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You can read the recommendations in the user guide, the technical guide or the installation guide for YAMAHA APEX. You'll find the answers to all your questions on the YAMAHA APEX in the user manual (information, specifications, safety advice, size, accessories, etc.). Detailed instructions for use are in the User's Guide.

User manual YAMAHA APEX
User guide YAMAHA APEX
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Instruction manual YAMAHA APEX



RX10GTX
RX10GTAX
RX10LTGTX
RX10LTGTAX

LIT-12628-02-64

8GD-28199-12



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Manual abstract:

To maintain the high quality and performance of this snowmobile, it is important that you and your Yamaha dealer pay close attention to the recommended maintenance schedules and operating instructions contained within this manual. RX10GTX RX10GTAX RX10LTGTX RX10LTGTAX OWNER'S MANUAL ©2007 by Yamaha Motor Corporation, U.S.A. 1st Edition, March 2007 All rights reserved. Any reprinting or unauthorized use without the written permission of Yamaha Motor Corporation, U.S.A. is expressly prohibited. Printed in Japan.

@@@@@@@The Safety Alert Symbol means ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED! Contents Safety information

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Ride slowly and cautiously when you ride off of established trails. Hitting a rock or stump, or running into wires could cause an accident and injury.

This snowmobile is not designed for use on surfaces other than snow or ice. Use on dirt, sand, grass, rocks, or bare pavement may cause loss of control and may damage the snowmobile. Avoid operating on glare ice, or on snow which has a lot of dirt or sand mixed in. Operation under such conditions will damage or result in rapid wear of ski runners, drive track, slide runners, and drive sprockets. Always ride with other snowmobilers when going on a ride. You may need help if you run out of fuel, have an accident, or damage your snowmobile. Many surfaces such as ice and hardpacked snow require much longer stopping distances. Be alert, plan ahead and 2 Safety information begin decelerating early. The best braking method on most surfaces is to release the throttle and apply the brake gently-- not suddenly. Maintenance and storage 1.

Do not leave the snowmobile on its left side for an extended period of time. Fuel may leak out from the fuel breather hose. Modifications made to the snowmobile not approved by Yamaha, or the removal of original equipment may render your snowmobile unsafe for use that may cause severe personal injury.



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Modifications may also make the snowmobile illegal to use. Never store the snowmobile with fuel in the fuel tank inside a building where ignition sources are present such as hot water and space heaters, an open flame, sparks, clothes dryers, and the like.

Allow the engine to cool off before storing the snowmobile in an enclosed space. Always refer to the "STORAGE" section on page 75 if the snowmobile is to be stored for an extended period. Maintain or replace safety and instruction labels, as necessary. 2. 3.

4. 5. 3 Safety information ESU10231 Location of the important labels Please read the following labels carefully before operating this snowmobile. NOTE: Maintain or replace safety and instruction labels, as necessary. 4 Safety information 3 4 5 6 CAUTION Cleaning with alkaline or acid cleaner, gasoline or solvent will damage windshield. Use neutral detergent. 3JJ-2835Y-A0 ATTENTION Eviter de nettoyer le pare-brise avec une solution alcaline ou acide ainsi qu'avec de l'essence ou un diluant. Utiliser un détergent neutre. 3JJ-2835Y-B0 7 RX10LTGT/RX10LTGTA 8HA-77762-E0 5 Safety information NOTE: The following suspension adjustment charts are included with the Owner's Manual. 6 Description ESU10260 1.

Air filter 2. Battery 3. Coolant recovery tank 4. Coolant reservoir 5. Fuse box 6. Main fuse 7. Oil filler cap 8. Idle adjusting screw 9. Storage compartment 10. Tool kit 11.

Tail/brake lights 12. Slide rail suspension 13. Drive track 14. V-belt holder 7 Description 1. Brake lever 2.

Parking brake lever 3. Grip warmer/rear suspension compression damping adjustment switch 4. Headlight beam switch 5. Engine stop switch 6. Thumb warmer adjustment switch 7.

Throttle lever 8. Shift lever 9. Main switch 10. Auxiliary DC jack 11. Tachometer 12. "MODE" button 13. "RESET" button 14. "SELECT" button 15. Fuel meter, grip warmer level indicator, rear suspension compression damping level indicator, and thumb warmer level indicator 16. Fuel meter indicator 17.

Self-diagnosis warning indicator 18. Rear suspension indicator 19. Coolant temperature warning indicator 20. Grip warmer indicator 21. Fuel level warning indicator 22. Thumb warmer inn (which shows the total distance traveled) G two tripmeters (which show the distance traveled since they were last set to zero)

G a barometer (which shows the ambient barometric pressure) G a clock G warning indicators (which show self-diagnosis, coolant temperature, fuel level, and oil level warnings) G a fuel meter (which shows the fuel remaining in the fuel tank) G a grip/thumb warmer level indicator (which shows the grip warmer level or the thumb warmer level) G a display brightness control function G a rear suspension in the fuel tank, the grip warmer level or the thumb warmer level, and 1. High beam indicator light " " 14 Control functions the compression damping force level of the electronically controlled rear shock absorber respectively. NOTE: The snowmobile must be stopped on a level surface to obtain an accurate fuel meter reading, since the reading changes according to the movement and inclination of the snowmobile. Grip warmer level indicator, rear suspension compression damping level indicator, and thumb warmer level indicator G 1. Fuel meter, grip warmer level indicator, rear suspension compression damping level indicator, and thumb warmer level indicator Fuel meter

The display segments of the fuel meter disappear towards "E" (Empty) as the fuel level decreases. When only one segment is left near "E", the fuel level warning indicator and the warning light come on. G To display the grip warmer level indicator or the rear suspension compression damping level indicator, press the grip warmer/rear suspension compression damping adjustment switch. To switch between the two level indicators, press the "MODE" button twice. To display the thumb warmer level indicator, press the thumb warmer adjustment switch. 1. Fuel level warning indicator " 2. Warning light " " " 1. Grip warmer indicator " " 2. Rear suspension indicator " " 3. Thumb warmer indicator " " If the fuel level warning indicator and the warning light come on, refuel as soon as possible.

15 Control functions G 1. Grip warmer/rear suspension compression damping adjustment switch G The top segment of the fuel meter, grip warmer level indicator, rear suspension compression damping level indicator, and thumb warmer level indicator flashes once when the corresponding adjustment reaches the maximum level. The bottom segment of the fuel meter, grip warmer level indicator, rear suspension compression damping level indicator, and thumb warmer level indicator flashes once when the corresponding adjustment reaches the minimum level. When the engine is started, the grip warmer, rear suspension compression damping, and thumb warmer levels are set to the levels selected when the engine was stopped. To adjust the grip warmer temperature

1. Push the "MODE" button and make sure that the grip warmer indicator is displayed. If the rear suspension indicator is displayed, push the "MODE" button again to display the grip warmer indicator. 1. "MODE" button 1. Thumb warmer adjustment switch 1. Grip warmer indicator " " 2. Rear suspension indicator " " 2. NOTE: G The grip warmer, rear suspension compression damping, and thumb warmer levels are displayed for 5 seconds after releasing the corresponding adjustment switch, then the display switches to the fuel meter. To raise the temperature, press the grip warmer/rear suspension compression damping adjustment switch to "HI", and to lower it, press the switch to "LO". 16 Control functions To adjust the rear suspension compression damping level 1. Push the "MODE" button and make sure that the rear suspension indicator is displayed. If the grip warmer indicator is displayed, push the "MODE" button again to display the rear suspension indicator. 1. Fuel level warning indicator " 2. Warning light " " 3. Fuel meter ESU10460 " Oil level warning indicator " " 1. Rear suspension indicator " " The oil level warning indicator and the warning light come on when the engine oil level is low. To increase the compression damping force, press the grip warmer/rear suspension compression damping adjustment switch to "HI", and to decrease it, press the switch to "LO". To adjust the thumb warmer temperature To raise the temperature, press the thumb warmer adjustment switch to "HI", and to lower it, press the switch to "LO". ESU10450 2. Fuel level warning indicator " " The fuel level warning indicator indicates a malfunctioning sensor, disconnected coupler, broken lead, or short circuit when detected by the self-diagnosis device of the snowmobile.



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The fuel level warning indicator, warning light, and all segments of the fuel meter warn the rider of the above problems by flashing continuously. When this occurs, have a Yamaha dealer inspect the snowmobile as soon as possible. 1. Oil level warning indicator " 2.

Warning light " " " If the oil level warning indicator and the warning light come on, place the snowmobile on a level surface and allow it to idle for one minute. If the oil level warning indicator and the warning light go off, the engine oil level is sufficient, however it is getting low. Add engine oil as soon as possible. If the oil level warning indicator and the warning light do not go off, check the engine oil level in the oil tank (see page 49 for engine oil level checking procedures), and add engine oil if necessary. 17 Control functions ESU10511 Coolant temperature warning indicator " " If the engine overheats, the coolant temperature warning indicator and the warning light come on. When this occurs, stop the engine immediately and allow the engine to cool down, and then check the coolant level in the coolant reservoir. (See page 53 for checking procedures.) 1. Warning light " " 2. Self-diagnosis warning indicator " 3.

Two-digit error code EWS00650 " WARNING If the self-diagnosis warning indicator and warning light flash continuously, and an error code is displayed during operation, there may be some problem with an electrical circuit, couplers, etc. Note the error code, and then have a Yamaha dealer inspect the snowmobile as soon as possible in order to avoid engine damage. ESU10530 1. Coolant temperature warning indicator " 2. Warning light " " ECS00040 " CAUTION: Do not operate the engine if it overheats. ESU12680 Engine stop switch " " Self-diagnosis device The engine stop switch is used to stop the engine in an emergency. Simply push the stop switch to stop the engine. To start the engine, pull the stop switch and proceed with starting the engine. (See pages 31 for engine starting procedures.) This model is equipped with a self-diagnosis device for various electrical circuits.

If any of those circuits are defective, the warning light and the self-diagnosis warning indicator will flash, and a two-digit error code will flash slowly in the tripmeter/odometer display. 18 Control functions See "Fuel meter, grip warmer level indicator, rear suspension compression damping level indicator, and thumb warmer level indicator" on page 14 for detailed information. 1. Engine stop switch" " During the first few rides, practice using the stop switch so that you can react quickly in an emergency. ESU10661 Headlight beam switch "LIGHTS" Push the headlight beam switch to change the headlight to high beam "HI" or to low beam "LO".

1. Grip warmer/rear suspension compression damping adjustment switch 1. Thumb warmer adjustment switch ESU10690 Auxiliary DC jack 1. Headlight beam switch "LIGHTS" 2. High beam "HI" 3.

Low beam "LO" ESU12710 The auxiliary DC jack is located in the front panel and can be used for accessories. NOTE: The auxiliary DC jack cannot be used if the engine is not running. To use the auxiliary DC jack 1. Start the engine. 2. Open the auxiliary DC jack cap, and then insert the accessory power plug into the jack. Grip warmer/rear suspension compression damping and thumb warmer adjustment switches These switches are used to adjust the grip warmer, rear suspension compression damping and thumb warmer levels. 19 Control functions 1. Auxiliary DC jack cap 2. Auxiliary DC jack 1.

Brake lever NOTE: NOTE: After using the auxiliary DC jack, be sure to remove the accessory power plug from the jack and close the auxiliary DC jack cap. ECS00120 When the brake lever is operated, the brake light will illuminate. ECS00060 CAUTION: Make sure that the brake lever end does not project out over the handlebar end. This will help prevent brake lever damage when the snowmobile is placed on its side for service. The brake lever is equipped with a position adjuster. To adjust the brake lever position: 1. Loosen the locknut. 2. While lightly pushing the brake lever in direction (a), finger tighten the adjusting bolt to set the brake lever to the desired position. CAUTION: G G Do not use accessories requiring more than the maximum rated capacity for the auxiliary DC jack.

This may overload the circuit and cause the fuse to blow. (See page 67 for the specified amperage.) Do not use an automotive cigarette lighter or other accessory with a plug that gets hot because the jack can be damaged. Maximum rated capacity: DC 12 V, 2.5 A (30 W) ESU10560 Brake lever The snowmobile is stopped by braking the entire drive system.

Squeeze the brake lever towards the handlebar grip to stop the snowmobile. 1. Locknut 2. Adjusting bolt 20 Control functions 3. Tighten the locknut securely after adjusting the brake lever.

ESU10590 Shift lever The shift lever is used to put the snowmobile into forward or reverse. After coming to a complete stop, pull the shift lever out, slide it to "FWD" or to "REV" until it stops, and then release it. ESU10580 Parking brake lever When parking the snowmobile or starting the engine, apply the parking brake by moving the parking brake lever to the left. 1. Parking brake lever 1. Shift lever To release the parking brake, move the parking brake lever to the right. EWS00060 1. Pull out. 2. Slide to "FWD" (forward).

3. Release. WARNING G G Always set the parking brake before attempting to start the engine. Never run the snowmobile with the parking brake applied. This may overheat the brake disc and reduce braking ability. 21 Control functions 1. Pull out. 2. Slide to "REV" (reverse). 3.

Release. ECS00070 1. Left side cover CAUTION: Do not shift from "FWD" to "REV" or from "REV" to "FWD" while the snowmobile is moving. Otherwise, the drive system could be damaged. ESU10720 Shroud and covers Securely fasten the shroud and covers before operating the snowmobile.

(See page 42 for removal and installation procedures.) 1. Top cover EWS00090 WARNING G G G Do not drive the snowmobile with the shroud or covers unfastened or removed. Keep your body and clothing away from rotating parts when servicing the snowmobile with the shroud or covers removed. Do not touch the hot muffler and engine during or immediately after operation.

1. Shroud 2. Right side cover ECS00370 CAUTION: Make sure that all cables, leads, etc., are routed properly before installing the shroud and covers. 22 Control functions ESU10750 ESU10810 Drive guard The drive guard is designed to cover the Vbelt clutch and V-belt in case parts break or come loose. Storage compartment Open the storage compartment to store the tool kit, spare parts, or other small items.



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1. Storage compartment 1. Drive guard EWS00400 ESU10600 Fuel Make sure that there is sufficient fuel in the fuel tank. EWS00070 WARNING G G Make sure that the drive guard is tightened securely before operating the snowmobile.

Never run the engine with the V-belt or drive guard removed. WARNING G ESU10760 V-belt holders Keep a spare V-belt for emergency use by placing it into the V-belt holders provided. G G Fuel is HIGHLY FLAMMABLE and poisonous. Check the "SAFETY INFORMATION" section carefully before refueling. (See page 1.) Do not fill the fuel tank above the bottom of the filler tube. Fuel could overflow if the snowmobile is tilted or if the ambient temperature rises, causing the fuel to warm up and expand. Make sure that the fuel tank cap is closed securely after refueling. Leaking fuel can catch fire. 1.

V-belt holder ECS00180 CAUTION: Make sure that the V-belt is installed securely in the holders. 23 Control functions G G Do not use alcohol deicers or water absorbing additives with oxygenated fuel. The fuel tank should be filled with straight gasoline as specified. ESU10870 Suspension The suspension can be adjusted to suit rider preference. A softer setting, for example, may provide greater rider comfort, while a harder setting may allow more precise handling and control over certain types of terrain or riding conditions.

EWS00150 1. Filler tube 2. Fuel level WARNING Be sure to have a Yamaha dealer make this adjustment. This shock absorber contains highly pressurized nitrogen gas. It could explode by improper handling, causing injury, or property damage.

G Do not tamper with or attempt to open the shock absorber. G Do not subject the shock absorber to an open flame or other high heat source, which could cause it to explode. G Do not deform or damage the shock absorber in any way. G Do not dispose of a worn or damaged shock absorber by yourself. Take the unit to a Yamaha dealer. ESU10890 Recommended fuel: REGULAR UNLEADED GASOLINE ONLY Fuel tank capacity: 35.6 L (9.41 US gal) (7.83 Imp.gal)

Your Yamaha engine has been designed to use regular unleaded gasoline with a pump octane number [(R+M)/2] of 86 or higher, or a research octane number of 91 or higher.

ECS00080 Adjusting the ski spring preload ECS00250 CAUTION: G G Oxygenated fuels (gasohol) containing a maximum 5% of ethanol can be used, although richer jetting may be required to prevent engine damage. Consult a Yamaha dealer. Gasohol containing methanol is not recommended. Make sure that snow or ice does not enter the fuel tank when refueling. CAUTION: The left and right ski spring preload must be set to the same setting. Uneven settings can cause poor handling and loss of stability. The spring preload can be adjusted by turning the spring preload adjusting ring. 24 Control functions Compression damping force The compression damping force of each ski shock absorber can be adjusted by turning the compression damping force adjusting knob. To increase the compression damping force, turn the adjusting knob in direction (a). To decrease the compression damping force, turn the adjusting knob in direction (b).

1. Spring preload adjusting ring 2. Spring seat length Spring preload setting (spring seat length or spring preload adjusting ring position): Minimum (soft): RX10GT / RX10LTGT 119.0 mm (4.69 in) RX10GTA / RX10LTGTA 69.

0 mm (2.72 in) Standard: RX10GT / RX10LTGT 119.0 mm (4.69 in) RX10GTA / RX10LTGTA 69.0 mm (2.

72 in) Maximum (hard): RX10GT / RX10LTGT 129.0 mm (5.08 in) RX10GTA / RX10LTGTA 79.0 mm (3.11 in) * The spring seat length changes approximately 1.5 mm (0.06 in) with each full turn of the adjusting ring. ESU10921 1. Compression damping force adjusting knob Adjusting the ski damping force ECS00260 CAUTION: The damping forces for the left and right ski shock absorbers must be adjusted to the same settings. Uneven settings can cause poor handling and loss of stability.

Compression damping setting: Minimum (soft): RX10GT / RX10LTGT 12 RX10GTA / RX10LTGTA 20 click(s) in direction (b)* Standard: RX10GT / RX10LTGT 7 RX10GTA / RX10LTGTA 15 click(s) in direction (b)* Maximum (hard): RX10GT / RX10LTGT 2 RX10GTA / RX10LTGTA 5 click(s) in direction (b)* * With the adjusting knob fully turned in direction (a) Rebound damping force The rebound damping force of each ski shock absorber can be adjusted by turning the rebound damping force adjusting knob. To increase the rebound damping force, turn the adjusting knob in direction (a). To decrease the rebound damping force, turn the adjusting knob in direction (b). 25 Control functions 1. Rebound damping force adjusting knob 1. Spring preload adjusting ring 2.

Spring seat length Rebound damping setting: Minimum (soft): RX10GT / RX10LTGT 20 RX10GTA / RX10LTGTA 30 click(s) in direction (b)* Standard: RX10GT / RX10LTGT 12 RX10GTA / RX10LTGTA 20 click(s) in direction (b)* Maximum (hard): RX10GT / RX10LTGT 3 RX10GTA / RX10LTGTA 10

click(s) in direction (b)* * With the adjusting knob fully turned in direction (a) Spring preload setting (spring seat length or spring preload adjusting ring position): Minimum (soft): 120.5 mm (4.74 in) Standard: 128.5 mm (5.

06 in) Maximum (hard): 138.5 mm (5.45 in) * The spring seat length changes approximately 1.5 mm (0.06 in) with each full turn of the adjusting ring.

NOTE: The rear suspension spring preload can be further adjusted by changing the position of the spring seat. Have a Yamaha dealer make this adjustment as it requires special tools. ESU11012 NOTE: The damping forces will not decrease past the minimum levels even if the adjusting knobs are turned out more than the minimum settings. ESU10980 Adjusting the rear suspension spring preload The rear suspension spring preload can be adjusted by turning the spring preload adjusting ring on the shock absorber. Adjusting the rear suspension damping force Adjusting the compression damping force The compression damping force can be adjusted by pressing the grip warmer/rear suspension compression damping adjustment switch.

(See page 14 for adjustment procedures.) 26 Control functions 1. 2. Loosen the locknut. Turn the control rod adjuster in direction (a) to increase weight transfer or direction (b) to decrease weight transfer. 1. Grip warmer/rear suspension compression damping adjustment switch Adjusting the rebound damping force The rebound damping force can be adjusted by turning the adjusting dial. To increase the rebound damping force, turn the adjusting dial in direction (a). To decrease the rebound damping force, turn the adjusting dial in direction (b). 1.

Locknut 2. Control rod adjuster EWS00180 WARNING Never adjust the control rod beyond the range of the scale on the special wrench. 3. Check the control rod adjuster length using the scale on the special wrench included in the owner's tool kit as shown. Make sure that the rim of the control rod body is within the range of the scale. 1. Rebound damping force adjusting dial Rebound damping setting: Minimum (soft): 30 click(s) in direction (b)* Standard: 20 click(s) in direction (b)* Maximum (hard): 10 click(s) in direction (b)* * With the adjusting dial fully turned lightly in direction (a) ESU11050 1.



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2. 3. 4.

Special wrench Adjuster length Rim Scale range Adjusting the control rod The weight transfer can be adjusted by turning the control rod adjuster or adjusting nut. 4. Tighten the locknut while holding the control rod adjuster in place. 27 Control functions Locknut tightening torque: 35 Nm (3.5 m-kgf, 25 ft-lb) ECS00320 CAUTION: When using the special wrench, make sure that it is situated at a right angle to the control rod, and that it is tightly fitted to the locknut or the control rod adjuster.

28 Pre-operation checks ESU11070 The condition of a snowmobile is the owner's responsibility. Vital components can start to deteriorate quickly and unexpectedly, even if the snowmobile remains unused (for example, as a result of exposure to the elements). Any damage or fluid leakage could have serious consequences. Therefore, it is very important, in addition to a thorough visual inspection, to check the following points before each ride. NOTE: Pre-operation checks should be made each time the snowmobile is used.

Such an inspection can be accomplished in a very short time; and the added safety it assures is more than worth the time involved. EWS00190 WARNING If any item in the pre-operation check list is not working properly, have it inspected and repaired before operating the snowmobile. ESU11080 Pre-operation check list ITEM Fuel CHECKS · Check fuel level. · Refuel if necessary. · Check fuel line for leakage. · Check oil level in engine. · If necessary, add recommended oil to specified level. · Check vehicle for oil leakage. · Check coolant level. · Add if necessary.

· Check for wear and damage. · Replace if necessary. · Make sure that drive guard is tightened securely. · Check the drive guard mounts for damage. · Make sure that the drive guard is firmly in place. · Check operation. · If soft or spongy, have Yamaha dealer bleed hydraulic system. · Check brake pads for wear. · Replace if necessary. · Check fluid level in master cylinder.

· If necessary, add recommended brake fluid to specified level. · Check hydraulic system for leakage. · Check that there is no snow under the air filter element. · If necessary, brush off the snow. PAGE 23 Engine oil 49 Coolant V-belt Drive guard 53 54 23 Brake 58 Air filter 47 29 Pre-operation checks ITEM Tool kit and recommended equipment Shroud and covers Skis and ski runners Drive track Slide runners Steering Lights, signals and switches Throttle lever Throttle override system (T.

O.R.S.) CHECKS · Check for proper placement. · Make sure that the shroud and covers are securely fastened.

· Check for wear and damage. · If necessary, have Yamaha dealer replace skis or ski runners. · Check for deflection, wear and damage. · If necessary, have Yamaha dealer replace track. · Check for wear and damage. · If necessary, have Yamaha dealer replace slide runners. · Check for excessive free play. · Check operation. · Correct if necessary. · Make sure that operation is smooth and spring back to its home position when released.

· Check the T.O.R.S. for proper operation. · If system is defective, have Yamaha dealer check vehicle. PAGE 42 22 61 62 62 61 19, 18, 65, 67 10 47 30 Operation ESU11300 Starting the engine EWS00200 WARNING G G Be sure to check the "SAFETY INFORMATION" section carefully before starting the engine. Make sure that the parking brake is applied. 1. Start ECS00330 CAUTION: G G NOTE: Make sure that the engine stop switch is in the on position. The starter motor cannot be operated when the engine stop switch is in the off position. Release the switch immediately after the engine starts. If the engine fails to start, release the switch, wait a few seconds, then try again. Each attempt should be as short as possible to preserve the battery. Do not crank the engine more than 10 seconds on any one attempt.

ESU11310 Break-in There is never a more important period in the life of your engine than the period between 0 and 500 km (300 mi). For this reason, you should read the following material carefully. Since the engine is brand new, do not put an excessive load on it for the first 500 km (300 mi). The various parts in the engine wear and polish themselves to the correct operating clearances. During this period, prolonged fullthrottle operation or any condition that might result in engine overheating must be avoided.

Turn the main switch to the start position. Warm up the engine until it does not run roughly. Operating your snowmobile for the first time Start the engine and let it idle for 15 minutes. 0160 km (0100 mi) Avoid prolonged operation above 6000 r/min. 160500 km (100300 mi) Avoid prolonged operation above 8000 r/min. 31 Operation 500 km (300 mi) and beyond The snowmobile can now be operated normally. ECS00340 CAUTION: G G After 800 km (500 mi) of operation, the engine oil must be changed and the oil filter cartridge replaced. If any engine trouble should occur during the engine break-in period, immediately have a Yamaha dealer check the snowmobile. ESU11331 Riding your snowmobile Getting to know your snowmobile A snowmobile is a rider active vehicle, and your riding position and your balance are the two basic factors of maneuvering your snowmobile. Riding your snowmobile requires skills acquired through practice over a period of time.

Take the time to learn the basic techniques well before attempting more difficult maneuvers. Riding your new snowmobile can be a very enjoyable activity, providing you with hours of pleasure. However, it is essential to familiarize yourself with the operation of the snowmobile to achieve the skill necessary to enjoy riding safely. Before operating the snowmobile, read this Owner's Manual completely and understand the operation of the controls. Pay particular attention to the safety information on page 1. Please read all warning and caution labels on your snowmobile. Also, read the Snowmobiler's Safety Handbook that is supplied with your snowmobile. You will be rewarded with added safety and a more reliable snowmobile. Always wear the proper clothing for both warmth and to help protect you from injury if an accident occurs. Become familiar with operating your snowmobile at low speeds, even if you are an experienced rider.

Do not attempt to operate at maximum performance until you are totally familiar with the snowmobile's handling and performance characteristics. The beginning operator should select a large flat area to become familiar with the snowmobile. Make sure that this area is free of obstacles and other traffic. You should practice control of the throttle and brake, and master turning techniques in this area before trying more difficult terrain.



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Set the parking brake and follow the instructions on page 31 to start the engine.

Once the engine has warmed up, you are ready to begin riding your snowmobile. To start out and accelerate 1. 2. With the engine idling, release the parking brake. Apply the throttle slowly and smoothly.

The V-belt clutch will engage and you will start to accelerate. EWS00210 WARNING The operator should always keep both hands on the handlebar. Never put your feet outside the running boards. Avoid high speeds until you have become thoroughly familiar with your snowmobile and all of its controls. Braking

When slowing down or stopping, release the throttle and apply the brake gently--not suddenly. Learning to ride your snowmobile Before you ride, always perform the pre-operation checks listed on page 29. The short time spent checking the condition of the snowmo- 32 Operation EWS00220 WARNING G G Many surfaces such as ice and hardpacked snow require much longer stopping distances. Be alert, plan ahead, and begin decelerating early. Improper use of the brake can cause the drive track to lose traction, reduce control, and increase the possibility of an accident. If your snowmobile begins to tip while turning, lean more into the turn to regain balance.

If necessary, gradually let off on the throttle or steer to the outside of the turn. Remember: Avoid higher speeds until you are thoroughly familiar with the operation of your snowmobile. Riding uphill You should practice first on gentle slopes. Try more difficult climbs only after you have developed your skill. As you approach a hill, accelerate before you start the climb, and then reduce the throttle to prevent track slippage. It is also important to keep your weight on the uphill side at all times. On climbs straight up the hill, this can be accomplished by leaning forward and, on steeper inclines, standing on the running boards and leaning forward over the handlebar. (Also see "Traversing a slope".) Turning For most snow surfaces, "body English" is the key to turning. As you approach a curve, slow down and begin to turn the handlebar in the desired direction.

As you do so, put your weight on the running board to the inside of the turn and lean your upper body into the turn. This procedure should be practiced at low speeds many times, in a large flat area with no obstacles. Once you have learned this technique, you should be able to perform it at higher speeds or in tighter curves. Lean more as the turn gets sharper or is made at higher speeds. Improper riding techniques such as abrupt throttle changes, excessive braking, incorrect body movements, or too much speed for the sharpness of the turn may cause the snowmobile to tip.

Slow down as you reach the crest of the hill, and be prepared to react to obstacles, sharp drops, or other vehicles or people which may be on the other side. If you are unable to continue up a hill, do not spin the track. Stop the engine and set the parking brake. Then pull the rear of the snowmobile around to point the snowmobile back down the hill. When the snowmobile is pointed downhill, mount your 33 Operation snowmobile from the uphill side.

Restart the engine, release the parking brake, and descend the hill. EWS00230 WARNING Side hills and steep slopes are not recommended for a novice snowmobiler. uphill side. A recommended riding position is to kneel with the knee of your downhill leg on the seat and the foot of your uphill leg on the running board. This position will make it easier for you to shift your body weight as needed. Riding downhill When riding downhill, keep speed to a minimum. It is important to apply just enough throttle to keep the clutch engaged while descending the hill. This will allow you to use engine compression to help slow the snowmobile, and to keep the snowmobile from rolling freely down the hill. Also apply the brake frequently, with light pressure. Snow and ice are slippery, so be prepared for the possibility that your snowmobile could begin to slip sideways on the slope.

If this happens, steer in the direction of the slide if there are no obstacles in your path. As you regain proper balance, gradually steer again in the direction you wish to travel. If your snowmobile starts to tip, steer down the hill to regain balance. EWS00260 WARNING EWS00240 WARNING Use extra caution when applying the brake during a descent. Excessive braking will cause the drive track to lock, causing a loss of control. If you are unable to maintain correct balance, and your snowmobile is going to tip over, dismount your snowmobile immediately on the uphill side. Ice or icy surface Operating on ice or icy surfaces can be very dangerous. Traction for turning, stopping, and starting is much less than that on snow. EWS00270 Traversing a slope EWS00250 WARNING Traversing slopes is not recommended for a novice snowmobiler. Traversing a slope requires you to properly position your weight to maintain proper balance.

As you travel across the slope, lean your body to position your weight towards the WARNING When you have to operate on ice or icy surfaces, drive slowly and cautiously. Avoid accelerating, turning, and braking rapidly. Steering is minimal and uncontrolled spins are an ever-present danger. 34 Operation Hard-packed snow It can be more difficult to negotiate on hardpacked snow as both the skis and drive track do not have as much traction as when the snowmobile is operated on fresh snow. Avoid rapid acceleration, turning, and braking.

G G Always check the drive track for damage or maladjustment before operating the snowmobile. Do not operate the snowmobile if you find damage to the drive track. ECS00350 Operation on surfaces other than snow or ice Operation of your snowmobile on surfaces other than snow or ice should be avoided. Operation under such conditions will damage or result in rapid wear of the ski runners, drive track, slide runners, and drive sprockets. Operation of the snowmobile on the following surfaces should be avoided at all times: G Dirt G Sand G Rocks G Grass G Bare pavement Other surfaces that should be avoided for the sake of drive track and slide runner life are: G Glare ice surfaces G Snow mixed with a lot of dirt and sand All of the above surfaces have one thing in common in regard to drive track and slide runners: little or no lubricating ability.

Drive track and all slide rail systems require lubrication (snow or water) between the slide runners and the slide metal. In the absence of lubrication, the slide runners will rapidly wear and in severe cases, literally melt away, and the drive track will be subject to damage or failure. Also traction aids such as studs, cleats, etc., may cause further track damage or failure. EWS00280 CAUTION: Ride on fresh snow frequently. Operating on ice or hard-packed snow will rapidly wear the slide runners. ESU11350 Maximizing drive track life Recommendations Track tension During initial break-in, the new drive track will tend to stretch quickly as the track settles.



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Be sure to correct the track tension and alignment frequently. (See page 62 for adjustment procedures.) A loose track can slip (ratchet), derail or catch on suspension parts causing severe damage.

Do not overtighten the drive track, otherwise it may increase the friction between the track and the slide runners, resulting in the rapid wear of both components. Also, this may put an excessive load on the suspension components, resulting in component failure. Marginal snow The drive track and the slide runners are lubricated and cooled by snow and water. To prevent the drive track and slide runners from overheating, avoid sustained high-speed usage in areas such as icy trails, frozen lakes and rivers that have minimal snow coverage. An overheated track will be weakened internally, which may cause failure or damage. **WARNING** Drive track damage or failure could result in loss of braking ability and snowmobile control, which could cause an accident. Off-trail riding Avoid off-trail riding until there is sufficient snow coverage. It generally takes several feet of snow to provide a good overall base to properly cover debris, such as rocks, logs, 35 Operation etc. If snow coverage is not sufficient, stay on trails to avoid impact damage to the drive track. G Reduce speed and avoid sharp turning when operating the snowmobile in reverse.

To select the desired operating position, pull the shift lever out, slide it to "FWD" or to "REV" until it stops, and then release it. Studded track In general, track life will be shortened when studs are installed. Drilling stud holes into the drive track will cut the internal fibers, which weakens the track. Avoid spinning the drive track. Studs may catch on an object and pull out of the track, leaving tears and damage around the already weakened area.

To minimize possible damage, consult your stud manufacturer for installation and stud pattern recommendations. Yamaha does not recommend track studding. ESU11390 1. Driving EWS00300 **WARNING** Be sure to read the "SAFETY INFORMATION" section on page 1 and the "Riding your snowmobile" section on page 32 carefully before operating the snowmobile. 1.

Pull out. 2. Slide to "FWD" (forward). 3. Release. **NOTE:** Make sure that the engine is warmed up enough before riding. EWS00310 **WARNING** G G G Make sure that the throttle lever is fully released and the snowmobile is at a full stop before shifting. Be sure to slide the shift lever to "FWD" or "REV" until it stops completely and only while the engine is idling. Make sure that the area behind the snowmobile is clear before reversing. Watch behind.

1. Pull out. 2. Slide to "REV" (reverse). 3. Release. ECS00070 **CAUTION:** Do not shift from "FWD" to "REV" or from "REV" to "FWD" while the snowmobile is moving. Otherwise, the drive system could be damaged. **NOTE:** The reverse buzzer beeps while the shift lever is in reverse. 36 Operation 2.

Release the parking brake by moving the parking brake lever to the right. G Make sure that the key is removed from the main switch whenever the operator leaves the snowmobile, to prevent accidental starting. 3. 4. 5.

6. Press the throttle lever slowly to move the snowmobile. Turn the handlebar in the desired direction. Squeeze the brake lever to stop the snowmobile. Apply the parking brake by moving the parking brake lever to the left.

ESU11430 Transporting When transporting your snowmobile on a trailer or in a truck, observe the following recommendations to help protect it from damage: G If transporting the snowmobile in an open trailer or truck, put a tight fitting cover on the snowmobile. A cover specifically designed for your snowmobile is best. This will help keep foreign objects out of the cooling vents, and also help protect the snowmobile against damage from debris on the road.

G If transporting the snowmobile in an open trailer or truck in areas where road salt is used, coat metal suspension surfaces lightly with oil or another protectant. This will help protect against corrosion. Be sure to clean the snowmobile when you get to your destination to remove any corrosive salts.

ESU11410 Stopping the engine Turn the main switch to the off position to stop the engine. 1. Off EWS00330 **WARNING** G Push down the engine stop switch to stop the engine in an emergency. 37 Periodic maintenance ESU11450 Safety is an obligation of the owner.

Periodic inspection, adjustment, and lubrication will keep your snowmobile in the safest and most efficient condition possible. The most important points of snowmobile inspection, adjustment, and lubrication are explained on the following pages. Maintenance, replacement, or repair of the emission control devices and systems may be performed by any repair establishment or individual that is certified (if applicable). EWS00340 **WARNING** If you are not familiar with maintenance work, have a Yamaha dealer do it for you. **PROPER PERIODIC MAINTENANCE OF YOUR SNOWMOBILE IS IMPORTANT IN ORDER TO ENJOY LONG, PLEASURABLE SERVICE. ESPECIALLY IMPORTANT ARE THE MAINTENANCE SERVICES RELATED TO EMISSION CONTROL. THESE CONTROLS NOT ONLY FUNCTION TO ENSURE CLEANER AIR, BUT ARE ALSO VITAL TO PROPER ENGINE OPERATION AND MAXIMUM PERFORMANCE. IN THE FOLLOWING PERIODIC MAINTENANCE CHARTS, THE SERVICES RELATED TO EMISSION CONTROL ARE GROUPED SEPARATELY. THESE SERVICES REQUIRE SPECIALIZED DATA, KNOWLEDGE, AND EQUIPMENT. YAMAHA DEALERS ARE TRAINED AND EQUIPPED TO PERFORM THESE PARTICULAR SERVICES.**

ESU11460 Periodic maintenance chart for the emission control system **INITIAL ITEM REMARKS** 1 month or 800 km (500 mi) (40 hr) **EVERY** Seasonally or 4000 km (2500 mi) (200 hr) **PAGE** Spark plugs * * * * * Valve clearance Crankcase breather system Fuel filter Fuel line Idle speed Fuel injection · Check condition. · Adjust gap and clean. · Replace if necessary. · Check and adjust valve clearance when engine is cold. · Check breather hose for cracks or damage. · Replace if necessary. · Check condition. · Replace if necessary. · Check fuel hose for cracks or damage. · Replace if necessary.

· Check and adjust idle speed. · Adjust synchronization. Every 40000 km (25000 mi) 44 49 -- -- -- 45 -- 38 Periodic maintenance **INITIAL ITEM REMARKS** 1 month or 800 km (500 mi) (40 hr) **EVERY** Seasonally or 4000 km (2500 mi) (200 hr) **PAGE** * Exhaust system · Check for leakage. · Tighten or replace gasket if necessary. -- * It is recommended that these items be serviced by a Yamaha dealer. 39 Periodic maintenance ESU11560 General maintenance and lubrication chart **INITIAL ITEM REMARKS** 1 month or 800 km (500 mi) (40 hr) **EVERY** Seasonally or 4000 km (2500 mi) (200 hr) **PAGE** Engine oil * Engine oil filter cartridge Cooling system · Change (warm engine before draining) · Replace.



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· Check coolant level. · Air bleed the cooling system if necessary. · Check engagement and shift speed. · Adjust if necessary.

· Inspect sheaves for wear and damage. · Inspect weights/rollers and bushings for wear for primary. · Inspect ramp shoes/bushings for wear for secondary. · Replace if necessary. · Lubricate with specified grease. Whenever operating elevation is changed. Every 20000 km (12000 mi) 49 49 * 53 -- -- * Primary and secondary clutches -- -- Initial at 500 km (300 mi) and every 800 km (500 mi) thereafter. 57 57 57 58 See NOTE following this chart. 58 65 Every 1600 km (1000 mi) * Drive chain · Check chain slack. · Adjust if necessary.

· Check oil level. · Change. · Adjust free play and/or replace pads if necessary. · Change brake fluid. · Make sure that operation is smooth.

· Lubricate if necessary. · Check for slight free play. · Lubricate shaft with specified grease as required. · Check for wear and damage. · Replace if necessary. · Check for wear and damage. · Replace if necessary. * Drive chain oil * Brake and parking brake Control cables Disc brake installation Slide runners Skis and ski runners * * * -- 62 61 40 Periodic maintenance INITIAL ITEM REMARKS 1 month or 800 km (500 mi) (40 hr) EVERY Seasonally or 4000 km (2500 mi) (200 hr) PAGE * Steering system · Check toe-out. · Adjust if necessary. · Check bearing assemblies for looseness. · Lubricate with specified grease. · Lubricate with specified grease. · Lubricate with specified grease. · Make sure that all nuts, bolts and screws are properly tightened. · Tighten if necessary.

· Check condition. · Charge if necessary. 61 * Steering bearings Ski and front suspension Suspension component Fittings and fasteners -- * * 65 65 67 * Battery 67 * It is recommended that these items be serviced by a Yamaha dealer. NOTE: Brake system: G After disassembling the master cylinder or caliper cylinder, always change the brake fluid. Regularly check the brake fluid level and add fluid if necessary. G Replace the oil seals of the master cylinder and caliper cylinder every two years. G Replace the brake hose every four years, or if cracked or damaged. 41 Periodic maintenance ESU11740 Tool kit The owner's tool kit has the tools which are sufficient for most periodic maintenance and minor repairs. A torque wrench is also necessary to properly tighten nuts and bolts. 1.

Fastener 1. Tool kit ECS00360 CAUTION: Before starting the engine, make sure that the tool kit is properly seated in its holder and is securely fastened. 1. Shroud NOTE: If you do not have a torque wrench available during a service operation requiring one, take your snowmobile to a Yamaha dealer to check the torque settings and adjust them if necessary. ESU11750 To install the shroud Hook the end of the shroud onto the shroud stay, slowly lower it to the original position, and then tighten the fasteners.

Removing and installing the shroud and covers Shroud To remove the shroud Loosen the fasteners, slowly raise the shroud, and then unhook the shroud from the shroud stay. 1. Shroud stay Left and right side covers To remove a side cover Loosen the fasteners, and then remove the side cover. 42 Periodic maintenance 1. Fastener 2.

Right side cover 1. Screw 2. Cable guide 2. Remove the bolts, disconnect the main switch coupler and auxiliary DC jack coupler, and then remove the top cover. 1. Fastener 2. Left side cover To install a side cover Place the side cover in the original position, and then tighten the fasteners. 1. Bolt 2. Top cover NOTE: Be sure to fit the projection on the rear of the side cover into the hole in the lower side cover.

Top cover To remove the top cover 1. Remove the screws, and then remove the cable guide. To install the top cover 1. Connect the main switch coupler and auxiliary DC jack coupler, place the top cover in the original position, and then install the bolts. 2. Pass all of the cables, etc., through the cable guide, place the cable guide in the original position, and then install the screws. EWS00090 WARNING G Do not drive the snowmobile with the shroud or covers unfastened or removed. 43 Periodic maintenance G G Keep your body and clothing away from rotating parts when servicing the snowmobile with the shroud or covers removed. Do not touch the hot muffler and engine during or immediately after operation.

Specified spark plug: Manufacturer: NGK Model: CR9EB Spark plugs are produced in several different thread lengths. The thread length or reach is the distance from the spark plug gasket seat to the end of the threaded portion. If the reach is too long, overheating and engine damage may result. If the reach is too short, spark plug fouling and poor performance may result. Also, if the reach is too short, carbon will form on the exposed threads resulting in combustion chamber hot spots and thread damage.

Always use a spark plug with the specified reach. Spark plug reach: 19.0 mm (0.75 in) ECS00370 CAUTION: Make sure that all cables, leads, etc., are routed properly before installing the shroud and covers.

NOTE: When installing the shroud and covers, be sure to tighten the fasteners and the top cover bolts securely. ESU11780 Checking the spark plugs The spark plug is an important engine component and is easy to inspect. The condition of the spark plug can indicate the condition of the engine. Check the coloration on the white porcelain insulator around the center electrode. @@@@Do not attempt to diagnose such problems yourself. @@@@Spark plug gap 2. @@@@Idle adjusting screw Standard engine idling speed: 14001600 r/min 5. Install the headlight unit, making sure to insert the projections on the headlight unit stay into the slots on the bottom of the headlight unit. Adjusting the engine idling speed ECS00400 CAUTION: G G Be sure to have a Yamaha dealer make this adjustment. Make sure that the throttle lever moves smoothly.

Remove the shroud, the left and right side covers, and the top cover. (See page 42 for removal procedures.) Start the engine and warm it up.

@@@@@Headlight unit bolt Remove the shroud. @@@@Locknut 2. Throttle cable free play adjusting bolt 3. Throttle cable free play 1. @@7. Tighten the locknut. @@Bolt 3.

4. @@Loosen the locknut. @@8. @@@@Install the bolts on the top cover. 10.

@@@@G Make sure that the throttle lever moves smoothly. @@Throttle lever pivot 2. Engine stop switch housing 3. @@2. @@@@@@@@@@1.

Remove the shroud. (See page 42 for removal procedures.) 2. @@Headlight unit bolt 7. @@Install the air filter case cover by hooking the fasteners. @@Bolt 4. 5. Slightly lift up the headlight unit, and then remove the air filter case cover.



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Lift up the air filter element frame and check the air filter element. If there is any snow on the air filter element, remove the element, brush off the snow, and then install the air filter element.

9. 48 Periodic maintenance Headlight unit bolt tightening torque: 3 Nm (0.3 m-kgf, 2.2 ft-lb) 10. Install the bolts on the top cover. 11. Install the shroud. ECS00430 CAUTION: The drive chain gears and V-belt clutch should be adjusted when operating above a high altitude of 900 m (3000 ft). Consult a Yamaha dealer. ESU11950 NOTE: After riding the snowmobile, make sure that there is no snow under the air filter element frame.

ESU11930 Valve clearance The valve clearance changes with use, resulting in improper air-fuel mixture and/or engine noise. To prevent this from occurring, the valve clearance must be adjusted by a Yamaha dealer at the intervals specified in the periodic maintenance chart. ESU11962 High-altitude settings Operating at high altitude reduces the performance of a gasoline engine about 3% for every 305 m (1000 ft) of elevation. This is because there is less air as altitude increases. Less air means less oxygen available for combustion.

Your snowmobile utilizes an electronic fuel injection system that delivers the optimal air/fuel ratio required by the engine. Therefore, the fuel injection system does not need to be adjusted, even for operation at high altitude. Remember: Less air at higher altitude means there is less horsepower available, even with the optimal air/fuel ratio. Expect acceleration and top speed to be reduced at higher altitudes. To overcome operating with less power at high altitudes, your snowmobile may also require different settings for the drive chain gears and V-belt clutch to avoid poor performance and rapid wear.

If you plan to operate your snowmobile at an altitude different from the area where you bought it, be sure to consult a Yamaha dealer. The dealer can tell you if there are any changes necessary for the altitude where you plan to ride. Engine oil and oil filter cartridge The engine oil level should be checked before each use. In addition, the oil must be changed and the oil filter cartridge replaced at the intervals specified in the periodic maintenance and lubrication chart.

EWS00370 WARNING Engine oil is extremely hot immediately after the engine is turned off. Coming into contact with or getting any engine oil on your clothes could result in burns. ECS00440 CAUTION: G G Do not run the engine with too much or not enough oil in the oil tank. Oil could spray out or the engine could be damaged. Be sure to change the engine oil after the first 800 km (500 mi) of operation, and every 4000 km (2500 mi) thereafter or at the start of a new season, otherwise the engine will wear quickly. 49 Periodic maintenance G The oil filter cartridge should be replaced every 20000 km (12000 mi) of operation.

Have a Yamaha dealer replace the oil filter cartridge. ECS00451 CAUTION: Disconnect the oil level gauge coupler before removing the oil filler cap, otherwise the cable could twist and break. 5. Remove the oil filler cap, wipe the dipstick clean, insert it back into the oil filler hole (without screwing it in), and then remove it again to check the oil level. To check the engine oil level 1. Place the snowmobile on a level surface and apply the parking brake. 2. Start the engine, warm it up for 1015 minutes, and then turn it off. The engine can also be warmed up by operating the snowmobile for 1015 minutes. @@Remove the shroud and the right side cover.

@@Oil filler cap 2. @@"H" level mark 2. "L" level mark 6. 1. Oil level gauge coupler 2.

@@@@Use only 4-stroke engine oil. @@8. Connect the oil level gauge coupler. 9. Install the right side cover and the shroud.

@@Right lower cover 5. 6. Place an oil pan under the oil tank to collect the used oil. @@1. 2. 3. Place the snowmobile on a level surface, and apply the parking brake. @@Remove the shroud and the right side cover. @@Oil level gauge coupler 2. @@Bottom panel 1.

Engine oil drain bolt (oil tank) 8. Place an oil pan under the engine to collect the used oil. 51 Periodic maintenance 9. Remove the engine oil drain bolt to drain the oil from the crankcase. 13. Add sufficient oil of the recommended type to raise it to the "H" level mark on the dipstick. (See above for checking procedures.) 1. Engine oil drain bolt (crankcase) NOTE: Dispose of used oil according to local regulations. 10.

Install the engine oil drain bolts, and then tighten them to the specified torques. Tightening torques: Engine oil drain bolt (crankcase): 30 Nm (3.0 m-kgf, 22 ft-lb) Engine oil drain bolt (oil tank): 16 Nm (1.6 m-kgf, 11 ft-lb) 11. Add 2.

0 L (2.1 US qt, 1.8 Imp.qt) of the recommended engine oil to the oil tank, and then install and tighten the oil filler cap. Recommended engine oil: See page 77. Oil quantity: With oil filter cartridge replacement: 3.0 L (3.17 US qt) (2.64 Imp.qt) Without oil filter cartridge replacement: 2.8 L (2.96 US qt) (2.46 Imp.qt) Total amount: 3.8 L (4.

02 US qt) (3.34 Imp.qt) 12. ECS00461 CAUTION: G G G When adding the engine oil, be careful not to fill above the "H" level mark on the dipstick. Use only 4-stroke engine oil. Make sure that no foreign material enters the engine oil tank. 14. Start the engine, and then let it idle for several minutes while checking it for oil leakage. If oil is leaking, immediately turn the engine off and make sure that the engine oil drain bolt, oil tank drain bolt, and the oil filler cap are installed correctly. 15.

Turn the engine off, and then connect the oil level gauge coupler. 16. Install the bottom panel and the right lower cover, and then install the right side cover and the shroud. ECS00470 CAUTION: If oil is leaking or the oil level warning indicator comes on when the engine is running, immediately turn the engine off and have a Yamaha dealer check the snowmo- 52 Periodic maintenance bile. Continuing to operate the engine under such conditions could cause severe engine damage.

ESU12010 Cooling system The coolant level should be checked before each ride. In addition, the cooling system must be bled of air at the intervals specified in the periodic maintenance and lubrication chart. EWS00380 WARNING Do not remove the coolant reservoir cap when the engine is hot. Scalding hot fluid and steam may be blown out under pressure, which could cause serious injury. When the engine has cooled, place a thick rag or towel over the coolant reservoir cap, and slowly rotate the cap counterclockwise to the detent.

This procedure allows any residual pressure to escape. When the hissing sound has stopped, press down on the cap while turning counterclockwise and remove it. To check the coolant level 1. Remove the top cover. (See page 42 for removal procedures.) 2. Check the coolant level in the coolant recovery tank when the engine is cold. If the coolant level is below the "COLD LEVEL" mark, add soft water until it reaches the "COLD LEVEL" mark.



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