

ABBREVIATIONS

1999 Dodge Pickup R1500

GENERAL INFORMATION

COMMONLY USED ABBREVIATION

"A" ABBREVIATION TABLE

"A" ABBREVIATION TABLE

ABBREVIATION	DEFINITION
A	Amperes
A/C	Air Conditioning
A/T	Automatic Transmission/Transaxle
AAP	Auxiliary Accelerator Pump
AB	Air Bleed
ABCV	Air Bleed Control Valve
ABDC	After Bottom Dead Center
ABRS	Air Bag Restraint System
ABS	Anti-Lock Brake System
AC	Alternating Current
ACC	A/C Clutch Compressor
ACCS	A/C Cycling Switch
ACCUM	Accumulator
ACCY	Accessory
ACT	Air Charge Temperature Sensor
ACV	Thermactor Air Control Valve
ADJ	Adjust or Adjustable
ADV	Advance
AFS	Airflow Sensor
AI	Air Injection
AIR or A.I.R.	Air Injection Reactor
AIS	Air Injection System
ALCL	Assembly Line Communications Link
ALDL	Assembly Line Diagnostic Link
ARC	Automatic
ASCD	Automatic
ASCS	Air Suction Control Solenoid
ASD	Auto Shutdown
ASDM	Air Bag System Diagnostic Module
ASV	Air Suction Valve
ATC	Automatic Temperature Control
ATDC	After Top Dead Center
ATF	Automatic Transmission Fluid
ATS	Air Temperature Sensor
AXOD	Automatic Transaxle Overdrive
Abs.	Absolute
Accy.	Accessory
Alt.	Alternator or Altitude
Amp.	Ampere
Assy.	Assembly
Auto.	Automatic
Aux.	Auxiliary
Avg.	Average

"B" ABBREVIATION TABLE

"B" ABBREVIATION TABLE

ABBREVIATION	DEFINITION
B/P	Backpressure
BAC	By-Pass Air Control
BAP	Barometric Absolute Pressure Sensor
BARO	Barometric
BBDC	Before Bottom Dead Center
BCM	Body Control Module
BDC	Bottom Dead Center
BHP	Brake Horsepower
BLK	Black
BLU	Blue
BMAP	Barometric & Manifold Absolute Pressure Sensor
BOO	Brake On-Off Switch
BP	Barometric Pressure sensor
BPS	Barometric Pressure sensor
BPT	Backpressure Transducer
BRN	Brown
BTDC	Before Top Dead Center
BTU	British Thermal Unit
BVSV	Bimetallic Switching Valve
Baro.	Barometric
Batt.	Battery
Bbl.	Barrel (Example:4-Bbl.)
Blst.	Ballast
Blwr.	Blower
Brkr.	Breaker

"C" ABBREVIATION TABLE

"C" ABBREVIATION TABLE

ABBREVIATION	DEFINITION
C	Celsius (Degrees)
C(3)	Computer Controlled Coil Ignition
C(4)	Computer Controlled Catalytic Converter
CANP	Canister Purge solenoid
CARB	California Air Resources Board
CAT	Catalytic Converter
CB	Circuit Breaker
CBD	Closed Bowl Distributor
CBVV	Carburetor Bowl Vent valve
cc	Cubic Centimeter
CCC	Computer Command Control
CCD	Computer Controlled Dwell
CCM	Central Control Module
CCO	Converter Clutch Override
CCOT	Cycling Clutch Orifice Tube
CCW	Counterclockwise
CDI	Capacitor Discharge Ignition
CEC	Computerized Engine Control
CFI	Central Fuel Injection
CID	Cubic Inch Displacement
CID	Cylinder Identification sensor
CIS	Continuous Injection System
CIS-E	Continuous Injection System-Electronic

"C" ABBREVIATION TABLE (con't)

ABBREVIATION	DEFINITION
CKT	Circuit
CLR	Clear
CNG	Compressed Natural Gas
CO	Carbon Monoxide
CO2	Carbon Dioxide
CONV	Convertible
CP	Canister Purge
CPA	Connector Position Assurance
CPS	Crank Position Sensor
CTS	Coolant Temperature Sensor
CV	Check Valve Constant Velocity
CVC	Constant Vacuum Control
CW	Clockwise
CYL	Cylinder
Calif.	California
Carb.	Carburetor
Chrg.	Charging
Circ.	Circuit
Cntrl.	Control
Comp.	Compressor or Compartment
Conn.	Connector
Cont.	Continued
Conv.	Convertible or Converter
Cu. In.	Cubic Inch
Cyl.	Cylinder

"D" ABBREVIATION TABLE

"D" ABBREVIATION TABLE

ABBREVIATION	DEFINITION
"D"	Drive
DBC	Dual Bed Catalyst
DC	Direct Current or Discharge
DDD	Dual Diaphragm Distributor
DERM	Diagnostic Energy Reserve Module
DFI	Digital Fuel Injection
DIC	Driver Information Center
DIS	Direct Ignition System
DIS	Distributorless Ignition System
DIST	Distribution
DISTR	Distributor
DK BLU	Dark Blue
DK GRN	Dark Green
DME	Digital Motor Electronics (Motronic System)
DOHC	Double Overhead Cam
DOT	Department of Transportation
DP	Dashpot
DRB-II	Diagnostic Readout Box
DVOM	Digital Volt/Ohm Meter (see VOM)
Def.	Defogger or Defroster
Def.	Defrost
Defog.	Defogger
Diag.	Diagnostic
Dist.	Distributor or Distribution
Dr.	Door

"E" ABBREVIATION TABLE

"E" ABBREVIATION TABLE

ABBREVIATION	DEFINITION
EAC	Electric Assist Choke _
EACV	Electric Air Control Valve _
EBCM	Electronic Brake Control Module
ECA	Electronic Control Assembly
ECAT	Electronically Controlled Automatic Transaxle
ECM	Electronic Control Module
ECT	Engine Coolant Temperature Sensor
ECU	Electronic Control Unit or Engine Control Unit
EDF	Electric Drive Fan relay assembly
EDIS	Electronic Distributorless Ignition System
EEC	Electronic Engine Control
EECS	Evaporative Emission Control System
EEPROM	Electronically Erasable PROM
EFE	Early Fuel Evaporation _
EFI	Electronic Fuel Injection _
EGO	Exhaust Gas Oxygen sensor (see HEGO)
EGR	Exhaust Gas Recirculation system _
EGRC	EGR Control solenoid or system _
EGRV	EGR Vent solenoid or system _
EMR	Emission Maintenance Reminder Module
ESA	Electronic Spark Advance _
ESC	Electronic Spark Control _
EST	Electronic Spark Timing _
ETR	Emergency Tensioning Retractor _
EVAP	Fuel Evaporative System _
EVIC	Electronic Vehicle Information Center
EVO	Electronic Variable Orifice _
EVP	EGR Valve Position Sensor _
EVR	EGR Valve Regulator _
EVRV	Electronic Vacuum Regulator Valve
Elect.	Electronic _
Eng.	Engine _
Evap.	Evaporative _
Exc.	Except _

"F" ABBREVIATION TABLE

"F" ABBREVIATION TABLE

ABBREVIATION	DEFINITION
F	Fahrenheit (Degrees)
F/B	Fuse Block
FBC	Feedback Carburetor
FI	Fuel Injector or Fuel Injection
FICD	Fast Idle Control Device
FIPL	Fuel Injector Pump Lever
FP	Fuel Pump
FPM	Fuel Pump Monitor
FPR-VSV	Fuel Pressure Regulator Vacuum Switching Valve
FWD	Front Wheel Drive
Fed.	Federal
Ft. Lbs.	Foot Pounds

"G" ABBREVIATION TABLE

"G" ABBREVIATION TABLE

ABBREVIATION	DEFINITION
G	grams
GND or GRND	Ground
GRN	Green
GRY	Gray
Ga.	Gauge
Gals.	gallons
Gov.	Governor

"H" ABBREVIATION TABLE

"H" ABBREVIATION TABLE

ABBREVIATION	DEFINITION
H/D	Heavy Duty
HAC	High Altitude Compensation
HC	Hydrocarbons
HEDF	High Speed Electro Drive Fan relay or circuit
HEGO	Heated Exhaust Gas Oxygen Sensor
HEGOG or HEGO	Ground circuit
HEI	High Energy Ignition
HLDT	Headlight
HO	High Output
HP	High Performance
HSC	High Swirl Combustion
HSO	High Specific Output
HTR	Heater
HVAC	Heating
Headlt.	Headlight
Hg	Mercury
Hgt.	Height
Htr.	Heater
Hz	Hertz (Cycles Per Second)

"I" ABBREVIATION TABLE

"I" ABBREVIATION TABLE

ABBREVIATION	DEFINITION
I.D.	Inside Diameter
IAC	Idle Air Control
IACV	Idle Air Control Valve
IC	Integrated Circuit
ID	Identification
IDM	Ignition Diagnostic Monitor
IGN	Ignition system or circuit
ILC	Idle Load Compensator
In. Hg	Inches of Mercury
INCH Lbs.	Inch Pounds
INFL REST	Inflatable Restraint
INJ	Injector or Injection
IP	Instrument Panel
IPC	Instrument Panel Cluster

"I" ABBREVIATION TABLE (con't)

ABBREVIATION	DEFINITION
ISA	Idle Speed Actuator
ISC	Idle Speed Control
ISS	Idle Stop Solenoid
ITS	Idle Tracking Switch
IVSV	Idle Vacuum Switching Valve
Ign.	Ignition
In.	Inches
Inj.	Injector

"J" ABBREVIATION TABLE

"J" ABBREVIATION TABLE

ABBREVIATION	DEFINITION
J/B	Junction Block

"K" ABBREVIATION TABLE

"K" ABBREVIATION TABLE

ABBREVIATION	DEFINITION
k/ohms	1000 ohms (kilo as in k/ohms)
kg	Kilograms (weight)
kg/cm	Kilograms Per Square Centimeter
KAM	Keep Alive Memory
KAPWR	Keep Alive Power
KM/H	Kilometers Per Hour
KOEO	Key On Engine Off
KOER	Key On Engine Running
KS	Knock Sensor

"L" ABBREVIATION TABLE

"L" ABBREVIATION TABLE

ABBREVIATION	DEFINITION
L	Liter(s)
L/D	Light Duty
LCD	Liquid Crystal Display
LED	Light Emitting Diode
LH	Left Hand
LOS	Limited Operation Strategy
LT BLU	Light Blue
LT GRN	Light Green
LUS	Lock-Up Solenoid
Lbs.	Pounds
Lt(s).	Light(s)
Lugg.	Luggage

"M" ABBREVIATION TABLE

"M" ABBREVIATION TABLE

ABBREVIATION	DEFINITION
mA	Milliamps
mV	Millivolts
mfd.	Microfarads
Mm	Millimeters
M/T	Manual Transaxle or Transmission
MA PFI	Mass
MA or MAF	Mass Airflow
MAF	Mass Air Flow Sensor
MAFS	Mass Airflow System
MAP	Manifold Absolute Pressure Sensor
MAT	Manifold Air Temperature
MCU	Microprocessor Control Unit
MCV	Mixture Control Valve
MEM-CAL	Memory Calibration Chip
MFI	Multiport Fuel Injection
MIL	Malfunction Indicator Light
MLP	Manual Lever Position
MPFI	Multi Point Fuel Injection
MPH	Miles Per Hour
MPI	Multi-Point (Fuel) Injection
Man.	Manual
Mech.	Mechanical
Mem.	Memory
Mtr.	Motor

"N" ABBREVIATION TABLE

"N" ABBREVIATION TABLE

ABBREVIATION	DEFINITION
N.m	Newton-Meter
NA	Not Available
NDS	Neutral Drive Switch
NGS	Neutral gear Switch
NOx	Oxides of Nitrogen
NPS	Neutral Pressure Switch
No.	Number
Nos.	Numbers

"O" ABBREVIATION TABLE

"O" ABBREVIATION TABLE

ABBREVIATION	DEFINITION
O	Oxygen
O.D.	Outside Diameter
O/S	Oversize
O2	Oxygen
OC	Oxidation Catalyst
OCC	Output Circuit Check
OD	Overdrive
ODO	Odometer

"O" ABBREVIATION TABLE (con't)

ABBREVIATION	DEFINITION
OHC	Overhead Camshaft
ORG	Orange
OSC	Output State Check
Opt.	Option or Optional
oz.	Ounce
ozs.	Ounces

"P" ABBREVIATION TABLE

"P" ABBREVIATION TABLE

ABBREVIATION	DEFINITION
P	Park
P/C	Printed Circuit
P/N	Park/Neutral
P/S	Power Steering
PAV	Pulse Air Valve
PC-SOL	Purge Control Solenoid
PCM	Powertrain Control module
PCS	Purge Control Solenoid
PCSDM	Passenger Compartment Sensor/Diagnostic Module
PCV	Positive Crankcase Ventilation
PFE	Pressure Feedback EGR sensor or circuit
PFI	Port Fuel Injection (see MA SEFI)
PGM-CARB	Programmed Carburetor
PGM-FI	Programmed Fuel Injection
PIP	Profile Ignition Pickup
PNK	Pink
PPL	Purple
PRNDL	Park Reverse Neutral Drive Low
PROM	Programmable Read-Only Memory
psi	Pounds Per Square Inch
PSPS	Power Steering Pressure Switch
PTC	Positive Temperature Coefficient
PTO	Power Take-Off
PWR GND	Power Ground circuit
Pkg.	Package
Press.	Pressure
Prog.	Programmed or Programmable
Pts.	Pints
Pwr.	Power

"Q" ABBREVIATION TABLE

"Q" ABBREVIATION TABLE

ABBREVIATION	DEFINITION
Qts.	Quarts

"R" ABBREVIATION TABLE

"R" ABBREVIATION TABLE

ABBREVIATION	DEFINITION
RABS	Rear Anti-Lock Brake System
RAC	Remote Accessory Control
RAM	Random Access Memory
RAP	Retained Accessory Power
RECIRC	Recirculation
RED	Red
RH	Right hand
ROM	Read Only Memory
RPM	Revolutions Per Minute
RVB	Rear Vacuum Break
RWAL	Rear Wheel Anti-Lock Brake
RWD	Rear Wheel Drive
Recirc.	Recirculate or Recirculation
Reg.	Regulator
Rly.	Relay

"S" ABBREVIATION TABLE

"S" ABBREVIATION TABLE

ABBREVIATION	DEFINITION
SAW	Spark Angle Word _
SBC	Single Bed Converter _
SBEC	Single Board Engine Controller _
SC	Super Charged _
SCC	Spark Control Computer _
SCS	Air Suction Control Solenoid _
SDM	Supplemental Restraint System Diagnostic Module _
SDU	SRS Diagnostic Unit _
SEN	Sensor _
SES	Service Engine Soon _
SFI	Sequential (Port) Fuel Injection _
SIG RTN	Signal Return circuit _
SIL	Shift Indicator Light _
SIR	Supplemental Inflatable Restraint _
SMEC	Single Module Engine Controller _
SOHC	Single Overhead Cam _
SOL or SoL	Solenoid _
SPFI	Sequential Port Fuel Injection _
SPK	Spark Control _
SPOUT	Spark Output Signal _
SRS	Supplemental Restraint System (Air Bag) _
SS 3/4-4/3	Shift Solenoid circuit _
SSI	Solid State Ignition _
STAR	Self-Test Automatic Readout _
STI	Self Test Input circuit _
STO	Self-Test Output _
SUB-O2	Sub Oxygen Sensor _
Sen. Or Sens.	Sensor _
Sol.	Solenoid _
Sprchg.	Supercharger _
Strg.	Steering _
Susp.	Suspension _
Sw.	Switch _
Sys.	System _

"T" ABBREVIATION TABLE

"T" ABBREVIATION TABLE

ABBREVIATION	DEFINITION
T.V.	Throttle Valve _
TAB	Thermactor Air By-Pass _
TAC	Thermostatic Air Cleaner _
TAD	Thermactor Air Diverter _
TAN	Tan _
TBI	Throttle Body Injection _
TCC	Torque Converter Clutch _
TCCS	Toyota Computer Control System
TDC	Top Dead Center _
TDCL	Total Diagnostic Communication
TFI	Thick Film Ignition system _
TGS	Top Gear Switch (cancels SIL in
THERMAC	Thermostatic Air Cleaner _
THS	Transmission Hydraulic Switch _
TP/TPS	Throttle Position Sensor _
TPI	Tuned Port Injection _
TPS	Throttle Position Sensor/Switch
TS	Temperature Sensor _
TSB	Technical Service Bulletin _
TTS	Transmission Temperature Switch
TV	Thermostat _
TWC	Three-Way Catalyst _
Temp.	Temperature _
Trans.	Transaxle/Transmission _

"V" ABBREVIATION TABLE

"V" ABBREVIATION TABLE

ABBREVIATION	DEFINITION
V	Valve _
VAF	Vane Air Flow sensor or circuit _
VAPS	Variable Assist Power Steering _
VAT	Vane Air Temperature _
VATS	Vehicle Anti-Theft System _
VBATT	Vehicle Battery Voltage _
VCC	Viscous Converter Clutch _
VIN	Vehicle Identification Number _
VIO	Violet _
VLR	Volt Loop Reserve _
VM	Vacuum Modulator _
VM	Vane Meter _
VOM	Volt-Ohmmeter (Analog) _
VPWR	Vehicle Power supply voltage (10-14
VREF	Voltage Reference (ECA supplied ref
VRV	Vacuum Regulator Valve _
VSC	Vehicle Speed Control sensor or sign
VSS	Vehicle Speed Sensor or signal _
VSV	Vacuum Switching Valve _
Vac.	Vacuum _
Volt.	Voltage _

"W" ABBREVIATION TABLE

"W" ABBREVIATION TABLE

ABBREVIATION	DEFINITION
W/	With _
W/O	Without _
WAC WOT	WOT A/C Cut-off switch
WAC	Wide Open Throttle A/C
WHT	White _
WOT	Wide Open Throttle _
YEL	Yellow _

A/C COMPRESSOR REFRIGERANT OIL CHECKING

1999 Dodge Pickup R1500

1999 GENERAL SERVICING
A/C Compressor Refrigerant Oil Checking

All Models

* PLEASE READ THIS FIRST *

NOTE: For compressor applications, see COMPRESSOR APPLICATIONS & BODY DESIGNATIONS. DO NOT exceed A/C system refrigerant oil capacity when servicing system. See CAPACITIES.

BODY DESIGNATIONS

BODY DESIGNATIONS (CHRYSLER CORP. CARS)

Model	(1) Body Designation
Avenger & Sebring Coupe	"FJ22" Body
Breeze, Cirrus & Stratus	"JA" Body
Concorde, Intrepid, LHS & 300M	"LH" Body
Neon	"PL" Body
Sebring Convertible	"JX" Body

(1) - Body codes are determined by fifth character of VIN code.

BODY DESIGNATIONS (CHRYSLER CORP. LIGHT TRUCKS & VANS)

Model	Body Designation
Caravan, Town & Country, & Voyager	"NS" Series
Dakota	"AN" Series
Durango	"DN" Series
Ram Pickup	"BR/BE" Series
Ram Van/Wagon	"AB" Series

BODY DESIGNATIONS (FORD MOTOR CO. LIGHT TRUCKS & VANS)

Model	Body Designation
Explorer & Mountaineer	"U" Series
Pickup	"F" Series
Ranger	"R" Series
Van	"E" Series

BODY DESIGNATIONS (GENERAL MOTORS CARS)

Model	(1) Body Designation
Alero, Cutlass, Grand Am & Malibu	"N" Body
Aurora & Riviera	"G" Body
Bonneville, Eighty Eight, LeSabre & LSS	"H" Body
Camaro & Firebird	"F" Body
Catera	"V" Body
Cavalier & Sunfire	"J" Body
Century, Grand Prix, Intrigue, Lumina, Monte Carlo & Regal	"W" Body

DeVille & Seville	"K" Body
Corvette	"Y" Body
Eldorado	"E" Body
Metro	"M" Body
Park Avenue	"C" Body
Prizm	"S" Body
Saturn	"Z" Body

(1) - Body codes are determined by fourth character of VIN code.

BODY DESIGNATIONS (GENERAL MOTORS LIGHT TRUCKS & VANS)

Model	(1) Body Designation
Astro & Safari	
2WD	"M" Series
4WD	"L" Series
Blazer, Bravada, Envoy, Jimmy, Pickup & Sonoma	
2WD	"S" Series
4WD	"T" Series
Commercial Chassis & Motorhome	"P" Series
Escalade, Pickup, Sierra, Silverado, Suburban, Tahoe & Yukon	
2WD	"C" Series
4WD	"K" Series
Express & Savana	"G" Series
Tracker	"J" Series
Montana, Silhouette & Venture	"U" Series

(1) - Series codes are determined by fifth character of VIN code.

BODY DESIGNATIONS (JEEP LIGHT TRUCKS)

Model	(1) Body Designation
Cherokee	"XJ" Series
Grand Cherokee	"WJ" Series
Wrangler	"TJ" Series

(1) - Series codes are determined by fifth character of VIN code.

COMPRESSOR APPLICATIONS

COMPRESSOR APPLICATIONS (CARS)

Application	Compressor
Chrysler Corp.	
Avenger & Sebring Coupe	
2.0L (DOHC)	Nippondenso 10PA17C 10-Cyl.
2.5L (SOHC)	Sanden MSC90-C Scroll
Breeze, Cirrus & Stratus	Sanden TRS-90 Scroll
Concorde, Intrepid, LHS & 300M	Nippondenso 10PA17 10-Cyl.
Neon	Nippondenso 10PA17 10-Cyl.
Sebring Convertible	Sanden TRS-90 Scroll
Ford Motor Co.	
Except Taurus 3.4L SHO	Ford FS-10 10-Cyl.
Taurus 3.4L SHO	Sanden Scroll
General Motors (1)	
"C" Body	Harrison V5 5-Cyl.

"E" Body	.....	Harrison HD6/HT6	6-Cyl.
"F" Body			
3.8L Engine	.....	Harrison V5	5-Cyl.
5.7L Engine	.....	Harrison V7	7-Cyl.
"G" Body			
Aurora	.....	Harrison HD6/HT6	6-Cyl.
Riviera	.....	Harrison V5	5-Cyl.
"H" Body	.....	Harrison V5	5-Cyl.
"J" Body	.....	Harrison V5	5-Cyl.
"K" Body	.....	Harrison HD6/HT6	6-Cyl.
"M" Body	.....	Nippondenso	10-Cyl.
"N" Body	.....	Harrison V5	5-Cyl.
"S" Body	.....	Harrison V5	5-Cyl.
"V" Body	.....	Harrison V5	5-Cyl.
"W" Body	.....	Harrison V5	5-Cyl.
"Y" Body	.....	Harrison V7	7-Cyl.
"Z" Body	.....	Zexel Rotary Vane	

(1) - Body codes are determined by fourth character of VIN code.

COMPRESSOR APPLICATIONS (LIGHT TRUCKS & VANS)

Application	Compressor
Chrysler Corp.	
Dakota & Ram Pickup	..... Sanden SD-7H15 7-Cyl.
Durango	..... Sanden SD-7H15 7-Cyl.
Caravan, Town & Country, & Voyager	..... Nippondenso 10PA17 10-Cyl.
Ram Van/Wagon	..... Sanden TR-105 Scroll
Ford Motor Co.	
"E" Series Van	..... Ford FS-10 10-Cyl.
Expedition & Navigator	..... Ford FS-10 10-Cyl.
Explorer & Mountaineer	..... Ford FS-10 10-Cyl.
"F" Series Pickup	
Except Super Duty	..... Ford FS-10 10-Cyl.
Super Duty	..... Sanden SD-7H15 7 Cyl.
Ranger	..... Ford FS-10 10-Cyl.
Villager	..... FS-10 10-Cyl.
Windstar	..... Ford FS-10 10-Cyl.
General Motors (1)	
"C" & "K" Series	..... Harrison HD6/HT6 6-Cyl.
"G" Series	..... Harrison V5 5-Cyl.
"J" Series	..... Nippondenso 10-Cyl.
"L" & "M" Series	..... Harrison HD6/HT6 6-Cyl.
"P" Series	..... Harrison HD6/HT6 6-Cyl.
"S" & "T" Series	
2.2L	..... Harrison V7 7-Cyl.
4.3L	..... Harrison HD6/HT6 6-Cyl.
"U" Series	..... Harrison V5 5-Cyl.
Jeep	
Cherokee	..... Sanden SD-7H15 7-Cyl.
Grand Cherokee	..... Nippondenso 10PA17 10-Cyl.
Wrangler	..... Sanden SD-7H15 7-Cyl.

(1) - Series codes are determined by fifth character of VIN code.

CAPACITIES

NOTE: Always refer to underhood A/C specification label in engine compartment or A/C compressor label while servicing A/C

system. If A/C specification label and specifications in this article differ, use underhood label specifications.

REFRIGERANT OIL & R-134a REFRIGERANT CAPACITY (CARS)

Application	(1) Oil Oz.	Refrigerant Oz.
Chrysler Corp.		
Avenger & Sebring Coupe		
2.0L (DOHC)	2.7-4.1	24.7-26.1
2.5L (SOHC)	5.7-6.4	24.7-26.1
Breeze, Cirrus & Stratus	5.0	20.0
Concorde, Intrepid, LHS & 300M	5.0	28.0
Neon	6.8	28.0
Sebring Convertible	5.0	20.0
Ford Motor Co.		
Continental	7.0	34.0
Contour, Cougar & Mystique	(1)	(1)
Crown Victoria & Grand Marquis	7.0	38.0
Escort, Coupe & Tracer	7.0	28.0
Mustang	7.0	34.0
Sable & Taurus	7.0	34.0
Town Car	7.0	38.0
General Motors		
"C" Body	9.0	32.0
"E" & "K" Bodies	(1) 8.0-9.0	32.0
"F" Body	9.0	24.0
"G" Body		
With HD6/HT6 Compressor	8.0	32.0
With V5 Compressor	9.0	32.0
"H" Body	9.0	32.0
"J" Body	9.0	24.0
"M" Body	3.4	19.0-21.0
"N" Body	9.0	(2)
"S" Body	(3) 4.1	22.9-26.5
"V" Body	9.0	33.5
"W" Body	9.0	30.0
"Y" Body	9.0	24.0
"Z" Body	5.0	24.0

- (1) - Total system capacity, unless otherwise noted. Refer to underhood A/C specification label in engine compartment for specified oil type.
- (2) - Refrigerant capacity for Alero and Grand Am is 36.0 ounces. Refrigerant capacity for Cutlass and Malibu is 28.0 ounces.
- (3) - Compressor oil capacity.

REFRIGERANT OIL & R-134a REFRIGERANT CAPACITY (LIGHT TRUCKS & VANS)

Application	(1) Oil Oz.	Refrigerant Oz.
Chrysler Corp.		
Caravan, Town & Country, & Voyager		
Without Rear Unit	9.0	34.0
With Rear Unit	13.4	44.0
Dakota	8.1	28.0
Durango		
Without Rear Unit	5.5	28.0
With Rear Unit	8.0	30.0
Ram Pickup	8.1	30.0
Ram Van/Wagon		
Without Rear Unit	8.0	34.0

With Rear Unit	10.0	.....	46.0
Ford Motor Co.			
"E" Series			
With Rear Unit	13.0	.....	64.0
Without Rear Unit	9.0	.....	44.0
Expedition & Navigator	(2)	.....	(2)
Explorer & Mountaineer	7.0	.....	30.0
F150/F250 Pickup	9.0	.....	32.0
F250HD/F350 Pickup	9.0	.....	32.0
Ranger	7.0	.....	30.0
Villager			
With Rear Unit	11.0	.....	56.0
Without Rear Unit	7.0	.....	32.0
Windstar			
With Rear Unit	13.0	.....	56.0
Without Rear Unit	9.0	.....	44.0
General Motors			
"C" & "K" Series			
Pickup & Sierra	8.0	.....	32.0
Crew Cab & Utility	8.0	.....	36.0
Suburban, Tahoe & Yukon			
With Rear Unit	11.0	.....	64.0
Without Rear Unit	8.0	.....	36.0
"G" Series			
With Rear Unit	11.0	.....	78.0
Without Rear Unit	8.0	.....	48.0
"J" Series	3.4	.....	21.0
"L" & "M" Series			
With Rear Unit	11.0	.....	48.0
Without Rear Unit	8.0	.....	32.0
"P" Series	8.0	.....	(2)
"S" & "T" Series			
2.2L	9.0	.....	30.0-32.0
4.3L	8.0	.....	30.0-32.0
"U" Series			
With Rear Unit	11.0	.....	46.0
Without Rear Unit	8.0	.....	32.0
Jeep			
Cherokee	8.1	.....	20.0
Grand Cherokee	5.8	.....	24.0
Wrangler	8.1	.....	20.0

- (1) - Total system capacity, unless otherwise noted. Refer to underhood A/C specification label in engine compartment for specified oil type.
- (2) - Refrigerant oil and/or refrigerant capacity not available from manufacturer. Refer to underhood A/C specification label in engine compartment.

REFRIGERANT OILS

* PLEASE READ THIS FIRST *

NOTE: Use ONLY the specified oil for the A/C system or compressor. Always check the underhood A/C specification label or A/C compressor label before adding refrigerant oil to A/C compressor/system.

NOTE: For compressor applications, see COMPRESSOR APPLICATIONS & BODY DESIGNATIONS. DO NOT exceed A/C system refrigerant oil capacity when servicing system. See CAPACITIES.

Use only NEW, moisture-free refrigerant oil in A/C systems. Refrigerant oil is highly refined with a very low moisture content. Oil container must be tightly closed when not in use, or moisture from air will be absorbed into refrigerant oil.

Refrigerant R-134a systems use Polyalkylene Glycol (PAG) refrigerant oil. Using a mineral oil based lubricant with R-134a systems will result in A/C compressor failure due to lack of proper lubrication.

All compressors have different lubrication requirements and use different Polyalkylene Glycol (PAG) refrigerant oils. Use only the specified PAG refrigerant oil for the appropriate system and A/C compressor. Always check the underhood A/C specification label or A/C compressor label before adding refrigerant oil to A/C compressor/system. See listing of refrigerant oils currently available from the vehicle manufacturers.

NOTE: PAG oil absorbs moisture very rapidly, 2.3-5.6 percent by weight as compared to a mineral oil absorption rate of .005 percent by weight.

CHRYSLER CORP., JEEP & EAGLE

Use ND-8 PAG oil, SUN PAG 56 oil, SP-10 PAG oil, or SP-20 PAG oil.

FORD MOTOR CO.

Use YN-12B or YN-12C PAG Refrigerant Oil (specification WSH-M1C231-B) or SP-20 PAG Oil (specification WST-M1C231-B2).

GENERAL MOTORS

On all models except Saturn, use PAG Refrigerant Oil (Part No. 12345923). On Saturn, use Saturn PAG refrigerant oil.

SERVICING PRECAUTIONS

DISCHARGING SYSTEM

Discharge A/C system, using approved refrigerant recovery/recycling equipment before loosening any fittings. Follow refrigerant recovery/recycling equipment manufacturer's instructions.

DISCONNECTING LINES & FITTINGS

After system is discharged, carefully clean area around all fittings to be opened. Always use 2 wrenches when loosening or tightening fittings. Some refrigerant lines are connected with a spring-lock coupling. Special tools may be required to disconnect lines. To prevent dirt and moisture from entering system, cap all openings as soon as lines are removed. DO NOT remove service valve caps until ready to connect lines and fittings.

NOTE: All R-134a based systems use 1/2-16 ACME threaded fittings. Ensure all replacement parts match the connections of the system being worked on.

CONNECTING LINES & FITTINGS

Always use new a gasket or "O" rings when connecting lines or

fittings. Coat "O" rings with refrigerant oil, and ensure it is not twisted during installation. To prevent damage to lines and fittings, always use 2 wrenches or specified tools. Keep refrigerant oil off fitting threads. Long term contact of oil on threads may cause future damage to threads.

PLACING SYSTEM IN OPERATION

After component service or replacement has been completed, evacuate system thoroughly with a vacuum pump. Charge system with proper amount of refrigerant. See REFRIGERANT OIL & REFRIGERANT SPECIFICATIONS article in GENERAL SERVICING. Perform leak test. After system has been leak tested, check system operation.

NOTE: A/C systems normally will not need additional refrigerant oil unless oil loss has occurred due to ruptured lines, leaking compressor seals, compressor overhaul or component replacement.

CHECKING COMPRESSOR OIL

FORD FS-10 10-CYLINDER

1) Slowly discharge A/C system, using approved refrigerant recovery/recycling equipment. Remove A/C compressor. Drain as much compressor oil from suction and discharge ports as possible. Rotate compressor shaft 6-8 revolutions by hand, while pouring oil from ports. Collect oil in a clean container and measure amount drained. DO NOT reuse old refrigerant oil.

2) If amount drained is 3-5 ounces, add amount drained plus one ounce of refrigerant oil to replacement compressor. If amount drained is more than 5 ounces, add the same amount that was drained from old compressor. If amount drained is less than 3 ounces, add 3 ounces to compressor. See FORD FS-10 COMPONENT REFRIGERANT OIL CAPACITIES table. Add refrigerant oil to replacement compressor through suction port.

3) Use new "O" rings on refrigerant lines. Install A/C compressor. Evacuate and charge system. Perform leak test. Ensure A/C system is operating properly.

FORD FS-10 COMPONENT REFRIGERANT OIL CAPACITIES

Component	Ounces
Accumulator/Receiver-Drier	
Except Villager	(1)
Villager	2.0
Condenser	
Except Contour, Cougar, Mystique, Villager & Windstar	1.0
Contour & Mystique	0.7
Villager	1.0-1.7
Windstar	1.5
Evaporator	
Except Contour, Mystique, Villager & Windstar	3.0
Contour & Mystique	0.7
Villager (Front Or Rear)	1.5-2.5
Windstar	4.0
Other Components (2)	2.0
Refrigerant Lines (3)	
Contour, Cougar & Mystique	1.0-1.7

(1) - Drain and measure oil from old accumulator. On Continental,

Contour, Cougar, Escort, Mustang, Mystique, Tracer and Windstar, drill two 1/2" holes in bottom of old accumulator, and drain. On all models, add the same amount of oil drained plus 2 ounces of refrigerant oil to new accumulator.

- (2) - Add refrigerant oil following replacement of other system components such as hoses, fixed orifice tube, A/C clutch cycling switch, A/C compressor pressure relief valve, system pressure cut-off switch, or service valve, compressor shaft seal, "O" ring or hose leaks.
- (3) - If all lines have been replaced.

HARRISON HD6/HT6, HD6/HR-6HE 6-CYL., V5 5-CYL. & V7 7-CYL.

NOTE: Replacement compressor may be shipped with 8-9 ounces of refrigerant oil. Drain shipping refrigerant oil into a clean container and retain for use.

1) If possible, operate system for several minutes to stabilize system. Turn engine off. Discharge A/C system, using approved refrigerant recovery/recycling equipment. Remove A/C compressor. Drain and measure refrigerant oil from old compressor through suction and discharge ports, and drain plug.

2) If no compressor oil leaks exist, and more than one ounce is drained, add amount drained from old compressor. If less than one ounce is drained from old compressor, add 2 ounces of refrigerant oil.

3) When replacing other A/C components, add specified amount of refrigerant oil to component. See HD6/HT6, HD6/HR-6HE, V5 & V7 COMPONENT REFRIGERANT OIL CAPACITIES table. Install compressor drain plug and compressor. Evacuate and charge system. Perform leak test. Ensure A/C system is operating properly.

NOTE: Approximately 3 ounces of refrigerant oil, suspended in refrigerant, will be lost due to a large, abrupt leak. When replacing a faulty A/C component, add amount of oil specified for component plus 3 ounces to compensate for oil loss. If oil cannot easily be added to component, add it to accumulator.

HD6/HT6, HD6/HR-6HE V5 & V7 COMPONENT REFRIGERANT OIL CAPACITIES

Component	Ounces
Cars	
Accumulator/Receiver-Drier	
Except "F", "N", "V" & "W" Bodies	3.5
"F", "N", "V" & "W" Bodies	(1)
Compressor	
"C" Body	(2)
"E", "K", "V" & "Y" Bodies	2.0
"F", "G", "H", "J", "P", "N" & "W" Bodies	(3)
Condenser	1.0
Evaporator	3.0
Trucks & Vans	
Accumulator/Receiver-Drier	
Except "U" Series	3.5
"U" Series	(4)
Compressor	
Except "U" Series	(3)
"U" Series	(2)
Condenser	
Except "U" Series	1.0
"U" Series	(4)

Evaporator	
Except "U" Series	3.0
"U" Series	(4)

- (1) - Add amount drained from old accumulator/receiver-drier plus one ounce.
- (2) - Ensure replacement compressor contains the same amount of refrigerant oil as was drained from old compressor.
- (3) - Drain and measure refrigerant oil from old compressor. If old compressor had less than one ounce, add 2 ounces of refrigerant oil to replacement compressor. If old compressor had more than one ounce, add the same amount of refrigerant oil to replacement compressor.
- (4) - Information not available from manufacturer.

NIPPONDENSO 10-CYLINDER

General Motors (Metro & Tracker)

1) Discharge A/C system, using approved refrigerant recovery/recycling equipment. Remove A/C compressor. Drain, measure and discard refrigerant oil from old compressor. Drain refrigerant oil from replacement compressor. Add refrigerant oil to replacement compressor equal to amount drained from oil compressor.

2) Add specified amount of refrigerant oil to components that are replaced during compressor replacement. See NIPPONDENSO 10-CYLINDER COMPONENT REFRIGERANT OIL CAPACITIES table. Install A/C compressor. Evacuate and charge system. Perform leak test.

NIPPONDENSO 10-CYLINDER COMPONENT REFRIGERANT OIL CAPACITIES

Component	Ounces
Compressor	3.0
Condenser	0.7-1.0
Receiver-Drier	0.3
System Total	3.4

NIPPONDENSO 10PA17/10PA17C 10-CYL.

Chrysler Corp. (Avenger & Sebring Coupe)

1) Remove A/C compressor. Drain and measure oil from old compressor. Replacement compressor is shipped with 3.4 ounces of oil. From replacement compressor, drain the difference between system oil capacity and amount of oil drained from replacement compressor.

2) Add specified amount of refrigerant oil to components that are replaced during compressor replacement. See 10PA17/10PA17C COMPONENT REFRIGERANT OIL CAPACITIES table. When replacing components listed, DO NOT exceed system total capacity.

Chrysler Corp. & Jeep (Caravan, Concorde, Grand Cherokee, Intrepid, LHS, Neon, Town & Country, Voyager & 300M)

1) Discharge A/C system, using approved refrigerant recovery/recycling equipment. Disconnect refrigerant hoses at compressor. Remove compressor bolts and A/C compressor.

2) Remove suction port on top of A/C compressor, and drain and measure oil. On Grand Cherokee, add the same amount of oil drained from old compressor to replacement compressor.

3) On all other models, add amount of oil to compressor equal to the total system capacity minus amount retained in components that are not being replaced. See 10PA17/10PA17C COMPONENT REFRIGERANT OIL CAPACITIES table. Install A/C compressor. Evacuate and charge A/C