

**OWNER'S MANUAL SUPPLEMENT  
1999 SCRAMBLER 500  
PN 9914970**



**IMPORTANT:** This is a supplement to your owner's manual. This information should remain with your owner's manual at all times.

**Specifications**



<b>SCRAMBLER 500</b>		
<b>C A P A C I T I E S</b>	Body Style	Gen III
	Gross Vehicle Weight	845
	Fuel Capacity	3.5 U.S. Gallons
	Gearcase Oil	16 Ounces
	Engine Oil Capacity	2 Quarts
	Front Rack (Maximum - Capacity)	Accessory (30 Lbs.)
	Rear Rack (Maximum Capacity)	Accessory (60 Lbs.)
	Tongue Weight	30 Lbs.
	Tow Hitch	Accessory
	Tow Capacity	850 Lbs.
	Turn Radius	60 inches
	Ground Clearance	6.5 inches
	Height	47 inches
	Length	74.5 inches
	Seat Height	33 inches
	Weight	542 Lbs.
Wheel Base	48.5 inches	
Width	45.5 inches	
<b>D R I V E S Y S T E M</b>	Drive System Type	PVT
	Shift Type	Side Lever (F-N-R)
	Gear Reduction - Low	Not Applicable
	Gear Reduction - Reverse	4.74 / 1
	Gear Reduction - Forward	3.06 / 1
	Front Drive (ratio)	2:1
	Final Drive (ratio)	13/36 76P
	Center Drive (ratio)	Not Applicable
Drive Chain	520 O-ring	
<b>T I R E S</b>	Front Tire	23 x 7 - 10
	Rear Tire	22 x 11 - 10
	Tire Pressure (front)	4 PSI
	Tire Pressure (rear)	3 PSI

<b>SCRAMBLER 500</b>		
<b>S U S P</b>	Front Susp. - Mac Strut	8.2 inches
	Rear Susp. - Progressive Rate Swing Arm	8.8 inches
	Shock Adjustment	Thread Adjust
<b>B R A K E S</b>	Front Brake	Fixed Disc, Hydraulic Floating Caliper
	Rear Brake	Hydraulic, opposed piston caliper, rear axle fixed disc
	Auxiliary Brake	Hydraulic, opposed piston caliper, rear axle, fixed disc
	Park Brake	Hydraulic Lock all wheel
<b>E N G I N E &amp; C O O L I N G</b>	Engine Model Number	EH50PLE-04
	Engine Type	4 cycle, single cylinder
	Lubrication	Dry Sump
	Bore x Stroke	92 x 75
	Displacement	499
	Compression Ratio	10:2 Full Stroke
	Engine Cooling	Liquid
	Alternator Output (watts)	250
	Carburetion	BST 40
	Main Jet	155
	Pilot Jet	40
	Needle Jet	Y-0
	Pilot Screw	2.0
	Jet Needle	6H25-94-3
	Ignition	CDI
	Timing	30° @ 3500 ± 1.5
	Spark Plug Gap	.028 inches / .7 mm
Spark Plug Type	NGK BKR6E	
Exhaust	USFS Approval Pending	
<b>L I G H T S</b>	Headlight (watts)	2 dual beam, 30 / 30
	Taillight (watts)	8.26
	Brake Light (watts)	26.9

SCRAMBLER 500		
F E A T U R E S	Battery	12 V 14 AH
	DC Plug In - Rear	Accessory
	DC Socket - Forward	Accessory
	Electric Start	Standard
	High Beam Indicator	Standard
	High Temp Indicator	Standard
F E A T U R E S	Windshield	Accessory
	Low Oil Light	Not Available
	Neutral Indicator	Standard
	Reverse Indicator	Standard
	Speedometer	Accessory
	Tool Kit	Standard

**Scrambler 500**  
**(Engine - EC50PLE-04)**  
**Carburetor Jetting**

Altitude	Ambient Temperature	Below 0°F (Below -18°C)	0° to 40°F (-18°C to +5°C)	+40° to +80°F (+5°C to +26°C)	+80°F & Above (+26°C & Above)
Meters (Feet)	0-900 (0-3000)	<b>167.5</b>	<b>160</b>	<b>155</b>	<b>147.5</b>
	900-1800 (3000-6000)	<b>160</b>	<b>155</b>	<b>147.5</b>	<b>142.5</b>
	1800-2700 (6000-9000)	<b>152.5</b>	<b>147.5</b>	<b>142.5</b>	<b>135</b>
	2700-3700 (9000-12000)	<b>145</b>	<b>140</b>	<b>135</b>	<b>130</b>

 - Pilot screw in 1/2 turn  
 - Pilot screw out 1/2 turn

**Clutching**

Altitude		Shift Weight	Clutch Spring	Driven * Helix
Meters (Feet)	0-900 (0-3000)	10WH	Blue/Green	1/1
	900-1800 (3000-6000)	10WH	Blue/Green	2/1
	1800-2700 (6000-9000)	10RH	Blue/Green	1/1
	2700-3700 (9000-12000)	10RH	Blue/Green	2/1

\* - Driven uses Red Spring

The following information (page 35) of your ATV Owner's Manual, has been revised.

## Engine Electrical Switches

**1. Override Switch (Reverse Speed Limiter)** - This vehicle is equipped with a reverse speed limiter system. To obtain additional power while backing up, depress the override button. **WARNING:** Never activate the override button while throttle is open as loss of control may result, causing severe personal injury or death.

**NOTE:** The override switch also allows activation of Demand 4 Drive (All Wheel Drive) in reverse, if Demand 4 Drive switch is on.

**2. Main Switch** - This switch must be turned clockwise to the "on" position to start the engine.

**3. Emergency Engine Stop Switch** - The engine will not start or run when the switch is in its "off" position. Its purpose is to provide the operator with a quick means of engine shutdown in case of stuck throttle or other emergency.

**NOTE:** Both the main switch and the emergency engine stop switch shut off all electrical power to the entire vehicle including lights.

**4. Engine Start Button** - Slide the stop switch to the center "run" position and push up to start.

## Demand 4 Drive

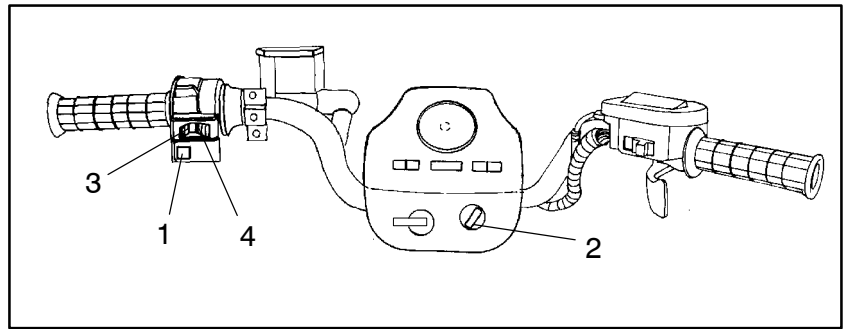
### Exclusive Demand 4 Drive System (All Wheel Drive)

This Polaris AWD is equipped with a unique, Polaris exclusive, Demand 4 Drive (AWD) system which is activated by a switch on the right handlebar. When the switch is "off" the 4x4 is in 2 wheel drive at all times. When the switch is "on" the 4x4 is in Demand 4 Drive and the front wheels will automatically engage anytime the rear wheels lose traction. When the rear wheels regain traction, the front wheels will automatically disengage. **NOTE:** The override switch also allows activation of Demand 4 Drive (AWD) in reverse, if Demand 4 Drive switch is on.

There is no limit to the length of time the vehicle may remain in Demand 4 Drive.

The Demand 4 Drive switch may be turned on or off while the vehicle is moving. If the switch is turned off when the front hubs are driving they will not release until the rear wheels regain traction.

**CAUTION:** Do not switch on Demand 4 Drive if the rear wheels are spinning. This may cause severe drive shaft and clutch damage. Engage the Demand 4 Drive switch before getting into conditions where front wheel drive may be needed. If the rear wheels are spinning, release the throttle before turning the Demand 4 Drive switch on.



## ! WARNING

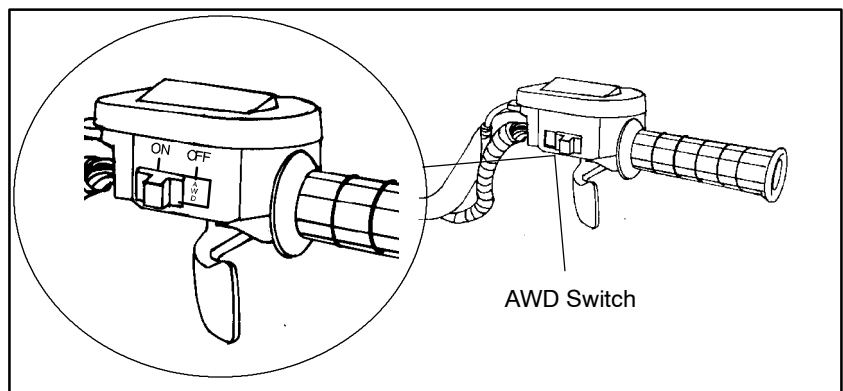
### Backing your ATV can be dangerous!

You could hit an obstacle or person behind you; or the vehicle could tip over rearward on a steep incline causing severe injury or death.

Always back slowly avoiding excessive speed and do not use the reverse speed override switch system unless additional power is required for vehicle movement.

Avoid backing on steep inclines.

Avoid turning at sharp angles in reverse.



The following Throttle Lever information, taken from page 38 of your ATV Owner's Manual, has been revised.

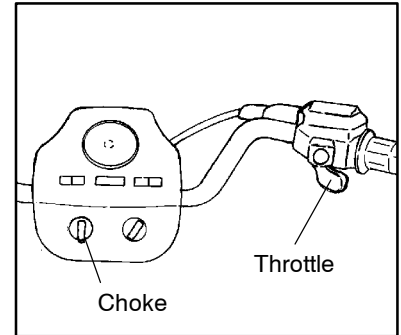
## Engine Throttle and Choke

### Throttle Lever

Engine speed and vehicle movement are controlled by pressing the throttle lever. The throttle system is spring loaded and engine speed returns to idle when the lever is released. This vehicle is equipped with a Polaris Electronic Throttle Control (ETC) which is designed to reduce the risk of a frozen or stuck throttle. In the event the throttle cable should stick in an open position, the engine will stop and power to the rear wheels will cease when the operator releases the throttle lever.

### Choke Lever

Refer to the engine starting procedure on page 56 for correct choke and throttle settings during starting.



## WARNING

The Electronic Throttle Control (ETC) stops the engine in the event of a throttle system malfunction and is provided for your safety. Do not attempt to modify the ETC system or replace it with any after market throttle mechanisms.



## WARNING

Do not start or operate an ATV with sticking or improperly operating throttle controls. A stuck or improperly operating throttle could cause an accident resulting in severe injury or death.

Always contact your dealer for service repairs whenever throttle problems arise.

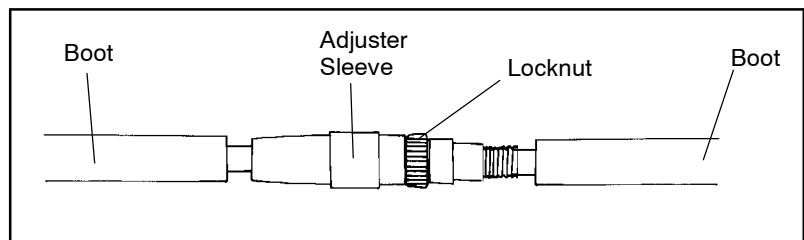
Failure to check or maintain proper operation of the throttle system can result in the throttle lever sticking during riding and cause an accident.

Always check the lever for free movement and return before starting the engine and occasionally during riding.

### Throttle Cable Free Play Adjustment

Throttle cable free play is adjusted at the handlebar.

1. Slide the boots off inline cable adjuster sleeve. Loosen adjuster locknut.
2. Turn adjuster sleeve until 1/16" to 1/8" freeplay is achieved at thumb lever.
3. Tighten locknut and slide boots over cable adjuster until they touch at the middle point of adjuster.



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# 1999 SCRAMBLER 500

RESISTOR HARNESS JUMPER IS ADDED TO UNITS BUILT FROM JUNE 22 THRU JULY 22, 1998 WIRES ARE REPRESENTED BY SOLID OR DASHED LINES TO SIMPLIFY TRACING IN DIAGRAM.

JB 7-17-98

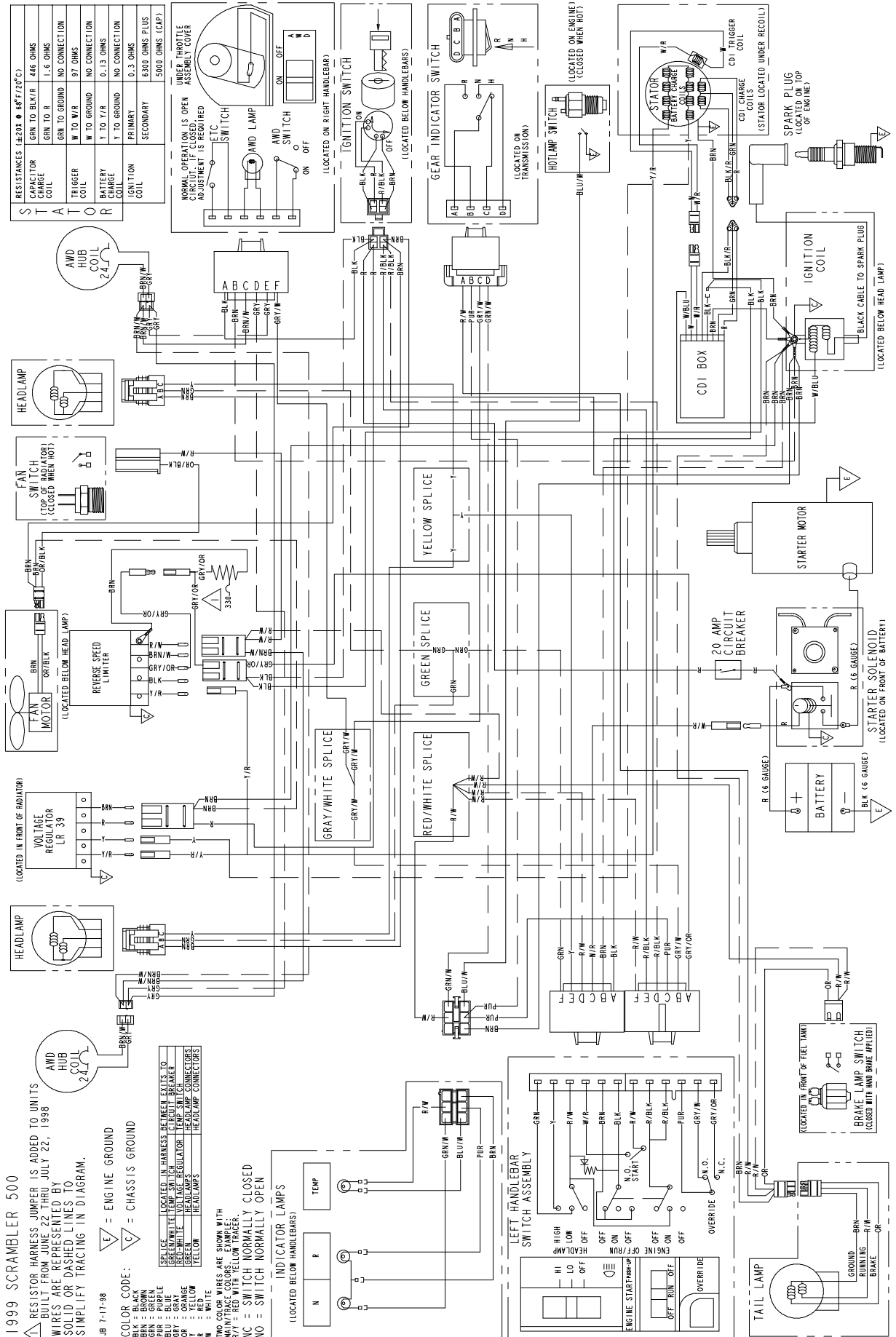
△ = ENGINE GROUND

◻ = CHASSIS GROUND

COLOR CODE:

- BRN = BROWN
- GRN = GREEN
- BLU = BLUE
- GRY = GRAY
- YEL = YELLOW
- WHT = WHITE

TWO COLOR WIRES ARE SHOWN WITH RED WITH YELLOW TRACER. NC = SWITCH NORMALLY CLOSED NO = SWITCH NORMALLY OPEN



RESISTANCES ±20% @ 68°F(20°C)
CAPACITOR
GRN TO BLK/R 146 OHMS
GRN TO R 1.6 OHMS
GRN TO GND NO CONNECTION
W TO W/R 97 OHMS
W TO GND NO CONNECTION
Y TO Y/R 0.13 OHMS
Y TO GND NO CONNECTION
IGNITION COIL
PRIMARY 0.3 OHMS
SECONDARY 6300 OHMS PLUS
5000 OHMS (CRP)

