

# HDS

INJECTOCLEAN

## El HDS es un nuevo scanner de Injectoclean especializado en vehículos Diesel pesados y mediana capacidad.

Este scanner HDS cuenta con nuevo diseño, un módulo de expansión integrado y los cables necesarios para las marcas mas comunes.





## Para los sistemas J1708 de marcas Cummins, Detroit Diesel, Caterpillar, Volvo y Freightliner.

ENGINE TURBOCHARGER TRANSMISSION  
POWER TAKEOFF AXLE PWR  
UNIT AXLE TRAILER #1 AXLE TRAILER  
#1 AXLE TRAILER #1 BREAKS  
UNIT BRAKES, TRAILER #1 BRAKES, TRAILER  
#2 BRAKES, TRAILER #2 INSTRUMENT  
CTRL TRIP RECORDER VEHICLE  
MANAGEMENT FUEL SYSTEM CRUISE  
CTRL ROAD SPEED INDICATOR CAB  
CLIMATE  
CTRL REFRIG/HEATING, TRAILER #1 REFRIG/  
HEATING, TRAILER #2 REFRIG/HEATING,  
TRAILER #3 SUSPENSION, PWR  
UNITS SUSPENSION, TRAILER #1  
SUSPENSION, TRAILER #2 SUSPENSION,  
TRAILER #3 DIAGNOSTIC SYSTEMS,  
PWR DIAGNOSTIC SYSTEMS, TRAILER #1  
DIAGNOSTIC SYSTEMS, TRAILER #2  
DIAGNOSTIC SYSTEMS, TRAILER #3  
ELECTRICAL CHARGING SYSTEM  
PROXIMITY DETECTOR, FRONT  
PROXIMITY DETECTOR, REAR  
AERODYNAMIC CONTROL UNIT  
VEHICLE NAVIGATION UNIT  
VEHICLE SECURITY MULTIPLEX  
COMMUNICATION UNIT-GROUND  
TIRES, PWR UNITS TIRES, TRAILER #1  
TIRES, TRAILER #2 TIRES,

TRAILER #3 ELECTRICAL DRIVER  
INFORMATION CENTER OFF-BOARD  
DIAGNOSTICS #1 ENGINE RETARDER  
CRANKING/STARTING SYSTEM  
ENGINE #2 TRANSMISSION, ADDITIONAL  
PARTICULATE TRAP SYSTEMS  
SENSORS DATA CONVERTER  
DATA LOGGING COMPUTER OFF-BOARD  
DIAGNOSTICS #2 COMMUNICATION  
UNIT-SATELLITE COMMUNICATION  
UNIT-SATELLITE ENGINE #3 ENGINE  
#4 ENGINE #5 ENGINE #6 VEHICLE  
CTRL HEAD UNIT VEHICLE LOGIC  
CTRL UNIT VEHICLE HEAD SIGNS  
REFRIG MANAG PROTECT & DIAG  
VEHICLE LOC UNIT-DIFFERENT  
FRONT DOOR STATUS UNIT MIDDLE  
DOOR STATUS UNIT REAR DOOR  
STATUS UNIT ANNUNCIATOR  
UNIT FARE COLLECTION UNIT  
PASSENGER COUNTER UNIT #1  
SCHEDULE ADHERENCE UNIT  
ROUTE ADHERENCE UNIT ENV  
MONITOR/AUX CLIMATE VEH  
STATUS POINT MONITOR UNIT  
HIGH SPEED COMMUNICATIONS  
UNIT MOBILE DATA TERMINAL

UNIT VEHICLE PROXIMITY, RIGHT  
SIDE VEHICLE PROXIMITY, LEFT  
SIDE BASE UNIT (RADIO GATEWAY  
FIX) BRIGDE FROM SAE J1708  
MAINTENANCE PRINTER VEHICLE  
TURN TABLE BUS CHASSIS ID  
UNIT SMART CARD TERMINAL  
MOBILE DATA TERMINAL VEH  
CTRL HEAD TOUCH SCREEN  
SILENT ALARM UNITS SURVEILLANCE  
MICROPHONE LIGHTING CTRL  
ADM UNIT BRIDGE, TRACTOR  
MOUNTED BRIDGE TRAILER  
MOUNTED COLLISION AVOIDANCE  
SYSTEM STACHOGRAPH DRIVER  
INFORMATION CENTER #2  
DRIVELINE RETARDER TRANS  
SHIFT CONSOLE-PRIMARY  
PARKING HEATER WEIGHING  
SYSTEM, AXLE GROUP #1  
WEIGHING SYSTEM, AXLE  
GROUP #2 WEIGHING SYSTEM,  
AXLE GROUP #3 WEIGHING  
SYSTEM, AXLE GROUP #4  
WEIGHING SYSTEM, AXLE  
GROUP #5 WEIGHING SYSTEM,  
AXLE GROUP #6 COMMUNICATION  
UNIT-CELLULAR SAFETY  
RESTRAINT INTERSECTION  
PREEMPTION INSTRUMENT  
CLUSTER #2 ENGINE OIL  
CTRL SYSTEM ENTRY ASSIST  
CTRL #1 ENTRY ASSIST CTRL  
#2 IDLE ADJUST SYSTEM  
PASSENGER COUNTER UNIT #2  
PASSENGER COUNTER UNIT #3  
FUEL TANK MONITOR





### International CF500, 4400 and 4300

- AXLE #2 LIFT AIR PRESSURE
- EMERGENCY RESERVOIR TRAILER
- SERVICE RESERVOIR TRAILER
- SECONDARY RESERVOIR POWERED VEHICLE
- PRIMARY RESERVOIR POWERED VEHICLE
- AXLE LIFT POSITION
- AXLE SLIDER LOCK STATUS
- AXLE SLIDER LOCK SWITCH STATUS
- CARGO SECTOR NUMBER
- STATUS OF THE CARGO SECUREMENT SENSORS
- AXLE NUMBER
- BRAKE STATUS/STROKE ADJUSMENT
- BRAKE STROKE STATUS
- ENTRY ASSIST POSITION/DEPLOYMENT
- ENTRY ASSIST MOTOR CURRENT
- FUEL SUPPLY PUMP INLET PRESSURE
- SUCTION SIDE FUEL FILTER DIFFERENTIAL PRESSURE
- ENGINE OIL LEVEL REMOTE RESERVOIR
- EXTENDED RANGE FUEL PRESSURE
- EXTENDED RANGE ENGINE OIL PRESSURE
- EXTENDED RANGE ENGINE COOLANT PRESSURE
- ENGINE ECU TEMPERATURE
- EXTENDED CRANKCASE BLOWBY PRESSURE
- GENERATOR OIL PRESSURE
- GENERATOR COOLANT TEMPERATURE
- AC COMPRESSOR DISCHARGE SIDE
- AC COMPRESSOR DISCHARGE SIDE(VERY HIGH PRESSURE)
- COMPRESSOR SUCTION SIDE
- EVAPORATOR TEMPERATURE
- ESTIMATED PERCENT FAN SPEED
- PERCENT EXHAUST GAS RECIRCULATION VALVE #1 POSITION
- PERCENT ACCELERATOR POSITION #3
- PERCENT ACCELERATOR POSITION #2
- CRANKCASE BLOW BY PRESSURE
- TRANSMISSION RANGE POSITION
- TRANSMISSION SPLITTER POSITION
- CLUTCH CYLINDER POSITION
- COARSE ENGAGEMENT ACTUATOR STATUS
- FINE ENGAGEMENT ACTUATOR STATUS
- COARSE DISENGAGEMENT ACTUATOR STATUS
- FINE DISENGAGEMENT ACTUATOR STATUS
- GEAR ACTUATOR #3 STATUS
- RAIL ACTUATOR #3 STATUS
- CLUTCH PLATES WEAR CONDITION
- TRANSMISSION TANK AIR PRESSURE
- SECOND FUEL LEVEL(RIGHT SIDE)
- TIRE PRESSURE CHECK INTERVAL
- ENGINE RETARDER LEVEL SWITCH
- ENGINE RETARDER SWITCH
- CRUISE CONTROL ON/OFF SWITCH STATUS
- CRUISE CONTROL SET SWITCH STATUS
- CRUISE CONTROL RESUME SWITCH STATUS
- TIRE PRESSURE SUPPLY SWITCH STATUS
- START AID CONTACTS STATUS
- CRANK CONTACTS STATUS
- RUN CONTACTS STATUS
- ACCESSORY CONTACTS STATUS
- PROTECT LAMP STATUS
- AMBER LAMP STATUS
- RED LAMP STATUS
- WAIT TO START LAMP
- HEATER 2 STATUS
- HEATER 1 STATUS
- VEHICLE WET TANK PRESSURE
- TRANSMISSION OUTPUT RETARDER STATUS
- EXTENDED RANGE BAROMETRIC PRESSURE
- ABS OFFROAD FUNCTION SWITCH
- AIR CONDITIONER COMPRESSOR CLUTCH STATUS/COMMAND
- AC REQUEST INPUT
- THROTTLE POSITION
- ENGINE INTERCOOLER TEMP
- TRANS SYNC CLUTCH VALUE
- TRANS SYNC BRAKE VALUE
- CENTER RAIL SENSE
- FORE/AFT SENSE
- NEUTRAL SENSE
- LOW RANGE SENSE
- HIGH RANGE SENSE
- INERTIA BRAKE ACTUATOR STATUS
- DEFUEL ACTUATOR STATUS
- LOCKUP CLUTCH ACTUATOR STATUS
- CLUTCH ACTUATOR STATUS
- GEAR ACTUATOR #2 STATUS
- RAIL ACTUATOR #2 STATUS
- GEAR ACTUATOR #1 STATUS
- RAIL ACTUATOR #1 STATUS
- SHIFT FINGER GEAR POSITION
- SHIFT FINGER RAIL POSITION
- PARKING BRAKE OFF ACTUATOR STATUS
- PARKING BRAKE ON ACTUATOR STATUS
- RETARDER INHIBIT STATUS
- SPLITTER INDIRECT ACTUATOR
- SPLITTER DIRECT ACTUATOR STATUS
- RANGE LOW ACTUATOR STATUS
- RANGE HIGH ACTUATOR STATUS
- FORWARD SWITCH STATUS
- NEUTRAL SWITCH STATUS
- REVERSE SWITCH STATUS
- BRAKE SYSTEM SWITCH STATUS
- SERVICE BRAKE SWITCH STATUS
- POWER CONNECT DEVICE STATUS
- START ENABLE DEVICE STATUS
- IGNITION SWITCH STATUS
- DOWNSHIFT SWITCH STATUS
- UPSHIFT SWITCH STATUS
- TORQUE LIMITING FACTOR
- TWO SPEED AXLE SWITCH STATUS
- PARKING BRAKE SWITCH STATUS
- IDLE SHUTDOWN TIMER STATUS
- IDLE SHUTDOWN TIMER FUNCTION
- IDLE SHUTDOWN TIMER OVERRIDE
- ENGINE HAS SHUTDOWN BY IDLE TIMER
- DRIVER ALERT MODE
- BLOWER BYPASS VALVE POSITION
- AUXILIARY WATER PUMP PRESSURE
- MAXIMUM ROAD SPEED LIMIT
- STEERING AXLE TEMPERATURE
- AXLE #1 LIFT AIR PRESSURE
- FORWARD REAR DRIVE AXLE TEMPERATURE
- REAR REAR DRIVE AXLE TEMPERATURE
- ROAD SURFACE TEMPERATURE
- WASHER FLUID LEVEL
- PARTICULATE TRAP INLET PRESSURE
- AIR START PRESSURE
- ROAD SPEED LIMIT STATUS
- ROAD SPEED
- CRUISE MODE
- CLUTCH SWITCH
- BRAKE SWITCH
- ACCEL SWITCH
- RESUME SWITCH
- COAST SWITCH
- SET SWITCH
- CRUISE CONTROL SWITCH
- CRUISE CONTROL SET SPEED
- CRUISE CONTROL HIGH SET LIMIT SPEED
- CRUISE CONTROL LOW SET LIMIT SPEED
- POWER TAKEOFF(PTO) MODE
- POWER TAKEOFF(PTO) CLUTCH SWITCH
- POWER TAKEOFF(PTO) BRAKE SWITCH
- POWER TAKEOFF(PTO) ACCEL SWITCH
- POWER TAKEOFF(PTO) RESUME SWITCH
- POWER TAKEOFF(PTO) COAST SWITCH
- POWER TAKEOFF(PTO) SET SWITCH
- POWER TAKEOFF(PTO) CONTROL SWITCH
- POWER TAKEOFF(PTO) OIL TEMPERATURE
- PERCENT ACCELERATOR PEDAL POSITION
- PERCENT ENGINE LOAD
- OUTPUT TORQUE
- FUEL DELIVERY PRESSURE
- FUEL FILTER DIFERENTIAL PRESSURE
- FUEL LEVEL
- WATER IN FUEL INDICATOR
- ENGINE OIL LEVEL
- ENGINE OIL FILTER DIFFERENTIAL PRESSURE
- ENGINE OIL PRESSURE
- CRANKCASE PRESSURE
- BOOST PRESSURE
- TURBO SPEED
- TURBO OIL PRESSURE
- INTAKE MANIFOLD TEMPERATURE
- AIR INLET PRESSURE
- AIR FILTER DIFFERENTIAL PRESSURE
- BAROMETRIC PRESSURE
- COOLANT PRESSURE
- ENGINE COOLANT TEMPERATURE
- COOLANT LEVEL
- COOLANT FILTER DIFFERENTIAL PRESSURE
- GOVERNOR DROOP
- NET BATTERY CURRENT
- ALTERNATOR CURRENT
- BRAKE APPLICATION PRESSURE
- BRAKE PRIMARY PRESSURE
- BRAKE PRIMARY PRESSURE
- HYDRAULIC RETARDER PRESSURE
- HYDRAULIC RETARDER OIL PRESSURE
- ENGINE RETARDER STATUS
- CYLINDER 8ENGINE RETARDER
- CYLINDER 6ENGINE RETARDER
- CYLINDER 4ENGINE RETARDER
- CYLINDER 3ENGINE RETARDER
- CYLINDER 2ENGINE RETARDER
- ENGINE RETARDER PERCENT
- CLUTCH PRESSURE
- TRANSMISSION OIL LEVEL
- TRANSMISSION OIL LEVEL HIGH/LOW
- TRANSMISSION FILTER DIFFERENTIAL PRESSURE
- TRANSMISSION OIL PRESSURE
- INJECTOR METERING RAIL #2 PRESSURE
- POWER SPECIFIC FUEL ECONOMY
- EXHAUST BACK PRESSURE
- MASS AIR FLOW
- AVERAGE FUEL RATE

- WHEEL SENSOR ABS AXLE:1 LEFT
- WHEEL SENSOR ABS AXLE:2 LEFT
- WHEEL SENSOR ABS AXLE:3 LEFT
- WHEEL SENSOR ABS AXLE:4 LEFT
- WHEEL SENSOR ABS AXLE:1 RIGHT
- WHEEL SENSOR ABS AXLE:2 RIGHT
- WHEEL SENSOR ABS AXLE:3 RIGHT
- WHEEL SENSOR ABS AXLE:4 RIGHT
- EXTENDED RANGE FUEL DELIVERY PRESSURE(ABSOLUTE)
- AUXILIARY VACUUM PRESSURE READING
- AUXILIARY GAGE PRESSURE READING #1
- AUXILIARY ABSOLUTE PRESSURE READING
- TIRE PRESSURE CONTROL SYSTEM FUNCTIONAL MODE 1STEER
- TIRE PRESSURE CONTROL SYSTEM FUNCTIONAL MODE 2DRIVE
- TIRE PRESSURE CONTROL SYSTEM FUNCTIONAL MODE 2TRAILER/TAG
- TIRE PRESSURE CONTROL SYSTEM 1PCU STEER SOLENOID STATUS
- TIRE PRESSURE CONTROL SYSTEM 1PCU DRIVE SOLENOID STATUS
- TIRE PRESSURE CONTROL SYSTEM 2PCU TRAILER
- TIRE PRESSURE CONTROL SYSTEM 2PCU SUPPLY SOLENOID STATUS
- TIRE PRESSURE CONTROL SYSTEM 2PCU CONTROL SOLENOID STATUS
- TIRE PRESSURE CONTROL SYSTEM 2PCU DEFLATE SOLENOID STATUS
- TRAILER,TAG, OR PUSH CHANNEL #1 TIRE PRESSURE TARGET
- DRIVE CHANNEL TIRE PRESSURE TARGET
- STEER CHANNEL TIRE PRESSURE TARGET
- TRAILER,TAG, OR PUSH CHANNEL #1 TIRE PRESSURE
- DRIVE CHANNEL TIRE PRESSURE
- STEER CHANNEL TIRE PRESSURE
- AVERAGE FUEL ECONOMY(GAS NATURAL)
- INSTANTANEOUS FUEL ECONOMY(NATURAL GAS)
- MASS FLOW RATE(NATURAL GAS)
- POWER TAKEOFF(PTO) #2 ENGAGEMENT CONTROL SWITCH STATUS
- POWER TAKEOFF(PTO) #1 ENGAGEMENT CONTROL SWITCH STATUS
- POWER TAKEOFF(PTO) #2 ENGAGEMENT ACTUATOR STATUS
- POWER TAKEOFF(PTO) #1 ENGAGEMENT ACTUATOR STATUS
- ATC SPINOUT SIGNAL DETECTION
- ATC ENGINE CONTROL
- ATC BRAKE CONTROL
- ATC STATUS LAMP
- ATC DEEP SNOW/MUD FUNCTION SWITCH
- NUMBER OF ECU RESETS
- CRANKCASE PRESSURE
- AUXILIARY INPUT #8
- AUXILIARY INPUT #7
- AUXILIARY INPUT #6
- AUXILIARY INPUT #5
- AUXILIARY OUTPUT #8
- AUXILIARY OUTPUT #7
- AUXILIARY OUTPUT #6
- AUXILIARY OUTPUT #5
- AUXILIARY INPUT #4
- AUXILIARY INPUT #3
- AUXILIARY INPUT #2
- AUXILIARY INPUT #1
- AUXILIARY OUTPUT #4
- AUXILIARY OUTPUT #3
- AUXILIARY OUTPUT #2
- AUXILIARY OUTPUT #1
- INJECTOR TIMING RAIL PRESSURE
- INJECTOR METERING RAIL PRESSURE
- BATTERY POTENTIAL(VOLTAGE)SWITCHED
- GAS SUPPLY PRESSURE
- MAIN SHAFT SPEED
- INPUT SHAFT SPEED
- TRANSMISSION RANGE SELECTED
- TRANSMISSION RANGE ATTAINED
- INJECTION CONTROL PRESSURE
- PRESENT COMPASS BEARING
- RATED ENGINE POWER
- ALTERNATOR POTENTIAL(VOLTAGE)
- BATTERY POTENTIAL(VOLTAGE)
- CARGO AMBIENT TEMPERATURE
- CAB INTERIOR TEMPERATURE
- AMBIENT AIR TEMPERATURE
- AIR INLET TEMPERATURE
- EXHAUST GAS TEMPERATURE
- FUEL TEMPERATURE
- ENGINE OIL TEMPERATURE
- TURBO OIL TEMPERATURE
- TRANSMISSION #1 OIL TEMPERATURE
- FRONT AXLE WEIGHT
- REAR AXLE WEIGHT
- TRAILER WEIGHT
- CARGO WEIGHT
- TRIP FUEL
- FUEL RATE(INSTANTANEOUS)
- INSTANTANEOUS FUEL ECONOMY
- AVERAGE FUEL ECONOMY
- POWER TAKEOFF(PTO) SPEED
- POWER TAKEOFF(PTO) SET SPEED
- IDLE ENGINE SPEED
- RATED ENGINE SPEED
- ENGINE SPEED
- TRANSMISSION OUTPUT SHAFT
- WHEEL SPEED ABS AXLE 1 LEFT
- WHEEL SPEED ABS AXLE 1 RIGHT
- WHEEL SPEED ABS AXLE 2 LEFT
- WHEEL SPEED ABS AXLE 2 RIGHT
- WHEEL SPEED ABS AXLE 3 LEFT
- WHEEL SPEED ABS AXLE 3 RIGHT
- FUEL TANK IDENTIFICATION
- FUEL TANK ANTENNA STATUS
- NOZZLE IDENTIFICATION
- SPEED SENSOR CALIBRATION
- TOTAL IDEL FUIEL USED(NATURAL GAS)
- TOTAL FUEL USED(NATURAL GAS)
- TRIP FUEL(NATURAL GAS)
- TOTAL IDLE HOURS
- TOTAL IDLE FUEL USED
- TRIP DISTANCE
- TOTAL VEHICLE DISTANCE
- TOTAL VEHICLE HOURS
- TOTAL ENGINE HOURS
- TOTAL POWER TAKEOFF(PTO)
- TOTAL ENGINE REVOLUTIONS
- ECU DATE
- ECU TIME
- TOTAL FUEL USED





## Mercedes Benz Sprinter

### 1.-INSTRUMENT CLUSTER

CURRENT KM  
FUEL LEVEL MIN  
FUEL LEVEL MIN  
OIL QTY  
OIL CHANGE  
LAST OIL IN ENGINE  
2nd OIL IN ENGINE  
LOW BRAKE FLUID  
BRIGHT PUSH BTN  
DARK PUSH BTN  
RESET BTN  
TYPE  
UP BTN  
DOWN BTN  
UPWARD BTN  
DOWNWARD BTN  
ACCEPT CALL BTN  
END CALL BTN  
FANFARE HORNS BTN  
(+) BTN  
(-) BTN

### 2.-ENGINE CDI SENSORS

RPMS  
ECT  
MAF  
IAT  
BOOST AIR TEMP  
ECT  
FUEL TEMP  
ENG OIL TEMP  
OIL LEVEL  
ENG OIL QUALITY  
ATMOSPHERIC PRESSURE  
INTAKE PRESSURE  
BOOST PRESSURE  
SPEC BOOST PRESSURE  
RAIL PRESSURE  
SPEC RAIL PRESSURE  
GEAR ENGGAGED  
FUEL TANK LEVEL  
B147 PEDAL S1  
B147 PEDAL S2  
BRAKE SW OPEN  
STOP LIGHT OPEN

### 3.-ENGINE CDI POSITIONER

RPMS  
ECT  
DUTY OF FUEL VALVE

RATIO OF RAIL PRESSURE  
RATIO OF EXHAUST GAS  
RATIO CHARGE PRES POS

### 4.-ENGINE CDI EXHAUST GAS

RPMS  
ECT  
ATMOSPHERIC PRESSURE  
MAF  
RATIO OF EXH GAS RECIRCULATION

### 5.-ENGINE CDI CHARGE PRESSURE

RPMS  
ATMOSPHERIC PRESSURE  
INTAKE PRESSURE  
BOOST PRESSURE  
IAT

RATIO CHARGE PRES POSIT

### 6.-ENGINE CDI FUEL INJECTION

RPMS  
BOOST PRESSURE  
MAF  
ACT PRE-INJEC 1  
ACT PRE-INJEC 2  
ACT MAIN INJECTION  
ACT POST-INJEC 1  
ACT POST-INJEC 2

### 7.-ENGINE CDI CRUISE CONTROL

CRUISE CTRL OFF  
CC RESUME  
SET + ACCEL CC  
SET + DECEL CC  
CC SAFETY CONTACT

### 8.-ENGINE CDI WORKING SPEED

ADR SW  
MAX WORKING SPD  
MIN WORKING SPD

### 9.-ENGINE CDI DRIVE AUTHORIZATION

START ENABLE  
MOD A94 IS DETACHED  
A94 IS PERSONALIZED  
A94 IS ACTIVATED  
START ENABLE FROM A62  
SYNC OF A62 IS BEING PERFORMED  
TEST COUNTER OF A62

### 10.-ENGINE CDI CAN COMMUNICATION

CAN BUS FAULT  
A94 NO LONGER SENDS ON CAN  
NO CAN MSG FROM A4 ETC  
NO CAN MSG FROM P15 IC 410h  
NO CAN MSG FROM P15 IC 408h  
NO CAN MSG FROM A40 ESM 230h  
NO CAN MSG FROM A2 ABS/ESP  
NO CAN MSG FROM A2 ABS/ESP 208h

### 11.-ENGINE CDI SYNC CRANK

SYNC STATUS  
RPMS

### 12.-TRANSMISSION CONTROL UNIT

BATTERY  
EMERGENCY RUN  
ACCEL PEDAL POS  
KICK DOWN SW

### 13.-TRANSMISSION GEARS

SEL LEVER  
ACT GEAR

TARGET GR  
TRANS OIL TEMP  
TRANS OIL TEMP  
START ENABLE  
STARTER LOCKOUT

### 14.-TRANSMISSION ENGINE

SUPPLY SENSORS  
SPEED S2  
SPEED S3  
TRANS INPUT  
TRANS OUPUT  
ACT GEAR  
TRANS OIL TEMP  
RPM  
ENGINE TORQUE  
CONVERTED ENG TORQUE

### 15.-TRANSMISSION SHIFT VALVES

SUPPLY VALVES  
1-2 & 4-5 SHIFT SOL  
2-3 SHIFT SOL  
3-4 SHIFT SOL  
ACT GEAR  
TARGET GR

### 16.-TRANSMISSION CONTROL VALVES

SUPPLY VALVES  
SHIFT PRESSURE  
CURRENT PRESSURE  
SPECIF CURRENT PRESSURE  
MODUL PRESSURE  
CURRENT MODUL PRESSURE  
SPECIF MODUL PRESSURE  
ACT GEAR  
TARGET GR

### 17.-TRANSMISSION LOCKUP CLUTCH

DIFFERENCE OF LOCKUP  
LOCKUP CLUTCH  
OPEN LOCKUP REQ  
LEFT REAR AXLE  
RIGHT REAR AXLE  
SPD REAR AXLE

### 18.-ABS WHEEL SPEEDS

LF WHEEL AXLE  
RF WHEEL AXLE  
LR WHEEL AXLE  
RR WHEEL AXLE

### 19.-ABS STATUSES

STOP LAMP SW  
BRAKE SW  
ASR PASSIVE SW  
VOLT T15

### 20.-INSTRUMENT SENSORS

AMBIENT TEMP  
SPEED  
FUEL LEVEL  
BRAKE WEAR  
COOLANT LEVEL  
WASHER FLUID

### 21.-INSTRUMENT PUSHBUTTON

BTN S1 MILES  
BTN S2 CLOCK  
BTN S3 NEGATIVE  
BTN S4 POSITIVE  
DOORS  
PARKING BRAKE

PARKING BRAKE

### 22.-INSTRUMENT INDICATORS

ENGINE DIAGNOSIS  
COOLANT LEVEL  
CHARGE IND TML61/D+  
ENGINE OIL LEVEL  
BRAKE WEAR  
ABS  
ASR  
PREGLOW IND  
PARKING BRAKE  
SEAT BELT REMINDER

### 23.-INSTRUMENT ELECTRICAL

BRIGHTNESS OF IC  
ILLUMINATION TML 58  
STATUS TML 61/D+  
TRASPONDER?  
TEMIC TRANSP  
TRANSP VALID  
READ COMPLETE?  
READ INHIBITED  
NUMBER OF KEYS

### 24.-EWM LIVEDATA

SELECTOR LEVEL  
VOLTAGE TML15  
JOGGING BTN(+)  
JOGGING BTN(-)  
REVERSING LAMP  
STATUS OF LOCKING  
STOP LAMP SW  
FILTERED WHEEL SPD

RR WHEEL SPD  
RL WHEEL SPD

### 25.-IMMOBILIZER CAN

REQUEST BY ECM  
ANSWER FROM IMMO  
START ENABLE FROM ECU

### 26.-HZR TEMPERATURES

AMBIENT TEMP  
INTERIOR TEMP  
EVAP TEMP  
AIR OUTLET TEMP  
COOLANT TEMP  
INTERIOR LAMP

### 27.-HZR SWITCHES

AIR CONDITIONING  
RECIRCULATED AIR  
RESIDUAL HEAT  
INTERIOR LAMP

### 28.-HZR AIR

COMPRESS SHUT-OFF ACCEL  
COMPRESS SHUT-OFF EMERGENCY  
COMPRESS CLUTCH  
REFRIGERANT PRESSURE  
PRESSURE SENSOR  
AUX FAN  
AIR OUTLET TEMP

### 29.-HZR GENERAL

VOLTAGE TERMINAL 15  
INTENSITY CONTROL OF INSTRUMENT LIGHTING  
ENGINE SPEED  
BLOWER STAGE 1

CIRCULATION PUMP  
RECIRCULATED AIR MODE  
LIGHTING AT PUSHBUTTON CONTROL MODULE  
WATER CYCLE VALVE

### 30.-ENGINE AFT2K

TRAN SPEED  
SPEED LOCKUP CLUTCH  
TARGET GR  
ACT GEAR  
SPEED S2  
SPEED S3  
TURBIN RPM  
RPM  
FRONT AXLE  
REAR AXLE  
GEAR SEL  
SEL LEVER  
DRIVING FACTOR  
EMERGENCY RUNNING  
CTRL SOL SET CURRENT  
CTRL SOL ACT CURRENT  
PRESSURE CTRL VALVE  
SHIFT VALVE  
SHIFT PRESS SET CURRENT  
SHIFT PRESS ACT CURRENT  
SHIFT PRESSURE  
RATIO TORQUE  
KICK DOWN SW  
LOCK OUT CONTACT  
WINTER MODE TRANS  
MANUAL MODE TRANS  
SHIFT (+)  
SHIFT (-)  
TRANS OIL TEMP





### ISUZU Modelos ELF 400, ELF 450, ELF 500, ELF 600

#### DATOS 1 DEL MOTOR

- VELOCIDAD DEL MOTOR
- VEL. DE RALENTI DESEADA
- SENSOR AUMENTO RALENTI
- CARGA DEL MOTOR
- SENSOR ECT
- ECT DEL ARRANQUE
- SENSOR IAT
- IAT DEL ARRANQUE
- SENSOR MAF
- SENSOR MAF
- PRESION BAROMETRICA
- BARO
- SENSOR PRESION DE REFUERZO
- SENSOR DE TEMPERATURA DE COMBUSTIBLE
- EMPERATURA DE COMBUSTIBLE
- PRESION REAL DEL RIEL DE COMBUSTIBLE
- PRESION DESEADA EN EL RIEL DE COMBUSTIBLE
- ANGULO INDICADO APP
- SENSOR 1 APP
- SENSOR 2 APP
- SENSOR 3 APP
- SEÑAL PRESENTE ARBOL LEVAS. EL MOTOR DEBE FUNCIONAR PARA OBTENER DATOS VALIDOS
- SEÑAL DE ARRANQUE PRESENTE
- SENSOR POSICION EGR
- COMANDO INYECTOR 1
- SENSOR DE VELOCIDAD VEHICULO
- INTERRUPTOR LUZ DE ALTO PEDAL
- INTERRUPTOR PEDAL FRENO LIBERACION CRUCERO
- REFERENCIA 1 5 VOLTS
- REFERENCIA 2 5 VOLTS
- REFERENCIA 3 5 VOLTS
- ESTADO RELEVADOR MOTOR
- ESTADO RELEVADOR DE ENERGIA
- SOLICITUD SENAL A/C
- SENAL DE IGNICION 1
- VOLTAJE DE BATERIA
- DTC ESTABLECIDO EN ESTE CICLO DE IGNICION
- TIEMPO FUNCIONAM. MOTOR

#### DATOS 2 DEL MOTOR

- COMANDO MIL
- COMANDO LUZ BUJIA INCANDESCENTE
- COMANDO RELEVADOR BUJIA
- SOLICITUD SENAL A/C
- CONTROL DE CRUCERO ACTIVO
- INTERRUPTOR CRUCERO ON/OFF
- INTERRUPTOR SELECCION/MARCHA LIBRE

- CRUCERO
- INTERRUPTOR REANUDAR/ACELERADOR CRUCERO
- COMANDO LUZ CRUCERO
- CRUCERO HABILITADO
- INTERRUPTOR LUZ DE ALTO PEDAL
- INTERRUPTOR PEDAL FRENO LIBERACION CRUCERO
- HABILITACION DE PTO(SI EQUIPADO)
- COMANDO RELEVADOR DE ACOPLAMIENTO PTO(SI EQUIPADO)
- SENAL RETROALIMENTACION PTO(SI EQUIPADO)
- SENAL DE DESENERGIZACION MOTOR PTO(SI EQUIPADO)
- SENSOR ACCELERADOR REMOTO PTO(SI ESTA EQUIPADO)
- INTERRUPTOR DE FRENO DE ESCAPE(SI EQUIPADO)
- COMANDO DE RELEVADOR DE FRENO DE ESCAPE(SI EQUIPADO)
- RELEVADOR FRENOS ESCAPE(SI ESTA EQUIPADO)
- SOLENOIDE ACCELERADOR ADMISION
- VELOCIDAD DEL MOTOR
- CARGA DEL MOTOR
- SENSOR ECT
- ANGULO INDICADO APP
- SENSOR PRESION DE REFUERZO
- PRESION DESEADA EN EL RIEL DE COMBUSTIBLE
- PRESION REAL DEL RIEL DE COMBUSTIBLE
- SENSOR POSICION EGR
- SENSOR DE VELOCIDAD VEHICULO
- SENAL IGNICION 1
- TIEMPO FUNCIONAM. MOTOR

#### DATOS COMBUSTIBLE

- RELACION DE BALANCEO CIL.1
- RELACION DE BALANCEO CIL.2
- RELACION DE BALANCEO CIL.3
- RELACION DE BALANCEO CIL.4
- PRESION REAL DEL RIEL DE COMBUSTIBLE
- PRESION DESEADA EN EL RIEL DE COMBUSTIBLE
- SENSOR DE TEMPERATURA DE COMBUSTIBLE
- RELACION COMBUSTIBLE INYECCION PRINCIPAL
- NIVEL DE COMBUSTIBLE INYECCION PILOTO
- RELACION DE COMBUSTIBLE BASICA
- RELACION DE COMBUSTIBLE FINAL
- CORRECCION DE RELACION
- RELACION DE COMBUSTIBLE
- SINCORNIZACION DE INYECCION PRINCIPAL
- REGULADOR FRP REAL
- REGULADOR FRP DESEADO
- COMANDO DEL FLUJO DE COMBUSTIBLE DEL REGULADOR FRP
- ESTADO BOMBA SUMINISTRO
- AJUSTE BOMBA SUMNISTRO
- VELOCIDAD DEL MOTOR
- CARGA DEL MOTOR
- SENSOR ECT
- ANGULO INDICADO APP
- SENSOR PRESION DE REFUERZO
- SENSOR POSICION EGR
- SENSOR DE VELOCIDAD VEHICULO
- SENAL IGNICION 1
- TIEMPO FUNCIONAM. MOTOR

#### DATOS EGR

- COMANDO SOLENOIDE EGR
- SENSOR POSICION EGR
- SENSOR POSICION EGR
- POSICION MINIMA APRENDIDA EGR
- DISCREPANCIA POSICION EGR
- VELOCIDAD DEL MOTOR
- CARGA DEL MOTOR
- SENSOR ECT
- SENSOR MAF
- SENSOR MAF
- ANGULO INDICADO APP
- SENSOR PRESION DE REFUERZO
- PRESION DESEADA EN EL RIEL DE COMBUSTIBLE

- PRESION REAL DEL RIEL DE COMBUSTIBLE
- SENSOR DE VELOCIDAD VEHICULO
- SENAL IGNICION 1
- TIEMPO FUNCIONAMIENTO MOTOR
- ELF 300 4HK1-TC(C/RAIL\_EURO3)**
- VOLT ENCENDIDO
- BATERIA
- RALENTI DESEADO
- RPM VELOCIDAD DEL MOTOR
- SEN 1 APP(POSICION DE PEDAL DE ACELERADOR)
- SEN 2 APP(POSICION DE PEDAL DE ACELERADOR)
- TPS
- RAIL COMB DESEADA
- RAMPA COMBUSTIBLE
- RAIL COMB V
- RETROALIM PRESION DEL RAIL
- FRP (PRESION DE LA RAMPA DE COMBUSTIBLE)
- REGULADOR FRP (PRESION DE LA RAMPA DE COMBUSTIBLE)
- STATUS FUEL PUMP
- ECT TEMP REFRIGERANTE MOTOR
- ECT TEMP REFRIGERANTE MOTOR
- IAT TEMP AIRE DE ADMISION
- IAT TEMP AIRE DE ADMISION
- FT TEMP COMBUSTIBLE
- FT TEMP COMBUSTIBLE
- BARO PRESION BAROMETRICA
- ATM PRESION ATMOSFERICA
- POS DESEADA TURBOCOMPRESOR
- PRES SOBREALIMENTACION
- PRES SOBREALIMENTACION
- PRES SOBREALIMENTACION
- POS DESEADA EGR
- POS EGR
- SOLEN EGR 1
- POS 1 EGR
- POS 2 EGR
- POS 3 EGR
- APP (POSICION DEL PEDAL DEL ACELERADOR) NOMINAL ASR
- VELOCIDAD DEL VEHICULO
- AJUSTE COMB CIL 1
- AJUSTE COMB CIL 2
- AJUSTE COMB CIL 3
- AJUSTE COMB CIL 4
- MOTOR MARCHA
- SW CALENTAM DEL MOTOR
- SW LLAVE ENCENDIDO
- SW LLAVE ENCENDIDO START
- SW PEDAL EMBRAGUE
- SW PUNTO MUERTO
- SW FRENO DE ESTACIONAMIENTO
- SW FRENO DE ESCAPE
- VALVULA FRENO ESCAPE
- SW TDF
- MARIPOSA MANDO TOMA DE FUERZA
- MARIPOSA MANDO TOMA DE FUERZA
- SUBIDA RALENTI
- SW CRUISE CONTROL
- SW SET CRUCERO
- SW RESET CRUCERO
- SW CANCEL CRUCERO
- SW A/C
- SOLIC CORTE FRENO ESCAPE POR MODULO DEL ABS
- SOLIC CORTE FRENO ESCAPE POR TCM
- SW FRIGORIFICO
- RELE BUJIAS INCANDESCENCIA
- TESTIGO BUJIAS INCANDESCENCIA
- NIVEL ACEITE MOTOR
- ELF 300 4JJ1-TC(C/RAIL\_EURO3)**
- VOLT ENCENDIDO
- BATERIA
- RALENTI DESEADO
- RPM

- SEN 1 APP(POSICION DE PEDAL DE ACELERADOR)
- SEN 2 APP(POSICION DE PEDAL DE ACELERADOR)
- TPS
- PRES RAIL COMB DESEADA
- PRES RAMPA COMBUSTIBLE
- SENSOR PRESION RAIL COMBUSTIBLE
- MODO RETROALIMENTACION PRESION RAIL
- ORDEN REGULADOR FRP(PRESION DE LA RAMPA DE COMBUSTIBLE)
- REALIMENTACION REGULADOR FRP(PRESION DE LA RAMPA DE COMBUSTIBLE)
- STATUS FUEL PUMP
- ECT TEMP REFRIGERANTE MOTOR
- ECT TEMP REFRIGERANTE MOTOR
- IAT TEMP AIRE DE ADMISION
- IAT TEMP AIRE DE ADMISION
- FT TEMP COMBUSTIBLE
- FT TEMP COMBUSTIBLE
- BARO
- PRESION ATMOSFERICA
- PRESION SOBREALIMENTACION
- PRESION SOBREALIMENTACION
- POS DESEADA EGR
- POS EGR
- SOL EGR 1
- POS 1 EGR
- POS 2 EGR
- POS 3 EGR
- TPS NOMINAL
- TPS
- TPS
- SOL MARIPOSA DE ADMISION
- APP (POSICION DEL PEDAL DEL ACELERADOR) NOMINAL ASR
- VELOCIDAD DEL VEHICULO
- CILINDRO 1 AJUSTE DE COMBUSTIBLE
- CILINDRO 2 AJUSTE DE COMBUSTIBLE
- CILINDRO 3 AJUSTE DE COMBUSTIBLE
- CILINDRO 4 AJUSTE DE COMBUSTIBLE
- STATUS MOTOR EN MARCHA
- SW CALENTAMIENTO MOTOR
- SW LLAVE ENCENDIDO EN ON
- SW LLAVE ENCENDIDO EN START
- SW PEDAL EMBRAGUE
- SW PUNTO MUERTO
- SW FRENO ESTACIONAMIENTO
- SW FRENO ESCAPE
- VALVULA FRENO ESCAPE
- SW TDF
- MARIPOSA MANDO DE TOMA DE FUERZA
- MARIPOSA DE MANDO DE TOMA DE FUERZA
- SUBIDA DEL RALENTI
- SEÑAL A/C
- SOLICITUD CORTE FRENO ESCAPE DEL MODULO ABS
- SOLICITUD CORTE FRENO ESCAPE DEL TCM
- SW FRIGORIFICO
- RELE BUJIAS INCANDESCENCIA
- TESTIGO BUJIAS INCANDESCENCIA
- NIVEL ACEITE MOTOR
- ELF 200 4HK1-TC(C/RAIL\_EURO2)**
- VOLT ENCENDIDO
- BATERIA
- RALENTI DESEADO
- RPM

- SENSOR 1 APP(POSICION DE PEDAL DE ACELERADOR)
- SENSOR 2 APP(POSICION DE PEDAL DE ACELERADOR)
- TPS
- PRESION RAIL COMBUSTIBLE DESEADA
- PRESION RAMPA COMBUSTIBLE
- PRESION RAIL COMBUSTIBLE
- MODO RETRO PRESION RAIL
- FRP REGULADOR (PRESION DE LA RAMPA DE COMBUSTIBLE)
- FRP REALIMENTACION (PRESION DE LA RAMPA DE COMBUSTIBLE)
- STATUS FUEL PUMP
- ECT TEMPERATURA REFRIGERANTE MOTOR
- ECT TEMPERATURA REFRIGERANTE MOTOR
- IAT TEMPERATURA DEL AIRE DE ADMISION
- IAT TEMPERATURA DEL AIRE DE ADMISION
- FT TEMPERATURA COMBUSTIBLE
- FT TEMPERATURA COMBUSTIBLE
- BARO
- PRESION ATMOSFERICA
- POS TURBOCOMPRESOR DESEADA
- PRESION SOBREALIMENTACION
- PRESION SOBREALIMENTACION
- POS DESEADA EGR
- POS EGR
- SOL EGR 1
- POS 1 EGR
- POS 2 EGR
- POS 3 EGR
- APP(POSICION DEL PEDAL DEL ACELERADOR) NOMINAL ASR
- VELOCIDAD DEL VEHICULO
- CILINDRO 1 AJUSTE COMBUSTIBLE
- CILINDRO 2 AJUSTE COMBUSTIBLE
- CILINDRO 3 AJUSTE COMBUSTIBLE
- CILINDRO 4 AJUSTE COMBUSTIBLE
- STATUS MOTOR EN MARCHA
- SW CALENTAMIENTO MOTOR
- SW LLAVE ENCENDIDO
- SW LLAVE ENCENDIDO EN START
- SW PEDAL EMBRAGUE
- SW PUNTO MUERTO
- SW FRENO ESTACIONAMIENTO
- SW FRENO ESCAPE
- ORDEN VALVULA FRENO ESCAPE
- SW TDF
- MARIPOSA MANDO TOMA FUERZA
- MARIPOSA MANDO TOMA FUERZA
- SUBIDA DEL RALENTI
- SW PRINCIPAL VELOCIDAD CRUCERO
- SW AJUSTE VELOCIDAD CRUCERO
- SW REANUDACION CTRL VELOCIDAD
- SW CANCELACION CTRL VELOCIDAD
- SEÑAL A/C
- SOLICITUD CORTE FRENO ESCAPE DEL MODULO ABS
- SOLICITUD CORTE FRENO ESCAPE DEL TCM
- SW FRIGORIFICO
- RELE BUJIAS INCANDESCENCIA
- TESTIGO BUJIAS INCANDESCENCIA
- SW NIVEL ACEITE MOTOR
- ELF 200 4JJ1-TC(C/RAIL\_EURO2)**

- VOLT DE ENCENDIDO
- BATERIA
- RALENTI DESEADO
- RPM
- SENSOR 1 APP(POSICION DE PEDAL DE ACELERADOR)
- SENSOR 2 APP(POSICION DE PEDAL DE ACELERADOR)
- POS PEDAL ACELERADOR
- RAIL COMBUSTIBLE DESEADA
- RAMPA COMBUSTIBLE
- RAIL COMBUSTIBLE
- MODO RETROALIMENTACION PRESION RAIL
- REGULADOR FRP(PRESION DE LA RAMPA DE COMBUSTIBLE)
- REALIMENTACION REGULADOR FRP (PRESION DE LA RAMPA DE COMBUSTIBLE)
- STATUS FUEL PUMP
- ECT TEMPERATURA REFRIGERANTE DEL MOTOR
- ECT TEMPERATURA REFRIGERANTE DEL MOTOR
- IAT TEMPERATURA AIRE DE ADMISION
- IAT TEMPERATURA AIRE DE ADMISION
- FT TEMPERATURA COMBUSTIBLE
- FT TEMPERATURA COMBUSTIBLE
- BARO
- PRESION ATMOSFERICA
- PRESION SOBREALIMENTACION
- PRESION SOBREALIMENTACION
- POS DESEADA EGR
- POS EGR
- SOLENOIDE EGR 1
- POS 1 EGR
- POS 2 EGR
- POS 3 EGR
- POS NOMINAL MARIPOSA ADMISION
- TPS
- POSICION MARIPOSA DE ADMISION
- SOLENOIDE MARIPOSA DE ADMISION
- APP (POSICION DEL PEDAL DEL ACELERADOR) NOMINAL ASR
- VELOCIDAD DEL VEHICULO
- CILINDRO 1 AJUSTE DE COMBUSTIBLE
- CILINDRO 2 AJUSTE DE COMBUSTIBLE
- CILINDRO 3 AJUSTE DE COMBUSTIBLE
- CILINDRO 4 AJUSTE DE COMBUSTIBLE
- STATUS MOTOR EN MARCHA
- SW CALENTAMIENTO MOTOR
- SW LLAVE ENCENDIDO EN ON
- SW LLAVE ENCENDIDO EN START
- SW PEDAL EMBRAGUE
- SW PUNTO MUERTO
- SW FRENO ESTACIONAMIENTO
- SW FRENO ESCAPE
- ORDEN VALVULA FRENO ESCAPE
- SW TDF
- MARIPOSA MANDO TOMA DE FUERZA
- MARIPOSA MANDO TOMA DE FUERZA
- SUBIDA RALENTI
- SEÑAL A/C
- SOLIC CORTE FRENO ESCAPE MODULO ABS
- SOLIC CORTE FRENO ESCAPE TCM
- SW FRIGORIFICO
- RELE BUJIAS INCANDESCENCIA
- TESTIGO BUJIAS INCANDESCENCIA