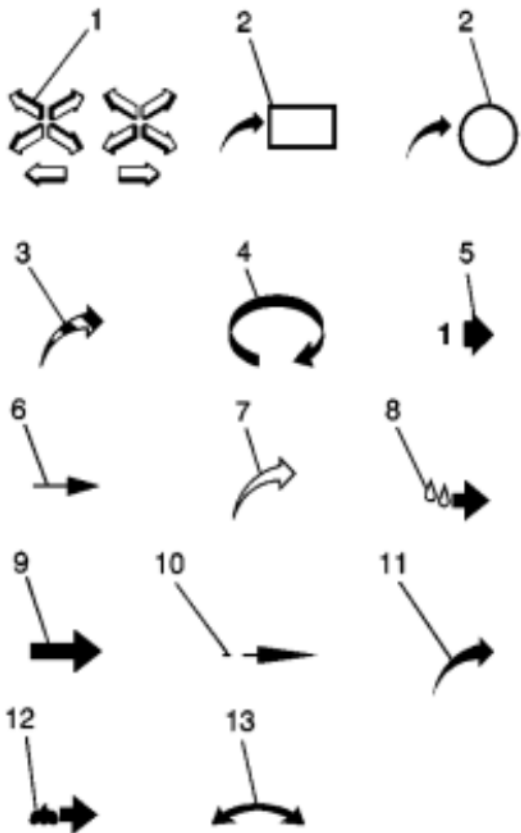




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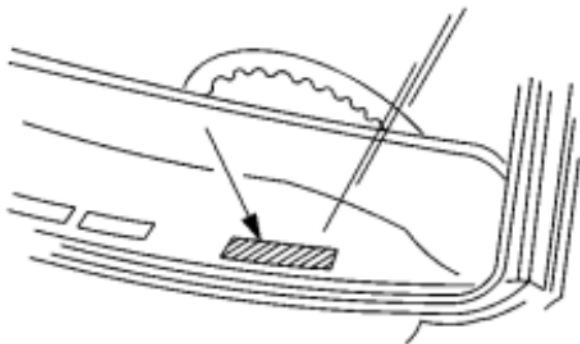
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- (1) Front of Vehicle
- (2) View Detail
- (2) View Detail
- (3) Ambient Air Mixed with Another Gas or Indicate Temperature Change
- (4) Motion or Direction
- (5) View Angle
- (6) Dimension (1:2)
- (7) Ambient/Clean Air Flow or Cool Air Flow
- (8) Lubrication Point- Oil or Fluid
- (9) Task Related
- (10) Sectioning (1:3)
- (11) Gas Other Than Ambient Air or Hot Air Flow
- (12) Lubrication Point- Grease or Jelly
- (13) Multidirectional Arrow

Vehicle, Engine and Transmission ID and VIN Location, Derivative and Usage



The vehicle identification number (VIN) plate is the legal identifier of the vehicle. The VIN plate is located on the upper left corner of the instrument panel (I/P) and can be seen through the windshield from the outside of the vehicle:

Position	Definition	Character	Description
1	Country of Origin	K	Asia
2	Manufacturer	L	Korea
3	Make	1	Chevrolet
4	Carline	T	T100/T300 Series
5	Transmission	F	FWD (Forward Wheel Drive), MT
		A	FWD (Forward Wheel Drive), AT
6-7	Body Style	69	Sedan, 4-Door, 4 Window, Notchback
		48	Sedan, 4-Door, 4 Window, Hatchback
8	Engine Type	3	RPO LDC Engine - Gas, 4 Cylinder, 1.2L, MFI, DOHC, PT-JV, Variable Camshaft Phasing
		F	RPO LDD Engine - Gas, 4 Cylinder, 1.4L, MFI, DOHC, Variable Camshaft Phasing, FAM 0
		E	RPO LDE Engine - Gas, 4 Cylinder, 1.6L, MFI, DOHC, VVT, Variable Camshaft Phasing, Variable Intake Module (VIM)
		G	RPO LDV Engine - Diesel, 4 Cylinder, 1.3L, L4, DI, DOHC, Turbo, 55 KW, 190NM
		R	RPO LSF Engine - Diesel, 4 Cylinder, 1.3L, CRI, DOHC, Turbo-VGT
		0	RPO LFJ Engine - Flexible Fuel, (Gas/ALc), 4 Cylinder, 1.6L, MFI, E100
		H	RPO L2N Engine - Gas, 4 Cylinder, 1.4L, MFI, L4, DOHC, FAM 0, 74 KW, E20 MAX, GME

9	Purpose	9	Emission System - EEC 09 (Euro-5)
10	Model Year	C	2012 (VZC)
11	Plant Location	B	Bupyung
12-17	Plant Sequence Number	—	Plant Sequence Number

1.2L (LDC) or 1.4L (L2N/LDD) Engine ID and VIN Derivative Location

Refer to Engine Identification .

1.3L (LDV/LSF) Engine ID and VIN Derivative Location

Refer to Engine Identification .

1.6L (LDE/LFJ) Engine ID and VIN Derivative Location

Refer to Engine Identification .

6T30/6T40/6T45/6T50 (MH9) Transmission ID and VIN Derivative Location

Refer to Transmission Identification Information .

D16 (MFH/MXP) Transmission ID and VIN Derivative Location

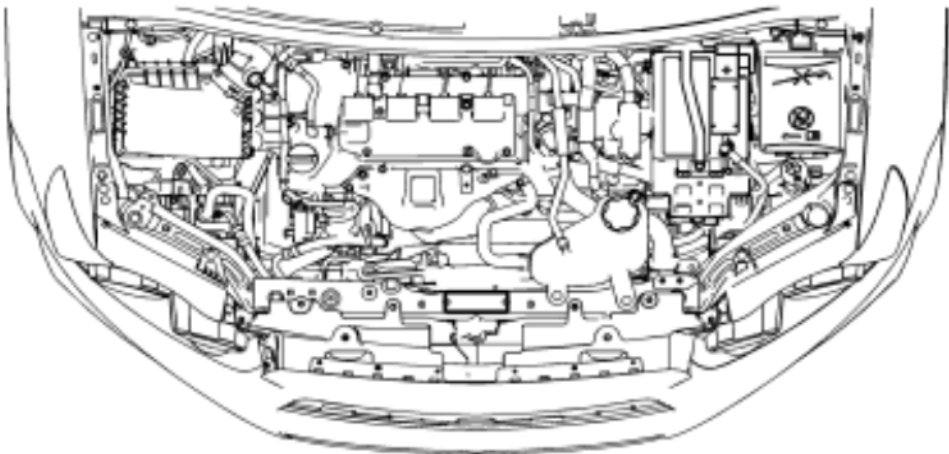
Refer to Transmission Identification Information .

M20-6 (MZ7) Transmission ID and VIN Derivative Location

Refer to Transmission Identification Information .

Vehicle Certification, Tire Placard, Anti-Theft, and Service Parts ID Label

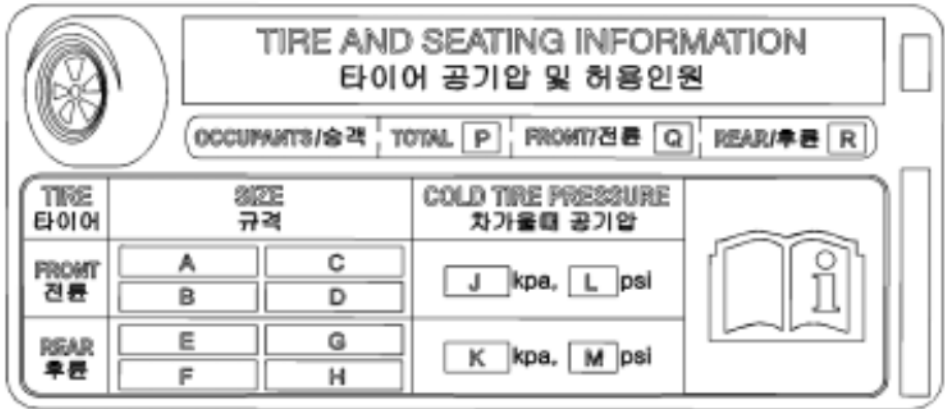
Certification Plate Location



The vehicle identification number (VIN) plate is attached to the top of the front end upper tie bar which is located under the radiator opening upper cover.

10 Matiz - Identification Plate Location

Tire Placard



The tire placard label is located on the driver side B- pillar and displays the following assessments:

- Tire size
- Tire pressure
 - Front
 - Rear
 - Various loading conditions

RPO Code List

The following table provides the description of the Regular Production Option (RPO) codes that are available on the vehicle. The vehicle's RPO list is printed on the Service Parts Identification Label.

RPO	Description
01A	Trim Color Seat - Jet Black VAR 1
01E	Trim Color Seat - DK Titanium
01K	Trim Color Seat - Brick
01S	Trim Color Seat - MED Titanium
02R	Trim Color Seat - MED Cashmere
02Y	Trim Color Seat - Jet Black & Stitching Brick
1A9	Trim Color Door Panel - MED Cashmere
1AF	Trim Color Door Panel - DK Titanium
1BF	Trim Color Door Panel - Brick
4AA	Interior Trim - Jet Black
4AQ	Interior Trim - VDK Pewter
5EA	Equipment - Package, CO2 - Reduction
9L3	Tire Spare - None
A33	Window - Power Operated, Rear DRS
A55	Window - Power Operated, Driver

A60	Lock Control Right Rear Compartment – Lid, Tailgate, Key Activated
A66	Window - Power Operated, Passenger
A69	Restraint - Seat Belt Tensioner, Front, VAR. 2
A70	Restraint - Seat Belt Tensioner, Front
A90	Lock Control RR CMPT - LID, REM CONT ELEC Release
A94	Lock Control RR CMPT - LID, REM CONT Manual Release
AAL	Restraint - Knee, Bolster, LH / RH
ABR	Window - Manual Operated, Front Door
ADL	Restraint System - Seat, Inflatable, Driver & Passenger, Single Stage
AE2	Latch - Rear Compartment, Safety, Manual Release
AG5	Adjuster Passenger Seat - Manual, 2 Way
AH3	Adjuster Front Seat - Manual, 4 Way, Driver
AH9	Adjuster Front Seat – Manual, 2 Way, Driver
AHU	Restraint Provisions - Belts, Adjuster, Height, Front
AJ3	Restraint System – Seat, Inflatable, Driver, Front
AJC	Restraint - Head, Front Seat, Up / Down Adjustment
AJD	Restraint - Head, Front Seat, Up / Down, Fore / Aft Adjustment, Folding Passenger

AJG	Restraint System - Seat, Inflatable, Driver & Passenger, Front & Seat Side, Single Stage
AKJ	Windshield Style - Shade Band
AKM	Window Type - Clear
AKN	Window Type - Tinted
AKP	Window Type - Solar Absorbing
AL0	Sensor Indicator - Inflatable Restraint, Front Passenger / Child Presence Detector
AM7	Seat Rear – Folding
AMA	Seat Rear – Split Back, Folding, Headrest
AN1	Seat Rear - Bench
AQ2	Net – Convenience, Package
AQP	Restraint - Head, Rear Seat, Center
AR1	Restraint System – (None)
AR7	Seat - Front BKT, Standard
AT7	Restraint System Rear – Seat, SHLDR, RETR, 3 Point, 3 SHLDR
AU3	Lock Control – Side Door, Electronic
AWB	Restraint System Rear – Seat, LH and RH/ELR and CTR/2 Point
AXG	Window - Power Operated - Express Driver Up / Down

AY0	Restraint System – Seat, Inflatable, Driver and Passenger Front, Seat Side, Roof Side
AYC	Restraint System - Seat, Inflatable, Driver & Passenger Front, Seat Side, Roof Side, Single Stage
AYF	Restaint System - Seat, Inflatable, Driver & Passenger Front, Front Seat Side & Rear Seat Side, Roof Side, Knee
B37	Covering – Floor Mat, Front and Rear, Auxiliary
B9U	Lock Control RR CMPT - L/Gate REM CONT, ELEC Open / Close
BA8	Compartment – Stowage, Front Seat, Passenger
BAH	Equipment - Security System, Immobilization, Step Two
BCM	Covering - Load Compartment, Movable
BCO	Plant Code - Bogota, Colombia
BGY	Plant Code - Dong Yue, China
BPF	Bumper Provisions - Front, Lower Spoiler Edge
BTT	Alarm - Remote Panic
BTV	Remote Start - Engine
BUP	Plant Code - Bupyeong 1, Korea
BXQ	Ornamentation - EXTR, PLR APLQ, Reveal, Black
C25	Wiper System - Rear Window, Intermittent
C32	Heater - Heating / Defroster System, Reinforced, Electric

C35	Heater - Duct, RR PASS
C41	HVAC System - Heater, Outside Air, with Fan
C49	Defogger - RR Window, Electric
C60	HVAC System - Air Conditioner FRT, MAN Controls
C7B	HVAC System - Air Conditioner FRT, HTR Core Not Required, Fan Speed Control Only
C80	Switch - Directional Signal, Wiper, Reverse Mount, STRG WHL
C91	Lamp - INTR, Roof, Courtesy
C95	Lamp, INTR, Roof, Courtesy & Dual Reading
C99	Switch - INFL RST I/P MDL MAN Suppression
CAI	Lamp - Tail & Stop, w/o Fog, ECE
CD4	Wiper System - Windshield, Pulse, Variable Delay
CF5	Roof - Sun, Glass, Sliding, ELEC
D05	Arm Rest - Front Seat, Driver
D31	Mirror I/S R/V - Tilt
D6J	Mirror I/S Front VAN - Sunshade, w/o Mirror, Passenger, w/ Mirror
D7A	Handle O/S Door - Body Color, Chrome Strip
D72	Handle O/S Door - Black

D75	Handle O/S Door - Body Color
D87	Handle - O/S, L/Gate, R/CMPT, Black
D91	Handle - O/S, L/Gate, R/CMPT, Color
D90	Sensor - Front Airbag (EFS) - Single
DC8	Mirror O/S - LH & RH, Remote Control, Manual Folding, Black
DG2	Mirror O/S - LH & RH, Remote Control, Manual Folding, Color
DG6	Mirror O/S - LH & RH, Remote Control, Electric, Manual Folding, Heated, Color
DHG	Mirror I/S Front VAN - Sunshade, Driver & Passenger, w/o Mirror
DL6	Mirror O/S - LH & RH, Remote Control, Electric, Manual Folding, Color
DL7	Mirror O/S - LH & RH, Remote Control, Electric, Heated, Power Folding, Color
DNJ	Mirror I/S Front VAN - Sunshade, w/Mirror, w/o Cover
DLV	Mirror I/S Front VAN - Sunshade, Driver & Passenger, w/Mirror & Cover
DUJ	Ashtray - Smoker's Package
E17	Bumper – 2.5mph
E19	Bumper – 5.0mph
E21	Handle - I/S, Door, Chrome
E22	Handle – Assist, Rear

E27	Handle – Assist, Passenger
E3E	Handle - O/S, L/Gate, R/CMPT, Chrome
E7Y	Fire Extinguisher – 2 kg
E91	Pocket – Front Seat Back, Passenger
EBL	Trim Seat - Cloth, Flash
EBM	Trim Seat - Cloth, Brevé
ECE	Trim Seat - Leather (TBD1-GSV)(GMDAT)
F77	Ratio - Transaxle Final Drive 4.11
FE1	Suspension System – Soft Ride
FE4	Suspension System – Special Ride and Handling
FE9	Certification - Emission, Federal
FHA	Fuel System - Electronic, Returnless
FHB	Ratio - Transaxle Final Drive 3.47
FHF	Trim Door - Hard Touch Paint
FHG	Trim Door - Soft Touch Paint
FHN	Vehicle Fuel - Gasoline E5
FHP	Vehicle Fuel - Gasoline E20

FHS	Vehicle Fuel - Gasoline E85
FHT	Vehicle Fuel - Gasoline E100
FHY	Vehicle Fuel - Diesel B10
FP9	Ratio - Transaxle Final Drive 3.55
FV1	Ratio - Transaxle Final Drive 3.72
FV2	Ratio - Transaxle Final Drive 4.18
FV5	Ratio - Transaxle Final Drive 4.19
FV7	Ratio - Transaxle Final Drive 4.29
FVE	Ratio - Transaxle Final Drive 4.63
FVG	Ratio - Transaxle Final Drive 4.64
FX1	Ratio - Transaxle Final Drive 3.94
FX3	Ride And Handling - Automatic Electronic Controlled
FXB	Ratio - Transaxle Final Drive 3.65
FY2	Ratio - Transaxle Final Drive 3.74
G83	Ratio - Transaxle Final Drive 4.47
GAN	Primary Color - Exterior, Switchblade Silver Met (G) 636R
GAR	Primary Color - Exterior, Carbon Flash Met (G) 501Q

GAZ	Primary Color - Exterior, Olympic White (G) 8624
GBA	Primary Color - Exterior, Black (G) 8555
GBE	Primary Color - Exterior, Crystal Claret Tintcoat (G) 505Q
GBV	Primary Color - Exterior, Cyber Gray MET (G) 637R
GCD	Primary Color - Exterior, Bright White (686H)
GCN	Primary Color - Exterior, Victory Red 9260
GCO	Primary Color - Exterior, SCO Yellow (9414)
GCR	Primary Color - Exterior, Inferno Orange MET (502Q)
GCW	Primary Color - Exterior, Misty Lake Met (683R)
GEL	Primary Color - Exterior, Dynamic Orange Met 728R
GGE	Primary Color - Exterior, Super Red (G) 717R
GIY	Primary Color - Exterior, Galaxy Silver MET (519F)
GJP	Primary Color - Exterior, Grenada Black (446P)
GLF	Primary Color - Exterior, Space Blue Metallic 819T
GMN	Primary Color - Exterior, Desert Bloom (876S)
GOB	Primary Color - Exterior, Cherry Red MET (G) 715J
GQJ	Primary Color - Exterior, Grand Canyon Brown MET (894T)

GQM	Primary Color - Exterior, Boracay Blue MET (895T)
GQV	Primary Color - Exterior, Flame Red
GQW	Primary Color - Exterior, Urban Grey (658R)
J93	Brake System - Power, FRT Disc, RR Drum, ABS, 15"
J94	Brake System - Power, FRT Disc, RR Drum, 15"
J97	Brake System - Power, FRT Disc, RR Drum, ABS, 14"
JBD	Booster - Brake, Single Rate
JBE	Booster - Brake, Dual Rate
JDE	Bumper - Front & Rear, Lightweight
JPW	Brake System - Power, FRT Disc, RR Drum, 14"
K12	Filter – Air, Pollutant
K33	Cruise Control - Automatic, Electronic, Speed Governor
K34	Cruise Control - Automatic, Electronic
K4E	Battery – LN3, AGM, 12V, 70AH, 760 ENCCA
K09	Generator – 120 Amp
K60	Generator – 100 Amp
K97	Generator – 80 Amp

KA1	Heater - Seat, Front
KE3	Knob - TRANS CONT Lever, Chrome
KG9	Generator – 140Amp
KI2	Knob - TRANS CONT Lever, Polyurethane
KL7	Conversion – Propane Gas (LPGas)
KL9	ENG Control - Stop/Start SYS
KNV	Knob - TRANS CONT Lever, Satin Silver, Chrome
KPK	Heater - Oil Pan
KPL	Cap - Fuel Fill, Locking
KRK	Knob - TRANS CONT Lever, Leather, Satin Silver, Chrome
KTD	Key - Primary Rigid, Additional Rigid
KTF	Key - Primary Foldable, Additional Foldable
KTH	Lock Control - Side Door Lock / Unlock
KTI	Kit, Tire - Inflator
KTJ	Lock Control - Side Door Lock / Unlock, Trunk Release
KTK	Lock Control - Side Door Lock / Unlock, Remote Start
KTL	Lock Control - Side Door Lock / Unlock, Trunk Release, Remote Start

KTM	Key - Primary Foldable, Additional Rigid
KTN	Equipment - Additional Key (No Buttons)
L2I	Engine - Gas, 4 Cyl, 1.4L, MFI, L4, DOHC, FAM O, 74 KW, E85 MAX, GME
L2N	Engine - Gas, 4 Cyl, 1.4L, MFI, L4, DOHC, FAM O, 74 KW, E20 MAX, GME
LCU	Engine - Gas, 4 Cyl, 1.4L, MFI, DOHC, PDA, FAM A/B, GMDAT
LDC	Engine - Gas, 4 Cyl, 1.2L, MFI, DOHC, PT-JV, Variable Camshaft Phasing
LDD	Engine - Gas, 4 Cyl, 1.4L, MFI, DOHC, Variable Camshaft Phasing, FAM 0
LDE	Engine - Gas, 4 Cyl, 1.6L, MFI, DOHC, VVT, Variable Camshaft Phasing, Variable Intake Module (VIM)
LDV	Engine - Diesel, 4 Cyl, 1.3L, L4, DI, DOHC, Turbo, 55KW, 190NM
LED	Engine - Gas, 4Cyl, 1.6L, MFI, DOHC, VVT, Variable Intake Module (VIM), E85 MAX
LFJ	Engine - Gas, 4 Cyl, 1.6L, MFI, E100 MAX
LHD	Vehicle Drive – Left Hand Drive
LSF	Engine - Diesel, 4 Cyl, 1.3L, CRI, DOHC, Turbo-VGT
LUV	Engine - Gas, 4 Cyl, 1.4L, MFI, DOHC, Turbo, VVT, ALUM, GME, E85 MAX
LUW	Engine - Gas, 4 Cyl, 1.8L, MFI, 103KW, DOHC, E85 MAX
LWD	Engine - Gas, 4Cyl, 1.2L, MFI, DOHC, 51KW
LWE	Engine - Gas, 4 Cyl, 1.8L, MFI, DOHC, VVT, 103 KW, GME

M26	Transmission - Manual 5Speed, Opel, 65 MM, 1.96 2ND, 1.323 3RD, 0.946 4TH, 0.756 5TH, F17 (WR)
M97	Shifter Interlock - Brake, TRANS
MDC	Molding B/S Upper - Bright
MEM	Transmission - Manual FWD 5Speed, Brazil, 180MM, 3.909 1ST, 0.674 5TH (F17; UR)
MFH	Transmission - Manual 5Speed, D16 M/CR
MH9	Transmission - Auto 6Speed, HMD, X24F
MX3	Transmission - Manual 5Speed, Y4M SHD, 1ST 3.667, 5TH 0.761
MXP	Transmission - Manual 5Speed, GMDAT, D16 Intermediate Semi-wide, 72MM, 3.727 1ST, 0.763 5TH
MZ4	Transmission - Manual 6Speed, Opel, 76.5 MM, 3.82 1ST, 0.615 6TH, (M32 WR)
MZ7	Transmission - Manual 6Speed, Opel, 76.5 MM, 4.273 1ST, 0.614 6TH (M20)
N08	Lock Control - Fuel Filler Door, REM CONT
N12	Exhaust System - Rear Exit
N30	Steering Wheel - Deluxe
N33	Steering Column - Tilt Type
N34	Steering Wheel - Leather, 3Spokes
N37	Steering Column - Tilt, Telescoping
N40	Steering - Power, Non-Variable Ratio

N45	Steering Wheel - 3Spokes
N54	Steering Wheel - 3Spokes, Sport
N81	Tire Spare - Full Size
NA3	Emission System - Japan
NCG	Lock - Electrical Child Lock System (Rear Door Latch)
NE1	Certification - Emission, Geographically Restricted Registration for Vehicles up to 14,000 LBS GVW
NE9	Emission System - EEC09
NF7	Emission System - Federal, NLEV
NJ1	Steering - Power, Non-variable Ratio, Electric
NPH	Exhaust System - Heavy Duty
NQU	Emission System - Korean, ULEV
NT3	Emission System - EEC00
NT4	Emission System - EEC05
NT7	Emission System - Federal, Tier 2
NU6	Emission System - California, PZEV
NZA	Control - Steering Wheel, Wireless Interface, Radio & Phone, Handsfree Controls
ORN	Plant Code - Orion, MI, USA

PZY	Plate - Skid Front & Rear
Q1G	Tire All - 185/75R14 SL 89H BW HW1
Q1H	Tire All - P195/65R15 SL 89H BW AL2
Q1W	Tire All - 195/65R15 SL 91H BW HW2
Q1X	Tire All - 205/55R16 SL 91H BW HW3
Q3O	Tire All - P205/50R17 SL 88V BW AL3
Q5I	Tire All - 205/50R17 SL 89V BW HW3
Q6K	Tire All - 195/65R15 SL 91H BW HW3
Q6L	Tire All - 205/55R16 SL 91H BW HW4
Q8E	Jack – Mechanical, with Tools
QB0	Tire All - P185/75R14 SL 89H BW ALS
QLG	Tire All - P205/55R16 SL 89H BW AL3
QZF	Tire All - P195/65R15 SL 89H BW AL2 (Low Resistance)
RHD	Vehicle Drive – Right Hand Drive
RQ4	Tire All - 195/65R15 SL 91H BW HW2 (Low Resistance)
RRB	Wheel - 14x5.5, J, Steel, Design 1
RRK	Wheel - 15x6.0, J, Aluminum, Design 1

RRL	Wheel - 15x6.0, J, Steel, Design 1
RRV	Wheel - 16x6.0, J, Aluminum, Design 1
RS7	Wheel - 17x6.5, J, Aluminum, Design 1
T39	Lamp - Turn Signal, AUX
T3U	Lamp – Front Fog
T3W	Lamp System - Daytime Running, Reduced Intensity Low Beam
T3X	Lamp System – Daytime Running, Regular Intensity Low Beam
T43	Spoiler - Rear
T44	Alarm – Overspeed Warning, Acoustical
T4A	Headlamps - Halogen
T67	Battery – LN3, FLA, 12V, 70AH, 512ENCCA
T83	Headlamps Control - Automatic On - Off
TB1	Lamp – Tail and Stop, Korea
TBU	Plant Code - 6 October City, Egypt
TCU	License Plate - Front & Rear Mounting, ECE
TD1	Reflector – Safety Triangle
TL6	Grille – Radiator, Black

TM7	Battery - LN2, FLA, 12V, 60AH, 438ENCCA
TN9	Battery - LN1, FLA, 12V, 50AH, 375ENCCA
TR1	Lamp - Tail & Stop
TR6	Headlamps Control - Leveling System, Manual
TS6	Lamp - Stop, High Level
TTV	Spoiler - Rear, LID / Liftgate, Sport
U04	Horn - Single Note
U18	Speedometer - Instrument, Kilometer
U25	Lamp - Interior, Rear Compartment, Courtesy
U2K	Digital Audio System - S-Band
U58	Radio Faceplate - Integrated Center Console
U68	Display - Driver Information Center
U71	Antenna - Roof, Radio
UBA	Antenna - Roof, Radio, GPS, Phone, S-Band XM
UC1	Speedometer - Instrument, Miles
UC3	Control - Steering Wheel, Radio & Phone, Redundant Controls
UD7	Sensor Indicator - Rear Parking Assist

UDB	Display Instrument – Driver Info Enhanced (Segmented)
UDG	Display Instrument – Trip Odometer (Segmented)
UE1	Communication System - Vehicle, G.P.S.1
UE3	Communication System - Vehicle, G.P.S.3
UG7	Theft Deterrent - Vehicle Tracking and Restart Prevention
UGM	Sensor Equipment - Outside Air Temperature Sensor
UH0	Indicator – Seat Belt Warning , LH
UH1	Indicator – Seat Belt Warning , RH
UH5	Indicator – Seat Belt Warning, Rear Seat
UH7	Radio - AM/FM Stereo, Seek / Scan, CD, ETR, Clock DSP, MP3 / WMA, USB, AUX / IN, Wireless Interface
UJ2	Indicator - Engine Oil Life
UJM	Tire Press Indicator - Manual Learn
UL5	Radio - (None)
UM7	Radio – AM/FM Stereo, Seek/Scan, Clock, ETR
UPF	Wireless Interface - Short Range, Voice REC
UQ9	Speaker System – (None)
UQJ	Restraint Provisions - Child, ISOFIX 2 Point Only

UQK	Restraint Provisions - Child, ISOFIX 2 Point Only, Point / LAT CH (INC 2 Top Tether Points)
UQL	Restraint Provisions - Child, ISOFIX 2 Point Only, Point / LAT CH (INC 3 Top Tether Points)
US8	Radio - AM/FM Stereo, Seek / Scan, CD, Auto Tone, Clock, ETR, MP3, RDS
USR	Receptacle - USB
UTJ	Theft Deterrent – Electrical, Unauthorized Entry
UTK	Theft Deterrent - Mechanical, Double Locking Latch
UW4	Speaker System – 4, Custom
UW6	Speaker System – 6, Custom
UY0	Battery – LN0, FLA, 12V, 40AH, 300ENCCA
V22	Grille – Radiator, Chrome
V48	Coolant – Engine Maximum Protection
V5M	Calibration - TCM, Neutral Idle Control
VD1	Provision Options - Europe
VD8	Provisions – First Aid Kit
VEE	Bumper Front - Body Color, Front & Rear
VGC	Protector - Film, Paint Etch Preventive
VHY	Protector – Body Sheet Metal, High Corrosion Preventive

VK8	Holder – Eyeglasses
VKD	License Plate - Front & Rear Mounting, SAE
VMO	Panel Center - Instrument, Graphite Silver MET
VMT	Bumper - Front Low Speed, Rear Light Weight
VYK	Panel Center - Instrument, Jet Black
W1Y	Control - Steering Wheel, Radio, Redundant Controls
WU5	Switch – I/P LP Dimmer
XL4	Chassis – Protection Kit, Engine Compartment
XL7	Frequencies Rating - 315 MHZ, Long Distance
XL8	Frequencies Rating - 433 MHZ
XX7	Radio – Provisions, Installation, VAR3
YF5	Certification - Emission, California
YG3	Ornamentation - EXTR, Head & Tail Lamps, Chrome Bezel
YG5	Ornamentation - EXTR, Head & Tail Lamps, High Gloss Finish
ZAA	Tire Spare - Compact

Fasteners

Table 1:[Metric Prevailing Torque Fastener Minimum Torque Development](#)
Table 2:[English Prevailing Torque Fastener Minimum Torque Development](#)

Metric Fasteners

This vehicle provides fastener dimensions using the metric system. Most metric fasteners are approximate in diameter to equivalent English fasteners. Make replacements using fasteners of the same nominal diameter, thread pitch, and strength.

A number marking identifies the OE metric fasteners except cross-recess head screws. The number also indicates the strength of the fastener material. A Posidrive® or Type 1A cross-recess identifies a metric cross-recess screw. For best results, use a Type 1A cross-recess screwdriver, or equivalent, in Posidrive® recess head screws.

GM Engineering Standards and North American Industries have adopted a portion of the ISO-defined standard metric fastener sizes. The purpose was to reduce the number of fastener sizes used while retaining the best thread qualities in each thread size. For example, the metric M6.0X1 screw, with nearly the same diameter and 25.4 threads per inch replaced the English 1/4-20 and 1/4-28 screws. The thread pitch is midway between the English coarse and fine thread pitches.

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The most commonly used metric fastener strength property classes are 9.8 and 10.9. The class identification is embossed on the head of each bolt. The English, inch strength classes range from grade 2 to grade 8. Radial lines are embossed on the head of each bolt in order to identify the strength class. The number of lines on the head of the bolt is 2 lines less than the actual grade. For example, a grade 8 bolt will have 6 radial lines on the bolt head. Some metric nuts are marked with a single digit strength identification number on the nut face.

The correct fasteners are available through GM SPO. Many metric fasteners available in the aftermarket parts channels are designed to metric standards of countries other than the United States, and may exhibit the following:

- Lower strength
- No numbered head marking system
- Wrong thread pitch

The metric fasteners on GM products are designed to new, international standards. The following are the common sizes and pitches, except for special applications:

- M6.0 X 1
- M8 X 1.25
- M10 X 1.5
- M12 X 1.75
- M14 X 2.00
- M16 X 2.00

Prevailing Torque Fasteners

Prevailing torque fasteners create a thread interface between the fastener and the fastener counterpart in order to prevent the fastener from loosening.

All Metal Prevailing Torque Fasteners

These fasteners accomplish the thread interface by a designed distortion or deformation in the fastener.

Nylon Interface Prevailing Torque Fasteners

These fasteners accomplish the thread interface by the presence of a nylon material on the fastener threads.

Adhesive Coated Fasteners

These fasteners accomplish the thread interface by the presence of a thread-locking compound on the fastener threads. Refer to the appropriate repair procedure in order to determine if the fastener may be reused and the applicable thread-locking compound to apply to the fastener.

10 Matiz General Information Figure 185364

A prevailing torque fastener may be reused ONLY if:

- The fastener and the fastener counterpart are clean and not damaged
- There is no rust on the fastener
- The fastener develops the specified minimum torque against its counterpart prior to the fastener seating

[Metric Prevailing Torque Fastener Minimum Torque Development](#)

Application	Metric	English
All Metal Prevailing Torque Fasteners		
• 6 mm	0.4 N·m	4 lbin
• 8 mm	0.8 N·m	7 lbin
• 10 mm	1.4 N·m	12 lbin
• 12 mm	2.1 N·m	19 lbin
• 14 mm	3 N·m	27 lbin
• 16 mm	4.2 N·m	37 lbin
• 20 mm	7 N·m	62 lbin
• 24 mm	10.5 N·m	93 lbin
Nylon Interface Prevailing Torque Fasteners		
• 6 mm	0.3 N·m	3 lbin
• 8 mm	0.6 N·m	5 lbin
• 10 mm	1.1 N·m	10 lbin
• 12 mm	1.5 N·m	13 lbin
• 14 mm	2.3 N·m	20 lbin
• 16 mm	3.4 N·m	30 lbin
• 20 mm	5.5 N·m	49 lbin

• 24mm	8.5 N·m	75 lbin
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English Prevailing Torque Fastener Minimum Torque Development

Application	Specification	
	Metric	English
All Metal Prevailing Torque Fasteners		
• 1/4 in	0.5 N·m	4.5 lbin
• 5/16 in	0.8 N·m	7.5 lbin
• 3/8 in	1.3 N·m	11.5 lbin
• 7/16 in	1.8 N·m	16 lbin
• 1/2 in	2.3 N·m	20 lbin
• 9/16 in	3.2 N·m	28 lbin
• 5/8 in	4 N·m	36 lbin
• 3/4 in	7 N·m	54 lbin
Nylon Interface Prevailing Torque Fasteners		
• 1/4 in	0.3 N·m	3 lbin
• 5/16 in	0.6 N·m	5 lbin
• 3/8 in	1 N·m	9 lbin
• 7/16 in	1.3 N·m	12 lbin
	1.8 N·m	16 lbin

• 1/2 in		
• 9/16 in	2.5 N·m	22 lbin
• 5/8 in	3.4 N·m	30 lbin
• 3/4 in	5 N·m	45 lbin

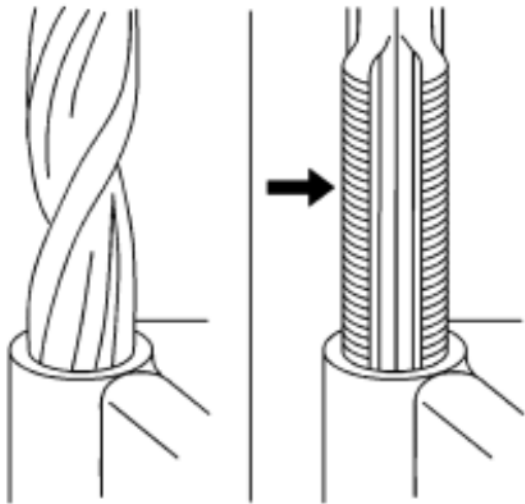
Thread Inserts

General Purpose Thread Repair Kits.

These kits are available commercially.

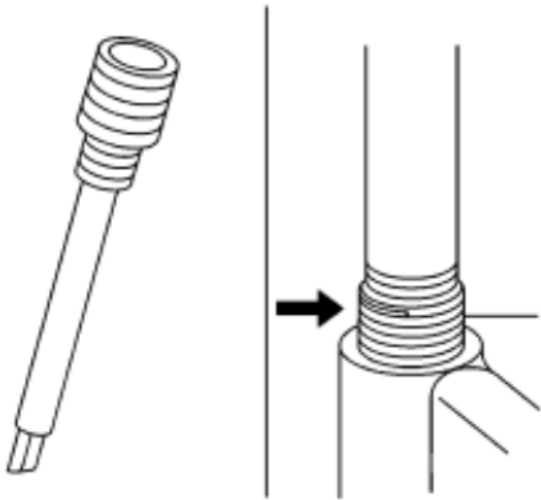
Repair Procedure

Warning: Refer to [Safety Glasses Warning](#) .



Note: Refer to the thread repair kit manufacturer instructions regarding the size of the drill and tap to use. Avoid any buildup of chips. Back out the tap every few turns and remove the chips.

1. Determine the size, the pitch, and the depth of the damaged thread. If necessary, adjust the stop collars on the cutting tool and tap to the required depth.
2. Drill out the damaged threads. Clean out any chips.
3. Lubricate the tap with light engine oil. Tap the hole. Clean the threads.



4. Thread the thread insert onto the mandrel of the installer. Engage the tang of the insert onto the end of the mandrel.
Note: The insert should be flush to one turn below the surface.
5. Lubricate the insert with light engine oil, except when installing in aluminum and install the insert.
6. If the tang of the insert does not break off when backing out the installer, break the tang off with a drift.

Door Lock and Ignition Lock Folding and Non-Folding Key Cutting

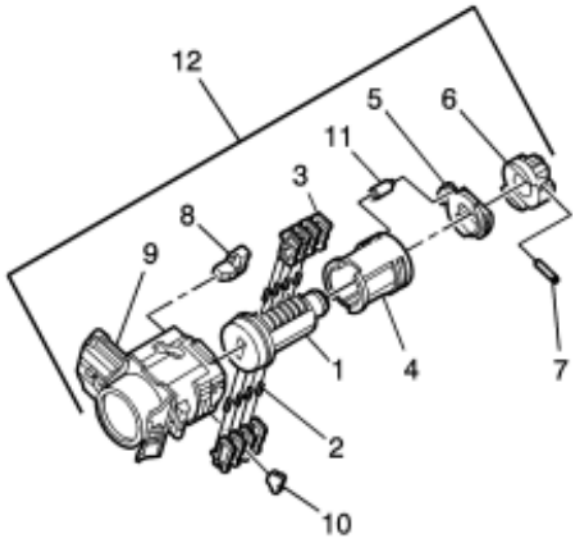
- High Security keys are available from the service parts system.
- Obtain the key code from the information card.
- Ask the Parts Distribution Center for a new coded key (based off of the information card).
- After receiving the new key, the dealer must program the immobilizer through the TECH 2.
- Inspect the new key operation in the lock cylinder. Ensure the new key operates effectively.

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Front Side Door Lock Cylinder Coding (Free Wheeling)

Special Tools

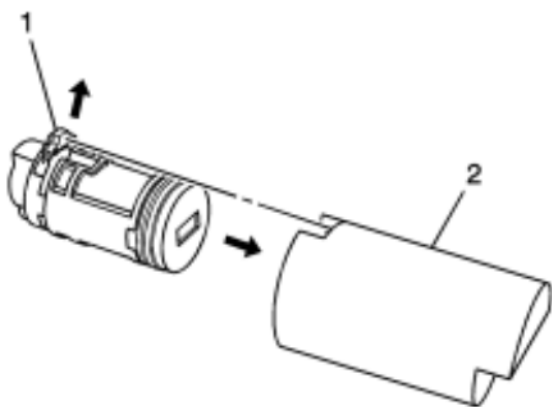
BO-49753 Assembly Tool



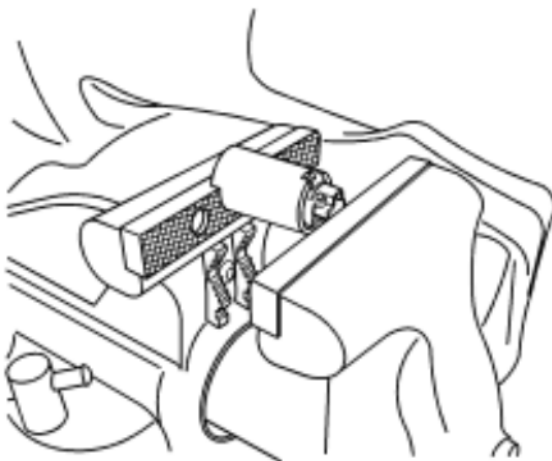
The door lock cylinder uses 8 of the 8 cut positions. The tumbler positions are staggered from side to side, 4 on one side and 4 on the other, are not self-retaining, and are not snap in.

Note: All lock cylinders for side milled keys have right and left tumblers. The location of the tooth of the tumbler determines whether it is right or left. Illustrations in this procedure show the right tumblers on the top and the left tumblers on the bottom. All tumblers are marked 1R, 1L, 2R, or 2L. The number being cut depth and the letter meaning right or left.

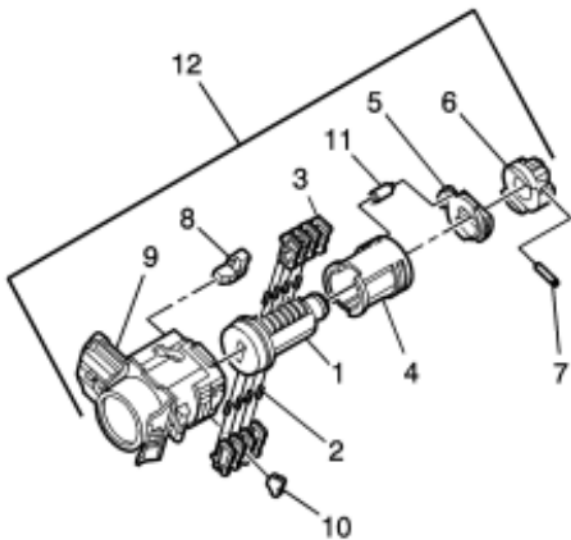
1. Hold the door lock cylinder(1) so the side with the 4tumbler spring pockets faces up, pocket nearest to the cylinder head.
2. Insert the tumbler springs(2) into the 4spring pockets. This side uses left tumblers.
3. Install the tumbler(3) for key cut position one in the slot nearest to the front of the lock cylinder. Install the remaining tumblers, key cut positions 3, 5, and 7, following the key code and same process. Press the tumblers in place until they are secure.
4. Check the correct loading of the tumblers by inserting the key into the cylinder. All tumblers should be flush with the lock cylinder body.
5. Turn the cylinder so the side with the 4tumbler spring wells faces up. This side uses right tumblers.
6. Insert the tumbler springs into the 4spring pockets.
7. The first tumbler closest to the front of the lock cylinder to be loaded will be the second key cut position, the second number in the key code. Install the remaining tumblers for the key cut positions 4, 6, and 8. Press the tumblers in place until they are secure.
8. Check the correct loading of the tumblers by inserting the key into the cylinder. All tumblers should be flush with the lock cylinder body.
9. Insert the key and lightly lubricate the cylinder body diameter and tumbler surfaces and a small amount in the head of the cylinder using the supplied grease.
10. Insert the sleeve(4) onto the cylinder assembly.
11. Insert the clutch(5) and driver(6) onto the cylinder(1).



12. Load the cylinder into the *BO-49753* assembly tool so that the clutch(1) indexes with the notch in the opening of the tool (2).

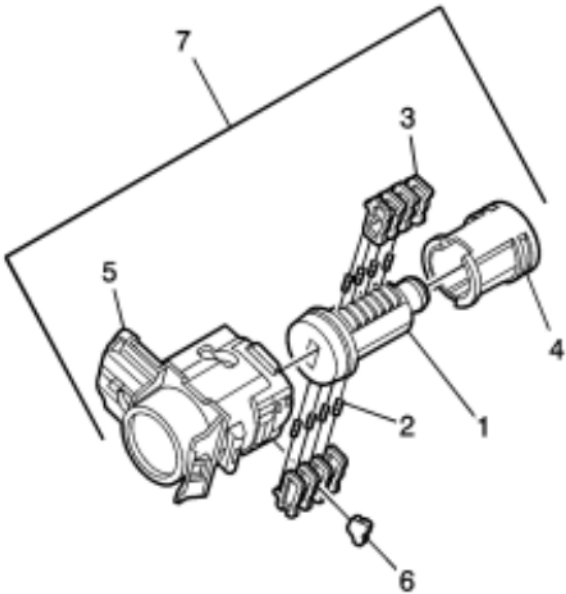


13. Load the assembly tool with the lock cylinder into a vice and tighten the vice ONLY enough to hold the tool and lock the cylinder in place.



14. Insert the roll pin(7) into the driver(6) and install it using a 1/16inch pin punch.
15. Insert the buffer(8) in the case(9), verify the buffer is properly seated.
16. Install the free wheel pin(11) in the sleeve(4) and clutch(5) and insert the assembly into the case(9).
17. With the lock cylinder assembly installed in the case(9), install the retainer(10) and stake the retainer in place using a small punch and hammer to peen the case material onto the exposed ends of the installed retainer(10).
18. Insert the key into the lock and function the lock to check for proper assembly and smooth operation.

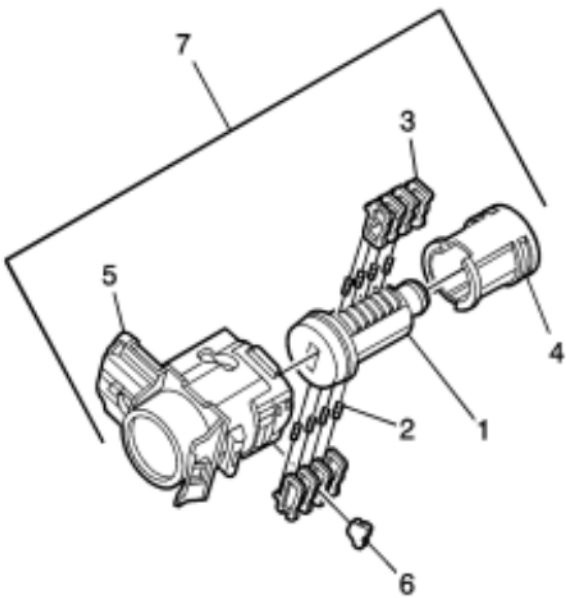
Front Side Door Lock Cylinder Coding (Non Free Wheeling)



The door lock cylinder uses 8 of the 8 cut positions. The tumbler positions are staggered from side to side, 4 on one side and 4 on the other, are not self-retaining, and are not snap in.

Note: All lock cylinders for side milled keys have right and left tumblers. The location of the tooth of the tumbler determines whether it is right or left. Illustrations in this procedure show the right tumblers on the top and the left tumblers on the bottom. All tumblers are marked 1R, 1L, 2R, or 2L. The number being cut depth and the letter meaning right or left.

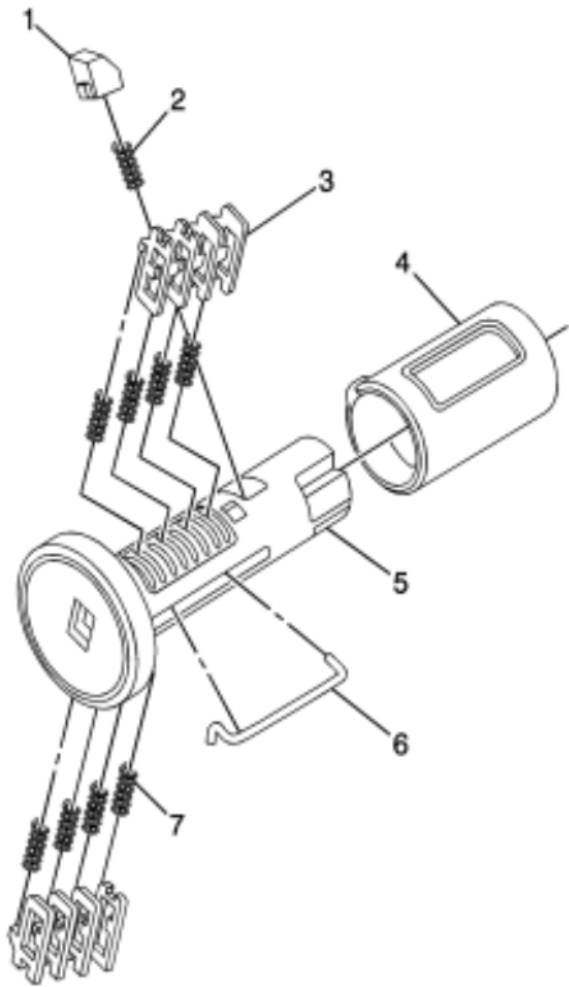
1. Hold the door lock cylinder(1) so the side with the 4 tumbler spring pockets faces up, pocket nearest to the cylinder head.
2. Insert the tumbler springs(2) into the 4 spring pockets. This side uses left tumblers.
3. Install the tumbler(3) for key cut position one in the slot nearest to the front of the lock cylinder. Install the remaining tumblers, key cut positions 3, 5, and 7, following the key code and same process. Press the tumblers in place until they are secure.
4. Check the correct loading of the tumblers by inserting the key into the cylinder. All tumblers should be flush with the lock cylinder body.
5. Turn the cylinder so the side with the 4 tumbler spring wells faces up. This side uses right tumblers.
6. Insert the tumbler springs into the 4 spring pockets.
7. The first tumbler closest to the front of the lock cylinder to be loaded will be the second key cut position, the second number in the key code. Install the remaining tumblers for the key cut positions 4, 6, and 8. Press the tumblers in place until they are secure.
8. Check the correct loading of the tumblers by inserting the key into the cylinder. All tumblers should be flush with the lock cylinder body.
9. Insert the key and lightly lubricate the cylinder body diameter and tumbler surfaces and a small amount in the head of the cylinder using the supplied grease.
10. Insert the sleeve(4) onto the cylinder assembly.



- 11. Insert the assembly into the case(5).
- 12. With the lock cylinder assembly installed in the case(5), install the retainer(6) and stake the retainer in place using a small punch and hammer to peen the case material onto the exposed ends of the installed retainer(6).
- 13. Insert the key into the lock and function the lock to check for proper assembly and smooth operation.

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Lock Cylinder Coding - Ignition

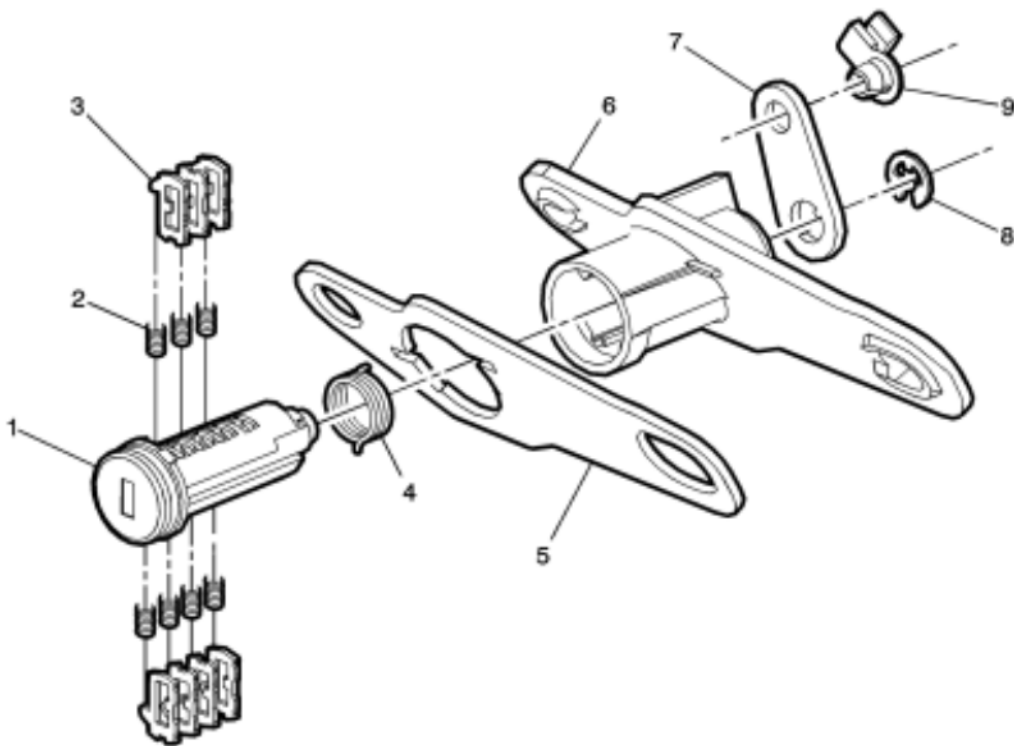


The ignition lock cylinder uses 8 key cut positions, 1–8. The ignition cylinder tumblers (3) are located on alternate sides of the cylinder (5). They are not snap-in and are not self-retaining. It follows the key code with the first tumbler being the first depth of the key code, closest to the head of the key.

Note: All lock cylinders for side milled keys have right and left tumblers. The location of the tooth of the tumbler determines whether it is right of left. Illustrations in this procedure show the right tumblers on the top and the left tumblers on the bottom. All tumblers are marked 1R, 1L, 2R, or 2L. The number being cut depth and the letter meaning right or left.

1. Hold the ignition cylinder assembly (5) so the side with the tumbler spring pocket located closest to the head of the cylinder is facing up.
2. Insert the tumbler spring (7) into each of the 4 spring pockets of the cylinder assembly. This side of the cylinder used left tumblers.
3. The first tumbler (3) to be loaded will be the first key cut position, which is the first number in the key code. Install the tumbler in the slot over the spring. Install the remaining right tumblers following the key code and same process, pressing the tumblers in place until they are secure.
4. Rotate the cylinder assembly. Insert the tumbler spring into each of the spring pockets of the cylinder assembly. This side of the cylinder used right tumblers.
5. The first tumbler (3) to be loaded will be the second key cut position, the second number in the key code. Install the first tumbler in the slot over the spring. Install the remaining left tumblers following the key code and same process, pressing the tumblers in place until they are secure.
6. Inspect for correct loading of the tumblers by inserting the key into the cylinder. All tumblers should drop flush with the lock cylinder body diameter.
7. With the key in the cylinder assembly insert the round connector (6), insert the retainer spring (2) in the retainer slot located in the cylinder assembly. Insert the retainer (1) lining it up in the slot over the spring. Depress the retainer and hold.
8. Insert the cylinder into the sleeve (4) as shown in the print. Make sure the actuator stays located properly in the cylinder.
9. When the key is removed, the lock should stay together.
10. Lightly lubricate the outside surface in the tumbler area of in the lock body and down the key slot using the provided grease. Insert and extract the key 5 times to lubricate the keyway.
11. Insert the key and function the lock 3 times to distribute the grease inside the sleeve.
12. Verify the key position for inserting the lock into the column.

Rear Compartment Lid Lock Cylinder Coding



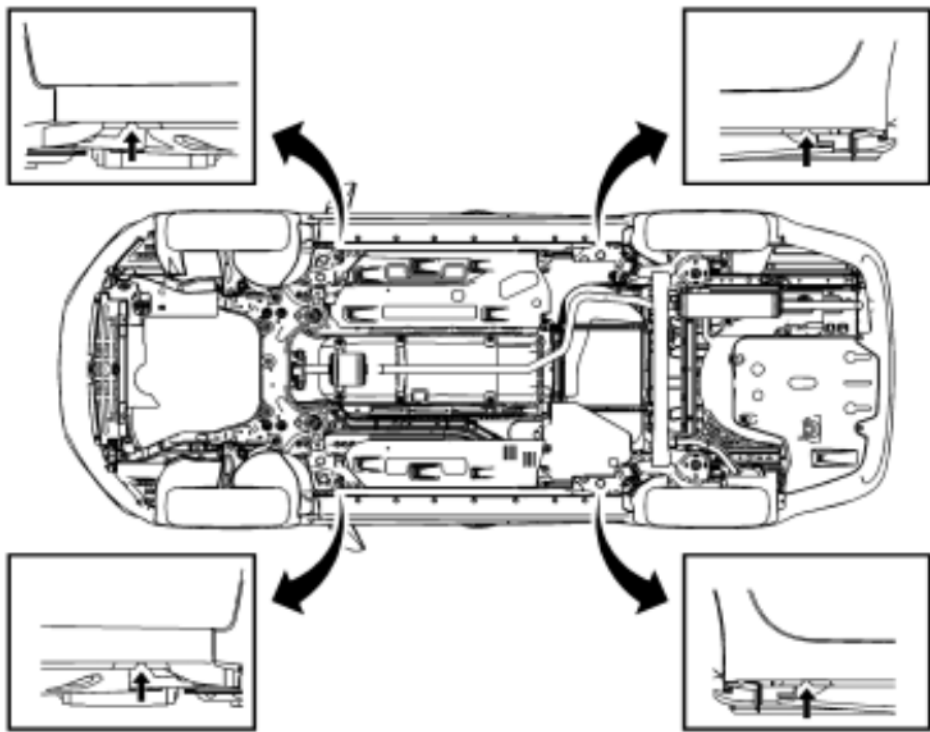
The rear compartment lid lock cylinder uses 7 of the 7 cut positions. The tumbler positions are staggered from side to side, 4 on one side and 3 on the other, are not self-retaining, and are not snap in.

Note: All lock cylinders for side milled keys have right and left tumblers. The location of the tooth of the tumbler determines whether it is right or left. Illustrations in this procedure show the right tumblers on the top and the left tumblers on the bottom. All tumblers are marked 1R, 1L, 2R, or 2L. The number being cut depth and the letter meaning right or left.

- 1. Tumbler spring(2) and tumbler(3) are to be assembled into the cylinder(1). In this case start with the tumbler nearest the cylinder head and work through until the last tumbler at the base. Use the key as a tool by pushing it in step by step to hold the already assembled tumblers in place.
- 2. Check the correct loading of the tumblers by inserting the key into the cylinder. All tumblers should be flush with the lock cylinder body.
- 3. Assemble the restoring spring(4) onto the rear of the cylinder.
- 4. Tape the pad(5) onto the housing(6).
- 5. Grease the housing.
- 6. Insert the lock cylinder(1) into the housing(6). Remove the key from the cylinder.
- 7. Install the lever(7) onto the end of the cylinder(1).
- 8. Attach the E-ring(8) to the cylinder, then crimp it to retain the lever assembly.
- 9. Snap the rod retainer(9) into the hole in the lever(7).
- 10. Insert the key into the lock and function the lock to check for proper assembly and smooth operation.

Lifting and Jacking the Vehicle

Note: The use of a LOW PROFILE LIFT ARMS SYSTEM may be required to avoid unwanted contact with the vehicle body and structure depending on lifting equipment used. Refer to the manufacturer recommendation for their applications of low profile lift arms system for their lifting equipment.



Danger: To avoid any vehicle damage, serious personal injury or death when major components are removed from the vehicle and the vehicle is supported by a hoist, support the vehicle with jack stands at the opposite end from which the components are being removed and strap the vehicle to the hoist.

Danger: To avoid any vehicle damage, serious personal injury or death, always use the jackstands to support the vehicle when lifting the vehicle with a jack.

Caution: Perform the following steps before beginning any vehicle lifting or jacking procedure:

- Remove or secure all of the vehicle contents in order to avoid any shifting or any movement that may occur during the vehicle lifting or jacking procedure.
- The lifting equipment or the jacking equipment weight rating must meet or exceed the weight of the vehicle and any vehicle contents.
- The lifting equipment or the jacking equipment must meet the operational standards of the lifting equipment or jacking equipment manufacturer.
- Perform the vehicle lifting or jacking procedure on a clean, hard, dry, level surface.
- Perform the vehicle lifting or jacking procedure only at the identified lift points. DO NOT allow the lifting equipment or jacking equipment to contact any other vehicle components.

Failure to perform the previous steps could result in damage to the lifting equipment or the jacking equipment, the vehicle, and/or the vehicle contents.

Vehicle Lifting– Frame Contact Lift

Front Lift Pads

When lifting the vehicle with a frame-contact lift, place the front lift pads on the rocker outer panel weld flange, as shown.

Rear Lift Pads

When lifting the vehicle with a frame-contact lift, place the rear lift pads on the rocker outer panel weld flange, as shown.

Vehicle Jacking

Caution: When you are jacking the vehicle at the front locations, be certain that the jack or the jack lift pad does not contact the front fascia, front fascia air dam, or the front fenders. If such contact occurs, vehicle damage may result. When jacking at selected front locations additional clearance may be required for the jacking points.



Note: When you are lifting a vehicle with a service jack, block the wheels at the opposite end from which you are lifting. Use jack stands to provide additional support.

When using a service jack under the front of the vehicle use one of the following locations:

Front of Vehicle

Place the service jack pad in the same location as shown for the front lift pads.

Rear of Vehicle

Note: Place jackstands **ONLY** under strong and stable vehicle structures. Place the service jack pad in the same location as shown for the rear lift pads.



Exterior Windnoise

Warning: An assistant should drive the vehicle while the technician checks for the location of the reported condition. Otherwise, personal injury could result.

Exterior windnoise is louder when the vehicle is driven with one or more windows down. Exterior windnoise occurs when air passes over the body panels, the seams, or the openings. Use the following items during the test drive in order to aid in the detection of leaks:

- Mechanic's stethoscope or heater hose
 - Masking tape—51 mm (2 in) width
 - Strip caulk
 - A water soluble marking pencil
1. While driving, determine the location of the exterior windnoise by lowering one window at a time. If the location corresponds with the condition in step 2, pull over and make a temporary repair with 51 mm (2 in) wide masking tape.
 2. Tape over the gaps and the moldings one at a time. Test between each taping. Taping over the gaps and moldings will correct the condition.
 3. Temporarily repair the condition with masking tape. Adjust the tape when needed.
 4. Continue testing in order to determine if the noise has been eliminated or other leak areas exist.
 5. When all the reported leak conditions are located, make permanent repairs using the proper alignment techniques and the sealing materials.

Interior Windnoise

Warning: An assistant should drive the vehicle while the technician checks for the location of the reported condition. Otherwise, personal injury could result.

Interior windnoise is not heard when the window is lowered. Interior windnoise is caused by the air leaving the inside of the vehicle through a seal or a seam.

1. Tape over the relief valves to cause added air pressure within the vehicle.
2. Test drive the vehicle and listen for windnoise or a whistle.
3. Pull the vehicle over and make the temporary repairs using masking tape. If you cannot determine the source of the windnoise, perform one or more of the following diagnostic tests:
 - [Air Pressure Test](#)
 - [Soap Suds or Bubble Test](#)
 - [Tracing Powder or Chalk Test](#)

Air Pressure Test

1. Mask off both the pressure relief valves.
2. Close all the windows.
3. Turn the vehicles ventilation fan to the on position, with the selector on high speed and in the defrost mode.
4. Unlock and close the doors.
5. Listen for escaping air along the door and the window seals with a stethoscope or a length of heater hose.

Soap Suds or Bubble Test

1. Mask off the pressure relief valves.
2. Close all the windows and the doors.
3. Turn the vehicles ventilation fan to the on position, with the selector on high speed and in the defrost mode.
4. Unlock and close the doors.
5. Apply the soap solution to the potential leak areas.
6. Look for bubbles revealing escaping air.

Tracing Powder or Chalk Test

Clean the weatherstrips and the contact surfaces with cleaning solvent.

1. Apply powder or chalk in an unbroken line to the contact surface of the weatherstrip surrounding the perimeter of the suspected areas.
2. Close the panel completely without slamming the panel. Closing the panel completely presses the weatherstrip firmly against the mating surface.
3. Inspect the applied line on the weatherstrip. The applied line is marred where contact is good. A corresponding imprint is on the mating surfaces.
4. Gaps or irregularities in the powder or the chalk line on the mating surfaces indicate the areas with a poor seal.

Squeaks and Rattles

Special Tools

- *J 39570* Chassis Ear
- *J 41416* Ultrasonic Leak Detector

For equivalent regional tools, refer to Special Tools .

Note:

- This procedure is not used in Brazil.
- Squeaks and rattles are caused by improperly controlled relative motion between vehicle components. There are 4 ways to prevent squeaks and rattles.

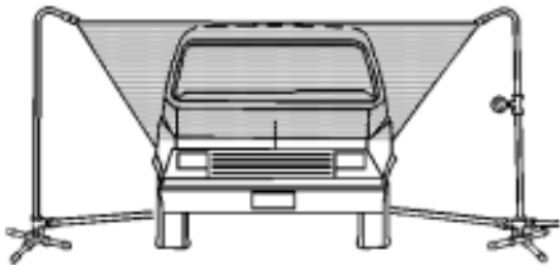
To aid in diagnosing, use *J 39570* chassis ear or *J 41416* ultrasonic leak detector.

- Attach the component that squeaks or rattles securely.
- Separate the components that squeak or rattle to prevent contact.
- Insulate the components that squeak or rattle.
- Insulate low uniform friction surfaces to eliminate stickslip motion.

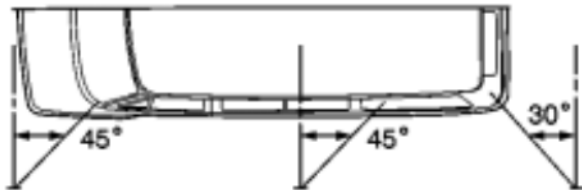
Waterleak Test Preparation

Note: This procedure is not used in Brazil.

- GM vehicles are designed to operate under normal environmental conditions.
 - The design criteria for sealing materials and components takes into consideration the sealing forces required to withstand the natural elements. These specifications cannot take into consideration any artificial conditions, i.e., high pressure car washes.
 - The water leak test procedure has been correlated to the natural elements and will determine the ability of a vehicle to perform under normal operating conditions.
 - The first step in diagnosing a leak is determining the conditions under which a leak occurs. If the general leak area can be found, the exact entry point can be isolated using a water hose or an air hose. Some trim panels or components may need to be removed in order to repair the leak.
 - If leaks are found around a door, door window, rear compartment lid or liftgate area this does not necessarily indicate a bad weatherstrip. An adjustment to these areas may resolve the condition.
1. Assemble the water test stand as shown.



2. Position the stands as shown.
The water spray from the stands should overlap the vehicle as shown.
3. Have an assistant inside of the vehicle during the test in order to locate any leaks.
4. The water pressure at the nozzle should maintain a 155 kPa (22 psi), for at least 4 minutes.



5. In order to check the windshield, aim the water spray 30 degrees down and 45 degrees toward the rear.
Aim the water towards the corner of the windshield.
6. In order to check the side windows for leaks, position the water stand towards the center of the rear quarter, aiming the water spray 30 degrees down and 45 degrees toward the rear.
7. In order to check the back window, aim the water spray 30 degrees down and 30 degrees toward the front.

Recommended Materials (Waterleak Repair)

Leak Areas	Repair Materials
Bolts, Studs, and Screws	Strip caulk
Large Holes	3M™ Automotive Joint and Seam Sealer
Metal joints	Brushable seam sealer which can be painted
Small Cracks and Pin Holes	3M™ Drip-Check Sealer or equivalent
Ventilation Ducts	3M™ Auto Bedding and Glazing Compound or equivalent
Weatherstrips	3M™ 08011 Weatherstrip Adhesive or equivalent
Windshield, Rear Window	Urethane adhesive, caulking kit, or equivalent

Dust Leaks

Dust may leak into the vehicle where water will not. This happens particularly in the lower portion of the interior.

Forward motion of the vehicle can create a slight vacuum which pulls air and dust into the vehicle.

In order to determine the location of dust leaks, perform the following steps:

1. Remove the mats from the floor.
2. Remove the mats from the kick panel.
3. Remove the insulation from the floor.
4. Remove the insulation from the kick panel.
5. Drive the vehicle on a dusty road.
6. Examine the interior.

Dust in the shape of a small cone or slit will usually be found at the point of leakage.

7. Mark the points of leakage.

Note: Ensure that the interior is darkened when performing this step.

8. Shine bright lamps on the underside of the floor and the cowl.
9. Have an assistant mark any points inside of the vehicle for any points where the light shines through.
 - Inspect the weld joints.
 - Inspect the body mounts.
10. Seal any leaks with an air-drying, body-sealing compound.

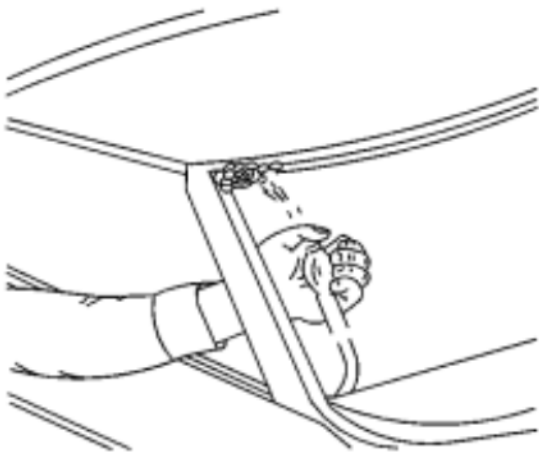
Water Hose Test



Note: Use a water hose without the nozzle attached.

1. Have an assistant inside of the vehicle in order to locate the leak.
2. Begin testing at the base of the window or the windshield.
3. Slowly move the hose upward and across the top of the vehicle.

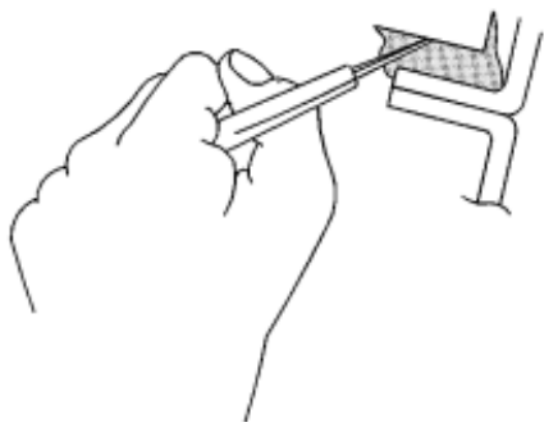
Air Hose Test



Caution: The air hose test should only be used on fully cured urethane adhesive. Otherwise, damage to the urethane adhesive bead could result in additional leaks.

1. Using a liquid detergent, diluted with water in a spray bottle, spray the window at the edges. Begin at the bottom and gradually move up and across the top.
Note: The compressed air should not exceed 205 kPa (30 psi).
2. Have an assistant inside of the vehicle with an air hose.
3. Have the assistant aim the compressed air at the suspected areas.
Bubbles will form in the soap solution at the location of the leak.

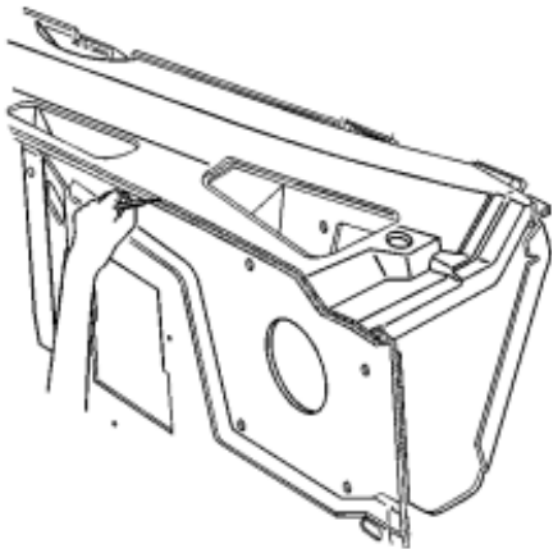
Body Waterleak Repair



Warning: If the vehicle interior is exposed to moisture and becomes soaked up to the level of the sensing and diagnostic module (SDM), the SDM and SDM harness connector must be replaced. The SDM could be activated when powered, which could cause airbag deployment and result in personal injury.

Depending on the location of the waterleak, you may have to remove certain interior components in order to repair the leak.

1. If the floor carpet is wet, refer to [Floor Carpet Drying](#) .



2. Cut out a portion of the adhesive caulking in the leak area from inside or outside of the vehicle.
3. Clean and remove all loose particles of the adhesive old caulking from the area.
4. Apply joint body and seam sealer where the old adhesive caulking was removed.
5. Allow the adhesive caulking to dry for several hours.
6. Test for leaks.
7. Install the trim, if removed.

Stationary Window Waterleak Repair

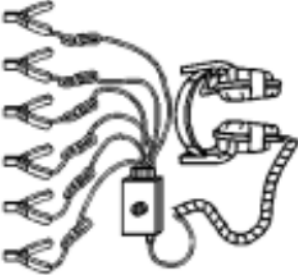
Warning: If any water enters the vehicle interior up to the level of the carpet or higher and soaks the carpet, the sensing and diagnostic module (SDM) and the SDM harness connector may need to be replaced. The SDM could be activated when powered, which could cause deployment of the air bag(s) and result in personal injury. Before attempting these procedures, the SIR system must be disabled. Refer to Disabling the SIR System. With the ignition OFF, inspect the SDM mounting area, including the carpet. If any significant soaking or evidence of significant soaking is detected, you must perform the following tasks:

- Remove all water.
- Repair the water damage.
- Replace the SDM harness connector.
- Replace the SDM.

Failure to follow these tasks could result in possible air bag deployment, personal injury, or otherwise unneeded SIR system repairs.

1. If the floor carpet is wet refer to [Floor Carpet Drying](#) .
2. Remove the trim moldings or the headliner in order to repair the leak, if needed.
3. Determine the source of water entry.
4. If water is leaking at the edge of the windshield, reseal the windshield using Urethane Adhesive Caulking Kit GMP/N12346392 or the equivalent.
5. If water leaks into the vehicle at the sides of the stationary windows, reseal the window using Urethane Adhesive Caulking Kit GMP/N12346392 or the equivalent.

Special Tools

Illustration	Tool Number/ Description
	CH-39570 J-39570 Chassis Ear
	GE-41416 J-41416 Ultrasonic Leak Detector