

This Polaris Sportsman ATV manual is 504 pages.

## QUICK REFERENCE DATA

### CHAPTER ONE / GENERAL INFORMATION

Manual organization / Warnings, cautions and notes / Safety / Serial numbers / Model identification (2004 models) / Fasteners / Shop supplies / Tools / Measuring tools / Electrical system fundamentals / Service methods / Storage / Specifications

### CHAPTER TWO / TROUBLESHOOTING

Warning light system / Starting the engine / Engine will not start / Starting difficulties / Poor engine performance / Fuel system / Engine / Engine lubrication / Cylinder leakdown test / Clutch system / Electrical testing / Electrical troubleshooting / Meter assembly / Front gearcase / Steering / Brake system / Specifications

### CHAPTER THREE / LUBRICATION, MAINTENANCE and TUNE-UP

Maintenance schedule / Pre-ride inspection / Tune-up / Engine compression test / Engine oil and filter / Oil pressure test / Clutch / Transmission oil / Shift linkage / Air filter / Inline breather filter / Air intake ducts / Idle speed (carbureted models) / Control cables / Fuel system / Exhaust system / Ignition timing (2002-2004 carbureted models) / Spark plugs / Cooling system / Front gearcase oil / Rear gearcase oil (all models except X2 and Touring models) / Tires and wheels / Steering system / Suspension / Brake system / Lighting system / Recoil starter / Lubrication service / Fasteners / Wires, hoses and control cables / Specifications

### CHAPTER FOUR / ENGINE TOP END

Component identification / Rocker cover / Rocker arms and pushrods / Cylinder head / Cylinder block and pistons / Valve lifter / Specifications

### CHAPTER FIVE / ENGINE LOWER END

Engine service / Oil system priming / Engine removal / Engine installation / Recoil starter (MV7 models) / Alternator covers (all models except MV7) / Flywheel, bendix and stator / Water pump cover / Stator housing / Timing gears / Water/oil pump / Camshaft thrust plate / Crankcase / Engine break-in / Specifications

### CHAPTER SIX / CLUTCH AND DRIVE BELT

Clutch system operation / Clutch tools / Clutch drying / Drive belt / Clutch outer cover / Clutch inner cover / Drive clutch / Driven clutch / Specifications

### CHAPTER SEVEN / TRANSMISSION AND SHIFT MECHANISM (ALL MODELS EXCEPT X2 AND TOURING MODELS)

Gearshift selector / Transmission case / Transmission / Specifications

### EIGHT / TRANSMISSION AND SHIFT MECHANISM (X2 AND TOURING MODELS)

Gearshift selector / Transmission case / Transmission shafts / Differential gear assembly / Snorkel shaft / Specifications

### CHAPTER NINE / AIR/FUEL AND EXHAUST SYSTEMS (CARBURETED MODELS)

Air box / Exhaust system / Intake manifold / Carburetor / Carburetor tests and adjustments / Pilot screw / Throttle cable / Throttle lever housing / Choke (starter) cable / Fuel draining / Fuel valve / Fuel tank / Rear tank (2005-on MV7 models) / Fuel sender (late 2004-on 600 and 700 models, 2005-on MV7 models) / Fuel pump / Specifications

## **CHAPTER TEN / AIR/FUEL SYSTEM (FUEL INJECTED MODELS)**

Air box / Exhaust system / Exhaust manifold / Intake manifold / Priming the fuel system / Depressurizing the fuel system / Fuel tank / Fuel pump / Fuel sender / Pressure regulator / Throttle lever housing / Throttle cable / Throttle body / Fuel injectors / Crankshaft position (CKP) sensor / Temperature and barometric air pressure / (T-BAP) sensor / Throttle position sensor (TPS) / Electronic control unit (ECU) / Self diagnosis / Specifications

## **CHAPTER ELEVEN / ELECTRICAL SYSTEM**

Electrical component replacement / Electrical connectors / Battery / Charging system / Stator / Voltage regulator/rectifier / Logic box (2005-on carbureted models) / Relays / Ignition system identification / CDI unit / Trigger coil / Ignition coil / Electronic control unit (ECU) / Starting system / Starter / Starter solenoid / Electronic throttle control (ETC) switch / Headlight pod / Headlight / Taillight assembly / Work light (models so equipped) / Switches / All wheel drive (AWD) coil / Active descent control (ADC) coil / Speed sensor / Transmission switch / Resistor module (2004-on models) / Shift indicator circuit / Differential solenoid (X2 and Touring models) / Differential controller relay (X2 and Touring models) / Meter assembly / On-board diagnostics / Fuses / Wiring and connectors / Wiring diagrams / Specifications

## **CHAPTER TWELVE / COOLING SYSTEM**

Hoses and hose clamps / Cooling system inspection / Coolant reservoir / Radiator / Radiator fan / Fan switch (2002-2004 600 and 700 models) / Coolant temperature sensor / Coolant temperature sensor (carbureted models) / Thermostat / Water pump / Specifications

## **CHAPTER THIRTEEN / WHEELS, TIRES AND HUBS**

Wheels / Front hub / Front bearing carrier / Rear hub / Rear bearing carrier / Tires / Specifications

## **CHAPTER FOURTEEN / FRONT SUSPENSION, STEERING AND FRONT DRIVE SYSTEM**

Hubstrut / Front strut / A-arm / Tie rod / Steering post / Handlebar / Handlebar grip / Front drive axle / Front drive shaft / Universal joint / Front gearcase / Specifications

## **CHAPTER FIFTEEN / REAR SUSPENSION AND REAR DRIVE SYSTEM**

Shock absorber / Upper control arm / Lower control arm / Control arm inspection / Stabilizer linkage assembly / Stabilizer support / Rear drive axle / Rear gearcase (all models except X2 and Touring / models) / Rear drive shaft (all models except X2 and / Touring models) / Specifications

## **CHAPTER SIXTEEN / BRAKES**

Brake operation / Brake service notes / Brake bleeding / Brake fluid draining / Brake pad inspection / Front brake caliper / Rear brake caliper / Front brake master cylinder / Rear brake master cylinder / Brake pedal / Brake disc / Brake hoses / Specifications

## **CHAPTER SEVENTEEN / BODY AND FRAME**

Quick release inserts / Riders seat / Riders backrest and passenger seat (X2 models) / Passenger seat (Touring models) / Side panel / Fender cover / Front fender / Front rack / Front bumper (all models except MV7) / Front brush guard / Grill and radiator shield (all models except / MV7 models) / Rear rack (all models except MV7, X2 and Touring models) / Rear rack (Touring models) / Rear rack and brush guard assembly / (MV7 models) / Rear fender (all models except X2 and MV7 models) / Rear quarter panel (X2 models) / Footwell / Rear storage box (all models except X2 models) / Cargo box (X2 models) / Winch / Winch contactor / Specifications

## **INDEX**

## COLOR WIRING DIAGRAMS

### Models Covered:

Sportsman 600 carbureted 2003 2004 2005  
Sportsman 700 carbureted 2002 2003 2004 2005 2006  
Sportsman MV7 2005 2006  
Sportsman 700 EFI 2004 2005 2006 2007  
Sportsman 700 EFI X2 2008  
Sportsman 800 EFI 2005 2006 2007 2008 2009 2010  
Sportsman 800 EFI X2 2007 2008 2009  
Sportsman 800 EFI Touring 2008 2009

Clymer Manuals Polaris Sportsman 600 Manual  
Clymer Manuals Polaris Sportsman 700 Manual  
Clymer Manuals Polaris Sportsman 700 EFI Manual  
Clymer Manuals Polaris Sportsman 700 EFI X2 Manual  
Clymer Manuals Polaris Sportsman MV7 Manual  
Clymer Manuals Polaris Sportsman 800 EFI Manual  
Clymer Manuals Polaris Sportsman 800 EFI X2 Manual  
Clymer Manuals Polaris Sportsman 800 EFI Touring Manual

Sportsman 600 (2003-2005)  
Sportsman 700 (2002-2006)  
Sportsman 700 EFI (2004-2007)  
Sportsman 700 EFI X2 (2008)  
Sportsman MV7 (2005-2006)  
Sportsman 800 EFI (2005-2010)  
Sportsman 800 EFI X2 (2007-2009)  
Sportsman 800 EFI Touring (2008-2009)