



DRIFTER

SB340-A2

SB440-A5



SNOWMOBILE ASSEMBLY & PREPARATION MANUAL

NOTICE TO DEALERS

This manual is provided to ensure that the snowmobile is assembled correctly and given proper presale preparation. Your customer expects and deserves a safe, reliable snowmobile, and performance of the steps listed here is essential to that end.

The selling dealer assumes sole responsibility for any unauthorized modifications prior to sale. **REFER TO YOUR SNOW PRODUCTS BINDER FOR ANY SERVICE BULLETINS SPECIFYING FACTORY DIRECTED MODIFICATIONS WHICH MUST BE PERFORMED BEFORE THE SNOWMOBILE IS READY FOR SALE.**

SAFETY AWARENESS

WARNING

This warning symbol identifies special instructions or procedures which, if not correctly followed, could result in personal injury, or loss of life

CAUTION

This caution symbol identifies special instructions or procedures which, if not strictly observed, could result in damage to, or destruction of equipment.

Table of Contents

Dealer's Assembly and Preparation Check List	ii
Assembly	1
Uncrate	1
Skis	1
Installation	1
Windshield	2
Handlebar	3
Throttle and Brake Control Levers	4
Tool Kit/Owner Manual and Safety Handbook	4
Safety Labels	4
Preparation	4
Suspension	4
Ride Adjustment	4
Handling Adjustment	5
Ski Spring Preload	5
Steering Alignment	6
Wiring Harness	7
Chaincase	7
Brake	8
Brake Adjustment	8
Drive and Driven Converter Alignment	9
Converter Center-to-Center Distance	9
Converter Offset Distance	10
Converter Parallelism	10
Engine Break-In	11
Oil Recommendation	11
Filling Oil Tank	11
Fuel Recommendation	11
Fuel/Oil Mixture (Break-In Only)	11
Fuel/Oil Mixture (Standard)	12
Adding Gasoline Antifreeze	12
Filling Fuel Tank	12
Engine Gearcase Lubrication	12
Oil Injection System	13
Bleeding Oil Pump Supply Tube	13
Oil Pump to Carburetor Synchronization	14
Purging Air from Oil Pump Outlet Tubes	15
Carburetor Adjustments	16
Enrichener Cable	16
Air Screw	17
Idle Screw	17
Throttle Control Cable	17
Ignition Timing Check	18
Ignition Timing Adjustment	19
Fan Belt Tension	20
Headlight Adjustment	20
Tail/Brake Light Test	21
Track Adjustment	21
Track Tension	21
Track Alignment	22
Test Ride (Operational Checks)	23
Specifications	25
Engine	25
Carburetor Settings & Fuel	25
Drive System	25
Electrical System	25
Torque Chart	26
Wiring Diagram	27

Dealer's Assembly and Preparation Check List

Remove the Assembly & Preparation Check List from storage case. Complete each item of the check list following the procedures outlined in this manual. Verify compliance by placing a check (✓) in box preceeding each item as it is completed. Be sure to sign all sections of the form as they are completed. Retain completed check list for your records.

KAWASAKI SNOWMOBILE DEALER'S ASSEMBLY & PREPARATION CHECK LIST	
I hereby certify that prior to delivery to the first retail purchaser assembly and preparation servicing was performed on the snowmobile listed below in accordance with the following check list, and in compliance with the established procedures prescribed by Kawasaki: (✓ check each item when completed).	
SNOWMOBILE INFORMATION	
MODEL _____	SERIAL NO. _____ ENGINE NO. _____
ASSEMBLY CHECK LIST	
1 ☐ REMOVE CRATE - check for damaged & missing parts.	6 ☐ SAFETY DECALS - properly installed.
2 ☐ SKIS - install - torque all bolts.	7 ☐ TOOL KIT - complete/installed.
3 ☐ SKI SHOCKS - mount and torque bolts.	
4 ☐ WINDSHIELD - mount to hood.	
5 ☐ HANDLEBARS - adjust to proper position/torque bolts.	ASSEMBLY BY: _____
	Signature _____
PREPARATION CHECK LIST	
1 ☐ STEERING - align skis/components secure.	*17 ☐ OIL LINE TO PUMP - (all oil injection models) bleed/secure/properly routed.
2 ☐ CLUTCH ALIGNMENT - check/adjust.	*18 ☐ ENGINE COOLANT - check level/freeze protection.
3 ☐ CLUTCH CENTER TO CENTER - check/adjust.	19 ☐ SPARK PLUGS - check/gap.
4 ☐ CHAINCASE - add lube if required/check for leaks.	20 ☐ GAS TANK - fill with recommended fuel/oil mix (refer to Owner's Manual) check for leaks.
5 ☐ BRAKE - clean disc/adjust.	21 ☐ CARBURETOR AIR SCREW - adjust.
6 ☐ WIRING HARNESS - properly routed/electrical connectors secure.	22 ☐ CARBURETOR IDLE SPEED - adjust.
7 ☐ SUSPENSION - check/adjust.	*23 ☐ PRIMER - check operation.
8 ☐ NUTS, BOLTS, OTHER FASTENERS - check/tighten.	24 ☐ IGNITION TIMING - check when engine is warm/adjust.
*9 ☐ ENGINE GEARCASE LUBRICANT - check level/add recommended oil as required.	25 ☐ ELECTRICAL SYSTEM - check operation - adjust
10 ☐ FUEL PUMP TUBES - secure and no kinks	☐ Headlight * ☐ Battery Charging System
11 ☐ ENRICHENER CONTROL - check/adjust.	☐ Taillight ☐ Brake Light
*12 ☐ OIL PUMP - check synchronization/adjust.	* ☐ Electric Starter * ☐ Instruments & Indicator Lights
13 ☐ THROTTLE CABLE - check/adjust.	
*14 ☐ CARB SYNCHRONIZE - check/adjust (twin carb models).	26 ☐ TRACK - adjust tension/align
*15 ☐ FAN BELT - check/adjust (axial fan models).	
*16 ☐ OIL TANK - fill with Kawasaki approved oil/check for leaks.	
	PREPARATION BY: _____
	Signature _____
TEST RIDE	
1 ☐ CONTROL CABLES - throttle & brake works without binding in any steering position/returns freely.	8 ☐ SPEEDOMETER/TACHOMETER - check operation.
2 ☐ ENGINE STOP SWITCH - check operation.	9 ☐ NO UNUSUAL NOISES.
3 ☐ SUSPENSION - check slider ride adjustment.	*10 ☐ NO COOLANT LEAKS.
4 ☐ STEERING - action is free lock to lock/no looseness.	11 ☐ NO FUEL OR OIL LEAKS.
5 ☐ ENGINE - recoil starter works properly/engine starts promptly/good throttle response and return. Exhaust smoke present but not excessive (oil injection models).	*12 ☐ COOLANT LEVEL - check/add coolant mix as required.
6 ☐ CLUTCHES - smooth operation/correct maximum RPM	13 ☐ CONTROLS - properly positioned/secure/adjusted.
7 ☐ BRAKES - adequate - smooth stopping power.	
	TEST RIDDEN BY: _____
	Signature _____
CUSTOMER DELIVERY	
1 ☐ OWNER'S MANUAL - explain contents/proper maintenance/install.	4 ☐ CONTROLS - explain location & operation/properly positioned for customer.
2 ☐ OWNER'S SAFETY HANDBOOK - explain contents/install.	
3 ☐ WARRANTY CERTIFICATE - explain warranty and customer responsibilities thoroughly/install.	DELIVERED BY: _____
	Signature _____
DEALER VERIFICATION	
Dealer Name _____	Signature of Dealership Manager _____
Address _____	Date _____
* Applicable models only - refer to assembly instruction provided by Kawasaki for specific models.	
P/N 49007-3501	white copy dealer file/canary copy owner
Printed in U.S.A.	
If it is desired to utilize the French portion of this check list, please remove the carbon sheet and insert in proper location.	

Assembly

Uncrate

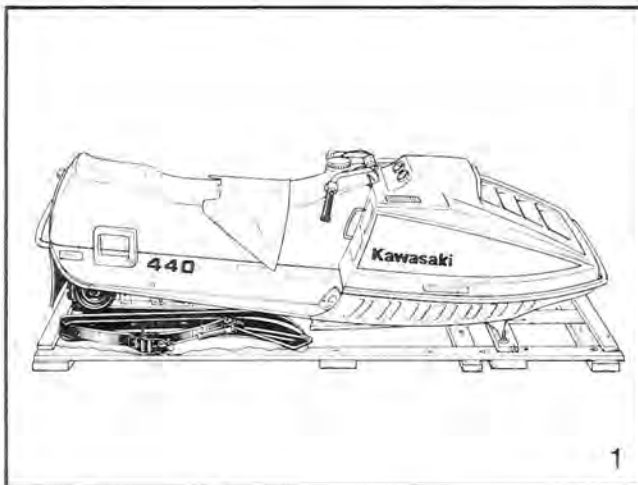
Observe this

WARNING

during next step

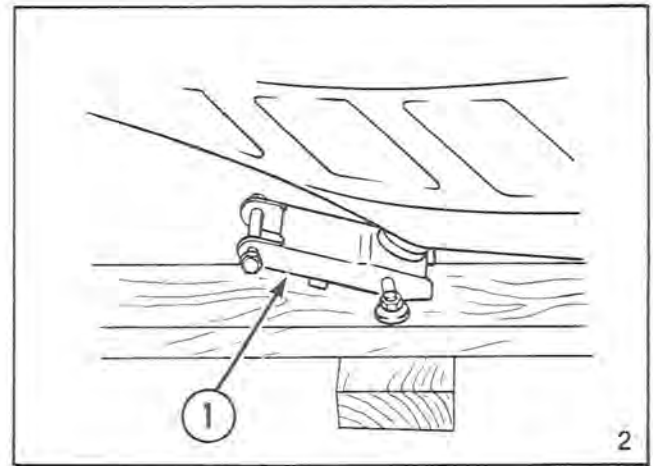
Bend over all exposed crate fasteners to prevent personal injury or possible vehicle damage.

In a large, clear work area, open crate by separating top and sides. Remove windshield from seat. (See Figure 1.)



NOTE: When uncrating vehicle, inspect for concealed damage that may occur during shipping. If damage is apparent, STOP uncrating and check your WARRANTY POLICIES & PROCEDURES Section of your Snow Products Binder under RECEIVING WAREHOUSE UNITS.

Loosen and remove the nuts that secure the ski spindles to the bottom of the crate. (See Figure 2.)



1. Ski Spindle

Observe this

WARNING

during next step

To prevent personal injury, use lifting equipment with approved safety hooks when raising the snowmobile.

With assistance, or the use of a hoist, carefully lift the snowmobile from the crate. Thoroughly inspect snowmobile for shipping damage and missing parts.

Remove plastic bag containing mounting hardware for skis and windshield from storage case.

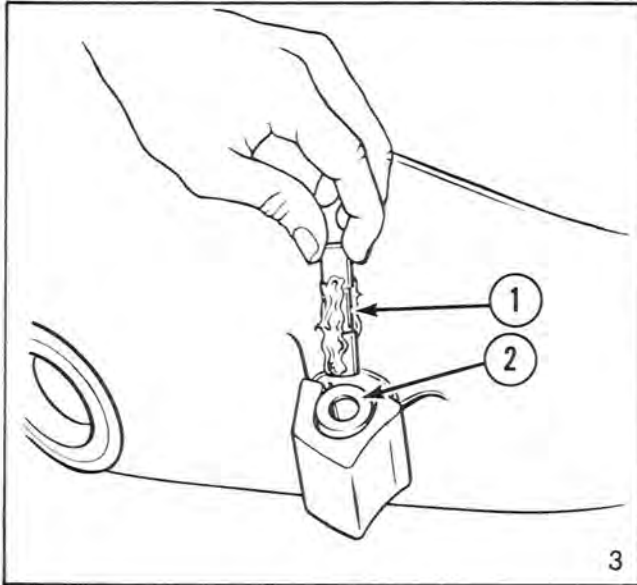
Skis

Installation

Place the snowmobile on its side. Be sure to provide a protected surface to prevent marring the finish of the snowmobile. Then perform the following:

1. Apply low temperature extreme pressure (ep) grease to the grooved or recessed area on the spindle sleeve, and insert the sleeve into the spindle. (See Figure 3.)

NOTE: During shipping, burrs may form at the outer edge of the spindle hole making sleeve insertion difficult. Use a suitable file to remove these burrs.



1. Spindle Sleeve
2. Spindle

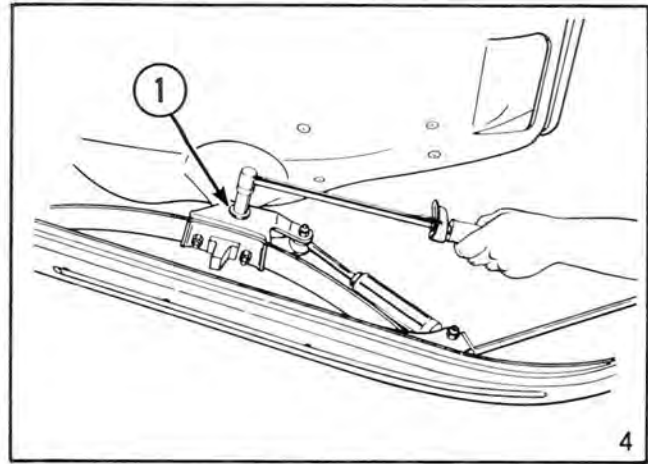
Observe this

WARNING

during next step

Improper tightening of spindle to saddle bolt will result in excessive steering system play. This negatively effects vehicle handling and could result in loss of control and possible personal injury to the operator.

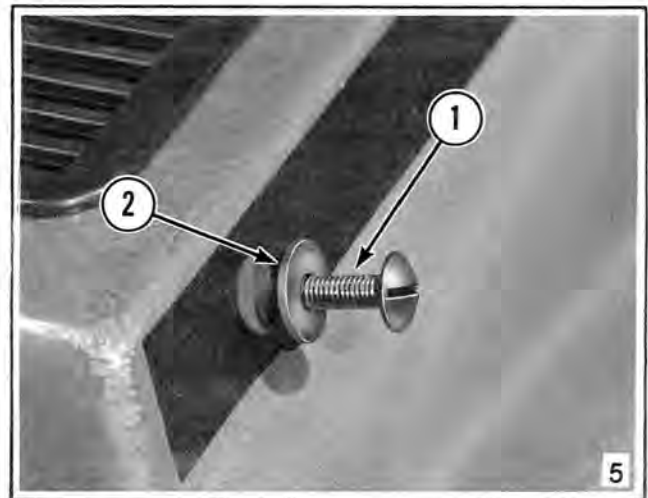
2. Secure ski and shock absorber assembly to spindle using hardware supplied. Be sure nut and large flat washer are installed on inward side of the spindle and torque 30 ft lb (4.1 kg-m). Torque shock absorber mounting nut 30 ft lb (4.1 kg-m). (See Figure 4.)



1. Flat Washer

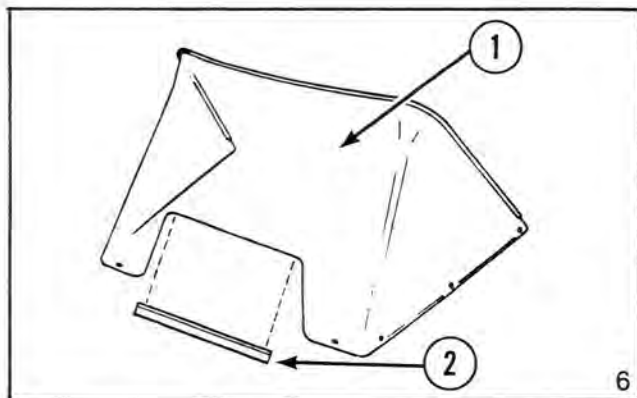
Windshield

Install the well nuts by threading a windshield mounting screw part way in and using the screw as a handle, push the well nut into position and remove the screw. (See Figure 5.)



1. Windshield Mounting Screw
2. Rubber Well Nut

Remove the protective film from the windshield and install windshield seal trim. (See Figure 6.)



- 1. Windshield
- 2. Seal Trim

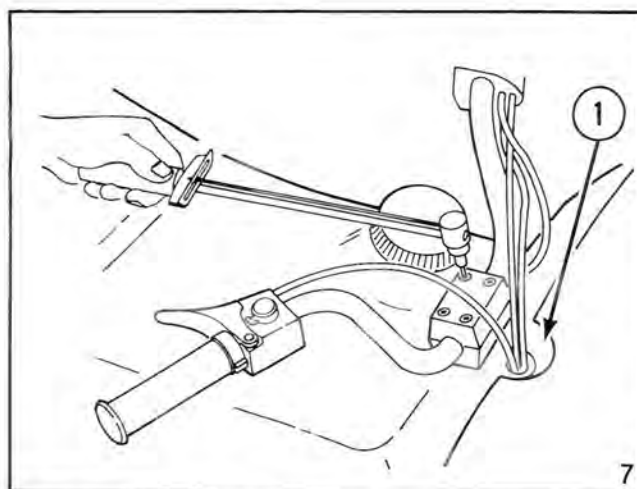
Install windshield using mounting screws provided.

Handlebar

Observe this **CAUTION** during next step

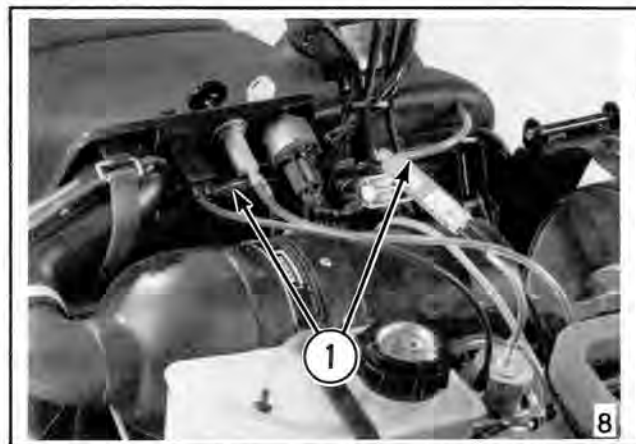
Adjust the handlebar so it does not hit the windshield when turning in either direction.

Adjust handlebar for comfortable driving position and evenly torque four screws 105 in. lb (1.2 kg-m). (See Figure 7.)



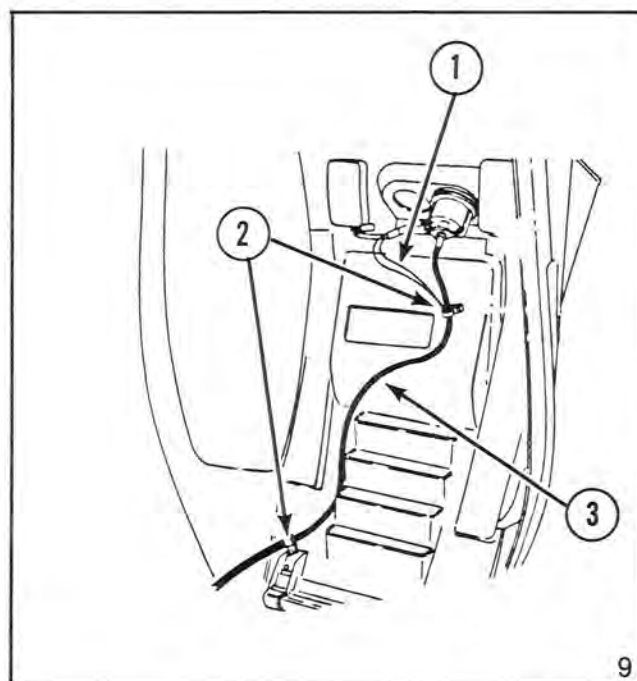
- 1. Hood Cutaway Section

Check the routing of the control cables and wire harnesses for proper positioning. They must pass through the cutaway section in the hood for adequate free movement when the hood is closed. Be sure the fuel tank vent tube is not crimped or pinched. (See Figures 7 and 8.)



- 1. Fuel Tank Vent Tube

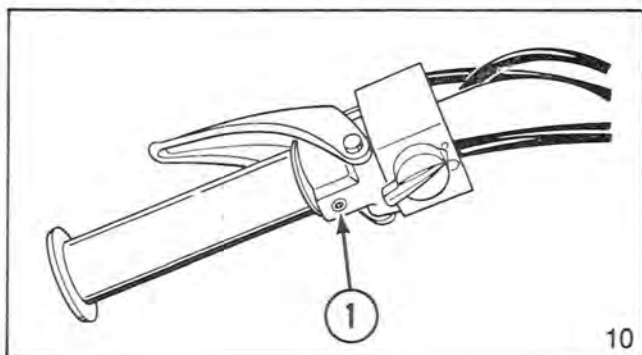
The headlight-instrument wire harness and speedometer cable must be routed properly on underside of hood. Clamps are used to secure harness and cable in position. (See Figure 9.)



- 1. Headlight-Instrument Wire Harness
- 2. Clamps
- 3. Speedometer Cable

Throttle and Brake Control Levers

Check throttle and brake control lever position. Be sure they are comfortable for driving. Torque set screws 25 in.lb (0.3 kg-m). (See Figure 10.)



1. Set Screw

Safety Labels

WARNING

Insure that all safety labels are properly located and secure. (See Figure 11.)



Tool Kit, Owner Manual, and Safety Handbook

Check the storage box to be sure it contains the Tool Kit, Owner's Manual and Safety Handbook.

Preparation

Suspension

The snowmobile is shipped with the suspension springs adjusted during production assembly to provide satisfactory ride and handling characteristics for average driver weight. Normally, no adjustments are required.

Ride Adjustment

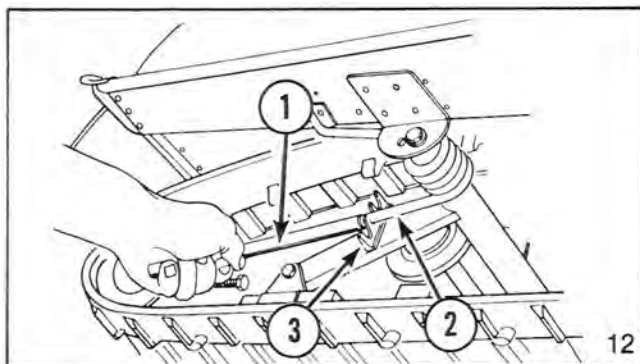
As assembled, the rear springs which control the ride characteristics are mounted in the lowest or softest of the three positions available. Ride adjustments can be made by changing the position of these springs to increase their tension. This will stiffen the ride and increase load capacity.

CAUTION

The tension (pre-load) of the springs on each side of the suspension arm must be equal. Excessive tension of one spring can cause spring breakage or excessive wear to one side of the slide wear strips.

To change spring tension:

1. Install spring adjusting tool, P/N 57001-3507 onto the end of the spring arm as shown. (See Figure 12.)



1. Spring Adjusting Tool P/N 57001-3507
2. Spring Arm
3. Spring Retainer

Observe this

WARNING

during next step

Rear suspension springs are under heavy spring load and improper adjusting techniques may result in personal injury.

2. Apply a firm grip on the spring adjusting tool with both hands and carefully lift the spring arm out of the detent in the spring retainer. Be prepared for the heavy spring load to be transferred to the spring adjusting tool as the spring arm is lifted out of the retainer detent.
3. Install the spring arm into a higher retainer detent to increase spring tension for the desired ride characteristics.

Handling Adjustment

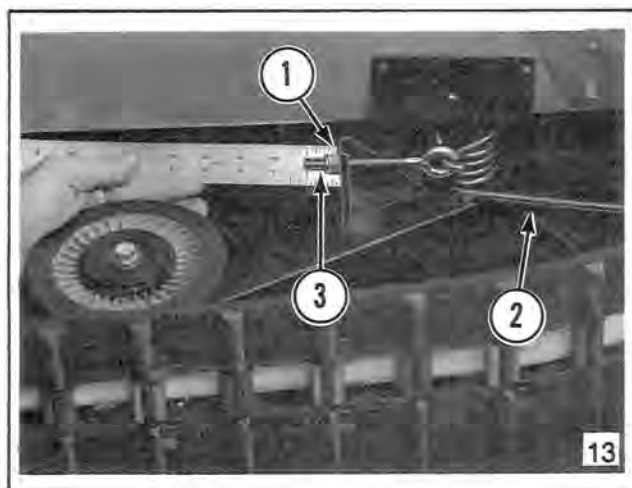
The handling characteristics of the snowmobile are controlled by the tension of the front suspension springs. Increasing the spring tension will reduce ski pressure on the ground, resulting in less steering effort and slower response. Less spring tension allows more ski pressure, causing quicker response and increased steering effort.

CAUTION

The tension (pre-load) of the front springs on each side of the suspension arm must be equal. Excessive tension of one spring can cause spring breakage or excessive wear to one side of the slide wear strips.

To adjust or change the handling characteristics of the snowmobile, tighten the adjusting nuts on each side of the suspension arm equally to increase front spring tension or loosen the nuts equally to decrease spring tension. (See Figure 13.)

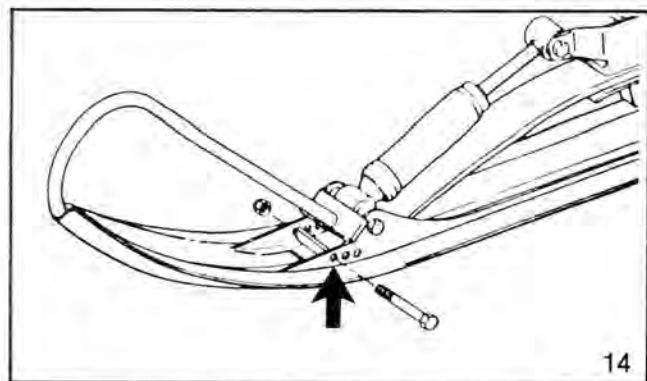
The standard adjustment is 1/4 in. (6.35 mm) of exposed threads from the adjusting nuts. This is recommended for the best overall handling over a wide range of conditions and terrain.



1. Adjusting Nut
2. Front Suspension Spring
3. Exposed Threads

Ski Spring Preload

Three positions have been provided for the front ski spring mounting bolt: (See Figure 14.)



1. Spring Mounting Position

FRONT HOLE POSITION - secures spring to reduce spring arch, increasing spring tension preload, resulting in a firmer ride with less spring travel for maximum stability during high speed operation.

CENTER HOLE POSITION - allows more spring arch, reducing spring preload, resulting in a softer ride for moderate speeds and trail riding.

REAR HOLE POSITION - provides maximum spring arch, further reducing spring preload, resulting in a much softer ride. This position is recommended for deep snow operation or slow speed trail riding only.

NOTE: Always mount the front ski spring bolt into the same position on each ski.

To change the preload of the ski spring, be sure the weight of snowmobile is on the skis, and proceed as follows:

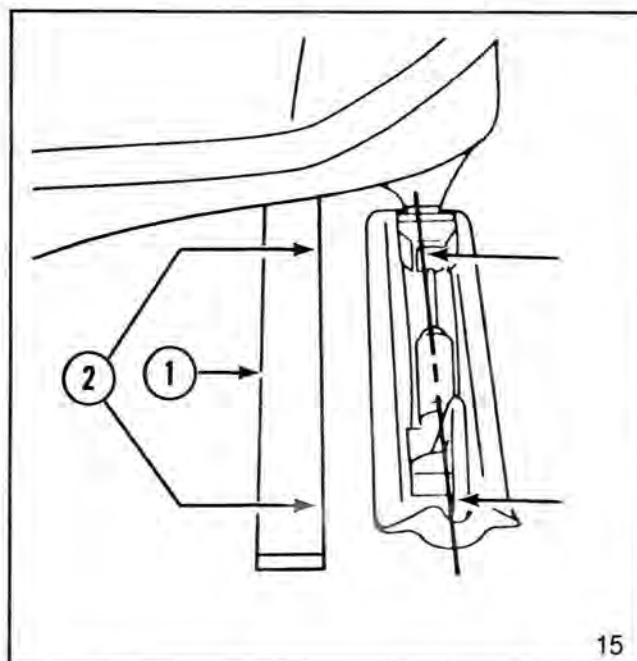
1. Remove nut from front spring mounting bolt.
2. Open hood and with assistance from another, stand on front bumper to relieve spring tension from mounting bolt.

3. With weight still on front bumper, remove bolt, slide spring rub strip to align with desired hole position of ski, and insert bolt.
4. Install nut and torque 25 in. lb (0.3 kg-m).

Steering Alignment

Check the ski alignment and handlebar centering.

1. Place a long board (or suitable straightedge) against the left edge of the track, and measure the distance between the board and center line of the ski. Position the ski so that the distance measured between the ski center line and edge of the board is the same at the front and rear of the ski. (See Figure 15.)

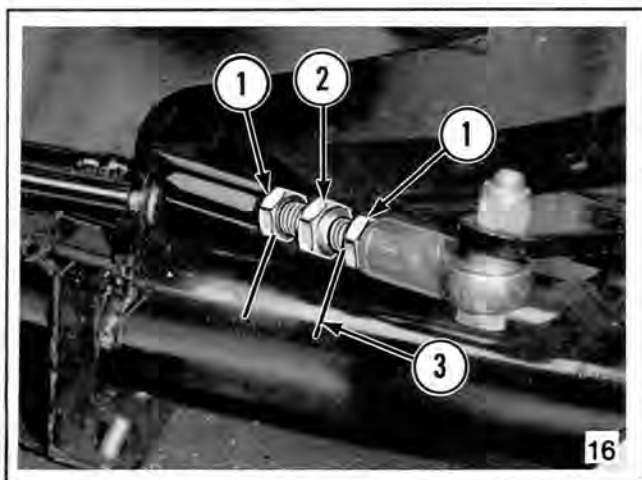


1. Straight Edge Against Track
2. Measure Distance Here

2. When the ski center line is parallel to the outside edge of the track, check the steering handlebar for centering.

Observe this **WARNING** during next step

To prevent possible steering linkage failure adjusting stud must remain centered between two jam nuts and measurement between jam nuts must not exceed 1-1/4 in. (32 mm). (See Figure 16.)

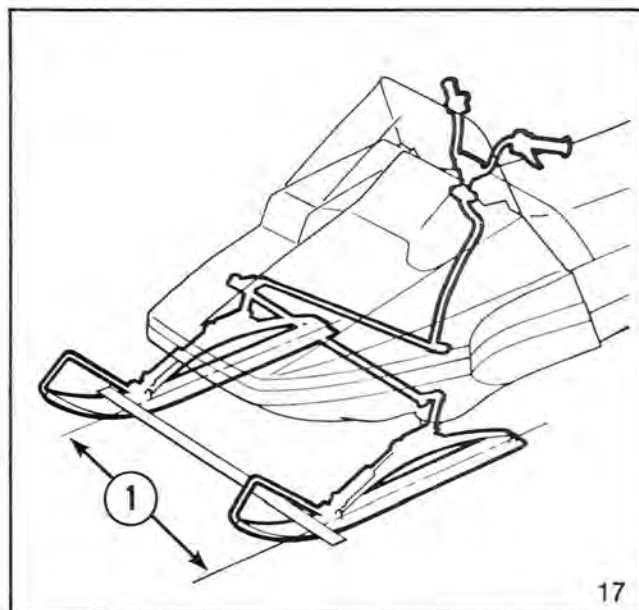


1. Jam Nuts
2. Tie Rod Length Adjusting Stud
3. 1-1/4 in. (32 mm) Maximum

3. If handlebar requires centering, support vehicle so RH ski is off the ground allowing it to move when adjusting handlebar. Loosen jam nuts and turn LH tie rod adjusting stud as necessary to center handlebar.

NOTE: Be sure the ski center line remains parallel to straight edge while turning the tie rod adjusting stud.

4. To align RH ski, move both ski tips towards center of snowmobile to remove the steering linkage play. Turn the RH tie rod length adjusting stud to obtain an equal distance from ski center to ski center when measured at the front and rear of the skis. (See Figure 17.)
5. Torque adjusting stud locknuts 120 in. lb (1.4 kg-m). Refer to torque chart and tighten all hardware (nuts, bolts, etc.) in steering system.



1. Equal Distance Between Ski Center Lines - Front and Rear

Wiring Harness

Check wiring harness for proper routing. Be sure wires are not being rubbed or pinched and all connectors are secure and fully connected.

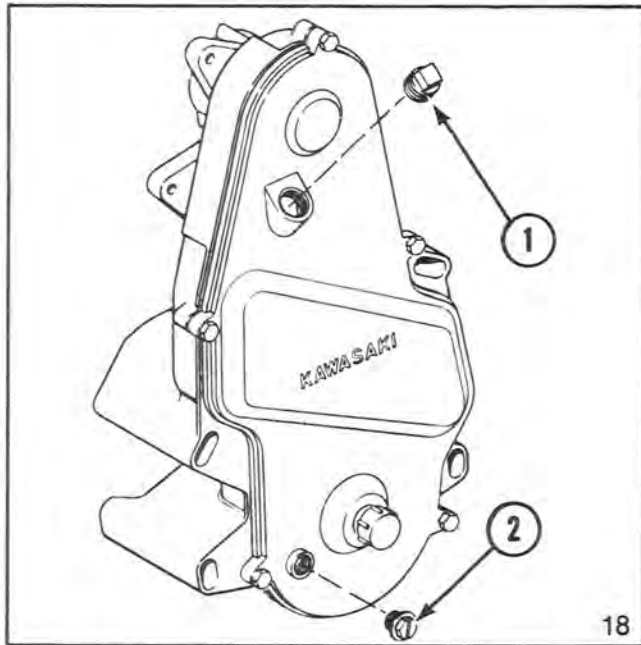
Chaincase

CAUTION

To avoid loss of lubricant, use KAWASAKI Chain lubricant ONLY - whenever adding to or filling chaincase.

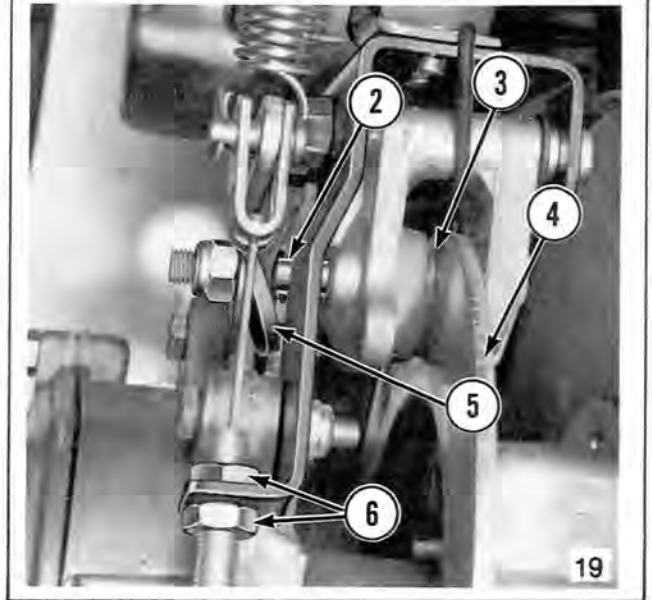
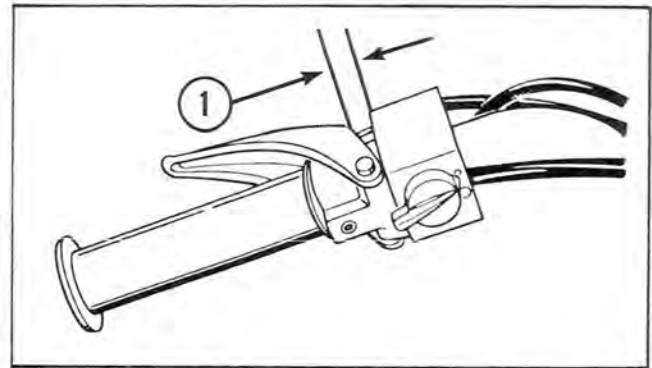
Check chaincase fluid level by removing Fluid Level Plug. Fluid level must be even with level hole's lower edge. If additional fluid is required, remove fill plug and pour KAWASAKI Chain Lubricant into fill hole until fluid level is even with fluid level hole's lower edge. (See Figure 18.)

Install Fill Plug and Fluid Level Plug into chain-case.



1. Fill Plug
2. Oil Level Plug

18



1. 3/4 in. (19 mm) Maximum
2. Push Pins
3. Brake Pads
4. Brake Disc
5. Brake Cam
6. Brake Cable Jam Nut

19

Brake

Check relationship of brake cam detent to brake pad push pins. In the off position the cam detent must be centered over pins. Be sure brake disc can be moved back and forth with very slight drag from brake pads. Measure brake control lever movement which should be less than 3/4 in. (19 mm) when brake is fully applied. Perform Brake Adjustment if required. (See Figure 19.)

Brake Adjustment

1. Back both brake cable jam nuts away from bracket about 1/4 in. (6 mm). Tighten brake adjusting nut bottoming cam against push pins.
2. Pull outer brake cable rearward to remove slack from inner cable and snug rear jam nut to bracket. Tighten forward jam nut against bracket and torque both jam nuts 50 in. lb (0.6 kg-m)

Observe this

WARNING

during next step

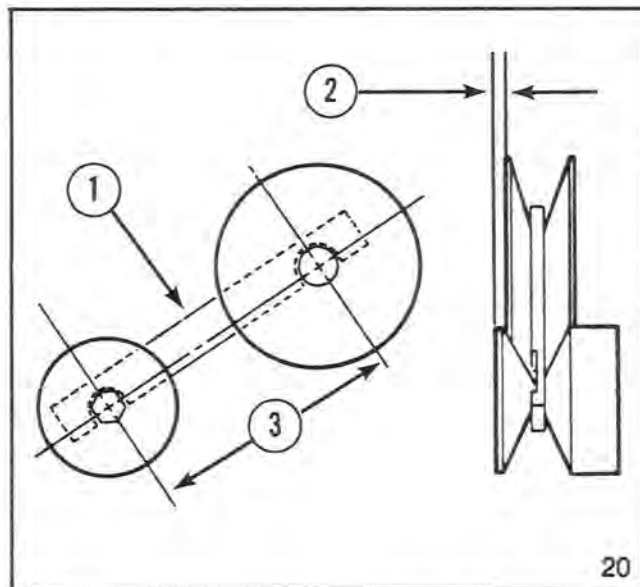
DO NOT OVERTIGHTEN the brake because damage to components, or personal injury could result.

3. Loosen brake adjusting nut until brake disc can be rotated back and forth easily with brake pads just lightly contacting the disc.

Drive and Driven Converter Alignment

Converter Center-To-Center Distance

Correct converter center-to-center distance of 10.3 in. (262 mm) and converter offset distance of 0.497 in. (11.5 mm) is obtained when alignment gauge P/N 57001-3515 is correctly installed between drive and driven converter sheaves. (See Figure 20.)

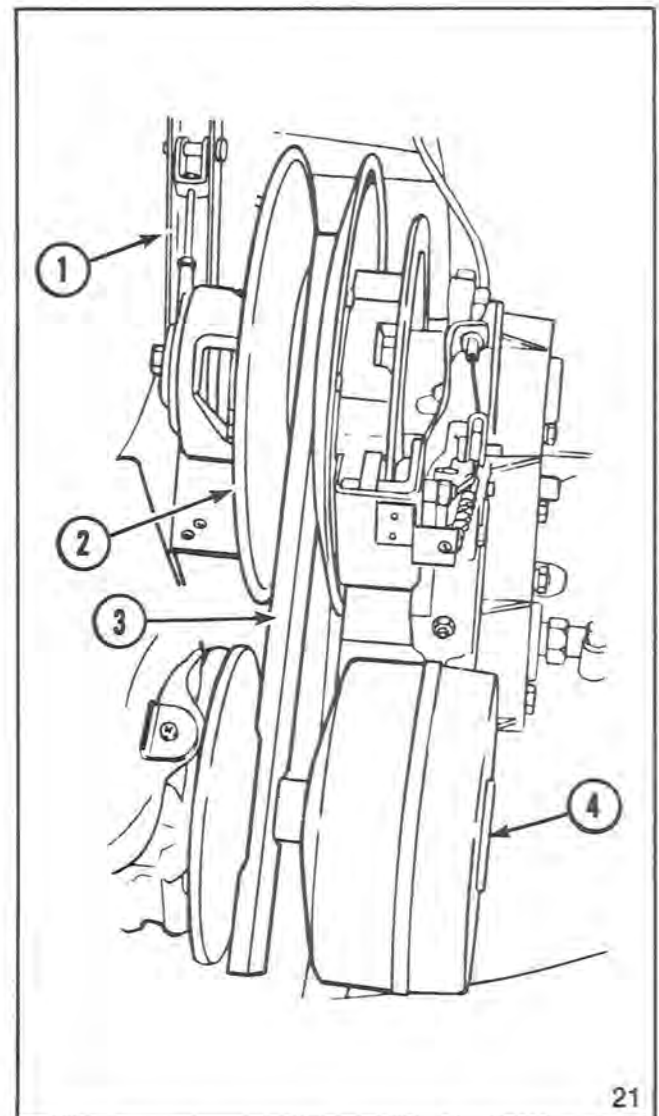


- 1. Alignment Gauge
- 2. Converter Offset
- 3. 10.3 in. (262 mm)

1. Remove belt guard and remove drive belt.
2. Rotate driven converter moveable sheave assembly clockwise, and insert alignment gauge between sheaves. Carefully release moveable sheave assembly allowing spring tension to retain gauge in position between stationary and moveable sheave assemblies. (See Figure 20.)
3. Center distance is correct if the notch in the alignment gauge fits over the shaft on the drive converter.

4. If adjustment of converter center distance is necessary; loosen four chaincase mounting nuts. Position chaincase forward or rearward as required. Torque chaincase mounting nuts 28 ft lb (3.9 kg-m).

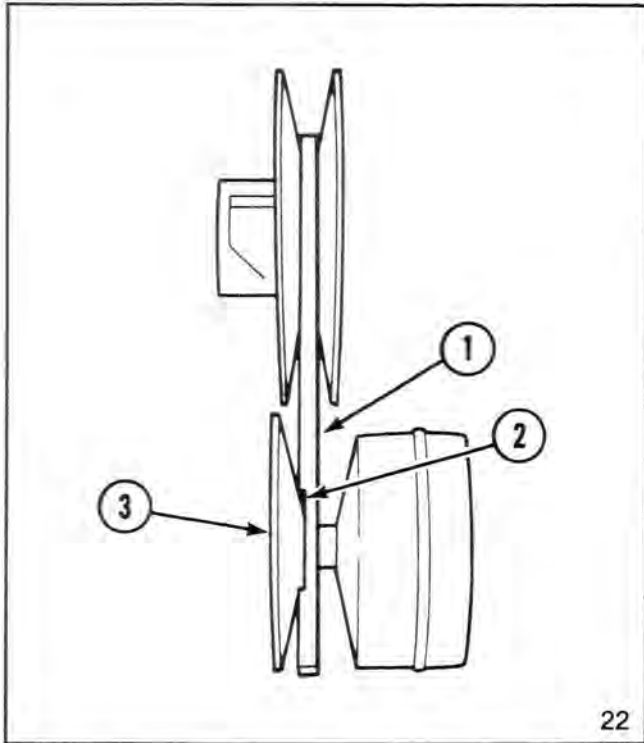
NOTE: Driven converter bearing support must be disconnected by removing clevis pin from chassis yoke. After adjusting chaincase, loosen support jam nut and adjust support assembly to proper length. Reconnect support to yoke and torque jam nut 95 in. lb (1.1 kg-m). (See Figure 21.)



- 1. Driven Converter Support Arm
- 2. Driven Converter Moveable Sheave
- 3. Alignment Gauge P/N 57001-3515
- 4. Drive Converter

Converter Offset Distance

1. Correct off-set distance is obtained when the surface of the shallow notch on the alignment gauge touches the base of the fixed sheave of the converter. (See Figure 22.)

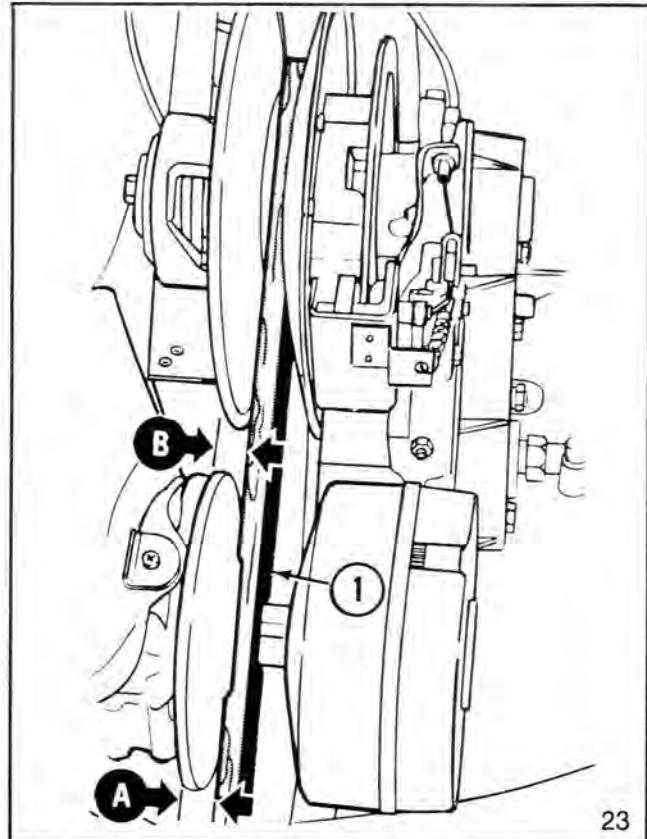


1. Alignment Tool P/N 57001-3515
2. Alignment Tool Recess
3. Drive Converter Stationary Sheave

2. If adjustment is necessary, loosen four engine mounting nuts. Slide engine back and forth until stationary sheave fits into recess in alignment gauge. Tighten all mounting bolts securely.

Converter Parallelism

1. When checking center-to-center and offset distances, parallelism must be checked by measuring dimensions A and B as shown. (See Figure 23.) Compare dimensions A and B against Notes I and II.



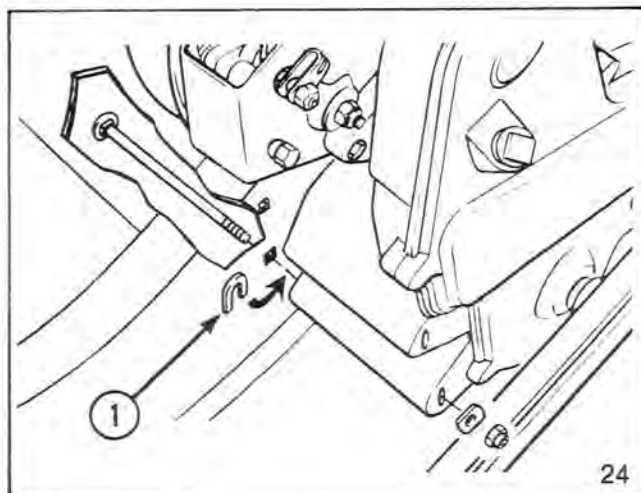
1. Alignment Gauge P/N 57001-3515

NOTE I: Dimension A must be more than dimension B.

NOTE II: Dimension A must never exceed dimension B by more than 1/16 in. (1.6 mm).

2. If dimension A is less than B, converter parallelism is not correct. Adjust parallelism by loosening engine mounting nuts, then twisting or rotating engine to correct position. Torque engine mounting nuts 30 ft lb (4.1 kg-m).
3. If parallelism is still not correct, loosen chain-case mounting nuts and install alignment "U" washers P/N 92025-3507 as required between chassis and chaincase. (See Figure 24.)

NOTE: Never use more than 2 alignment "U" washers per bolt.



1. "U" Washer, P/N 92025-3507

Engine Break-In

For proper engine break-in, run the machine on hard packed snow at approximately 3/8 to 1/2 throttle, with occasional bursts to full speed. Limit the full speed operation to 1 1/2 to 2 minutes, then return to cruising speed for 10 to 15 minute intervals. After 10 hours of operation or two tanks of gasoline are used, break-in is complete.

Oil Recommendation

We recommend using Kawasaki Snowmobile Oil. This oil is specially formulated to give minimum piston ring varnish and combustion chamber deposits along with excellent lubrication qualities.

In an emergency situation when Kawasaki Snowmobile Oil is not available, a B.I.A. certified TC-W oil may be substituted. All certified oils will indicate the TC-W rating on the container. If the B.I.A. certification does not appear on the container, the oil **MUST NOT BE USED**.

The use of lubricants such as "tune-up tonics" and "super oils" is **NOT RECOMMENDED**.

Filling Oil Tank

Fill oil tank with recommended oil. **DO NOT ALLOW DIRT TO ENTER WHILE FILLING.** Oil tank capacity is 2-1/2 quarts (2.37 liters).

Check oil tank vent tube for:

1. Proper Routing - Sharp bends or kinks in the vent tube will reduce oil flow to the oil pump.
2. Tie Band Installation - Tie band may pinch off tube, reducing oil flow to the oil pump, if installed too tight.
3. Vent Tube Position - To prevent siphoning action, possible under certain conditions, position end of vent tube higher than top of oil tank.

Fuel Recommendation

Use regular or premium leaded gasoline with a minimum PUMP POSTED ANTI-KNOCK INDEX NUMBER OF 89. **DO NOT USE GASAHOL.**

WARNING

Gasoline fumes are heavier than air and can become explosive if exposed to a pilot light from a furnace, hot water heater, clothes dryer, etc. Mix fuel or fill fuel tank only in an area that is well ventilated and free from pilot lights and sparks.

Fuel Mixture (Break-In Only)

To insure adequate lubrication of internal engine components during early break-in, a 25-to-1 gasoline-to-oil ratio is recommended for the first three (3) gallons of gasoline. This ratio can be obtained by thoroughly mixing 1 pint (0.47 liter) of Kawasaki Snowmobile Oil with three (3) gallons (11.4 liters) of gasoline. Pre-mixing gasoline and oil will no longer be required after the initial three gallons of gasoline and oil mix have been consumed.

25 to 1 Gasoline to Oil Mixture, Break-in Only	
Oil	Gasoline
1 pint (U.S.)	3.0 gal. (U.S.) 2.6 gal. (Imp.)
1 pint (Imp.)	3.0 gal. (Imp.) 3.8 gal. (U.S.)

Fuel Mixture (Standard)

The fuel-to-oil ratio required is automatically controlled at the engine oil pump.

Adding Gasoline Antifreeze

A major brand of Gasoline Antifreeze (such as Heet) should be added to the fuel mix by following the manufacturer's recommendations on the container for a proper mix ratio of fuel with antifreeze. (See Figure 25.)



CAUTION

Each time fuel tank is filled, gasoline antifreeze must be added to fuel mixture. Moisture trapped in fuel system components (fuel tank, lines, fuel pump or carburetors) may freeze causing engine malfunction or damage.

Filling Fuel Tank

Before removing filler cap from the fuel tank, remove any ice, snow, or water from around the fuel tank opening to prevent contamination of fresh fuel mixture.

WARNING

Gasoline fumes are heavier than air and can become explosive if exposed to a pilot light from a furnace, hot water heater, clothes dryer, etc. Fill the fuel tank only in an area that is well ventilated and free from pilot lights and sparks.

Fill the fuel tank slowly and pour the fuel mixture into the tank using a funnel with a fine mesh screen.

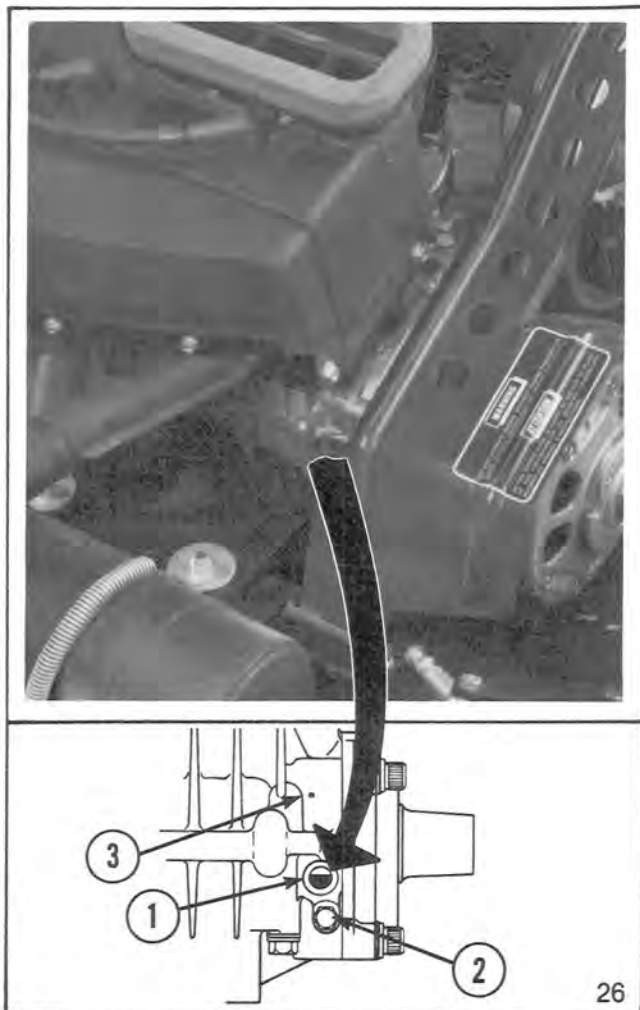
Engine Gearcase Lubrication

Components inside gearcase drive the oil injection pump.

Lubricant level is correct when oil appears above center but not higher than the top of the sight gauge. The sight gauge is located on the engine front, below left-hand cylinder assembly. (See Figure 26.)

Fill or add lubricant to the gearcase as follows:

1. Remove gearcase fill plug (located on top of gearcase) and pour Kawasaki engine gearcase oil or Shell Fire and Ice 10W40 or an equivalent viscosity motor oil that meets or exceeds API service SE specifications. Gearcase capacity is about 1.35 oz. (40 cc). (See Figure 27.)

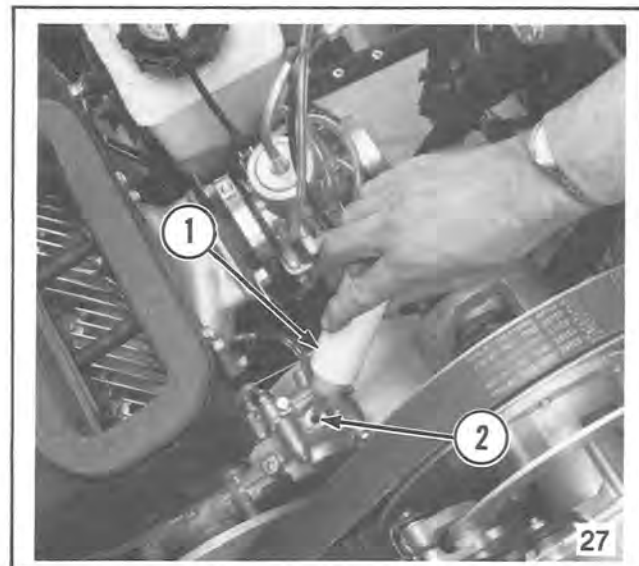


1. Oil Level Sight Gauge
2. Engine Gearcase Drain Plug
3. Gearcase Breather Hole

Engine gearcase oil should be changed after the initial 100 miles of engine operation, and at the end of each season, to remove any impurities or foreign matter present in the gearcase cavity. To completely drain gearcase, remove drain plug and raise rear of snowmobile. (See Figure 26.)

Observe this **CAUTION** during next step

Failure to remove obstructions from gearcase breather hole may cause excessive oil consumption resulting in extensive engine damage. (See Figure 26.)



1. Container of Oil
2. Gearcase Fill Hole

To insure proper operation of oil seal between the engine gearcase and crankcase, check for accumulated obstructions in the gearcase breather hole, located above gearcase sight gauge.

Oil Injection System

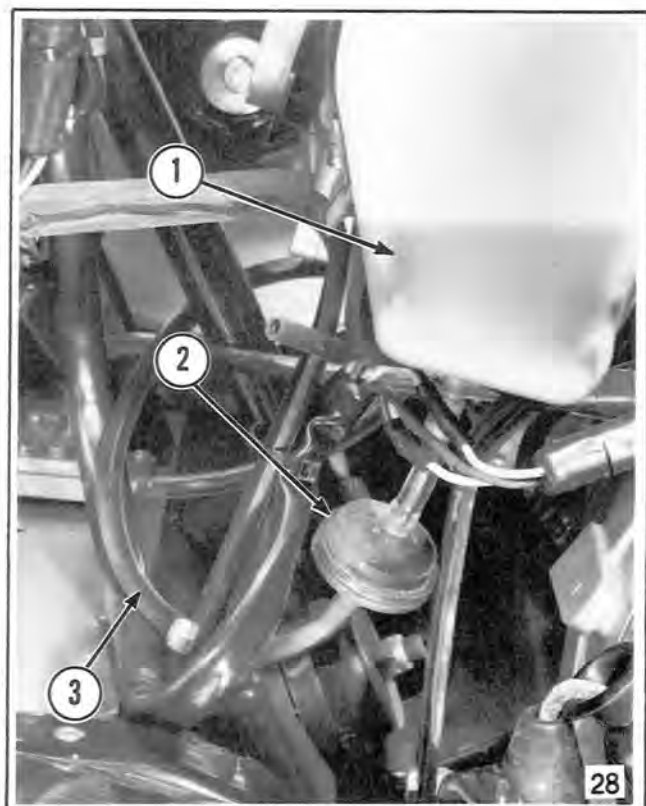
The oil pump is a variable ratio pump; at idle, the fuel/oil ratio is approximately 110 to 1 increasing with throttle position to approximately 25 to 1 at maximum power.

Bleeding Oil Pump Supply Tube

Observe this **CAUTION** during next step

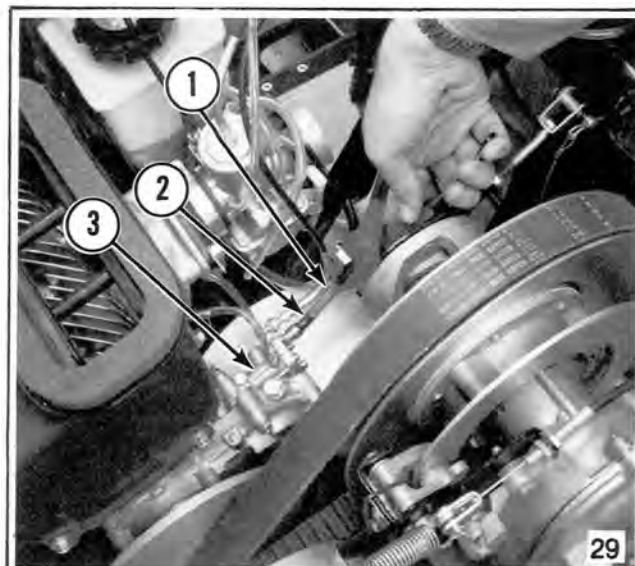
Failure to bleed out air trapped in the oil line can cause severe engine damage.

The Drifter is equipped with an in-line oil filter to prevent foreign particles from entering the oil injection system. After filling oil tank, bleed air from oil pump supply tube as follows: (See Figure 28.)



1. Oil Tank
2. Oil Supply Line Filter
3. Oil Supply Tube

1. Fill oil tank with Kawasaki Snowmobile Oil.
2. Remove oil pump bleed screw. This allows oil to fill the filter and flow through oil supply tube to oil pump. (See Figure 29.)
3. Replace oil pump bleed screw when supply tube is filled.
4. Visually check oil filter and oil supply tube to be sure that all air has been removed.
5. Air trapped inside the oil pump assembly can be removed by squeezing (pulsing) oil pump supply tube with pliers. This process causes air to exit the oil pump nipple and enter the supply tube. (See Figure 29.)



1. Air Bubble
2. Oil Supply Tube
3. Oil Pump

Continue squeezing (pulsing) oil pump supply tube until bubbles no longer exit the pump assembly.

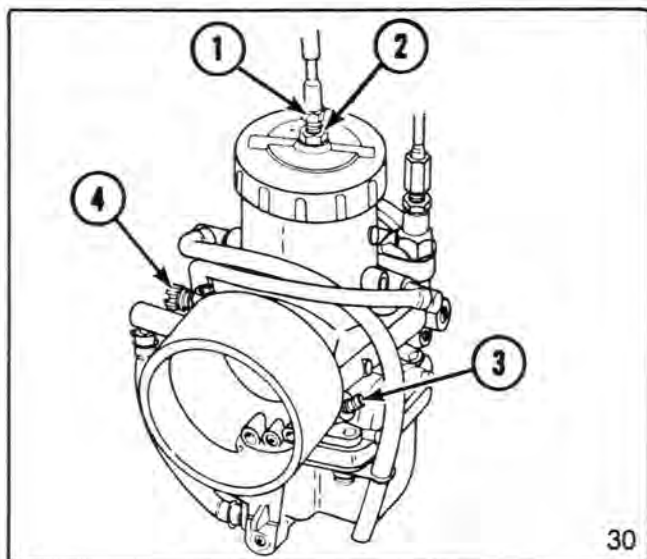
6. Remove bleed screw from top of oil pump and allow to drain until all air bubbles are removed from inlet tube. Visually check entire length of tube to be sure that all air has been removed, then reinstall bleed screw.

Oil Pump to Carburetor Synchronization

Synchronization of the oil pump and carburetor is extremely important to assure adequate engine lubrication and peak performance. Remove drive belt and air silencer assembly, then perform following procedure:

1. Loosen idle stop screw so that the throttle slide bottoms out in carburetor bore. (See Figure 30.)

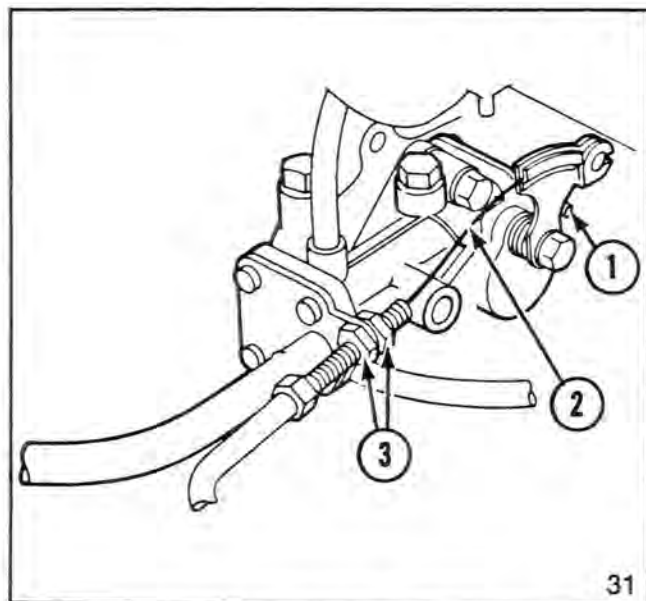
NOTE: Check to be sure throttle slide has bottomed-out. If not, loosen jam nut and turn throttle cable adjuster to allow slide to bottom out.



1. Throttle Cable Adjuster
2. Adjuster Jam Nut
3. Air Screw
4. Idle Stop Screw

30

2. Push oil pump lever forward until it contacts the stop pin; this insures the oil pump is at dead idle position. (See Figure 31.)



1. Lever Stop Pin
2. Slack Removed
3. Cable Locknuts

31

3. Adjust throttle cable on carburetor so that all slack is removed. The throttle slide should begin to rise as soon as the throttle lever on handlebar is advanced. (See Figure 30.)
4. Loosen locknuts on oil pump cable and, while holding oil pump lever against the stop pin, remove all slack. Adjustment is correct when the lever on the oil pump and throttle slide in the carburetor move simultaneously as the throttle control lever is activated. (See Figure 31.)
5. Turn idle stop screw in until spring is coil bound. Then, back off screw six complete turns (initial adjustment). Air screw is properly adjusted when opened 1.5 turns off its seat.
6. Reinstall air silencer assembly.
7. Perform steps under Purging Air from Oil Pump Outlet Tubes.

Purging Air from Oil Pump Outlet Tubes

Remove drive belt and perform the following procedure.

Any air bubbles in the oil pump outlet tubes will cause serious internal damage. Purge air from these tubes as follows:

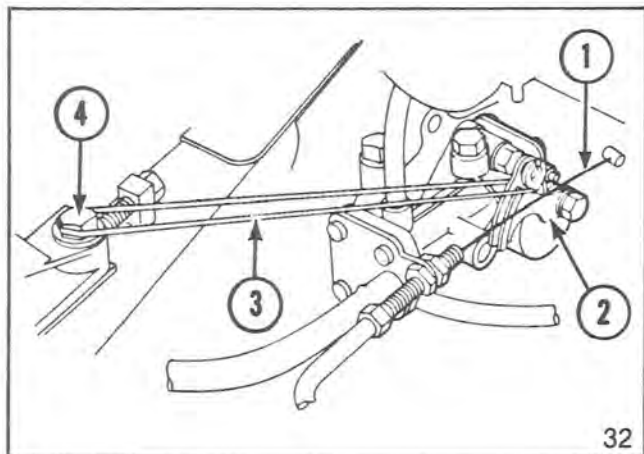
Observe this

WARNING

during next step

Failure to disconnect oil pump control cable when performing this procedure will damage the cable. The damaged oil pump control cable will prevent the throttle from returning to idle position, resulting in automatic clutch engagement when engine is started, which may lead to personal injury.

1. The oil pump inner control cable must be disconnected from the control lever on the oil pump to prevent damage to cable. Do not disturb cable locknuts when removing the inner cable. (See Figure 32.)



1. Oil Pump Inner Control Cable
2. Oil Pump Control Lever
3. Rubber Band
4. Mount Bolt

2. Attach rubber band to hold oil pump control lever in the wide open position. This will cause the maximum flow of oil through the outlet tubes. (See Figure 32.)

Observe this **CAUTION** during next step

Never run engine with air silencer removed from the carburetors. Poor engine performance and damage will result.

3. Start engine and adjust idle stop screw to obtain engine idle speed of 2,500 RPM. Stop engine after it has idled for one minute. This is ample time to purge all air from the oil pump outlet tubes.

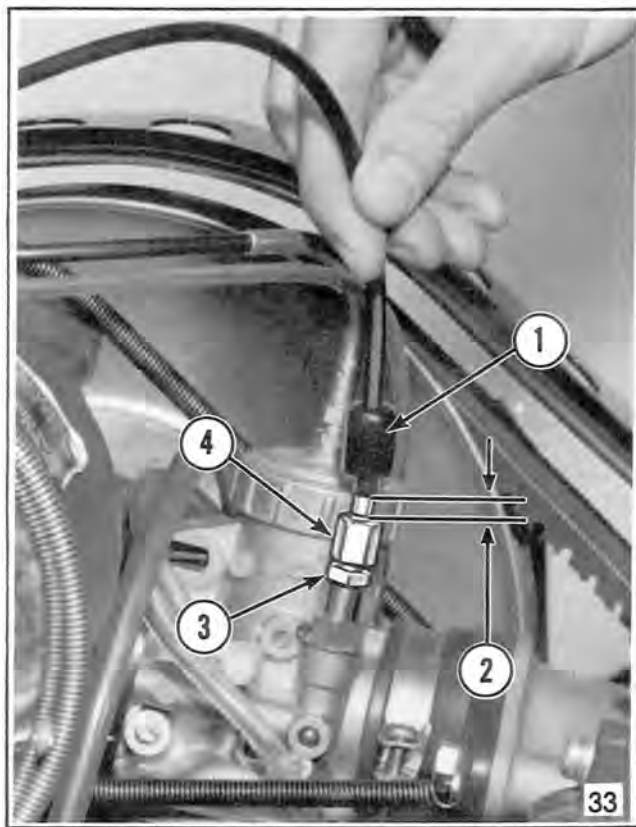
4. Release rubber band and reconnect oil pump inner control cable to lever. Be sure to check operation of oil pump control lever and cable by activating throttle control lever on the handlebar.

Carburetor Adjustments

Enrichener Cable

With the enrichener lever down, and plastic boot slid up the casing, the enrichener cable should have 1/16 inch (1.5 mm) free movement when raised as shown. (See Figure 33.)

NOTE: Engine flooding may occur if the enrichener cable free movement is less than 1/16 inch (1.5 mm).



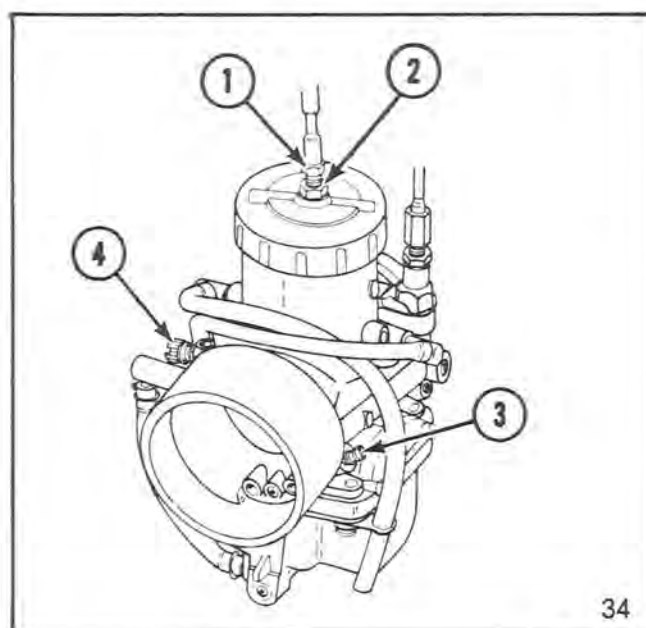
1. Plastic Boot
2. 1/16 in. (1.5 mm)
3. Locknut
4. Adjusting Screw

If adjustment is required, loosen jam nut and turn adjusting screw to obtain correct movement. Torque jam nut 20 in. lb (0.2 kg-m).

After adjustment or check, position boot over fitting to prevent dirt from entering the enrichener system.

Air Screw

The carburetor air screw is properly adjusted when opened 1.5 turns off its seat. Refer to the specifications page. (See Figure 34.)



1. Throttle Cable Adjuster
2. Adjuster Jam Nut
3. Air Screw
4. Idle Stop Screw

Idle Screw

The idle speed screw initial adjustment is 6 turns open from coil bound, (screw turned in tight).

WARNING

If the engine idles too fast, the drive converter may not disengage when the throttle lever is released, or the converter may engage automatically. Either condition could result in personal injury.

Make sure the fuel pump pulse line and all fuel lines are secure and free of kinks and bends.

Start the engine and run it at low speed for 3 to 5 minutes for proper warm-up, and adjust the idle speed using a portable tachometer.

Throttle Control Cable

CAUTION

Excessive free movement of throttle lever may cause inner throttle cable to disconnect from lever. Too little or no free movement may lead to incorrect adjustment.

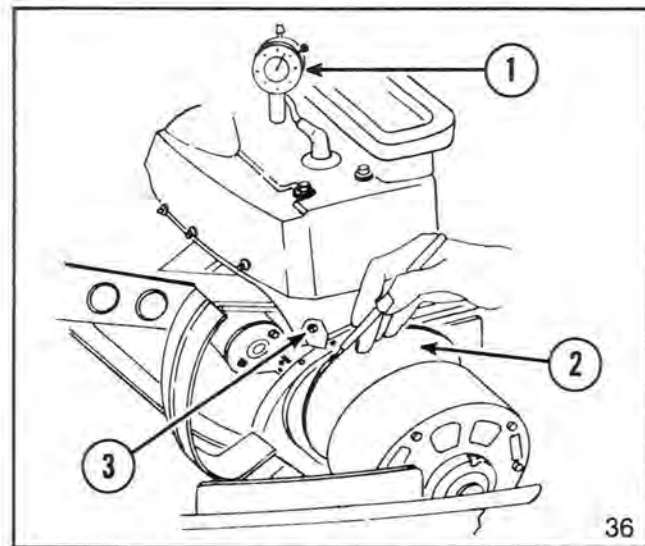
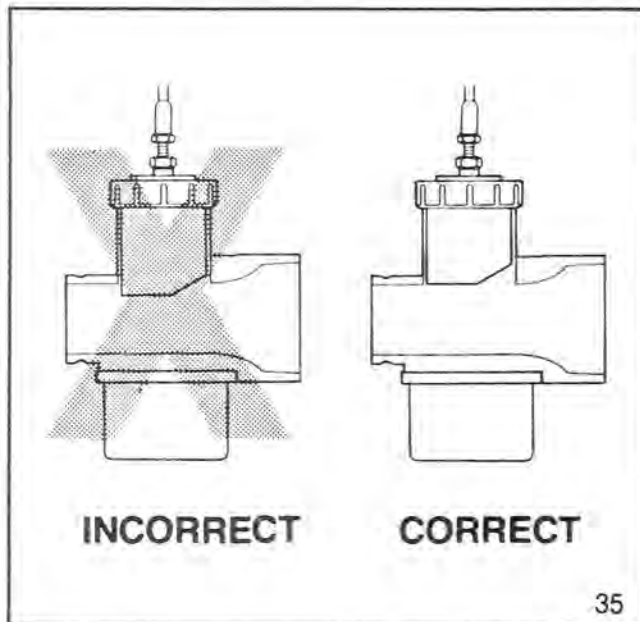
With the throttle lever at the idle position there should be 1/16 in. (1.6 mm) free play between the lever and its housing.

CAUTION

To prevent cable end breakage, throttle lever must contact handlebar grip at full throttle position.

Be sure throttle lever contacts handlebar grip at full throttle position. Remove air silencer and check that carburetor slide is raised completely above carburetor venturi at full throttle. (See Figure 35.)

Adjust throttle cable by loosening adjusting screw jam nut. Turn adjusting screw to obtain proper adjustment and torque jam nut 20 in. lb (0.2 kg-m). (See Figure 35.)



1. Dial Indicator
2. Converter Fixed Sheave
3. Fabricated Pointer

Ignition Timing Check

Remove the drive belt prior to performing the following procedure.

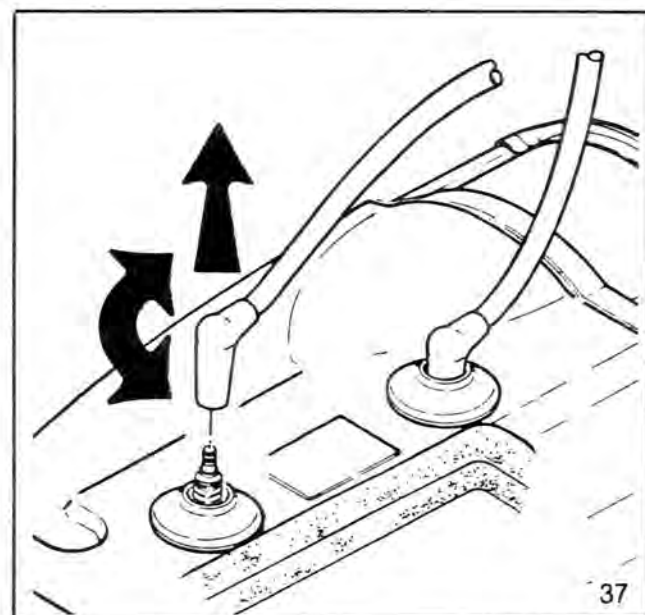
1. Install fabricated timing pointer onto engine. For accuracy, attach pointer to engine rather than chassis so pointer moves with engine. (See Figure 36.)

3. Rotate drive converter in normal direction of rotation (counter-clockwise) to find TDC (top dead center). Adjust dial indicator to zero.
4. Turn drive converter clockwise to 0.073 in. (1.85 mm).
5. Make a mark on drive converter fixed sheave corresponding to timing pointer. (See Figure 36.)

Observe this **CAUTION** during next step

When removing spark plugs, carefully rotate plug cap back and forth while pulling cap straight upward. Do not attempt to twist or force plug cap off by pulling on lead wires as this will damage the connection. (See Figure 37.)

2. Remove both spark plugs and install a dial indicator into the LH cylinder spark plug hole. (See Figure 36.)

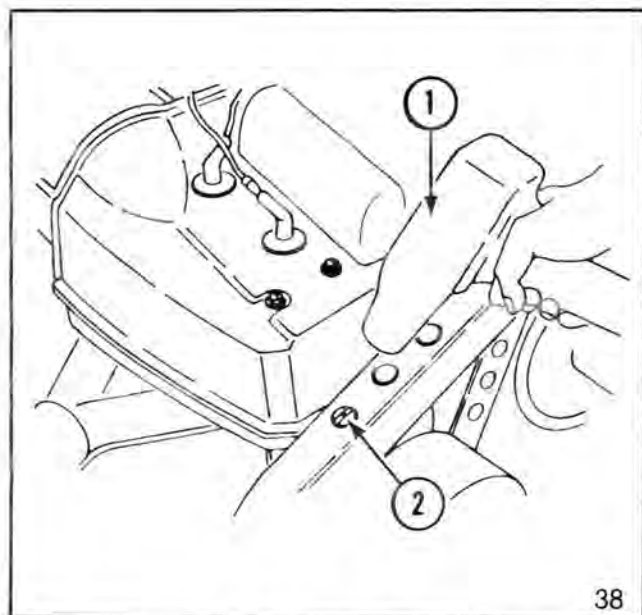


6. Remove the dial indicator. Before installing the spark plugs, check that:
 - a. Plug gap is properly adjusted to 0.024 in. (0.6 mm).
 - b. Compression washer is installed on spark plug and cylinder head seat is clean.
 - c. Spark plugs are torqued 20 ft lb (2.7 kg-m).

Observe this **WARNING** during next step

Do not touch the spark plug leads while the engine is running as they will transmit a powerful electrical shock. Do not touch the hot exhaust system, as a severe burn will result.

7. Connect strobe type timing light to spark plug lead wire following manufacturer's instructions. Drive belt must be removed and converter belt guard secured in place.



1. Timing Light
2. Mark on Drive Converter

8. Start engine and allow it to warm up to operating temperature. Then run engine at 6,500 RPM and aim timing light, through converter guard, directly at timing pointer. Timing is correct when mark aligns with pointer as light flashes. (See Figure 38.)

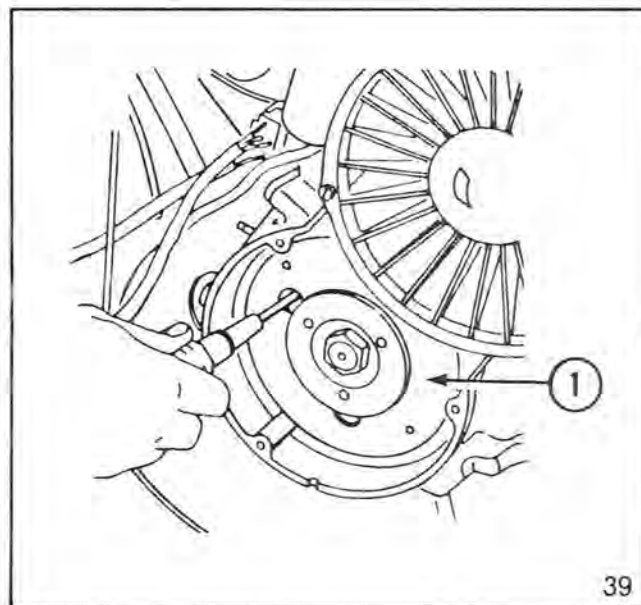
Ignition Timing Adjustment

1. Remove recoil starter assembly and fan belt pulley. Twist fan belt out of the way.

Observe this **CAUTION** during next step

When adjusting the stator assembly, take care not to damage the coil windings.

2. Loosen the stator assembly mounting screws through the holes in the flywheel. To correct the timing, rotate the stator assembly as required (clockwise to retard timing; counter-clockwise to advance timing). (See Figure 39.)



1. Flywheel

3. Tighten stator mounting screws. Torque to 6 ft lb (0.83 kg-m).
4. Replace fan belt pulley, starter pulley and fan belt. Torque bolts to 70 in.lb (0.8 kg-m).
5. Recheck timing using Ignition Timing Check procedure to be sure timing is correct.
6. Install recoil starter assembly. Drive belt may now be installed and belt guard secured into position with clip pins.

If adjustment of fan belt tension is required, remove outer pulley half from fan shaft. Add or remove spacers between pulley halves as required for proper belt tension. Adding spacers will decrease belt tension and removing spacers will increase tension.

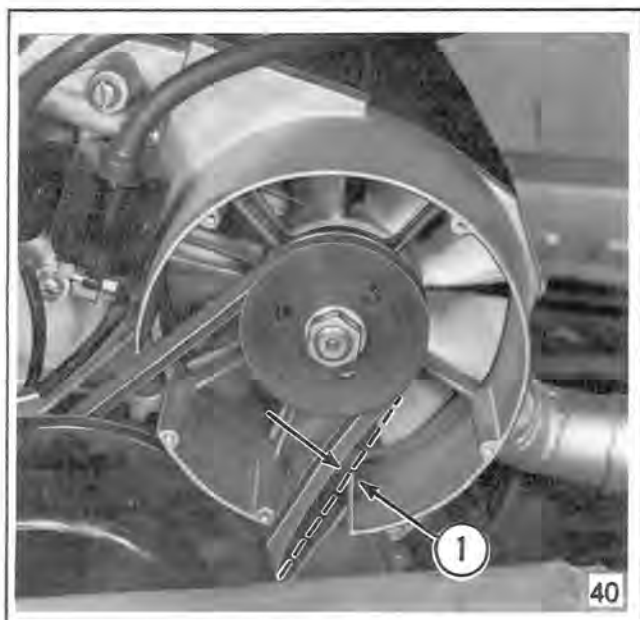
CAUTION

To prevent fan belt damage, remove spark plugs and rotate engine crankshaft while tightening outer pulley mounting nut.

Use Fan Pulley Holder Tool P/N 57001-3506 to hold pulley and torque nut 47 ft lb (6.5 kg-m).

Fan Belt Tension

Remove fan guard to test fan belt tension. With 11 lb (5 kg) force applied to belt, tension should be 5/32 in. (3.8 mm). (See Figure 40.)



1. 5/32 in. (3.8 mm)

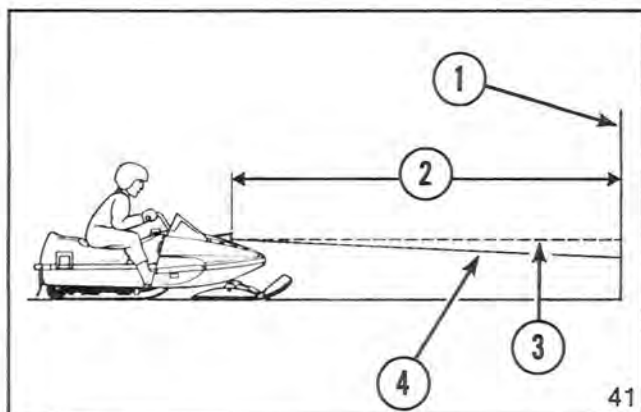
Headlight Adjustment

1. Position the snowmobile on a level floor so the headlight points at a wall 25 feet (7,620 mm) away.
2. Measure the distance from the floor to the center of the headlight and mark the wall at the dimension measured (reference mark). (See Figure 41.)

WARNING

If adjusting the headlight indoors, provide proper ventilation to prevent possible carbon monoxide poisoning.

NOTE: Be sure an operator is seated on the snowmobile while the engine is running to prevent the vehicle from creeping ahead, and to assure proper aiming.

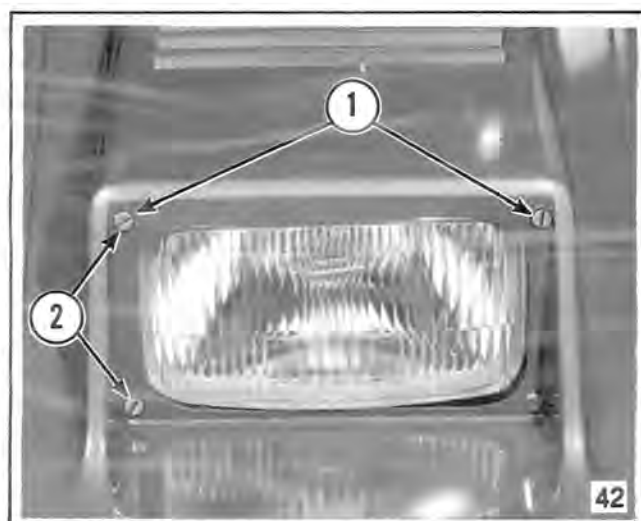


1. Wall
2. 25 ft (7,620 mm)
3. Reference Mark (center of headlight to floor)
4. 2 in. (51 mm) below reference mark

3. Turn on the headlight high beam. The headlight is properly aimed when the high beam is centered and aimed 2 in. (51 mm) below the reference mark on the wall. (See Figure 41.)

Observe this **CAUTION** during next step

Always turn headlight adjusting screws to the right (clockwise). Turning screws counterclockwise may back them out of the headlight, allowing the headlight to become loose or drop out of position.



1. Vertical Adjusting Screws
2. Horizontal Adjusting Screws

4. If headlight adjustment is required, turn the adjusting screws as required. (See Figure 42.)

Check the operation of the headlight low beam.

Tail/Brake Light Test

The tail light will operate only when the key switch is in the "Run/Lights" position.

The brake light is activated by a switch mounted in the brake lever housing on the handlebar. Brake light operation is independent of the other lights and the key switch.

Track Adjustments

WARNING

When raising the rear of the snowmobile off the ground, place the ski tips against a stationary object and be sure the vehicle is properly secured to prevent personal injury.

Track Tension

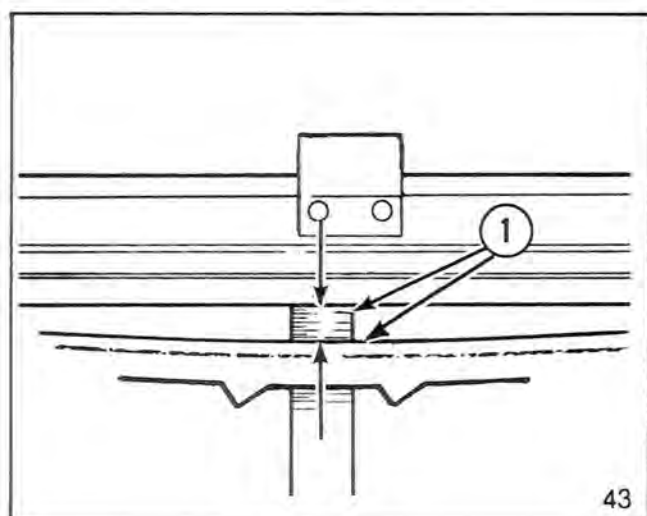
WARNING

To prevent personal injury, never adjust track tension with the engine running.

1. Raise the rear of the snowmobile so the track is off the ground for its entire length and secure the snowmobile so it cannot fall; then hang a 5 lb (2.2 kg) weight from the mid-point of the track.

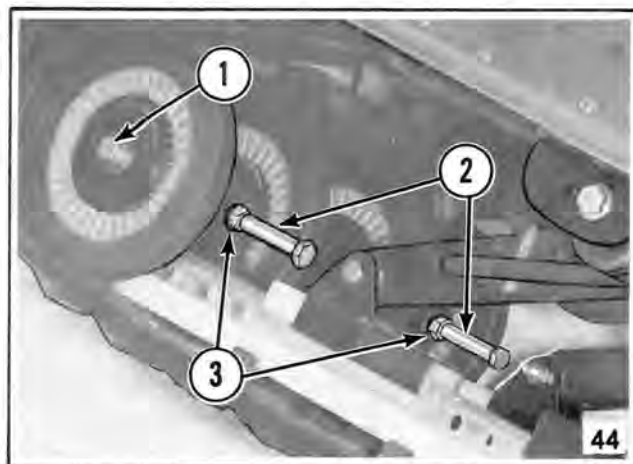
NOTE: Do not position the snowmobile on its side to adjust track tension as it would be impossible to get an accurate adjustment.

2. With the 5 lb (2.2 kg) weight hanging from the track, the clearance from the bottom of the wear strip to the top edge of the track should be $\frac{3}{4}$ in. (19 mm). Measure this clearance directly below the rear suspension pivot arm bolt. (See Figure 43.)



1. $\frac{3}{4}$ in. (19 mm)

3. If adjustment is necessary, loosen rear axle locking bolts and rear axle adjusting bolt jam nuts. Turn adjusting bolts required to obtain specified clearance. (See Figure 44.)
4. When proper tension is attained, be sure both adjusting bolts are same length when measured from bolt end to rear axle bracket. (See Figure 44.) This is a good starting point for track alignment.



1. Rear Axle Locking Bolt
2. Rear Axle Adjusting Bolts
3. Lock (Jam) Nuts

Observe this **WARNING** during next step

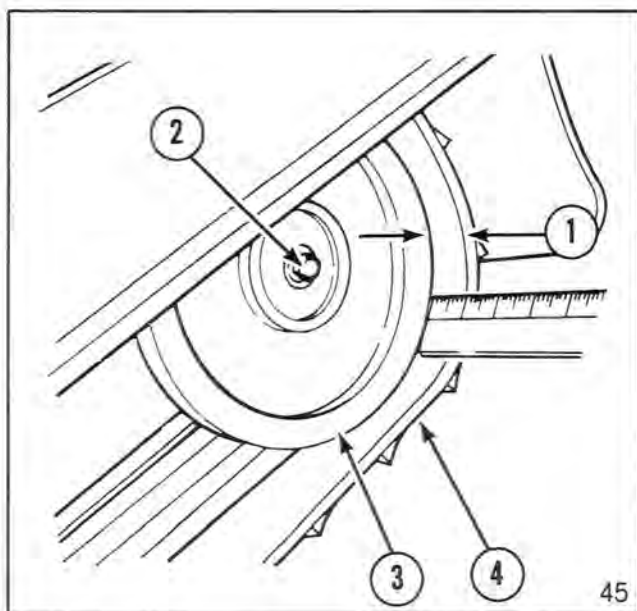
NEVER raise rear of snowmobile by hand or stand behind the vehicle when engine is running or track is rotating. A rotating track can fling debris rearward at great velocity. This may cause severe personal injury. Remove all tools and foreign matter from track area before starting engine.

5. Remove the weight from the track and start the engine. Push the throttle lever only enough to turn the track slowly a few revolutions.
6. Stop the engine and perform Track Alignment Check.

Track Alignment

The track is aligned when the distance between the rear idler wheel and edge of the track is equal on both sides. (See Figure 45.)

If track runs to one side, tighten rear axle adjusting bolt $\frac{1}{2}$ turn on side with greater measurement from rear wheel to edge of track. Restart engine and recheck alignment.



1. Dimension Equal on Both Sides
2. Rear Axle Locking Bolt
3. Idler Wheel
4. Edge of Track

CAUTION

If track alignment requires considerable adjustment, track tension should be rechecked to prevent damage to drive or suspension system.

When track alignment is correct, tighten the lock nut on both rear axle adjusting bolts and torque rear axle locking bolts 25 ft lb (3.4 kg-m).

NOTE: After the rear axle bolts have been tightened, check to be sure that the spacers (tubing) over the rear axle squeeze against the slide rail brackets, preventing the spacers from rotating. Loose spacers will permit the rear axle to float and proper track alignment cannot be maintained.

Test Ride Operational Checks

Test ride the snowmobile and check for the following:

✓ CONTROL CABLES

The throttle and brake controls must operate without binding and return freely in any steering position.

NOTE: With engine running at idle, turn handlebars lock to lock. If any change in engine speed occurs, check cables for proper routing.

✓ STEERING

Steering should be smooth and free from lock-to-lock with no excessive looseness or tightness in the steering linkage.

✓ ENGINE

Recoil starter works properly and the engine starts promptly. Test for good throttle response and return.

✓ SUSPENSION

Adjusted for average driver weight and operates smoothly.

✓ TRACK

Track runs true with little vibration or drag. If ratcheting (slippage or jumping between drive lugs on track and drive sprockets) during hard acceleration or braking occurs, tighten track tension slightly.

✓ EMERGENCY STOP SWITCH

Check operation in all switch positions.

✓ CONVERTERS

Test for smooth operation and correct engine RPM at full throttle.

✓ BRAKES

When activated, the brakes should result in adequate smooth stopping of the track; when released, there should be no brake drag.

✓ INSTRUMENTS

Check for proper indications.

During the test ride, listen for any unusual noises (rattles, squeaks, etc.) that may warrant inspection and correction.

Upon completion of the test ride, open the hood and check the following:

1. Brake adjustment.

2. Retorque drive converter mounting bolt 55 to 60 ft lb (7.6 to 8.3 kg-m).

3. Thoroughly inspect the engine compartment for fuel or oil leaks and repair as required.

4. Fastener check - perform a general inspection to check fasteners for security. Use torque chart as a guide for tightening hardware when required.

Specifications

ENGINE

	DRIFTER 340	DRIFTER 440
Type	TA340C-D203	TA440C-D203
Displacement	20.7 c.i. (339 cc)	26.6 c.i. (436 cc)
Bore X Stroke	2.362 x 2.362 in. (60 x 60 mm)	2.677 x 2.362 (68 x 60 mm)
Number of Cylinders	2	2
Ignition System	Capacitor Discharge	Capacitor Discharge
Ignition Timing	0.073 in. (1.85 mm)BTDC	0.073 in. (1.85 mm)BTDC
Spark Plug	NGK BZ-9ES	NGK BZ-9EV
Spark Plug Gap	0.024 in. (0.6 mm)	0.024 in. (0.6 mm)
Carburetor Make	Mikuni	Mikuni
Carburetor Model	VM32 Econo Jet	VM 32 Econo Jet
Engine RPM at Full Throttle	6,700-6,900	6,700-6,900
Engine RPM at Idle Speed	2,500	2,500

CARBURETOR SETTINGS & FUEL

Air Screw	1.5 turns off seat
Idle Screw	6 turns open from coil bound initial (adjust to specified idle speed)
Gasoline	Regular or Premium Leaded, minimum pump posted anti-knock index number of 89
Oil	Kawasaki Snowmobile Oil or B.I.A. certified TC-W oil
Gasoline/Oil Ratio	Oil Injection

DRIVE SYSTEM

Drive Belt Width	1-1/4 in. (31.7 mm)
Drive Belt Circumference	43-1/2 in. (1,105 mm)
Converter Offset	0.497 in. (11.5 mm)
Converter Center Distance	10.3 in. (262 mm)

ELECTRICAL SYSTEM

Type	12 Volts - 120 Watts
Headlight	Stanley A5988
Tail/Brake Light	G.E. No. 1157
Instrument Lights	G.E. No. 1816

Torque Chart

DESCRIPTION	TORQUE	DESCRIPTION	TORQUE
CONTROLS & SWITCHES		BRAKE	
Brake lever locking - allen screw	25 in.lb (0.3 kg-m)	Brake cable - jam nuts (5/16)	50 in.lb (0.6 kg-m)
Enrichener lever mtg. - nut	Handtighten	Brake disc to converter - screws (1/4)	95 in.lb (1.1 kg-m)
Ignition switch mtg. - nut	Handtighten	Brake bracket to chaincase - nuts (1/4)	100 in.lb (1.2 kg-m)
Primer pump mtg. - nut	40 in.lb (0.4 kg-m)	Caliper assy mtg. - nuts (5/16)	18 ft lb (1.2 kg-m)
Throttle lever - allen screw	25 in.lb (0.3 kg-m)		
CABLES		DRIVE & DRIVEN CONVERTERS	
Brake cable - jam nuts (5/16)	50 in.lb (0.6 kg-m)	Support to driven converter - jam nut (1/4)	95 in.lb (1.1 kg-m)
Enrichener cable - jam nut (6 mm)	20 in.lb (0.2 kg-m)	Support to driven shaft - bolt (5/16)	25 ft lb (3.5 kg-m)
Oil pump cable - jam nuts (6 mm)	20 in.lb (0.2 kg-m)	Drive converter mtg. - bolt (1/2)	60 ft lb (8.3 kg-m)
Speedometer cable	Handtighten		
Throttle cable - jam nut (6 mm)	20 in.lb (0.2 kg-m)		
HOOD		ENGINE MOUNT & EXHAUST BRACKET	
Hinge to hood - nuts (1/4)	25 in.lb (0.3 kg-m)	Engine mount - nut (3/8)	30 ft lb (4.2 kg-m)
Hood latch band mtg. - nut	Comp. Rubber	Engine to plate - bolt (1/2)	30 ft lb (4.2 kg-m)
Lanyard mtg. - nut ((#10)	20 in.lb (0.2 kg-m)		
Windshield mtg. - screws	15 in.lb (0.2 kg-m)		
STEERING		ENGINE LUBRICATION SYSTEM	
Handlebar clamp - screws (1/4)	105 in.lb (1.2 kg-m)	Elbow fitting to oil tank	Judgement
Steering arm to spindle - nuts (3/8)	30 ft lb (4.1 kg-m)	Oil pump inlet plate mtg. - screws (4 mm)	40 in.lb (0.5 kg-m)
Steering block mtg. - bolts (5/16)	18 ft lb (2.5 kg-m)	Oil pump mounting - bolts (6 mm)	60 in.lb (0.7 kg-m)
Steering block mtg. - nuts (5/16)	18 ft lb (2.5 kg-m)	Oil pump outlet nozzle to crankcase - bolt (8 mm)	10 in.lb (0.1 kg-m)
Tie rod - jam nuts (3/8)	120 in.lb (1.4 kg-m)	Oil pump outlet nozzle to cylinder - bolt (8 mm)	10 in.lb (0.1 kg-m)
Tie rod to steering arm - nuts (3/8)	15 ft lb (2.0 kg-m)		
Tie rod to steering post - nuts (3/8)	15 ft lb (2.0 kg-m)		
SKI & SPINDLE		ENGINE GEARCASE	
Front spring to ski - nuts (3/8)	25 in.lb (0.3 kg-m)	Gearcase drain plug - bolt (6 mm)	50 in.lb (0.6 kg-m)
Rear spring to ski - nuts (3/8)	31 ft lb (4.2 kg-m)	Gearcase to crankcase - allen bolts (8 mm)	12 ft lb (1.7 kg-m)
Ski assembly - nuts (3/8)	30 ft lb (4.1 kg-m)	Gearcase to crankcase boss - bolt (6 mm)	60 in.lb (0.7 kg-m)
Ski skag mtg. - nuts (5/16)	18 ft lb (2.5 kg-m)	Oil pump gear to pump - nut (8 mm)	12 ft lb (1.7 kg-m)
Spindle to shock - nuts (3/8)	30 ft lb (4.1 kg-m)		
Spindle to ski - bolts (3/8)	30 ft lb (4.1 kg-m)		
Spring to saddle - bolts (3/8)	45 ft lb (6.4 kg-m)		
CHASSIS		CYLINDER HEAD AND CYLINDER	
Brace to nose pan - nuts (1/4)	100 in.lb (1.2 kg-m)	Carburetor holder to intake manifold - bolts (8 mm)	45 in.lb (0.6 kg-m)
Bumper to pan - nuts (1/4)	100 in.lb (1.2 kg-m)	Cylinder head - nuts (8 mm)	16 ft lb (2.2 kg-m)
Hinge to pan - nuts (1/4)	100 in.lb (1.2 kg-m)	Exhaust manifold - nuts (8 mm)	12 ft lb (1.7 kg-m)
Passenger grip mtg. - nuts (5/16)	10 ft lb (1.4 kg-m)	Intake manifold to cylinder (6 mm)	70 ft lb (0.8 kg-m)
Rear bumper mtg. - nuts (1/4)	100 in.lb (1.2 kg-m)	Spark plugs (14 mm)	20 ft lb (2.7 kg-m)
Seat to chassis - bolts (1/4)	35 in.lb (0.4 kg-m)		
Seat to chassis - screws (1/4)	35 in.lb (0.4 kg-m)		
Tail light lens mtg. - screws (#8)	10 in.lb (0.1 kg-m)		
Tail light body to rear door - nut (#10)	20 in.lb (0.2 kg-m)		
Voltage regulator mtg. - nuts (1/4)	100 in.lb (1.2 kg-m)		
SUSPENSION		FAN CASE AND AIR SHROUD	
Bracket to rail - nuts (1/4)	100 in.lb (1.2 kg-m)	Engine air duct to main shroud - nuts (#10)	30 in.lb (0.3 kg-m)
Hi-fax to rail - screws	100 in.lb (1.2 kg-m)	Exhaust shroud to main shroud - bolts (6 mm)	70 in.lb (0.8 kg-m)
Idler wheel shaft mtg. - bolts (3/8)	30 ft lb (4.1 kg-m)	Fan pulley to fan - nut (14 mm)	47 ft lb (6.5 kg-m)
Idler wheels to rear arm - bolts (5/16)	15 ft lb (2.0 kg-m)	Fan screen to fan housing - screws (6 mm)	70 in.lb (0.8 kg-m)
Limiter strap mtg. - nuts (1/4)	45 in.lb (0.5 kg-m)	Intake shrouds to cylinders - bolts (6 mm)	70 in.lb (0.8 kg-m)
Rear axle locking - bolts (5/16)	25 ft lb (3.5 kg-m)	Main shroud to cylinder head - bolts (6 mm)	70 in.lb (0.8 kg-m)
Shock absorber mtg. - nuts (3/8)	15 ft lb (2.0 kg-m)	Main shroud to fan housing - bolts (6 mm)	70 in.lb (0.8 kg-m)
Swing arm pivot shaft - bolt (3/8)	25 ft lb (3.5 kg-m)		
Swing arm to bracket - nuts (5/16)	15 ft lb (2.0 kg-m)		
Track adjusting bolt - jam nuts (3/8)	20 ft lb (0.2 kg-m)		
DRIVESHAFT		CRANKCASE	
Bearing housing mtg. - nuts (1/4)	100 in.lb (1.2 kg-m)	Gearcase fill plug - bolt (8 mm)	
Locking collar - set screw (1/4)	95 in.lb (1.1 kg-m)	Lower crankcase boss to upper (6 mm)	16 ft lb (2.2 kg-m)
		Lower crankcase to upper crankcase (8 mm)	16 ft lb (2.2 kg-m)
CHAINCASE & DRIVEN CONVERTER SHAFT		PISTON & CRANKSHAFT	
Chaincase level plug	Judgement	Flywheel mtg. - nut (18 mm)	60 ft lb (8.3 kg-m)
Chaincase fill plug	Judgement		
Chaincase mtg. - nuts (5/16)	28 ft lb (3.8 kg-m)		
Cover to chaincase - bolts (1/4)	50 in. lb (0.6 kg-m)		
Driveshaft collar (#10)	90 in.lb (1.0 kg-m)		
Lower drive sprocket - bolt (1/2)	35 ft lb (4.8 kg-m)		
Speedometer adaptor to chaincase	10 ft lb (1.4 kg-m)		
Tensioner arm - bolt (1/4)	70 in.lb (0.8 kg-m)		
Top drive sprocket - bolt (5/16)	19 ft lb (1.2 kg-m)		
		RECOIL STARTER	
		Friction plate to rope reel - nut (8 mm)	10 ft lb (1.4 kg-m)
		Recoil assembly mtg. - bolts (6 mm)	70 in.lb (0.8 kg-m)
		Starter pulley to flywheel - bolts (6 mm)	70 in.lb (0.8 kg-m)
		MAGNETO	
		C.D.I. igniter mtg. - screws (6 mm)	60 in.lb (0.7 kg-m)
		Ignition harness - screw (4 mm)	Judgement
		Stator plate mtg. - screws (5 mm)	70 in.lb (0.8 kg-m)

Wiring Diagram

