutineControl) 01 (00-ISOSAEReserved,01-startRoutine,02-stopRoutine,03-requestRoutineResults,04-7F - ISOSAEReserved)

**85**(ControlDTCSetting) 02 (00-ISOSAEReserved,01- on,02- 0ff,03-3F - ISOSAEReserved,40-5F - vehicleManufacturerSpecific,60-7E - systemSupplierSpecific,7F - ISOSAEReserved)

**28**(CommunicationControl) 01 (00- enableRxAndTx,01- enableRxAndDisableTx,02-disableRxAndEnableTx,03-disableRxAndTx,04-3F -ISOSAEReserved,40-5F - vehicleManufacturerSpecific,

60-7E - systemSupplierSpecific,7F - ISOSAEReserved)

**10** (DiagnosticSessionControl) 02(00-ISOSAEReserved,01-defaultSession,02-programmingSession,03-extendedDiagnosticSession,04-safetySystemDiagnosticSession,05-3F - ISOSAEReserved,

40-5F - vehicleManufacturerSpecific,60-7E - systemSupplierSpecific,7F - ISOSAEReserved)

**27** (SecurityAccess) 11 (00-ISOSAEReserved,01-requestSeed,02-sendKey,03-05-07..41-requestSeed,04-06-08..42-sendKey,43-5D -ISOSAEReserved requestSeed values

44-5E - ISOSAEReserved sendKey values,5F -requestSeed value,44-60 - sendKey value,61-7E - systemSupplierSpecific,7F - ISOSAEReserved)

**27** (SecurityAccess) 12

**2E** (WriteDataByIdentifier) F1 5A(Identifier)

**34** (RequestDownload) multipacket

**36** (TransferData)

**37** (RequestTransferExit)

**31** (RoutineControl) 01 multipacket

**31** (RoutineControl) 01 multipacket

**34** (RequestDownload) multipacket

**36** (TransferData) multipacket (max Count 0x6A Packets )

**37** (RequestTransferExit)

**31** (RoutineControl) 01

**11**(ECUReset) 01 (00-ISOSAEReserved,01-hardReset,02-keyOffOnReset,03-softReset,04-enableRapidPowerShutDown,05-disableRapidPowerShutDown

06-3F - ISOSAEReserved, 40-5F - vehicleManufacturerSpecific,60-7E - systemSupplierSpecific,7F-ISOSAEReserved)

TesterPresent (3E hex) service

AccessTimingParameter (83 hex) service (00-ISOSAEReserved,01-readExtendedTimingParameterSet,02-setTimingParametersToDefaultValues,03- readCurrentlyActiveTimingParameters,04- setTimingParametersToGivenValues

05-FF - ISOSAEReserved)

LinkControl (87 hex) service (00-ISOSAEReserved,01- verifyBaudrateTransitionWithFixedBaudrate,02- verifyBaudrateTransitionWithSpecificBaudrate,03- transitionBaudrate)

ReadDataByIdentifier (22 hex) service

ReadMemoryByAddress (23 hex) service

ReadScalingDataByIdentifier (24 hex) service

ReadDataByPeriodicIdentifier (2A hex) service

DynamicallyDefineDataIdentifier (2C hex) service (00-ISOSAEReserved,01- defineByIdentifier,02- defineByMemoryAddress,03- clearDynamicallyDefinedDataIdentifier,04-7F -ISOSAEReserved)

WriteMemoryByAddress (3D hex) service

ClearDiagnosticInformation (14 hex) service

ReadDTCInformation (19 hex) service (00-ISOSAEReserved,01-reportNumberOfDTCByStatusMask,02-reportDTCByStatusMask,03-reportDTCSnapshotIdentification,04-reportDTCSnapshotRecordByDTCNumber,

05- reportDTCSnapshotRecordByRecordNumber,06-reportDTCExtendedDataRecordByDTCNumber,07- reportNumberOfDTCBySeverityMaskRecord,08-reportDTCBySeverityMaskRecord,

09-reportSeverityInformationOfDTC,0A-reportSupportedDTC,0B-reportFirstTestFailedDTC,0C-reportFirstConfirmedDTC,

0D-reportMostRecentTestFailedDTC,0E-reportMostRecentConfirmedDTC,0F-reportMirrorMemoryDTCByStatusMask,10-reportMirrorMemoryDTCExtendedDataRecordByDTCNumber,

11-reportNumberOfMirrorMemoryDTCByStatusMask,12-reportNumberOfEmissionsRelatedOBDDTCByStatusMask,13-reportEmissionsRelatedOBDDTCByStatusMask,14-reportDTCFaultDetectionCounter,

15-reportDTCWithPermanentStatus,16-7F - ISOSAEReserved)

InputOutputControlByIdentifier (2F hex) service

RequestUpload (35 hex) service