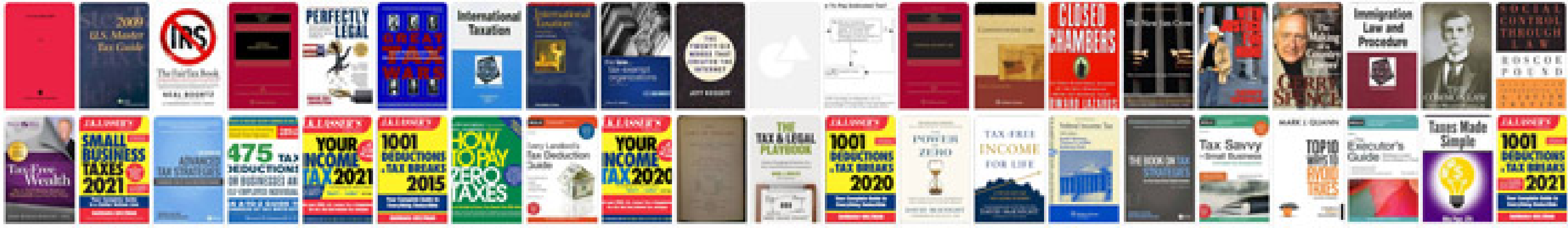

Sportsman 800

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It was also the largest displacement ATV on the market and more than a few sources in the ATV industry complained that it was too powerful for any practical need and that it was escalating a horsepower war among ATV manufacturers. Today, the Polaris Sportsman XP tempts riders with even more power, sophistication and refinement. A fuel injected, cc, pushrod inline twin with two valves per cylinder. As twin cylinder motors go, the Sportsman is unusual because both pistons rise and fall together, but fire alternately. If you want more thrust, hop up parts for this engine are easy to find, because this same engine is used in several Polaris RZR models. EFI means instant starts in cold or hot weather, not having to fiddle with a choke for starting and warm up and no need rejet carburetors for high elevation riding. The simplest kind to use, a belt type, continuously variable transmission CVT. That means it freewheels on downhills at idle. The machine coasts with more resistance in low than high, or you can trick the transmission into providing engine braking by blipping the throttle. Polaris offers automatic engine braking for the as an option if you feel you need it. To keep steering light, the system remains in 2WD even in 4WD until the speed sensitive front differential senses the rear wheels turning faster than the fronts. When that happens, the front differential locks in the fraction of a wheel rotation. The has so much muscle it makes a meal of huge hills and long, slick mud bogs that can be a struggle on smaller, less powerful machines. New possibilities seem to open up in all sorts of situations because you can gather speed so quickly and maintain momentum in challenging terrain. Big bore 4x4s make average riders look like heros because sheer power lets them instantly conquer gnarly obstacles with ease. Truly talented riders can do amazing things with the As powerful as it is, the Polaris is not an unruly monster. It provides very good comfort and enough bottoming resistance for fast trail riding. It can even handle whooped out trails at a surprising pace. Considering the Sportsman weighs about pounds with a full tank, the suspension does an amazing job. At a casual pace, the is surprisingly easy to handle. The Sportsman is a pleasure to ride on twisting trails and it tracks confidently in open terrain at higher speeds. The Polaris 4WD system is as effective as any and more convenient than most, because it locks the front differential the instant maximum traction is needed. The Sportsman has so much power and traction for climbing we had to hunt for hills that challenged it. We topped every one we tried, but descending the steep slippery ones requires more attention than on some machines. Many machines provide engine four wheel engine braking in 4WD. Fortunately, the brakes are strong and controllable. Most are very good. The huge, lockable, sealed front storage compartment built into the front rack is one of the largest on any ATV. Fuel injection means instant starts. Three powerful lights make night rides fun and safe. Parking brakeâ€¦Lever lock on left hand brake lever, park position on transmission range selector. Lighting Frontâ€¦Two 27W grille-mounted headlights, single 50W handlebar-mounted headlight. Instrumentsâ€¦Speedometer, odometer, trip odometer, tachometer, hour meter fuel gauge, clock. Necessary cookies are absolutely essential for the website to function properly. This category only includes cookies that ensures basic functionalities and security features of the website. These cookies do not store any personal information. Any cookies that may not be particularly necessary for the website to function and is used specifically to collect user personal data via analytics, ads, other embedded contents are termed as non-necessary cookies. It is mandatory to procure user consent prior to running these cookies on your website. Continue Reading. You might also like. Prev Next. Follow Us utvactionmag. Close this module. This website uses cookies to improve your experience. We'll assume you're ok with this, but you can opt-out if you wish. Accept Read More. Close Privacy Overview This website uses cookies to improve your experience while you navigate through the website. Out of these, the cookies that are categorized as necessary are stored on your browser as they are essential for the working of basic functionalities of the website. We also use third-party cookies that help us analyze and understand how you use this website. These cookies will be stored in your browser only with your consent. You also have the option to opt-out of these cookies. But opting out of some of these cookies may affect your browsing experience. Necessary Necessary. Non-necessary Non-necessary. Sign in. Welcome, Login to your account. Forget password? Remember me. Sign in Recover your password. A password will be e-mailed to you. Quick Links. See also: Service Manual , Owner's Manual. Table of Contents. Polaris industries all terrain vehicle owner's manual pages. If you cannot locate this card, or if it has been removed, please call for assistance. Page 5 Copyright Polaris Sales Inc. All information contained within this publication is based on the latest product information at the time of publication. Due to constant improvements in the design and quality of production components, some minor discrepancies may result between the actual vehicle and the information presented in this publication. Page 7: Vehicle Identification Numbers Remove the spare key and store it in a safe place. Your key can be duplicated only by mating a Polaris key blank with one of your existing keys, so if both keys are lost, the ignition switch must be replaced. If any decal becomes illegible or comes off, contact your Polaris dealer to purchase a replacement. Replacement safety decals are provided by Polaris at no charge. Reduce speed and allow greater distance for braking when carrying cargo. To prevent serious injury, do not operate vehicle with guard removed. Do not modify engine or clutch. Doing so can cause part failure, possible imbalance, and excessive engine RPM, which can result in serious injury or death. ATV riding requires special protective clothing for comfort and to reduce the chance of injury. Helmet Your helmet is the most important piece of protective gear for safe riding. A helmet can prevent a severe head injury. Page Operator Safety Failure to follow the warnings contained in this manual can result in severe injury or death. A Polaris ATV is not a toy and can be hazardous to operate. This vehicle handles differently than other vehicles, such as motorcycles and cars. A collision or rollover can occur quickly, even during routine maneuvers like turning, or driving on hills or over obstacles, if you fail to take proper precautions. Your safety is involved when these words and symbols are used. Become familiar with their meanings before reading the manual. The safety alert symbol, on your vehicle or in this manual, alerts you to the potential for personal injury. Take a training course. Beginners should receive training from a certified instructor. Contact an authorized Polaris ATV dealer or call Polaris at to find out about the training courses nearest you. S Never operate on hills too steep for the ATV or for your abilities. Practice on smaller hills before attempting larger hills. Page Equipment Modifications We are concerned for the safety of our customers and for the general public. Therefore, we strongly recommend that consumers do not install on a Polaris ATV any equipment that may increase the speed or power of the vehicle, or make any other modifications to the vehicle for these purposes. Reaction time may be slower and operator balance and perception could be affected. Failure to properly maintain the ATV. Always check the terrain carefully before ascending any hill. If all forward speed is lost: Keep your weight uphill. Avoid operating over large obstacles such as rocks and fallen trees when possible. Page 32 Never modify the ATV through improper installation or use of accessories. All parts and accessories added to the vehicle must be genuine Polaris Industries Inc. After any overturn or accident, have a qualified service dealer inspect the entire machine for possible damage, including but not limited to brakes, throttle and steering systems. Do not activate the override switch while the throttle is open. If the throttle cable should stick in an open position when the operator releases the throttle lever, the engine will stop, and power to the rear wheels will cease. If the fluid level is low add DOT 3 brake fluid only. See page for the part numbers of Polaris products. Always check to be sure the parking brake is disengaged before operating. Setting the Parking Brake 1. Page Auxiliary Brake The rear wheels may skid and slide sideways, causing loss of control and serious injury or death. Your Polaris ATV has an auxiliary brake 1 for added safety. When the switch is off, the ATV is in two-wheel drive at all times. The instrument cluster measures distance in miles as well as hours of operation. Gear Indicator - As the shift lever is moved, this indicates the Please return your ATV to your dealer for all major repairs. As long as the gauge is in the diagnostic mode, the wrench icon will remain lit. When your vehicle leaves the factory, this feature is set at 50 hours. Please see your Polaris dealer for all major repairs. To download blink codes failure codes from the EFI module: 1. Always exercise extreme caution whenever handling gasoline. Always refuel with the engine stopped, and outdoors or in a well ventilated area. Do not smoke or allow open flames or sparks in or near the area where refueling is performed or where gasoline is stored. No single action on your part is as important as following the procedures for a proper break-in. Page 51 Ensure proper operation Ensure operation Ensure proper operation Inspect, clean Drain deposits whenever visible Check operation, apply Polaris dielec- tric grease when lamp is replaced Check operation, apply Polaris dielec- tric grease when lamp is replaced Wear helmet, goggles, protective Page Starting The Engine Water in the bottom of the crankcase can lead to engine damage and must be drained. Water accumulation increases as outside temperature decreases. See your Polaris dealer for engine heater kits, which provide quicker warm-ups and easier starting in colder weather. Sit upright with both feet on the footrests and both hands on the handlebars. Start the engine and allow it to warm up, then shift the transmission into gear. Check your surroundings and determine your path of travel. This means that the wheel on the outside of the turn must travel a greater distance than the inside wheel when turning and the inside tire must slip traction slightly. Slow down when entering slippery areas. Engage AWD before wheels begin to lose traction. Always travel straight uphill. Keep both feet on the footrests. Transfer your weight forward. Proceed at a steady rate of speed and throttle opening. Avoid crossing the side of a hill when possible. Sidehilling can be the most dangerous type of driving encountered and should be avoided if at all possible. When traveling downhill, follow these precautions: 1. Transfer your weight to the rear. Drive straight down the hill. Slow down. Squeeze the brake lever gradually. Follow these procedures when operating through water: 1. Determine water depths and current before crossing. Choose a crossing where both banks have gradual inclines. Be constantly alert for hazards such as logs, rocks and low hanging branches. Page Driving In Reverse Avoid backing on inclines, and avoid turning at sharp angles. The override button should be used with caution as rearward vehicle speed is greatly increased. Do not operate at wide open throttle. Turn the engine off. Place the transmission in park. Set the parking brake. Always block the rear wheels on the downhill side as shown. Federal law requires that this spark arrestor be installed and functional when the vehicle is operated on public lands. See your Polaris dealer. Periodic Maintenance Chart Careful periodic maintenance will help keep your vehicle in the safest, most reliable condition. Inspection, adjustment and lubrication of important components are explained in the periodic maintenance chart. Page Periodic Maintenance Chart 25 H " if equipped Perform these procedures more often for vehicles subjected to severe use. Maintenance Interval whichever comes first Miles Km 25 H Page 70 Idle speed Toe adjustment Headlight aim Perform these procedures more often for vehicles subjected to severe use. Its exceptional frictional properties result in more efficient operation, more power output and lower fuel consumption. Position the ATV on a level surface. Start the engine and let it idle for seconds, then stop the engine. Do not allow hot oil to come into contact with skin. Always change the oil and filter at the intervals outlined in the Periodic Maintenance Chart beginning on page Page Transmission Oil 1. The transmission oil fill plug 2 is located on the right side of the ATV behind the footwell. Maintain the oil level even with the bottom of the fill hole threads 1. Use of other oils may result in improper operation of components. Oil Check 1. Remove the fill plug. Do not dilute with water. To access the recovery bottle, remove the left side panel as outlined on page Maintain the coolant level between the minimum and maximum marks on the bottle when the fluid is cool. Page 81 Always fill the reservoir as needed whenever the cover is loosened or removed to ensure proper diaphragm operation. Use Polaris DOT 3 brake fluid. Do not overfill. Check the brake system for fluid leaks. Check the brakes for excessive travel or spongy feel. Check the friction pads for wear, damage and looseness. Check the security and surface condition of the disc. Page Toe Alignment If you discover improper alignment, see your Polaris dealer for service. Steering Assembly The steering assembly of the ATV should be checked periodically for loose nuts and bolts. If loose nuts and bolts are found, see your Polaris dealer for service before operating the vehicle. Remove the seat. Grasp the rear of the side panel near the rear cab. With a firm motion, pull the panel outward to disengage the side panel from the grommet. Pull the panel downward and rearward to remove it from the ATV. All service must be performed by your authorized Polaris dealer. Remove the seat, release the air box cover clips, and remove the air box cover. Loosen the clamp and remove the filter. Remove the fabric type pre-filter 1 from the main filter 2. Wash the pre-filter in soapy water, then rinse and let dry. Oil from your skin leaves a residue, causing a hot spot that will shorten the life of the lamp. Headlight and taillight lenses become dirty during normal operation. Use the following procedure to make the adjustment. Position the vehicle on a level surface with the headlight approximately 25 ft. Remove the two screws on the lower front corners of the headlight pod. Lift the pod slightly while depressing the tabs at the rear of the pod. Lift the pod cover and disconnect the speedometer harnesses from the speedometer. Turn the back of the headlight harness 1 counterclockwise and pull the harness assembly away from the headlight assembly. Remove the headlamp and install the new headlamp. Reinstall the harness assembly into the headlight assembly. Page Spark Plugs S Spark plug torque is 18 ft. Always use Polaris-recommended spark plugs. Spark plug condition is indicative of engine operation. The spark plug firing end condition should be read after the engine has been warmed up and the vehicle has been driven at higher speeds. Take the vehicle to your dealer before starting the engine. Do not perform service on the spark arrestor while the system is hot. Allow components to cool sufficiently before proceeding. As engine speed increases, the force exerted on the movable drive sheave by the flyweights also increases. This, in turn, increases the amount of pinch applied to the drive belt. Page Pvt Drying Always follow all recommended maintenance procedures. This PVT system is intended for use on Polaris products only. Do not install it in any other product. Always make sure the PVT housing is securely in place during operation. When removing the battery, always disconnect the negative black cable first. When reinstalling the battery, always connect the negative black cable last. With a few precautions, your ATV can be cleaned much like an automobile. Page Fluid Levels Use dish soap type cleaners only. High pressure washers may force water past seals. Stabilize the Fuel Fill the fuel tank. Follow the instructions on the container for the recommended amount. Carbon clean will also reduce the possibility of bacterial growth in the fuel system. Allow minutes of operation Page Battery Maintenance 6. If Polaris fuel system additive is not used, fuel tank, fuel lines, and injectors should be completely drained of gasoline. Inspect and Lubricate Inspect all cables and lubricate. Wash chrome rims frequently. Use a mild detergent to remove any salt, dirt, mud or grime. Page Adjustments Follow the adjustment procedures exactly, or see your Polaris dealer for service. The handlebars can be adjusted for rider preference. If the engine idle speed is not satisfactory, please see your Polaris dealer for adjustment. Throttle Cable Freeplay Throttle cable freeplay is adjusted at the handlebar. Slide the boots 1 off the inline cable adjuster sleeve 2. Loosen the adjuster locknut 3. Page Troubleshooting 10 seconds. Clutch seals should be inspected for damage if repeated leaking occurs. Contact your Polaris dealer for inspection of clutch com- ponents. Replace old or off-season fuel with fresh fuel. Check for fouled plugs or foreign material in gas tank, fuel lines or fuel filter. Page Polaris Products Chain Lube 16 oz. Polaris also gives a one year limited warranty on the final drive chain for failure due to defects. This warranty covers the parts and labor charges for repair or replacement of defective parts which are covered by this warranty. This warranty does not cover accidental damage, normal wear and tear, abuse or improper handling. When requesting warranty service you must present your copy of the Warranty Registration form to the dealer. Page In the Country where your vehicle was purchased: Warranty or Service Bulletin repairs must be done by an authorized Polaris dealer. If you move or are traveling within the country where your vehicle was purchased, Warranty or Service Bulletin repairs may be requested from any authorized Polaris dealer who sells the same line as your vehicle. Page Exported Vehicles How to Get Service If Purchased From A Private Party: If you purchase a Polaris product from a private citizen outside of the country in which the vehicle was originally purchased, all warranty coverage will be denied. Page Index Accessories Age Restrictions Air Filter Service. Page Parking on an Incline Pre Ride Inspection This manual is also suitable for: sportsman efi. Print page 1 Print document pages. Cancel Delete. Sign In OR. Don't have an account? Sign up! Restore password. Upload from disk. Upload from URL. Arctic Cat. F Models. G Models. K Models. R Models. S Models. Harley Davidson. Honda Sport. CBR VFR Interceptor. Honda Cruiser. Honda Scooter. Kawasaki Sport. Dual Sport. Ninja Kawasaki Cruisers. Moto Guzzi. MV Agusta. Suzuki Sport. Suzuki Cruiser. Suzuki Scooter. Yamaha Sport. Yamaha Cruisers. Yamaha Scooter. Triumph Cruiser. Triumph Sport. Customer Login. Part is off a Good Running Polaris Sportsman with only Used See Video and Photos for Details. Customer Login If you are already registered, please log in. Email Address:. Forgot your password? Create your account and enjoy a new shopping experience. Create A New Account. Order Now. Pay Later. How It Works. Add to Cart. Items 1 to 20 of 29 total. Our mission at Sun Coast Cycle Sports is to ensure our customers affordably, and quickly, get back on the road, dirt or track Our products include fast and free shipping to the lower 48 states. Most of our products arrive within business days after they leave our warehouse. We also provide full tracking information emailed to you immediately to ensure you will have peace of mind when your product will arrive. We provide you our customer with extensive photos of all items, you will recive the item in the photos. We do not use stock images. If you have any questions about our products or what will for your unit, feel free to call We offer a 30 day guarantee on all of our products and offer simple returns. Need help? We're available at Make Polaris. Model Sportsman. Has selectable turf mode 1 wheel drive , posi track two wheel rear drive , or true On demand 4 wheel shaft drive with a flip of a switch on the go with 4 wheel independent suspension. Give our sales team a call today - or fill out the contact form below and have one call you! Model Sportsman 4x4. Just serviced with warranty. Great selection of pre-owned ATV's, all makes and models. New inventory arriving daily. Model Sportsman EFI. This machine comes equipped with a winch and plow. Low miles clean machine. Only at Rother Bros. Selling as we just don't use it but around the yard. Very strong and reliable machine. No leaks or smoking. Terra superwich and brush guard added. Ready for hunting season. This is the hard to find "Nuclear Sunset" Limited Edition and has only been adult ridden up in Flagstaff AZ and never rolled or damaged in anyway. Garage kept "Street legal" and is in great condition!! Only has hours and miles on it! Hollywood, FL. Alamo Heights, TX. Bayfield, CO. Gresham, OR. Mill Valley, CA. Lyles, TN. Alpharetta, GA. Alert Successfully Created. Save search. Motorcycles for Sale Polaris Sportsman Efi. Year Make Polaris Model Sportsman. Year Make Polaris Model Sportsman 4x4. Category - Engine - Posted Over 1 Month. ZIP Code. Year minYear Apply Filters Clear Search. Daily Weekly No Emails. Submit Cancel. Make Polaris. Model Sportsman X2 4x4 With Plow. Just serviced with warranty. Model Sportsman x2. Fuel injected, V-twin cc. Made to ride with a passenger. Model Sportsman X2. Model Sportsman. Cycle trader would not let me choose a cc X2 as described. Model Sportsman X2 Private adult owned. No time to use. Conquering an endless sea of boulders. Or just coming around the trail s bend and discovering a place you never knew existed. Leone's is a full service dealership with the best selection of machines, accessories, and parts in the area. Leone's has 6 certified service technicians on staff to serve all of your powersports needs. Come check us out! Added winch and Polaris deluxe plow. Most versatile. New battery, belt, comes fully serviced! Has 2, miles. There are a few cracked plastic but runs and drives great. Dump bed works great. Ready to work! Make Honda. Never Settle For Second Best. But some adventures? Able to do-it-all, whether it? And here? We started with our tried-and-true fuel injected class engine and improved its fuel efficiency. Then we designed an all-new stronger chassis with increased suspension stroke for better handling and a smoother ride to tackle any type of terrain. But just in case you get yourself in a sticky situation we added our all-new front differential lock to make sure you get back to camp. And finally, we wrapped all of these new features and more with all-new aggressively styled bodywork to set Foreman apart from the competition. Recommended for riders 16 years of age and older. Honda recommends that all ATV riders take a training course and read their owner's manual thoroughly. Reverts back to 2WD when you don t. Integrated winch control wiring and plow mount make it even easier to get work done. Rear dump box features a lb. The 6. Our EPS lets you ride all day with less fatigue from steering. Its rock-solid design has 9. Excellent condition!!! Lawrenceville, GA. Rocky Ford, CO. Bayfield, CO. Williamsburg, VA. Carthagena, OH. Ridgefield, WA. Gloucester, VA. Alert Successfully Created. Save search. Motorcycles for Sale Polaris Sportsman X2. Year Make Polaris Model Sportsman x2. Year Make Polaris Model Sportsman. ZIP Code. Year minYear Apply Filters Clear Search. Daily Weekly No Emails. Submit Cancel. Quick Links. Table of Contents. This service manual is designed primarily for use by certified Polaris Master Service Dealer technicians in a properly. All references to left and right side of the vehicle are from. Some procedures outlined in this manual require a sound knowledge of mechanical theory, tool use, and shop. Technicians should read the text and be familiar with service. Certain procedures require the use of special tools. Use only the proper tools as. Comments or suggestions about this manual may be directed to: Service Publications Dept. Polaris Sales Inc. All information contained within this publication is based on the latest product information at the time of publication. Due to constant. No liability can be accepted for omissions or inaccuracies. Any reprinting. Printed in U. Polaris industries all-terrain vehicles owner's manual 96 pages. Owner's manual for vehicle maintenance and safety pages. Polaris snowmobile universal owner's manual pages. Offroad Vehicle Polaris sportsman efi Service Manual pages. Due to constant improvements in the design and quality of production components, some minor discrepancies may result between the actual vehicle and the information presented in this publication. The machine model number must be used with any correspondence regarding warranty or service. This information can be found on the sticker applied to the top side of the crankcase A. To identify which series the key is, take the first two digits on the original key and refer to the chart to the right for the proper part number. Page Misc. Some of the tools listed or depicted are mandatory, while other tools maybe substituted with a similar tool, if available. Polaris recommends the use of Polaris Special Tools when servicing any Polaris product. Center Distance: Distance between center of crankshaft and center of driven clutch shaft. Chain Pitch: Distance between chain link pins No. Polaris measures chain length in number of pitches. CI: Cubic inches. Page Maintenance Change oil immediately and monitor level. If oil level begins to rise, discontinue use and determine cause. NOTE: Inspection may reveal the need for replacement parts. Always use genuine Polaris parts. More often under severe conditions operating in water or hauling heavy loads. Page Transmission Lubrication Remove transmission drain plug to drain the oil. Discard used oil properly. Clean and reinstall the drain plug. Torque to specification. Remove fill plug. Check for leaks. Oil Fill Plug Install fill plug. AW ISO 10 hydraulic fluid equivalent. Locate bleeder valves found on either side of differential Shifter and remove the protective caps. Throttle lever operation should be smooth and lever Slide boot off throttle cable adjuster and jam nut. Install line locks on fuel lines and verify locks are seated. Gasoline is extremely flammable and explosive Start engine and inspect for leaks. Add only Polaris ADC fluid when required. Clean with electrical contact cleaner or a glass bead spark plug cleaner only. Page Battery Maintenance Observe coolant levels often during the break-in period. Do not dilute with water. Verify the inner splash cap vent Cooling Hoses hole is clear and open. Inspect the gasket. It should adhere tightly to the cover and seal all the way around. Escaping steam and fluid can cause severe burns. To check the oil level: sure to check the PVT cover and other components for water ingestion. Remove dipstick and fill sump with 2 quarts 1. Place gear selector in park and set the parking brake. Page Final Drive Due to the critical nature of the procedures outlined first, and then at front and rear. Try to move the wheel in this chapter, Polaris recommends steering and hub by pushing inward and pulling outward. If toe alignment is incorrect, measure the distance between vehicle center and each wheel. This will tell you which tie rod Set handlebars in a straight ahead position and secure needs adjusting. Page Exhaust Pipe See Chapter 9 wheels. Steps 2 and 3. Tighten any loose fittings and replace any Sight Glass worn or damaged parts. Refer to Chapter 7 for CV boot replacement, or have your Polaris dealer 1 inch or greater replace the boot. Check controls for proper operation, positioning and adjustment. Brake control and switch must be positioned to allow brake lever to travel throughout entire range without contacting switch body. To open the front compartment turn the latch handle to the horizontal position on both sides. To close the storage compartment turn the latch handles to the vertical position. IN pulls the cable into the winch and OUT feeds the cable out of the winch. This information is for Sportsman models equipped with a winch in the front. The red wire connects to the battery. The winch wires can be located under the front cab area. Locate the wires, remove the cap and hook up to winch the Blue and Yellow 6 Ga. Warm the engine and change the oil and filter. Follow the Polaris does not recommend the use of a high pressure type car procedure in this chapter for proper oil change. If a high pressure system is Page 54 Always place the transmission in park and lock the parking brake. Inspect all cables and lubricate with Polaris Cable Lubricant. Follow lubrication guidelines in the maintenance section of the Be sure the fuel cap, oil cap and seat are installed correctly. To maintain a X2 not applicable beautiful finish and prevent corrosion, periodic maintenance is required. JournalBearings B. Camshaft C. Thrust Plate D. Balance Shaft E. Woodruff Key F. Flange Seal G. Crankshaft H. Oil Pickup I. Journal Bearings J. Baffle K. Oil Plug L. Washer M. O-ring N. Crankcase O. Page 59 6. Clamp B. Oil Fill Tube C. Dipstick D. Oil Filter Nipple G. Oil Filter H. Dowel I. Page 62 A. Head Bolts B. Rocker Arms C. Head Assembly D. Gasket E. Pushrods Circlip UP F. Bushing for Install G. Expansion Plug H. Cylinder I. Piston Assembly J. Circlip K. Gasket L. Rocker Cover 2. Breather D. O-ring Seal E. Fuel Injector B. Fuel Rail C. Page Cooling System Pressure Test 10 psi. The system must retain 10 psi for five minutes or longer. If pressure loss is evident within five minutes, check the radiator, hoses, Polaris Premium clamps and water pump seals for leakage. Carefully remove the fuel rail B and injectors. Page Engine Installation Notes Engine Installation Notes Engine Break-In Period The break-in period for a Polaris ATV engine is defined as the After the engine is installed in the frame, review this checklist first ten hours of operation, or the time it takes to use two full and perform all steps that apply: tanks of gasoline. Page Electrical Pay close attention to areas where the cylinder sleeve meets the aluminum casting transfer port area. Use electrical contact cleaner if necessary to clean these areas. Rinse thoroughly, dry with compressed air, and oil the bore immediately with Polaris Lubricant. Mark or tag rocker arms in order of disassembly to keep them in order for reassembly. NOTE: The following procedure is only for servicing the top end of the valve train when replacing valve springs or replacing valve seals. Place the whenever the cylinder head is disassembled. Hardened, cracked or worn valve seals will cause hydraulic lifters C , pushrods D , and rocker arms E in excessive oil consumption and carbon buildup. Compare to specifications. Remove all carbon from valves with a soft wire wheel or Measure valve stem in several places. Rotate the valve 90 degrees and measure Check valve face for runout, pitting, and burnt spots. To for wear. NOTE: Polaris recommends that the work be done by a local machine shop that specializes in this area. NOTE: The cylinder head valve guides cannot be replaced. Page Cylinder Head Reassembly ENGINE Lubricate the valve guides with clean engine oil, and apply Valve seals should be installed after the valves are in the oil or water based lapping compound to the face of the head to avoid valve seal damage. Install new valve seals valve. When all valves are installed, tap lightly with soft faced hammer on the end Remove the valve lifter's by reaching into the crankcase of the valves to seat the split keepers. Do not scratch the ring lands. Remove circlip A. Mark the piston with a white pen to ensure proper orientation if reused during assembly. Repeat procedure for second ring. Remove all gasket material from the cylinder sealing surfaces. Inspect the top of the cylinder B for warp using a straight edge A and feeler gauge C. Refer to Ill. Inspect cylinder for taper and out of round with a telescoping gauge or a dial bore gauge. Measure piston outside diameter at a point 5 mm up from the bottom of the piston at a right angle to the direction of the piston pin. Wipe cylinder bore with oil immediately in the ring land and measuring with a thickness gauge. Replace piston and rings if ring-to-groove clearance to remove residue and prevent rust. Replace starter drive Install Flywheel Puller PN and remove if gear teeth are cracked, worn, or broken. Remove the starter bendix G , wire holddown plate H , and the woodruff key I from the crankshaft. Inspect the cam gear teeth and check to make sure there is spring tension offsetting the teeth between the two gears. If there is no tension, check the springs inside of the cam gear assembly. With a white marking pen, accent the timing mark on the Insert the pointed dowels from the Tapered Pins PU- gear that contains the springs. Inspect the gear teeth and the three tabs on the gears for wear. Line up the two gears using the timing marks and the three into one assembly hole counter clockwise gear tabs that were referenced earlier. Push the gears back together, using both hands and hold securely. Remove the bolt and nut from the balance shaft gear. Try Install the Flywheel Puller PN and remove the to remove the balance shaft gear. If the gear does not come crankshaft gear, if needed. Use a feeler gauge to measure the clearance between the dowel in first. If the valve is installed incorrectly, two rotors. Measure the gap between the two rotor tips as shown below. Place the shaft in a press to remove the bearing. Press gear onto shaft while supporting the housing. Bearing Press shaft into the new bearing.. Remove thrust plate U. New Bearing Remove and inspect crankshaft main journal bearings for damaged. When removing the oil baffle bolts, use a abnormal wear. Follow Steps of this section to prime the engine and to help aid proper break-in. Apply Crankcase Sealant PN to the top gearcase halve. Apply assembly lube to cam journals and balance shaft bearing surfaces of the MAG case halve. Install cam and Assemble the crankcase halves. Orientate the piston rings on the piston before installation order as removed in disassembly. Apply Lubriplate or into the cylinders. Position cylinder and piston assemblies onto the connecting Install camshaft thrust plate G with new bolts. Torque rods and push the piston pins through the piston and bolts to specification. Lubricate Rotors Align the bolt holes and install oil pump assembly into crankcase. Before installing the crankshaft gear I , heat the crankshaft Install washer and bolt. Carefully install the tapered end of the Crankshaft Seal cover O. Apply Crankcase Sealant PN to the outside Torque bolts in proper sequence to crankcases mate. See photos below. This helps to prevent specification. Install water pump impeller P. Secure the impeller with Torque the nut to starter drive. Install the starter bendix. NOTE: There are thrust washers on both sides of starter drive. Page Remove primer plug from the engine. Push oz. Remove the adapter. Apply sealant to the plug threads. This will ensure proper sealing when installing bolts. Install the head gasket A on the cylinder B. Lubricate rockers E with engine oil. Lightly Install thermostat J , new O-ring, and thermostat housing. The reed has a tab and will assemble one-way only. Torque the breather bolts to specification. To maintain a beautiful finish and prevent corrosion, periodic maintenance is required. DO NOT use Repeat this procedure as often as desired to maintain the caustic chemicals to clean, as they may damage the finish. This dealer-only software installs on laptop computers equipped Fuel Injectors 5. Fuel Filter 6. Refer to the steps below for fuel line removal. Place a shop towel around the fuel line to catch any dripping fuel. Squeeze the connector tabs together and push the locking slide back. The EFI system is designed to provide peak engine performance with optimum fuel efficiency and lowest possible emissions. The ECU requires a minimum of 7. The memory in the ECU is operational the moment the without system or engine component damage. Connect the pressure hose of the Polaris pressure tester PN PU to the test valve on the fuel rail. Route the clear hose into a portable Internal 30 Micron gasoline container or the equipment fuel tank. Remove the air box cover and remove the two gas tank mounting bolts at the rear of the gas tank. Loosen the fuel tank hose and pull the fuel line from Carefully pull the fuel tank out of the frame. A rubber-fiber diaphragm divides the regulator into two separate sections-, the fuel EFI Engines use a non-serviceable, high-volume, high- chamber and the pressure regulating chamber. Excessive voltage will burn out the injector s. Do not ground the injector s with the Operation Overview ignition on. The throttle position sensor TPS is a non-serviceable item. If it is faulty, it must be replaced. The throttle plate should seal off throttle bore completely. Establishing correct flow: Now that the zero offset voltage has been set, you can now set the throttle body to the correct air flow Back Air Flow Screw Out Until No value. This indicates all other components are working properly. Refer to Chapter 10 for ETS testing. Press inside insert A until it snaps into place. Step 3 Side Panel Removal Side panel removal is quick and easy, use the following instructions for removal and installation. Remove seat by releasing the latch and lifting up on the seat. Front Storage Remove Bolts Remove the two T25 screws that secure the storage box to the front fender well areas each side. Pull the tabs out of the notches and lift up on the cover piece. Remove the two screws B that secure the front cab to the frame in the fuel tank mount area. Install rear rack onto rear frame and cab. Lift the rear cab from the frame. The bottom handle bar block has a side with 3 holes, the side with 3 holes faces up and to the front of the ATV. Align the pin A in the top block with the middle hole B in the bottom block for proper installation. Ball Joint Stud Bushing 8 ft. Apply grease to extension cap and threads of puller bolt to NOTE: Refer to the illustration on the previous page ease removal. Front Strut Cartridge Replacement Remove the handle bar pod. NOTE: Refer to illustration on following page. Remove the handle bar. Remove the fuel tank bracket assembly. Hold strut rod and remove top nut. Remove the steering tie rod ends from the steering bracket. The passenger backrest should be face down in the cargo box and the driver seat backrest should be locked into position. Reverse the removal steps to reinstall the cargo box. Refer to the standard fastener torque values in Chapter 1 during Remove the four bolts attaching the rear of the cargo box assembly. Passenger Backrest Unlatch the driver seat backrest by turning the engagement knobs on each side in the directions shown below. Configure the seating for 2-UP riding. With the passenger seat bottom in place, remove the two screws retaining the seat bottom. Torx Screw Moveable Sheave 2. Cam Assembly Roller Pin 3. Retaining Ring Spring Pin 4. E-clip Stationary Sheave 5. Washer Periodic inspection and maintenance is required to keep the system operating at peak performance. Refer to the spring specification chart for specific free length measurements and tolerances. Also check to see that spring coils are parallel to one

another. These shift weights have many different factors designed into them for controlling engagement RPM and shifting patterns. Shift weights should not be changed or altered without first having a thorough understanding the effects they have on belt to sheave clearance, clutch balance, engagement and shifting characteristics. The ATV should be fasteners and fastener placement. Replace if proper clutch offset on reassembly. Align the alignment mark on the cover with the mark on the engine seal. Mark drive belt direction of rotation so that it can be installed in the same direction. The belt is normally positioned so part numbers are easily read. NOTE: Be sure to position belt so part number is easily read. Verify new belt is seated properly in the clutches before operating the ATV. Adjust if necessary. Drive Clutch Disassembly Inspect Shaft Using a permanent marker, mark the cover, spider, and moveable and stationary sheaves for reference, as the cast- in X's may not have been in alignment before disassembly. Turn roller with your finger. If spider during assembly. Inspect BOTH sheaves for signs of wear, grooving or cracking. In order to remove bushings it will be Place main adapter Item 8 on puller. Rotate one-way clutch clockwise as viewed from the cover plate side. The clutch should rotate on the shaft Removal Tool 3 with only slight amount of drag. Verify there is no binding Nut C or rough spots. Reinstall shift weights using new lock nuts on the bolts. Spider Nut Torque: 15 ft. Remove snap ring A and slowly Remove driven clutch from the transmission input shaft. Pull out the clutch roller pins L and rollers M. Inspect the spider dampener E for wear and replaced if needed. Remove the E-clip F , washer G , and the clutch rollers H. Inspect the bearing for wear. Spin the bearing, if the bearing does not spin smoothly replace as needed. To remove the bearing, simply press the bearing from the shaft. Spin the bearing, if the Bushing Replacement Kit bearing does not spin smoothly replace as needed. Press a new bearing onto the output shaft using a press. Install adapter Item 9 onto puller. Both Sides. Install the roller pin into the sheave assembly. Both sides. The flat side of the roller pin faces downward when the shaft side is laying flat on the bench. Install the spider assembly onto the shaft with the retaining ring on top of the spider. Install the cam assembly helix over the shaft. Replace the entire clutch as an Dealer MSD technician who has received the assembly if worn, damaged or cracked. Torque cover bolts evenly to specification. Spacer Washers Spider Torque: ft. Any misalignment will alter clutch balance. Disassembly Using special tool PN , apply and hold downward pressure on the outer spring retainer and remove the snap ring A. Inspection Inspect both the inner and outer sheave surfaces. Install inner spring retainer if removed. Install the inner sheave onto the outer sheave. NOTE: Rollers and helix are non-serviceable items. Page Pvt Troubleshooting During this procedure, the throttle should not be held at the full position for more than 10 seconds. PVT seals should be inspected for damage if repeated leaking occurs. Engine RPM below specified operating range -Install correct shift weight kit to match engine -Drive clutch shift weight too heavy. Inspect brake Belt burnt, thin spots -Dragging brake system. Pull strut assembly out while pivoting front drive shaft downward until it clears strut assembly. Remove cotter pin and nut from lower A-arm ball joint. Remove lower A-arm from ball joint. Apply an anti-seize Inspection compound to splines. Align splines of drive shaft with front gearcase and install by lightly tapping on drive shaft Check the front and rear driveshaft CV boots for any tears or leaking grease. Remove small clamp and boot from driveshaft. Inspect the grease carefully for contamination, and clean the joint thoroughly if necessary. Install the small clamp on the boot. Once bearing is at bottom of casting, support casting on outer edges so bearing can be removed. Slide prop shaft back and away from housing, then pull sharply forward to Always wear eye protection when working with remove from transmission shaft. Carefully install U-joint cross with grease fitting properly positioned inward toward center of shaft. Take care not to dislodge needle bearings upon installation of cross joint. Repeat procedure for other side. Install snap ring to contain bearing cap just installed. Seat all bearing caps against snap rings by supporting cross shaft and tapping on each corner as shown. Description Ref. Gearcase Sub Asm. Once enabled, the AWD Ring Gear remains engaged while the front gearcase is moving and will not disengage until the rear wheels regain traction. Bolts and fluid drain plug are accessible through the skid plate. Pull the hub and strut assembly out and pull the drive-shaft out of the hub. Remove the armature plate and RH output hub assembly from the outer cover plate. Inspect the bearing and contact surfaces of the output hub for signs of wear or damage. Inspect the bearing and Inspect roll cage B sliding surface. This surface must be contact surfaces of the output hub for signs of wear or clean and free of nicks, burrs or scratches. Inspect the H- damage. Inspect the magnetic coil A in the outer cover plate Remove the snap ring retaining the input shaft assembly. Inspect the backlash pad B for excessive wear. Remove the input shaft assembly. Inspect the pinion gear C for chipped, broken, or missing teeth. The output hub should spin freely. Replace all O-rings, seals, and worn components. Install the RH output hub B into the output cover. The Press the pinion shaft seal into the pinion cover, until the output hub should spin freely. Torque the cover plate bolts to specification. Be

sure that the armature plate tabs are fully engaged into the roll cage assembly. The gearcase coil should measure turns. Re-apply Loctite onto the bottom screw threads. The top of the coil To install gearcase, reverse removal procedures. Use new should be seated below the U-shaped insert. The U-shaped roll pin in front prop shaft. Operation is controlled by the ECU grounding and ungrounding the coil. Remove and Remove the armature plate. Inspect the armature plate for inspect the cover o-ring 1. Inspect thrust bearing 2 for wear, distortion or other damage. Replace component as wear. Replace items as required. Inspect roll cage sliding surface 2. This surface must be clean and free of nicks, burrs or scratches. Remove and inspect the H-springs 4. Replace any components as required. Remove and inspect the bearing surfaces of the output hub. Inspect the magnetic coil 1 in the outer cover plate Inspect the magnetic coil 1 and bushing in the input cover assembly. Inspect the backlash pad 2 for excessive wear. Replace the input cover seal. Safety glasses or a face shield are required. Using moderate hand pressure, hold the tool on top of the piston while using compressed air at the gearcase passage circled to force piston up and out of the case. Coat the edges of the verify alignment of the sight hole circled and piston mark piston cavities. Thoroughly clean the gearcase components before beginning reassembly. Install a new seal in the main gearcase halve. Install the input shaft assembly. Install a new seal and o-ring the input shaft cover 2 prior to reassembly. Install the clutch pack 1 , spacer 2 and ring gear 3. Install a new o-ring on the backlash pad 2 stem. NOTE: Ring gear backlash 2 is set at the factory. Install new cover o-ring 1 on the cover plate assembly Place cover assembly on Install bolts arrows retaining the and a new passage o-ring 2 on the gear case. Remove rear hub cap. Remove hub. Remove cotter pin A. Loosen the hub retaining nut B. Loosen the wheel nuts C. Safely support the rear of the ATV. Remove both lower control arm bolts. From the back side, tap on the outer bearing race with a drift punch in the reliefs as shown or press out using a hydraulic press. Remove bearing carrier. Support bottom of bearing carrier housing. Start bearing in housing. Install snap ring into groove. Installation Insert bearing carrier on drive shaft. Tip hub outward and remove Lift bearing carrier until top aligns with upper control arm. Tap CV housing off shaft with a soft faced Remove clamps from rubber boot s using the CV Boot hammer while holding snap ring open. Clamp Pliers PN A. Take care not to Remove CV joint from end of shaft. The joint is fully assembled when the snap ring is located in the groove on Remove boot from shaft. This will allow the air pressure to equalize in the CV boot in the position that the joint will spend most of its life. Removal 80 ft. Loosen both rear wheel nuts. Loosen both rear center hub nuts. Lift and safely support rear of ATV so that the rear wheels are off the ground. Spin the bearing to check the ball bearings for smoothness. Replace the bearing if needed. Remove the input shaft cover and the pinion shaft from the gearcase housing. Input Cover Bolt Torque: 25 ft. Apply Crankcase Sealant PN to surface of case and install cover bolts. To install the rear gearcase, reverse the removal Re-install gearcase vent line. Refill the rear gearcase with Polaris Premium Gearcase Pre-install the propshaft onto the transmission and insert Lubricant PN Place the bellcrank in neutral position. Remove the front propshaft. Remove the the keyed spline. Note the raised edge on the detent detent spring B. Remove the shift shaft and detent lever. Mark the detent gear C with a white pen. You may Remove the bearing from the reverse shaft using a puller. Remove the park lock engagement dog. Remove the wave spring and reverse engagement dog. Remove the snap ring and washer from the reverse shaft. Use a press to remove the gear from the shaft. Remove low gear 33T and the needle bearing. Make note of the direction of the gear and hub location. Slide off the shift dogs and wave springs. Remove the pinion shaft retainer plate and the pinion shaft. Remove the front housing cover screws. Remove the snap ring, washer, gear, and split bearing. Remove the front housing cover, shim, thrust button, and Remove the shafts as an assembly. Reinstall the chain onto the front output shaft and rear output shaft. Remove the silent chain from the assembly for shaft inspection. Install front and rear output shafts into the case. Note location of hubs Reinstall cover and torque bolts in a and torque screws to specification. NOTE: Verify case locating pins knock pipes are in place. Slide the reverse shaft assembly through the silent chain. As the engagement dogs are installed onto the shaft, place the wave springs into the spring groove. Keep the spring in place while the fork is being installed on the shaft and while placing the shafts into the case. Position the shift forks up and so the the pins point toward Be sure the assembly. Place a small amount of grease PN into the Apply Crankcase Sealant PN onto the cover and pocket before installing the sector gear. Install the shift gear case mating surfaces. Install the cover and hand tighten all 16T on the shift drum shaft. Refer to Maintenance Chapter 2 for more information. Page Sportsman X2 Transmission 8. Refer to Chapter 2 for transmission lubricant service. Page Sportsman X2 Transmission Remove both rear drive shafts. Brake caliper removal is Remove the middle transmission support bracket K required. Do not let calipers hang by the brake line. See completely from the ATV. Chapters 7 and 9 Remove both upper shock absorber mounting bolts and swing shocks away from the transmission. Page Transmission Installation Transmission Installation Reconnect the torsion bar to both lower control arms. Page Troubleshooting Checklist Once the PVT system is installed. Tighten all remaining transmission mounting bolts to specification. See page 8. Lubricant to the proper level. See Chapter 2 for proper fill procedures and Torque Specifications. Place the transmission in the Neutral gear before disassembly. Drain and properly dispose of transmission oil. See Chapter Remove the bellcrank nut 1 and remove the bellcrank 2. Remove the c-clip 3 that holds the gear selector switch 4 onto the shaft and remove the selector switch. Page Sportsman X2 Transmission Remove all cover bolts. Using suitable pry tools, remove Remove the cam chain tensioner spring Slide the cam the cover using the designated pry points. Tap cover with chain tensioner shoe 15 , pins 16 , and cam chain soft face hammer to remove. Remove the T27 screws that secure the output gear 21 with a T27 hex socket or driver. Gear Cluster Disassembly Remove the shift drum 22 from the gearcase by moving the drum up and to the right to clear the shift shaft. Reverse Shaft Needle The reverse shaft should slide out of the silent chain 4 to To disassemble the shift fork rail remove the snap ring 10 separate the assembly. If needed, remove the seal from the front of the snorkel shaft snorkel tube Remove the snap ring Remove the second snap ring 13 and spacer 14 from the Front Drive Snorkel Assembly snorkel shaft. To remove the remaining bearing on the snorkel shaft 15 , Inspect the output gear assembly 1 , replace bearings if remove the retaining ring and press the bearing off. Inspect the 91T gear for damage, chips, or abnormal worn teeth. Be sure to properly mesh snorkel shaft counterclockwise to the next notch or 8th notch. Install the 4 torx screws 2 to secure the output gear assembly into place. Page Sportsman X2 Transmission Once the gear backlash is found, to install the snorkel lock Assemble the input shaft assembly if previously screw, you may have to rotate the snorkel tube clockwise disassembled. This will allow the lock screw Input Shaft Assembly A. Page Sportsman X2 Transmission Inspect the shift drum for any damage or wear. Inspect the NOTE: To ease assembly use a plastic tie strap to hold the shift forks D and the shift drum C together during splines of the shift drum. Replace the O-rings on the end of the shift drum and lubricate them before assembly. With all of the components in the correct positions install Install the rear drive differential and drive chain, following the 4 output gear assembly screws. Lift the leg of the spring up and over the rear pin. The Apply a continuous bead of Crankcase Sealant 3-Bond tensioner cam will lift the shoe and tension chain. PN to the LH gearcase mating surface and install the cover. Install the shift gear 16T G on the shift drum shaft. Install the compression spring K. Install the sector gear F in the bushing pocket on the left side. Aligning the timing marks on the gears. Timing marks Socket Set Screw B. Bleeder Screw C. Caliper Asm. Boot E. Square O-rings F. Piston G. Loose wheel hub or bearings replace bearings if worn Page in. Repeat procedure Steps for the remaining caliper s. Begin bleeding procedure with the caliper that is farthest Install a box end wrench on inside reservoir. Install diaphragm, sight glass, cap and screws. Field test machine at low speed before putting into service. Check for proper braking action and lever reserve. Pad Removal Torque to 15 ft. Page Assembly Assembly edge. Remove inner pad. Measure the thickness of the pad material. Replace pads if worn beyond the service limit. Apply heat to the hub in the area of the brake disc mounting bolts to soften the bolt locking agent. Severe injury may occur. Loosen and remove brake line to caliper. Place a container under caliper to catch fluid draining from brake line. Install piston D with a twisting motion while pushing inward. Install the brake pads. Clean the disc and pads with brake parts cleaner or denatured alcohol to remove any dirt, oil or grease. Remove the rear wheel Loosen pad adjuster screw turns. NOTE: Brake fluid will Support caliper so as not to kink Support the machine. Remove the rear tire. Remove the slide pin clips from the slide bolt. Push caliper pistons into caliper bore slowly with pads installed. Torque the slide pin to specification. Install new brake pads in caliper body. Install Pads ft. Clean caliper area before removal. Place a container below the caliper to catch brake fluid that will drain from the brake line. Service Limit: 1. Clean the disc bracket pad C , and the brake pads D. The caliper body is a 2-step piston. The rear step is measured as well Install new O-rings in the slide bolt bushing holes. Be sure as the outside step. O-ring and seal grooves are thoroughly cleaned of all residue, or piston may bind in bore. Inspection Visually inspect disc for scoring, scratches, or gouges. Replace the disc if any deep scratches are evident. Use a micrometer and measure disc thickness at 8 different points around perimeter of disc. Master Cylinder Bolts B. Rear Brake Line C. Rear Master Cylinder D. Bushing s E. Washer s F. Cotter Pin G. Foot Pedal H. Spring I. Front Brake Line J. Banjo Fitting 9. Page Overview If required, remove the rear brake line from the master cylinder. Use a suitable container to catch the brake fluid. Polaris disc brake systems are light weight, low maintenance Dispose of brake fluid properly. Remove the RH footwell to gain access to the rear master cylinder. Remove the rear brake lines from the master cylinder. Use Banjo Bolt Torque: a suitable container to catch the brake fluid. Two B Speedometer harnesses plug into the cluster head; This is charged. When it begins to flash, release the button. The setting will increase by one hour each time the button is pressed. Polaris dealers are equipped with the proper diagnostic tools to further diagnose the blink code. This will help the instrument cluster slide into the pod assembly more easily. Be sure the rubber grommet inside the pod is fully installed and that the indexing key is in the headlight pod keyway. Refer to I. Do not use the cast mark to determine flywheel application. The gap should be Current Draw - Key Off. Damage will occur to electrical components. Do not connect or disconnect the battery cable or ammeter with the engine running. Using a multitester set on D. A amp circuit breaker protects the fan circuit. Both Carefully remove headlamp bulb from housing. Sides Remove the headlamp and replace with a new headlamp. NOTE: Do not touch the lamp with bare fingers. The low beam can be adjusted slightly upward or downward. Loosen Screw Remove the lamp and replace with a new headlamp. NOTE: Do not touch the new lamp with bare fingers. Hold the plastic part 1 of the lamp. The switch snaps out by pushing in on the tabs on both sides of the The brake light A and the work light B are both located in the switch. The brake light A and the work light B are both located in the rear tail lamp housing. Remove the front cover. Brake Lamp Switch Once the red tab is pulled out, press in on the black tab and pull out to disconnect harness. Disconnect from the wire harness. Using a digital ohmmeter, test the solenoid at the connector leads and compare to the Set the fuel tank on a flat surface. This enables quick installation. Refer to Chapter 2 for more information on winch installation and operation. Pin 20 senses the transmission signal and determines if the switch is in Neutral or Park. Pin 24 senses when the brake is applied. When the conditions are met, the ECU will activate Pin 16 to ground the starter solenoid. Remove the shims from the armature shaft and housing. Reading should be infinite. Inspect inspect the O-rings located on the armature housing. The reading should be infinite no Remove terminal nut with lock washer, flat washer, large continuity. Inspect O-ring and replace if damaged. Slide positive brush springs to the side, pull brushes out of their guides and remove brush plate. Install brush plate to field magnet housing aligning index tab. Install the starter onto the engine case. Hand tighten each of the starter bolts. Torque the bottom bolt first to 9 Install O-ring, two small phenolic spacers, large phenolic ft. Use either of the following methods to remove and install a new garter spring: A. Gear Assembly 1. Through Bolt Replace with new parts. Brush Spring Cover 3. Thrust Washer Stopper 4. Gear Assembly Snap Ring 5. Washer 6. NOTE: Make sure engine crankshaft is free to turn before proceeding with dynamic testing of starter system. A digital multitester must be used for this test With the tester on the VDC position, place the tester's black lead on the battery negative and the Remove battery and properly service. Different types of Battery electrolyte is poisonous. It contains sulfuric batteries require different service procedures. Serious burns can result from contact with Proper servicing and upkeep of your battery is very skin, eyes or clothing. This will help to prevent corrosion and maintain good electrical connection. If not, battery gases could accumulate and cause an explosion. The vent tube should be routed away from frame and body to prevent contact with Route the cables correctly. The chart below indicates freezing points by specific gravity. Charge battery for hours using a variable rate charger. Readings of See charts and Load Test. To prevent shock or component damage, remove NOTE: Lead-acid batteries should be kept at or near spark plug high tension leads and connect

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securely Remove the battery from the ATV to prevent damage from Readings of All-wheel braking is integrated into the foot brake and hand brake systems and allows 4 wheel braking from either control separately, or at the same time. When the foot brake is applied, all brake calipers are active, as braking pressure is routed from the foot brake master cylinder through the proportioning valve and distribution block, exiting one line to the front calipers, while the other line exits the proportioning valve and feeds the outer line to the rear calipers. Steering post removal may be required for lock service or repair. Page Brake System Inspection Page Drive Clutch Weights Page Lower Headlamp Removal Page Rear Gearcase, Installation Page Transmission Mounts, Exploded View Page IX. This manual is also suitable for: sportsman x2 efi sportsman x2 efi. Print page 1 Print document pages. Cancel Delete. Sign In OR. Don't have an account? Sign up! Restore password. Upload from disk. Upload from URL.