# **Clark's Garage Shop Manual**

Welcome to Clark's Garage Shop Manual. The procedures here are group alphabetically as much as possible. If you don't find what you're looking for, try the 'Search' button on the main menu or drop me an email. I may be working on what you're looking for.

If you would like to submit an article or procedure for the web site, or have an idea for a new procedure, please <u>email me</u>.

ര

#### <u>A B C D E F G H I J M N O P R S T V W</u>

# A

Air Bag

Air Bag System Testing

Air Bag Warning Light Reset

Air Filter

Filter Housing Removal and Installation

Air Flow Sensor

Removal and Installation

Alternator

Replacement

TOP

 $\mathbf{B}$ 

**Balance Shafts** 

Balance Shaft Oil Seal Replacement

**Belt - General Information** 

**Belt Installation** 

**Belt Removal** 

**Belt Tensioning** 

**History** 

Sprocket Installation and Alignment Check

## Battery

**Battery Checks** 

Battery Tray Leaks / Repair

#### **Bolts**

Allen Head and Cheesehead Bolt Removal

#### Brakes

**Checking the Brake System** 

Checking Brake Pad Thickenss and Brake Pad Replacement

Fluid Replacement and Bleeding

Master Cylinder Replacement

Parking Brake Adjustment

Rotors - Inspecting and Replacing

**Upgrades** 

# Bumper

Bumper Cover Removal (951)

# TOP

C

## Camshaft

**Camshaft Assembly Installation** 

Camshaft Assembly Oil Seal Replacement

Camshaft Assembly Removal

Camshaft (Timing) Belt General Information

Camshaft (Timing) Belt Installation

Camshaft (Timing) Belt Removal

Camshaft (Timing) Belt and Balance Shaft Belt Tensioning

Camshaft Chain Tensioner Replacement (16V)

# Chips (Computer)

Installation see <u>DME Control Unit - Chip Installation (Including KLR chip for Turbos)</u>

## Clock

Removal and Replacement

## Clutch

Clutch Disc Wear Check

Replacement

Slave Cylinder Replacement and Bleeding

## Control Arms

944 Control Arms - General Information, Rebuilding, and Aftermarket Replacements

Removal and Installation

# Cooling System

Flow Diagram and Description - Normally Aspirated 944

Flow Diagram and Description - Turbocharged 944

Cooling System Draining, Filling, and Venting

Fan Operation and Troubleshooting

**Troubleshooting Cooling System Problems** 

# Crankshaft

Front Oil Seal Replacement

Rear Oil Seal Replacement

#### Cruise Control

**General Information and Repair** 

## CV Joints

**CV Joint Boot Inspection** 

General Information, Removal, Installation, and Maintenance

# Cylinder Head

Cylinder Head and Head Gasket Installation

Cylinder Head and Head Gasket Removal

Cylinder Head Tightening Sequence and Torque Specifications

## TOP

# D

#### Dash

Early 944 Dash Replacement (Pre-1985.5)

Late 944 Dash Replacement (1985.5 and Newer)

## Defroster

**Troubleshooting Rear Hatch Defroster** 

# Distributor

**Distributor Cap and Rotor Replacement** 

## DME Control Unit

Chip Installation (Including KLR chip for Turbos)

Control Unit Removal and Installation

# DME Relay

**Technical Information and Testing** 

Door Handles

Removal, Installation, and Adjustment

Door Panels

Removal and Installation

TOP

 $\underline{\mathbf{E}}$ 

Electrical

See fuses

Engine

951 Engine Performance Modifications

**Engine Oil and Filter Replacement** 

Installation

Removal

**Starting and Running Troubleshooter** 

Exhaust

**Exhaust System Removal and Installation** 

TOP

 $\underline{\mathbf{F}}$ 

Flywheel

Flywheel Lock Installation

Fuel and Vacuum Line Routing

Fuel and Vacuum Line Diagram (1985.5 and Newer N/A 944s)

Fuel and Vacuum Line Diagram (16V Normally-Aspirated 944s)

Fuel and Vacuum Line Diagram (944 Turbo)

Fuel Filter

Replacement

Fuel Injector

**Fuel Injector Information** 

Fuel Injector and Fuel Rail Removal and Installation

Fuel Level

Level Indication Problems / Repairs

Fuel Pressure

Checking

Fuel Pressure Regulator

**General Information and Replacement** 

Fuel Pump

**Delivery Rate - Checking** 

Fuel Pump Replacement

Fuses

Early 944 Fuse List (pre-1985.5)

Late Early 944 Fuse List (1985.5 and newer)

TOP

 $\underline{\mathbf{G}}$ 

Gauges

Early 944 Gauge Removal

Late 944 (1985.5 and newer) Gauge Removal

Information and Troubleshooting (See Sensors and Gauges)

TOP

 $\mathbf{H}$ 

Hatch

See Rear Hatch

Head Gasket

See Cylinder Head

Headlights

Headlight Motor Circuit Operation and Repair

Headlight Operating Mechanism Linkage Lubrication

Heater

**Heater Malfunctions** 

**Hood Crest** 

Removal and Installation

**Hood Insulation** 

Removal

**Hood Struts** 

<u>Information and Replacement</u>

**HVAC** 

**Check Valve Information** 

**TOP** 

 $\overline{\mathbf{I}}$ 

Idle

**Idle Speed Adjustment** 

Ignition

**Ignition Switch and Wiring Test** 

**Ignition System Troubleshooting** 

**Instrument Panel** 

**Instrument Panel Lights** 

Instrument Cluster Removal (see Gauges)

Intake Manifold

Removal and Installation

**TOP** 

 $\underline{\mathbf{J}}$ 

Jacking

Jacking a 944 / Placing a 944 on Jack Stands

TOP

 $\mathbf{M}$ 

Maintenance

Peroidic Maintenance Schedule

Mirror

**Removal and Installation** 

**Motor Mounts** 

Checking

Replacement

TOP Nose Panel **Removal and Installation** TOP Odometer **Repairing Odometer** Oil Oil Flow Diagram - 924S, 944, 944 Turbo Oil Cooler General Information and Seal Replacement Oil Pan Gasket Replacement Oil Pressure **General Information and Troubleshooting** Oil Pressure Relief Valve General Information Oil Pressure Sending Unit Replacement Oil Pump Removal and Installation O<sub>2</sub> Sensor **Checking and Replacement** 

**Option Codes** TOP Paint **Paint Codes** Painting a 944 Performance Performance Products and Services Vendors Power Steering Rack Rebuilding Replacement TOP R Radiator Removal and Installation Rear Hatch Repairing a Squeaking or Rattling Rear Hatch Rear Hatch Strut Replacement TOP  $\underline{\mathbf{S}}$ **Sealants** 

## Sensors and Gauges

Information, Troubleshooting, and Testing

Shocks (Rear)

Replacement

Speed and Reference Sensors

Checking, Replacement, and Adjustment

Speedometer

Speedometer, Gear Ratio, and Tire Size Calculator

Speedometer, Gear Ratio, and Tire Size Manual Calculations

Starter

**Checking Starter Operation** 

Removal and Installation

Stereo

Head Unit and Speaker Replacement Guide

Steering Wheel

**Steering Wheel Removal and Installation** 

Stone Guards

Removal and Installation

Struts (Front)

Removal and Installation

Sunroof

Operation, Troubleshooting, and Repair

**Sunroof Component Testing** 

# Plastic Gear Replacement

# Suspension Upgrades

Sway Bars

Front Sway Bar Removal and Installation

Rear Sway Bar Removal and Installation

TOP

 $\underline{\mathbf{T}}$ 

Temperature Control Unit

Removal and Replacement

Thermofan Switch

Replacement

Thermostat

**General Information and Replacement** 

Throttle Position Switch

Information, Troubleshooting, Replacement, and Adjustment

Timing Belt

See Camshaft

Top Dead Center (TDC)

**Locating and Setting Engine to TDC** 

Torque Tube

Rebuilding

**Torsion Bar** 

Removing, Replacing, and Reindexing

Towing

**General Information and Towing Eye** 

Transaxle

**Changing Manual Transaxle Fluid** 

Information

Removal and Installation

Troubleshooting

**Engine Will Not Start** 

Turbocharger

Replacement (Including Tips on K27 Turbocharger Installation)

Turn Signals

**Common Problems and Repairs** 

TOP

V

Vacuum Line Routing

See "Fuel and Vacuum Line Routing"

 $\underline{\mathbf{W}}$ 

Wastegate

Checking

Fabricating and Installing Shims

Removal and Installation

Water Pump

# **Information and Replacement**

Wheels

Information

Wheel Bearings

Front Wheel Bearings - Checking, Adjustment, Repacking, and

Replacement

Rear Wheel Bearing Replacement - Steel Trailing Arms

Rear Wheel Bearing Replacement - Aluminum Trailing Arms

Windows (Electrical)

Troubleshooting and Switch Repair

TOP

(C)