



**SNOWMOBILES**

# Pre-Delivery Bulletin

## PRE-DELIVERY BULLETIN LIST

| BULLETIN NO. | SUBJECT      | APPLICABLE TO  |
|--------------|--------------|--|
| 81-10        | Pre-Delivery | 1981 Nordik  |
| 81-11        | Pre-Delivery | 1981 Super-Mod   |
| 82-1         | Pre-Delivery | 1982 Spirit<br>Elan  |
| 82-2         | Pre-Delivery | 1982 Alpine  |
| 82-3         | Pre-Delivery | 1982 Mirage I, II, IIE<br>Mirage Special<br>Citation 3500, 4500<br>Citation 4500E<br>Citation SS |
| 82-4         | Pre-Delivery | 1982 Everest 500, 500E<br>Futura 500, 500E   |
| 82-5         | Pre-Delivery | 1982 Everest LC<br>Futura LC   |
| 82-6         | Pre-Delivery | 1982 Nordik<br>Skandic   |
| 82-7         | Pre-Delivery | 1982 Blizzard 5500 MX<br>Sonic   |
| 82-8         | Pre-Delivery | 1982 Blizzard 9500<br>Ultra Sonic  |
| 82-9         | Pre-Delivery | 1982 Elite   |
| 82-10        | Pre-Delivery | 1982 Futura 300  |

| BULLETIN NO. | SUBJECT   | APPLICABLE TO   |
|--------------|---|---|
| 82-11        | <ul style="list-style-type: none"> <li>- Pre-delivery bulletins changes</li> <li>- Suggested alternative pre-delivery operation sequence</li> </ul> | 1982 Alpine<br>Citation 3500, 4500<br>Citation 4500E, SS<br>Mirage I, II, IIE<br>Mirage Spécial<br>Everest 500, 500E<br>Everest & Futura LC<br>Nordik, Skandic<br>Blizzard 5500 MX<br>Blizzard 9500<br>Sonic & Ultra Sonic<br>Elite |



**SNOWMOBILES**

# Pre-Delivery Bulletin

**1982**

## PRE-DELIVERY BULLETIN LIST

| BULLETIN NO. | SUBJECT  | APPLICABLE TO   |
|--------------|--|---|
| 82-1         | Pre-Delivery   | 1982 Elan & Spirit  |
| 82-2         | Pre-Delivery   | 1982 Alpine   |
| 82-3         | Pre-Delivery   | 1982 Mirage I/II/IIE<br>Mirage Special<br>Citation 3500/4500<br>4500E & Citation SS   |
| 82-4         | Pre-Delivery   | 1982 Everest 500/500E<br>Futura 500/500E  |
| 82-5         | Pre-Delivery   | 1982 Everest & Futura LC  |
| 82-6         | Pre-Delivery   | 1982 Nordik & Skandic   |
| 82-7         | Pre-Delivery   | 1982 Blizzard 5500 MX<br>Sonic  |
| 82-8         | Pre-Delivery   | 1982 Blizzard 9500<br>Ultra Sonic   |
| 82-9         | Pre-Delivery   | 1982 Elite  |
| 82-10        | Pre-Delivery   | 1982 Futura 300   |
| 82-11        | Pre-Delivery Bulletins<br>Changes<br><br>Suggested Alternative<br>Pre-Delivery Operation<br>Sequence | 1982 Alpine<br>Citation 3500/4500<br>4500E, Citation SS<br>Mirage I/II/IIE<br>Mirage Special<br>Everest 500/500E<br>Everest & Futura LC<br>Nordik, Skandic<br>Blizzard 5500 MX<br>Blizzard 9500<br>Sonic & Ultra Sonic<br>Elite |



# Pre-Delivery Bulletin

no. 82-1

Date: 1981 01 26

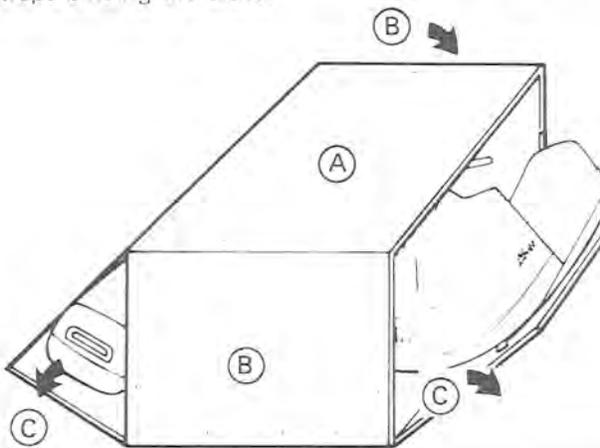
MODELS: 1982 SPIRIT  
1982 ELAN

Serial nos: All

Subject: Pre-Delivery

## UNCRATING

Carefully lay the crate on one side (A). Cut the two (2) straps binding the crate.



**WARNING:** Strapping is under pressure therefore, care must be observed while cutting.

A) Remove the top of the crate.

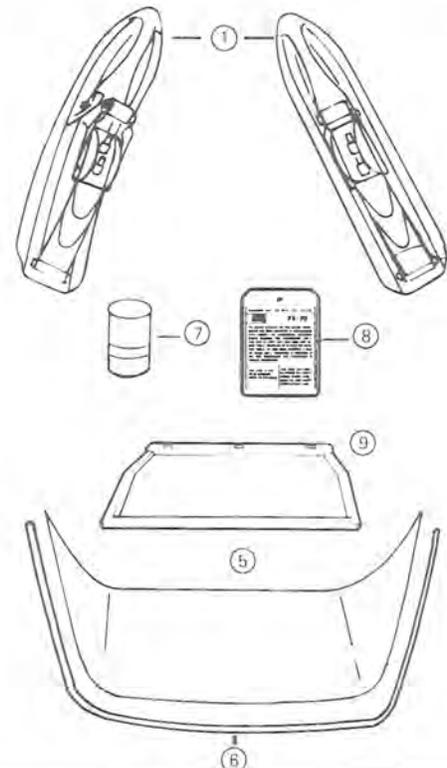
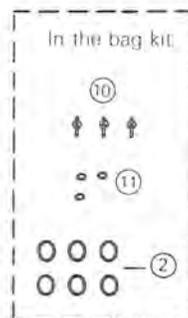
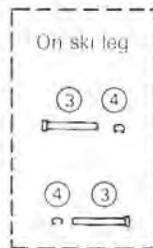
B) & C) Detach vehicles bases from end paneling (B). Lay the vehicles on their bases.

**CAUTION:** Care should be taken when detaching vehicles bases (C) due to the inward movement of the bases.

Cut the strapping holding skis and suspension. Remove windshield, accessory kit, etc., from vehicle. Detach vehicle from wooden base and remove.

### PARTS TO BE INSTALLED

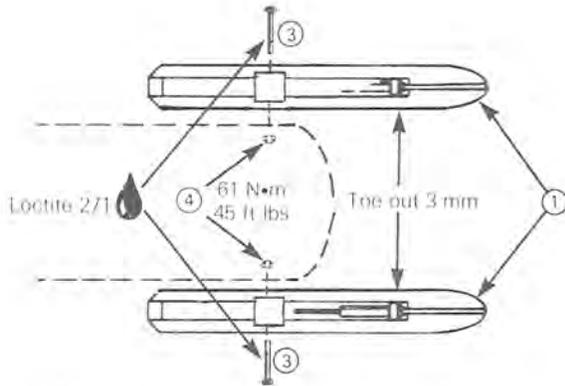
1. Ski (2)
2. "O" ring (6)
3. Bolt (2) (ski to spring coupler)
4. Elastic stop nut (2)
5. Windshield
6. Windshield trim
7. Chaincase oil
8. Sound level tag
9. Snowguard
10. Rivets (3)
11. Washers (3)



## ASSEMBLY PROCEDURE

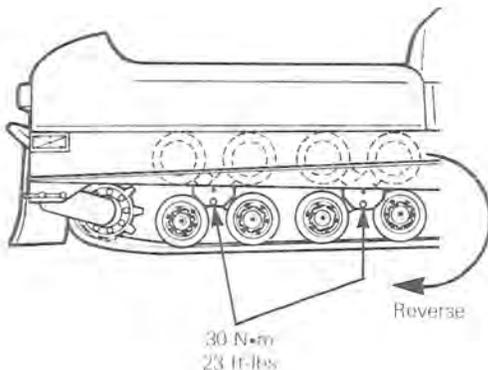
### SKIS

- Install skis on vehicle.
- Tighten ski bolt (3) until spring coupler and ski leg are in contact. Do not jam.
- Torque ski leg/spring coupler nut (4) to 61 N•m (45 ft-lbs). (Apply Loctite no. 271 red (high strength) or equivalent on threads.)
- Ski adjustment: Toe out 3 mm (1/8").  
For proper procedure, refer to 1981 Shop Manual.



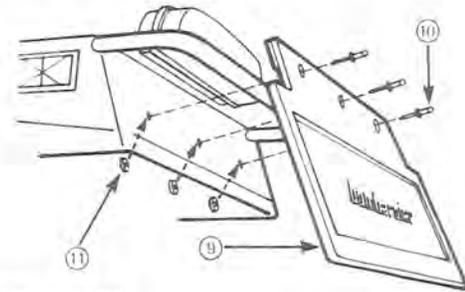
### SUSPENSION

- Using a pry bar reverse each bogie wheel set (if necessary release track tension).
- Check tightness of capscrew (6) securing the cross shafts to frame. Torque to 30 N•m (23 ft-lbs).
- Hook up link plate springs.



### SNOW GUARD

- Install snow guard (9) on vehicle.
- Fasten it with the three rivets (10) and washers (11).

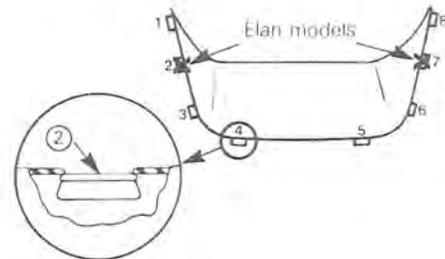


### WINDSHIELD

- Position windshield on hood then push tabs in their slots. Lock in place using the six (6) "O" rings (2) supplied in kit.
- Peel off protective film from windshield (5) and install windshield trim (6).

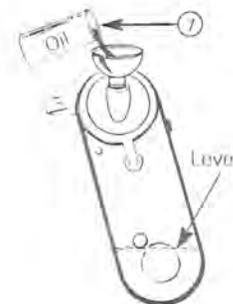
**CAUTION:** When installing windshield trim, make sure that the protective film is completely removed from the edges of the windshield.

Elan models: do not install "O" rings on second and seventh tabs.



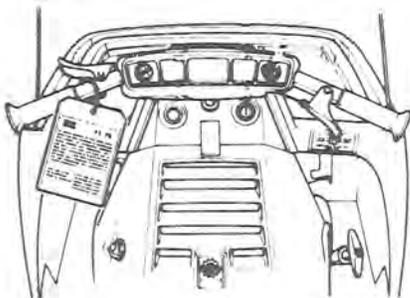
### CHAINCASE

- Fill chaincase to bottom lip of oil level inspection hole (smallest plug) using oil supplied in kit.
- With finger, check drive axle seal for oil tightness.



## SOUND LEVEL TAG

Affix the sound level tag to the steering.



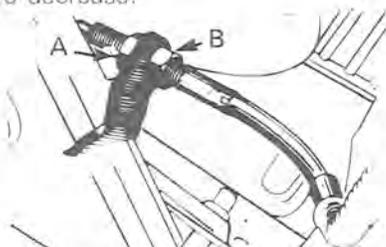
**IMPORTANT:** This label is to be installed on every machine and must not be removed prior to purchase.

## ADJUSTMENT PROCEDURE

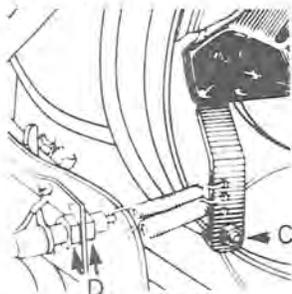
### BRAKE

– Check if brake mechanism is correctly set. Brake handle must be 25 mm (1") from handlebar grip when fully applied.

If a MINOR adjustment is indicated: slacken off nut (A), and tighten nut (B) to increase clearance. Turn each nut vice versa to decrease.



To proceed with MAJOR adjustment: slacken off the nut retaining the brake cable (C). Adjust cable to required length and retighten nut. Ensure that minor adjustment nuts (A & B) are located approximately half way on adjuster threads.

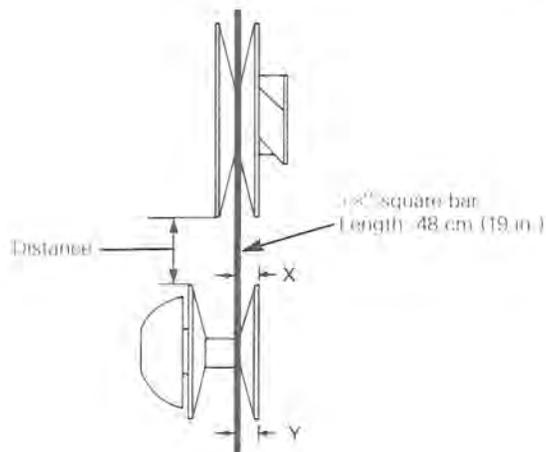


◆ **WARNING:** Always check the brake light to see if it functions after performing brake adjustment. If necessary, loosen brake light switch lock nut (D) and adjust.

▼ **CAUTION:** The brake switch body is made of plastic material. Only tighten lock nuts until switch has no free play.

## PULLEY ADJUSTMENTS

|                              |                              |
|------------------------------|------------------------------|
| Distance:                    | 42-44 mm (1 11/16" - 1 3/4") |
| Dimension X & Y:<br>(offset) | 33-35 mm (1 5/16" - 1 3/8")  |

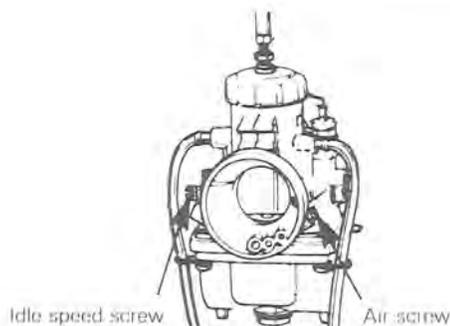


- Dimension "X" must never exceed dimension "Y".
- Dimension "Y" can exceed dimension "X" by 1.6 mm (1/16").

## CARBURETOR ADJUSTMENTS

### ELAN/SPIRIT

|                   |                  |
|-------------------|------------------|
| Air Screw         | 1 1/2 ± 1/8 turn |
| Main Jet          | 160              |
| Idle Speed R.P.M. | 1300-1500        |



### Air Screw Adjustment

Completely close the air screw (until a slight seating resistance is felt) then back off to specifications.

## Idle Speed Adjustment

Turn idle speed screw clockwise until it contacts the throttle slide then continue turning two (2) additional turns. This will provide a preliminary idle speed setting. Start engine and allow it to warm up then adjust idle speed to 1300-1500 RPM by turning idle speed screw clockwise or counter-clockwise.

▼ **CAUTION:** Do not attempt to set the idle speed by the air screw. Severe engine damage can occur.

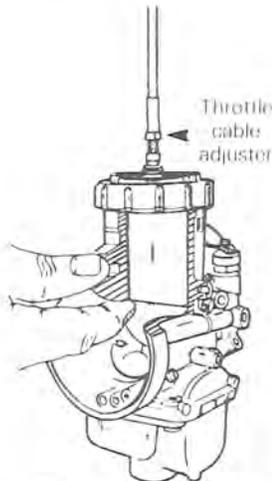
## Throttle Slide Adjustment

◆ **WARNING:** Ensure the engine is turned **OFF**, prior to the throttle slide adjustment.

With the throttle cable adjuster jam nut unlocked, press the throttle lever against the handle grip.

By turning the cable adjuster, adjust the carburetor slide cut away so that it is flush with the top of the carburetor bore.

Tighten the cable adjuster jam nut.



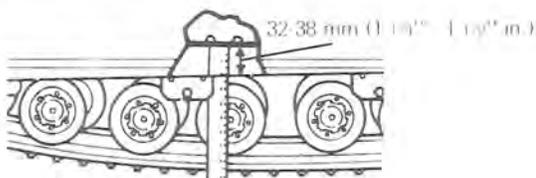
◆ **WARNING:** It is important that the throttle slide adjustment be performed to ensure proper functioning of throttle mechanism.

## TRACK TENSION AND ALIGNMENT

○ **NOTE:** Track tension and alignment are inter-related. Do not adjust one without checking the other.

### Tension

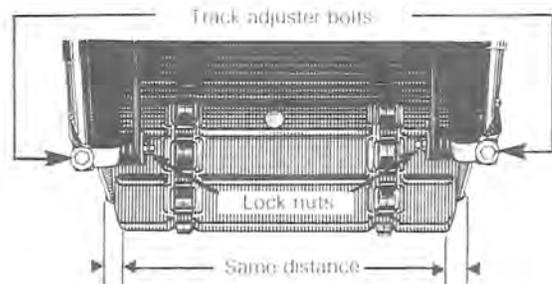
The track tension (distance between top inside edge of track and the bottom of the footboard) should be 32-38 mm (1 1/4" - 1 1/2").



## Alignment

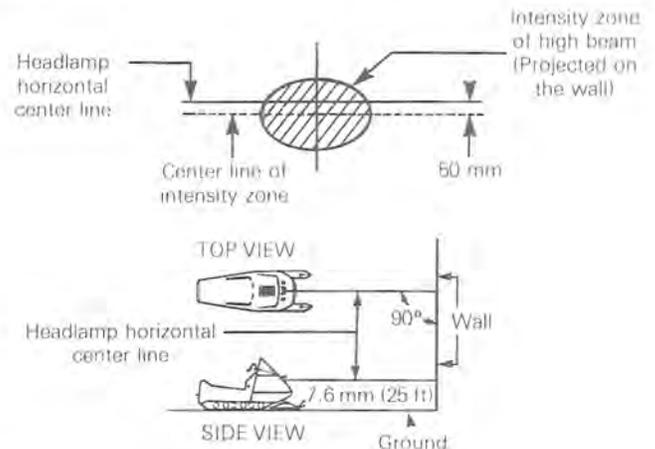
After track tension has been corrected, start the engine and accelerate slightly so that track turns SLOWLY. Check that track is well centered and turns evenly on the rear sprockets. The distance between the edges of the track and the link plates should be the same on both sides.

◆ **WARNING:** Before checking track alignment, ensure that the track is free of all particles which could be thrown out while track is rotating. Keep hands, feet, tools and clothing clear of track.



## BEAM AIMING

Beam aiming is correct when center of high intensity zone of high beam is 50 mm (2") below horizontal head lamp center line.



## Required conditions

- Place vehicle on a flat surface 7.6 mm (25') from a wall or screen.
- Rider seated on vehicle.
- Turn High Beam ON.

## GENERAL INSTRUCTIONS

Check vehicle performance. Inspect movement/operation of brake, steering mechanism, headlamp, tail/brake lights, emergency stop switch, dimmer switch and throttle lever. Thereafter, clean the vehicle thoroughly. Explain the operator manual and warranty to the customer. **COMPLETE AND RETURN WARRANTY REGISTRATION.**

# 1982 SPIRIT & ELAN MODELS PRE-DELIVERY TECHNICAL DATA

|                             |  |
|-----------------------------|--|
| SKI ALIGNMENT               | 3 mm (1/8") toe out.   |
| BRAKE                       | Brake control lever 25 mm (1") from handlebar grip when fully applied.                                   |
| PULLEY ADJUSTMENT           |  |
| — distance*                 | 42-44 mm (1 11/16"-1 3/4")   |
| — dimensions X & Y (offset) | 33-35 mm (1 5/16"-1 3/8")  |
| CARBURETOR ADJUSTMENT       |  |
| — air screw                 | 1 1/2 ± 1/8 turn   |
| — main jet                  | 160  |
| — idle speed                | 1300-1500 R.P.M.   |
| TRACK ADJUSTMENT            |  |
| — tension                   | 32-38 mm (1 1/4" - 1 1/2")<br>distance between top inside edge of track and the bottom of the footboard. |
| — distance                  | Equal distance (distance between edges of track and the link plates should be the same on both sides).   |

**\*IMPORTANT:** Spirit & Elan pulley distance should never exceed 44 mm (1 3/4").





Date: 1981 01 22

MODELS: 1982 ALPINE

Serial nos: All

Subject: Pre-Delivery

### UNCRATING

Cut the three (3) metal straps binding the crate.

**WARNING:** Strapping is under pressure therefore, care must be observed while cutting.

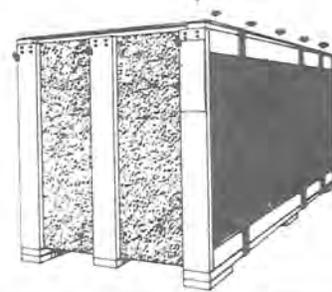
Using a crowbar and a hammer, remove the nails and staples holding the top cover.

Remove nails attaching crate sides to crate base. Lift crate sides to remove.

**CAUTION:** Care should be taken during panel removal to prevent the hood from being scratched.

Remove ski, windshield, backrest, accessory kit, etc., from vehicle. Cut the strapping holding rear of vehicle to wooden base and remove vehicle.

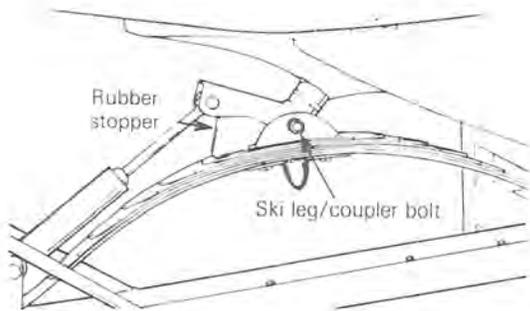
**CAUTION:** Do not hoist the vehicle using the handlebar.



1. Ski
2. Bolt (ski)
3. Nut (ski)
4. Screw (2) (steering padding)
5. Steering padding
6. Front bumper
7. Bolt (2) (bumper)
8. Nut (2) (bumper)
9. Screw (4) (bumper)
10. Nut (4) (bumper)
11. Windshield
12. "O" ring (11)
13. Bolt (hitch)
14. Nut (hitch)
15. Retaining pin (hitch)
16. Cotter pin (hitch)
17. Hitch
18. Sound level tag
19. Rubber stopper
20. Washer (2)
21. Retaining pin (shock)
22. Cotter pin
23. Windshield trim
24. Ski tie down (2)
25. Rivet (2)
26. Snow guard (2)
27. Rivet (10)
28. Angle drive protector
29. Angle drive
30. Screw (2)
31. Washer (1)
32. Washer (1)
33. Elastic stop nut (2)
34. Flat washer
35. Speedometer insert
36. Flat washer (4) (Europe only)
37. Rear light reflector (2) (Europe only)
38. Screw (2) (Europe only)
39. Elastic stop nut (2) (Europe only)

## SKI

- Position a spacer on each side of ski leg then position ski assembly (with rubber stopper positioned on spring coupler), install ski leg/coupler bolt.
- Install then torque elastic stop nut on ski leg/coupler bolt to 61 N•m (45 ft-lbs). (Ski must move freely by hand).
- Secure shock absorber to ski leg using retainer and cotter pins.



- Ski adjustment: the handlebar must be horizontal with the ski parallel with the vehicle.

## SUSPENSION

- Using a pry bar reverse each bogie wheel set.
- Check tightness of capscrews (16) securing the cross shafts to frame.
- Hook up link plate springs.

## WINDSHIELD

- Peel off protective film from windshield.
- Position windshield on hood then push until tabs are fully inserted into hood slots. Lock windshield tabs in position using the eleven (11) "O" rings supplied in kit (double "O" ring on each side).
- Install the windshield trim.

## FRONT BUMPER

- Position the front bumper in location then using the bolts (5/16" x 1") and nuts provided in kit, attach bumper to bottom side of frame.
- Using the pre-drilled holes of bumper as guide, drill 1/4" dia. through the frame.
- Firmly secure using (4) screws and nuts.



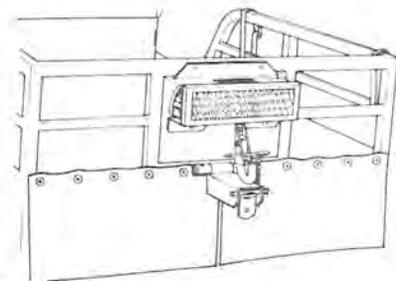
## STEERING

- Install steering padding using two (2) self-tapping screws supplied in kit. Ensure to relocate and retighten the emergency cut-out switch and the dimmer switch.

◆ **WARNING:** After steering padding installation, check the free movement/operation of the throttle and brake control levers, emergency cut-out switch and dimmer switch.

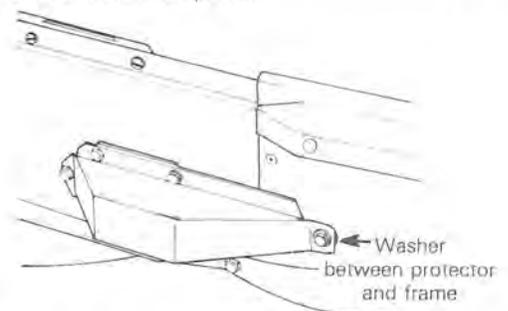
## SNOW GUARD

- Position snow guard on vehicle (flat side toward the inside) and mark holes to be drilled.
- Drill 13/64" holes (if applicable) and install using 10 rivets supplied.
- Drill 2 additional holes and install 2 screws, 2 flat washers and elastic stop nut.



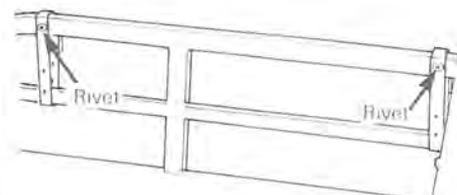
## SPEEDOMETER

- Remove the 2 upper screws of the drive axle bearing housing (right hand side).
- Install speedo drive insert and angle drive, connect cable.
- Install protector.
- Drill 2 additional holes and install 2 screws, 2 flat washers and elastic stop nut.



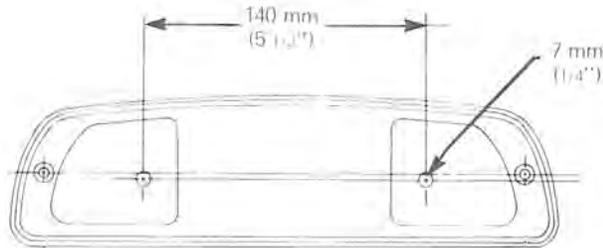
## SKI TIE DOWN

- Install the 2 ski tie downs using 2 rivets supplied (13/64" holes for rivets).



## REAR LIGHT REFLECTORS (Europe models only)

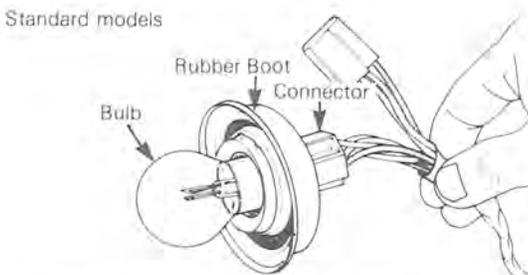
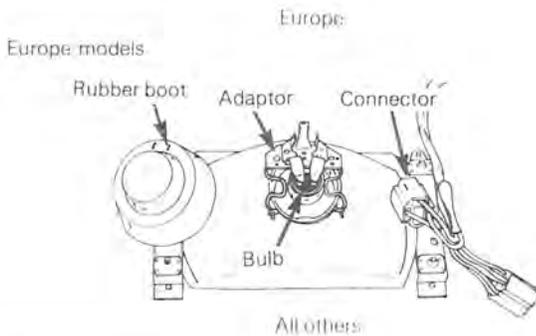
- Remove rear light protector and lens.
- Drill two 7 mm (1/4").



- Install flat washer and reflector, secure with screw, flat washer and stop nut inside lens.
- Reinstall protector.

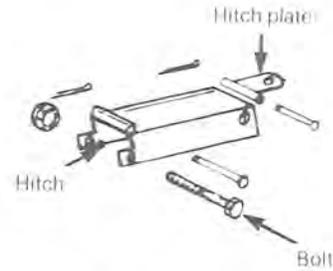
## HEADLAMP (Europe only)

For Europe models, disconnect headlamp, remove rubber protector and bulb.



- Install bulb supplied (taped to harness), special adaptor and special rubber protector.
- Connect headlamp to socket with black wire in center position.

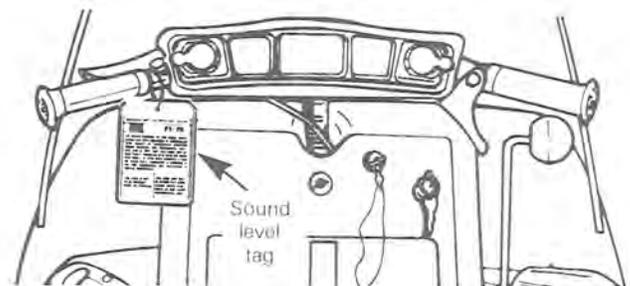
## HITCH



- Remove hitch plate from vehicle.
- Install hitch to vehicle with the long retaining pin and cotter pin.
- Position the hitch horizontally, and drill a 21/64" hole through the frame (using the hitch as a template).
- Secure the retaining bolt and install the hitch plate.

## SOUND LEVEL TAG

Affix the sound level tag to the steering.

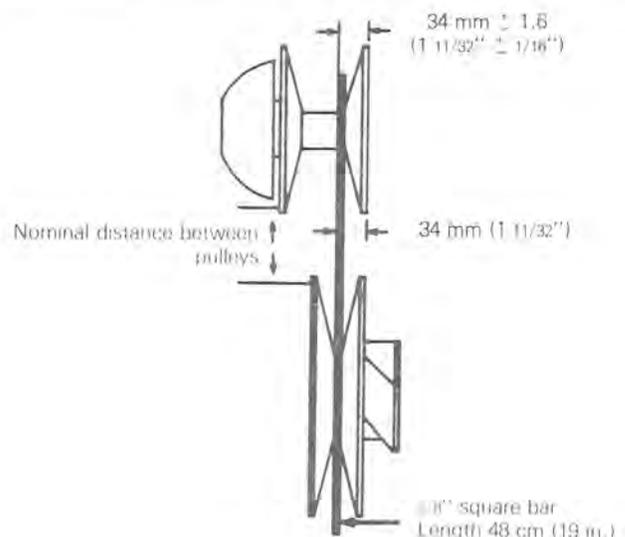


**IMPORTANT:** This label is to be installed on every vehicle and must not be removed prior to purchase.

## PULLEYS

Nominal distance: 44-47 mm (1 3/4" - 1 7/8") between pulleys

Dimension: 33-35 mm (1 5/16" - 1 3/8") (offset)



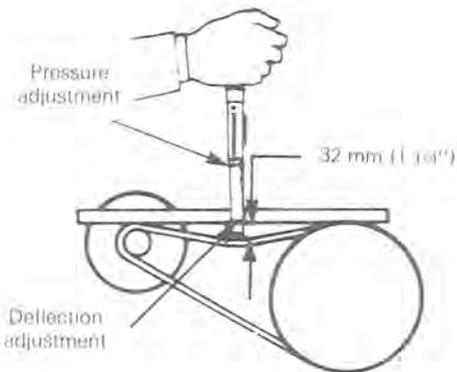
To adjust: add or remove shims between starter ring gear and engine. (Maximum 5 shims).

**Distance:** To obtain maximum vehicle performance, adjust pulley distance as follows:

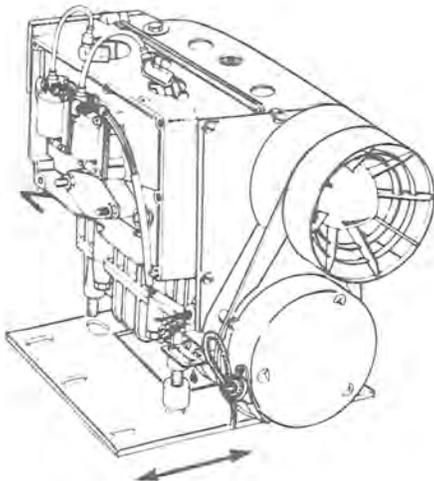
1. Adjust pulley distance to nominal distance.
2. Prior to final adjustment, the drive belt **must** have a break-in period time of one to two minutes.
3. The **final adjustment** of pulley distance should be performed by using the belt deflection method that follows:

**"V" Belt tension tester method P/N 414 3482 00**

1. Slide lower "O" ring of deflection distance scale to 32 mm (1 1/4").
2. Slide upper "O" ring to zero distance on the deflection.
3. Using wooden rule and tester, apply pressure until lower "O" ring is flush with edge of rule.
4. Rear deflection force on the upper scale (at top edge of "O" ring). Reading of 6.8 kg (15 pounds) should be obtained.



To correct, decrease or increase distance between pulleys by moving engine bracket.



## BATTERY

Remove battery from vehicle.

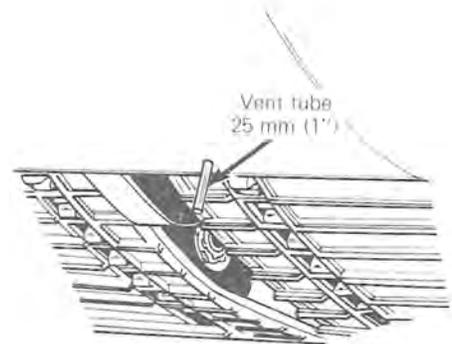
1. Remove the sealing tube from the vent elbow.
  - ◆ **WARNING:** Failure to remove the sealing tube could result in an explosion.
2. Remove caps and fill battery to the UPPER LEVEL line with electrolyte (specific gravity: 1.260 at 20°C (68°F)).
3. Allow the battery to stand for 30 minutes MINIMUM so that electrolyte can soak through battery cells.
4. Readjust the electrolyte level to the UPPER LEVEL.
5. Charge battery at a charging rate of 2.0 amperes for 10 to 20 hours.

▼ **CAUTION:** If cell temperature rises higher than 50°C (122°F) discontinue charging temporarily or reduce the charging rate.

6. After charging, allow the gas bubbles to escape by vibrating lightly the battery by hand.
7. Readjust electrolyte level to UPPER LEVEL.
8. Reinstall the caps and wipe off any spillage on battery using baking soda and water solution.

Install vent tube from underneath belly pan and connect to battery vent elbow.

◆ **WARNING:** Vent tube must be free and open. A kinked or bent tube will restrict ventilation and create gas accumulation that could result in an explosion.

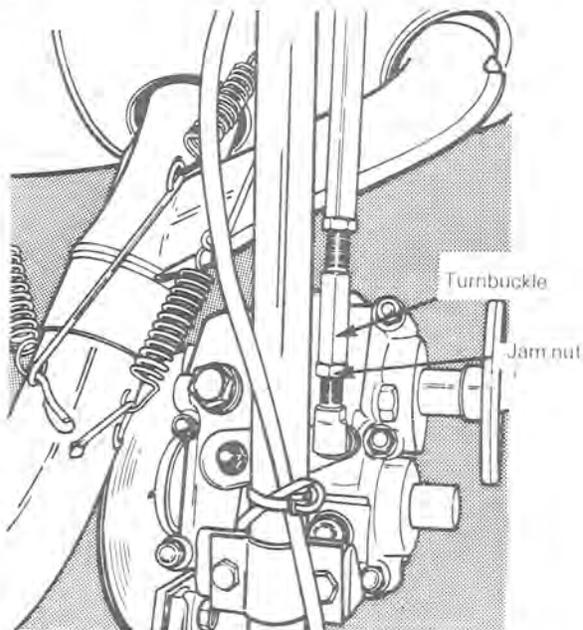


## TRANSMISSION SHIFTING MECHANISM

With gearbox lever properly engaged in gear, check adjustment so that shifter lever fits correctly in corresponding gear groove.

To adjust, loosen jam nut and adjust turnbuckle as required.

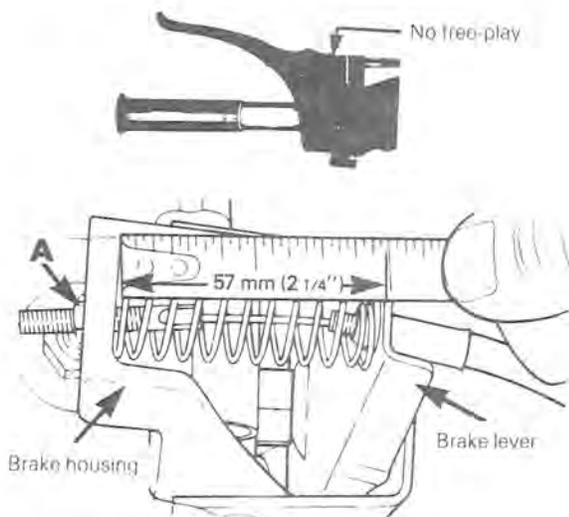
Retighten jam nut.



○ NOTE: Whenever head nuts are retorqued and upper column is loosened, readjust shifter mechanism.

## BRAKE

The brake system is a self-adjusting type, however, for proper brake operation check that there is no free-play at the handlebar while there is a distance of 57 mm  $\pm$  3 (2 1/4"  $\pm$  1/8) between the brake lever and the brake housing.



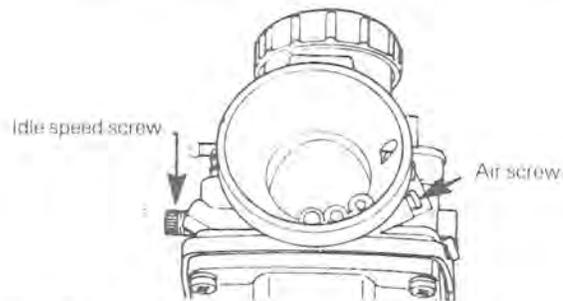
○ NOTE: Before checking distance, apply brake repeatedly until ratchet "click" is no longer heard. To adjust, use adjuster nut "A".

◆ WARNING: Always check the brake light to see if it functions after performing brake adjustment. If necessary, loosen brake light switch lock nuts and adjust.

## CARBURETOR

ALPINE 640 ER

|                   |                      |
|-------------------|----------------------|
| Air screw         | 1 1/2 turn $\pm$ 1/8 |
| Main Jet          | 280                  |
| Idle Speed R.P.M. | 1500-1800            |



### Air Screw Adjustment

Completely close the air screw (until a slight seating resistance is felt) then back off screw: 1 1/2  $\pm$  1/8.

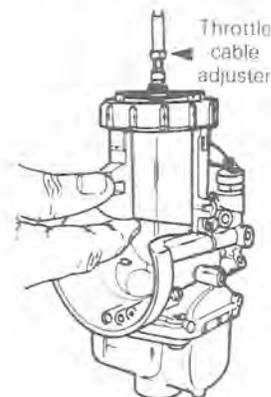
### Throttle Slide Adjustment

◆ WARNING: Ensure the engine is turned **OFF**, prior to the throttle slide adjustment.

With the throttle cable adjuster jam nut unlocked, press the throttle lever against the handle grip.

By turning the cable adjuster, adjust the carburetor slide cut away so that it is flush with the top of the carburetor bore.

Tighten the cable adjuster jam nut.



◆ WARNING: It is important that the throttle slide adjustment be performed to ensure proper functioning of the throttle mechanism.

### Idle Speed Adjustment

Back off idle speed screw completely.

Turn idle speed screw clockwise until it contacts the throttle slide then continue turning two (2) additional turns.

This will provide a preliminary idle speed setting. Start engine and allow it to warm then adjust idle speed to 1500-1800 R.P.M. by turning idle speed screw clockwise or counter-clockwise.

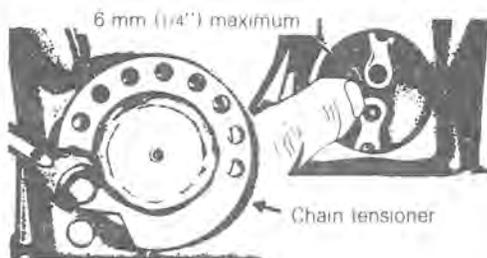
**CAUTION:** Do not attempt to set the idle speed by using the air screw. Severe engine damage can occur.

## GEARBOX

- Remove rubber inspection cover located on bottom right side of gearbox then using a rigid piece of wire as dipstick, check oil level. Oil level must reach approximately 80 mm (3 1/4").
- If necessary to replenish, remove filler cap from top of gearbox.



- Check drive chain tension. It should have a free-play of 6 mm (1/4"). To check, run vehicle forward so that true free-play can be verified. Check tension then turn driven pulley 1/2 turn counter-clockwise to recheck. From maximum reading, adjust free-play by rotating chain tensioner.

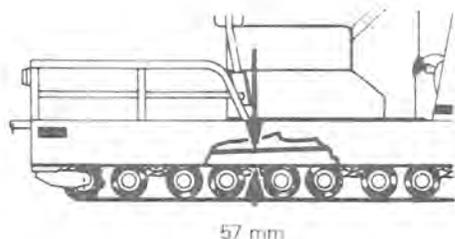


**CAUTION:** Chain tension should also be checked after the first 3 hours of operation.

## TRACK

### Tension

Lift the rear of vehicle and support it off the ground. Check track tension at the second set of bogie wheels from rear.



The deflection of each track should be 57 mm (2 1/4") between top inside edge of track and center of bogie wheel set retaining bolt.

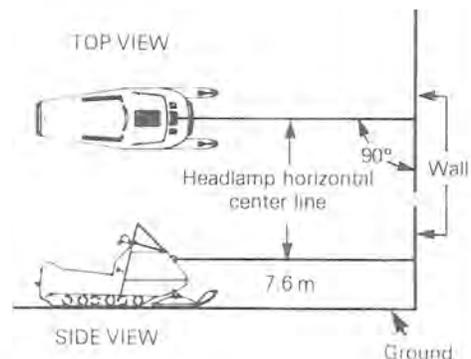
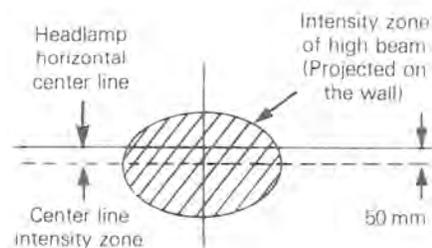
## Alignment

After track tension has been corrected start the engine and accelerate slightly so that track turn slowly. Check that tracks are well centered.

**WARNING:** Before checking track alignment, ensure that the tracks are free of all particles which could be thrown out while tracks are rotating. Keep hands, feet, tools and clothing clear of tracks. Ensure no-one is standing in close proximity to the vehicle.

## BEAM AIMING

Beam aiming is correct when center of high intensity zone of high beam is 50 mm (2") below horizontal headlamp center line.



## Required conditions

- Place vehicle on a flat surface 7,6 m (25') from a wall or screen.
- Rider seated on vehicle.
- Turn High Beam ON.

## GENERAL INSTRUCTIONS

Check vehicle performance. Inspect movement/operation of brake, steering mechanism, headlamp, tail/brake lights, emergency stop switch, dimmer switch and throttle lever. Thereafter, clean the vehicle thoroughly. **EXPLAIN THE OPERATOR MANUAL AND WARRANTY TO THE CUSTOMER. COMPLETE AND RETURN WARRANTY REGISTRATION.**

# 1982 ALPINE PRE-DELIVERY TECHNICAL DATA

|                       |  |
|-----------------------|--|
| BRAKE                 | Brake must be fully applied before brake control lever touches handlebar grip. |
| PULLEY ADJUSTMENT     |  |
| — nominal distance    | 44-47 mm (1 3/4" - 1 7/8")   |
| — offset              | 33-35 mm (1 5/16" - 1 3/8")  |
| CARBURETOR ADJUSTMENT |  |
| — air screw           | 1 1/2 ± 1/8 turn   |
| — main jet            | 280  |
| — idle speed          | 1500-1800 R.P.M.   |
| TRACK ADJUSTMENT      |  |
| — tension             | 57 mm (2 1/4")   |
| GEARBOX               |  |
| — oil level           | 80 mm (3 1/4") on dipstick.  |
| — chain tension       | 6 mm (1/4") free-play.   |





Date: 1981 02 26

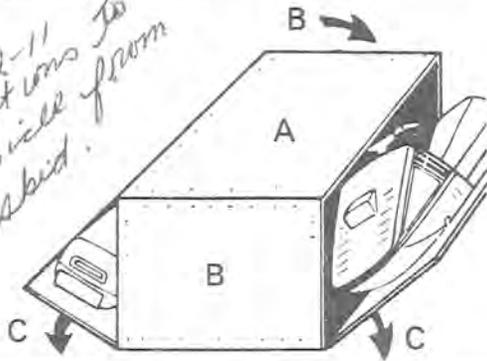
MODELS: 1982 MIRAGE I, MIRAGE II-II E, MIRAGE SPECIAL, 1982 CITATION 3500, CITATION 4500-4500E, CITATION SS

Subject: Pre-Delivery

Serial nos: All

## UNCRATING

Carefully lay the crate on one side (A). Cut the two (2) straps binding the crate.



*Refer to P.D. Bulletin 82-11 for most instructions to remove vehicle from bottom skid.*

**WARNING:** Strapping is under pressure therefore, care must be observed while cutting.

A) Remove the top of the crate.

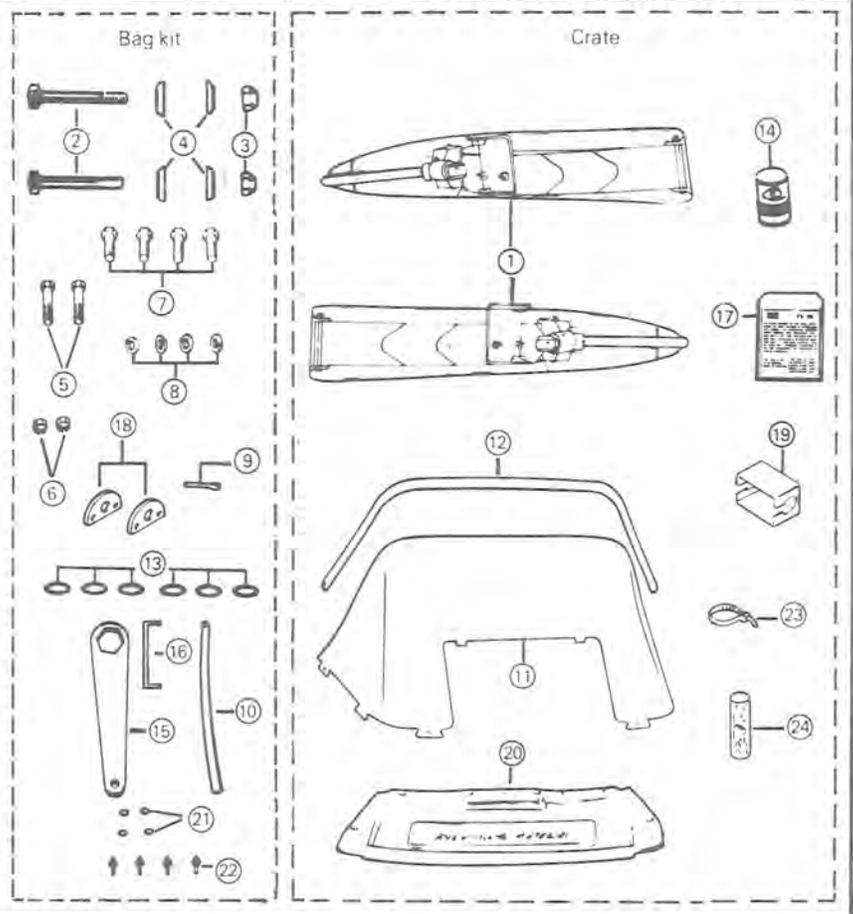
B) & C) Detach the vehicles bases from end paneling (B). Lay the vehicles on their bases.

**CAUTION:** Care should be taken when detaching vehicles bases (C) due to the inward movement of the bases.

Cut the strapping holding skis and suspension. Remove windshield, accessory kit, etc., from the vehicle. Detach the vehicle from wooden base and remove.

### PARTS TO BE INSTALLED:

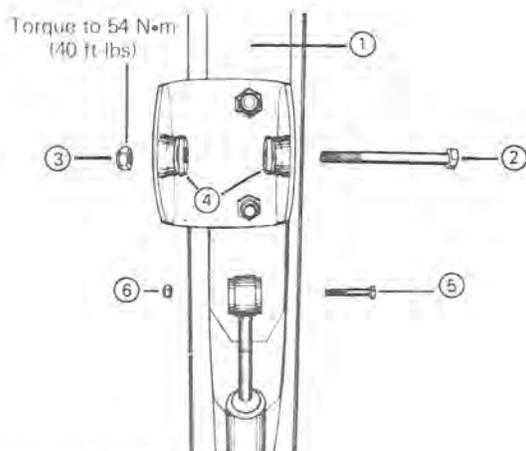
1. Ski (2)
2. Spring couplet bolt
3. Elastic stop nut (2)
4. Elastic cup (4)
5. Bolt (shock) (2)
6. Elastic stop nut (shock) (2)
7. Bolt (suspension) (4)
8. Lockwasher (suspension) (4)
9. Cotter pin (suspension shock absorber)
10. Overflow tube (battery)
11. Windshield
12. ~~Washer~~ (windshield) *trim*
13. O'ring (windshield) (6)
14. Oil can (chaincase)
15. Hexagonal wrench
16. Retainer (drive pulley)
17. Sound level tag
18. Washer (2) (suspension)
19. Steering cap
20. Snowguard
21. Washer (4) (snowguard)
22. Rivet (4) (snowguard)
23. Tie rap (2) (steering handle)
24. Handle (starter rope)



# ASSEMBLY PROCEDURE

## SKIS

- Install the ski assembly ① to the spring coupler.
- Tighten the spring coupler bolt ② until spring coupler side, slider cup ④ and ski leg are in contact. Do not jam.
- Torque the elastic stop nut ③ to 54 N•m (40 ft-lbs).
- Secure the shock absorber to the ski leg bracket using the bolt ⑤ and elastic stop nut ⑥ supplied.
- Set the ski adjustment to obtain a toe out of 3 mm (1/8"). For proper procedure refer to 1980 Shop Manual.



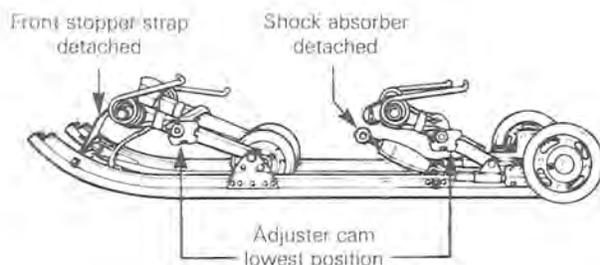
## SNOW GUARD

- Install snow guard ⑳ to the vehicle using the rivets ㉒ and washers ㉑ supplied in the kit.

## SUSPENSION REPOSITIONING

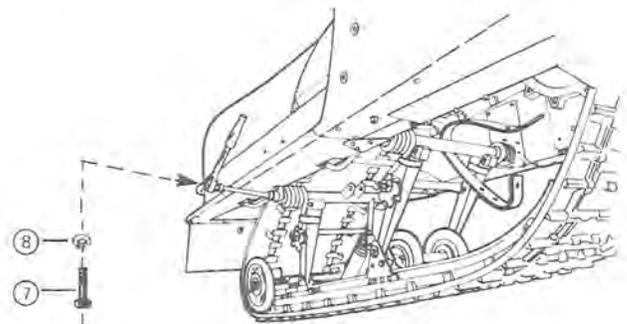
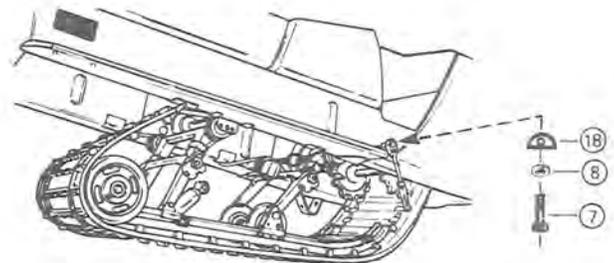
### Preparation

- Detach the front stopper strap.
- Remove cotter pin locking the shock absorber clevis pin and detach the shock absorber by removing the clevis pin.
- Set the adjuster cam to the lowest position and fix the springs with a tape.
- Push the rear idler wheel forward.

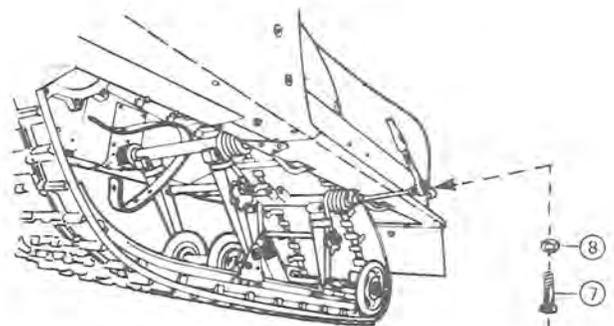
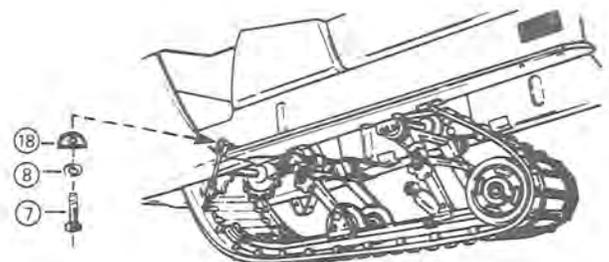


## Installation

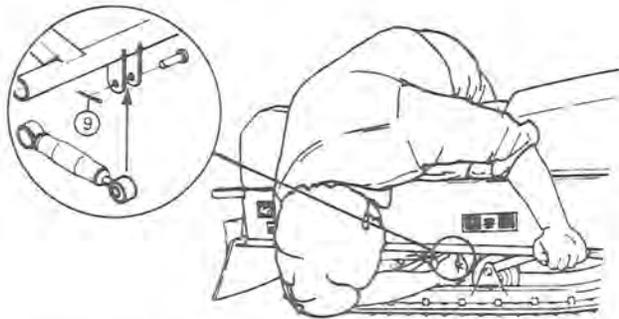
- Place a cardboard on the floor.
- Tilt vehicle on one side.
- Attach front suspension and the rear suspension arm to frame. Do not torque.



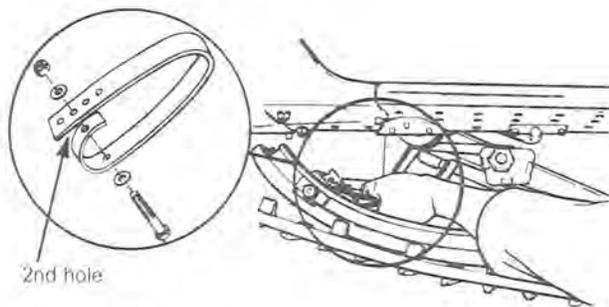
- Tilt the vehicle on the other side.
- Attach the front then the rear suspension arm to frame.



- Reposition vehicle on the ground. Position adjuster cams at the lowest elevation.
- Torque the four suspension retaining bolts to 43 N•m (32 ft-lbs).
- Apply downward pressure on the seat.
- Secure the extended shock with clevis pin and a new cotter pin ⑨.



- Attach front stopper strap at 2nd hole.



## ADJUSTABLE STEERING HANDLE

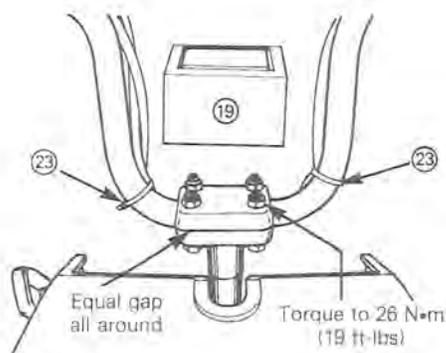
- Secure cut-out and dimmer switch wiring to the steering handle with two tie raps ⑳ supplied.

◆ **WARNING:** Do not tie brake and throttle cables to steering handle.

- Adjust the steering handle to the desired position.
- Lock the steering handle in place by tightening the four (4) screws to 26 N•m (19 ft-lbs).

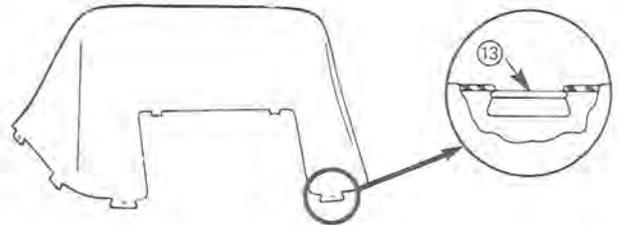
▼ **CAUTION:** Tighten the screws equally and ensure there is an equal gap on each side of the cover.

- Install the steering cap ⑲.



## WINDSHIELD

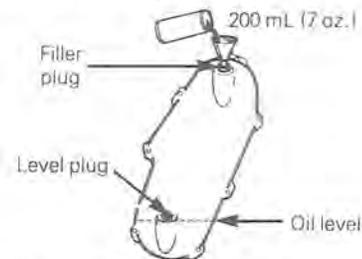
- Peel off the protective film from the windshield ⑪.
- Position the windshield on the hood then push it down until the tabs are fully inserted into the hood slots. Lock the windshield tabs in position using the six (6) "O" rings supplied in the kit ⑬.
- Install the windshield trim ⑫.



## CHAINCASE

- Add chaincase oil.
- Check oil level by removing oil level plug.
- The oil should be level with the bottom of the oil level orifice.

○ **NOTE:** The chaincase oil capacity is approximately 200 mL (7 oz.).



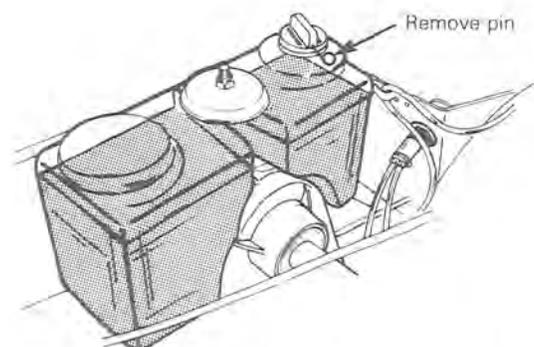
With finger, check the drive axle seal tightness.

## INJECTION OIL RESERVOIR

▼ **CAUTION:** Remove the pin from the vent hole of the reservoir cap.

Check reservoir oil level. Replenish with Bombardier Snowmobile oil.

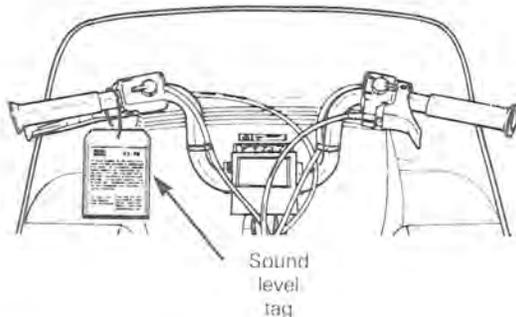
Advise the customer to always check the oil level when refueling.



## SOUND LEVEL TAG

Affix the sound level tag to the steering (located in tool box).

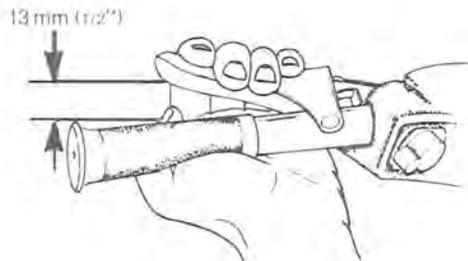
**IMPORTANT:** This label is to be installed on every machine sold and must not be removed prior to purchase.



## ADJUSTMENTS

### BRAKE

Brake should apply fully while the brake control lever is approximately 13 mm (1/2") from the handlebar grip.



If adjustment is required, turn the brake cable adjuster counter-clockwise until the brake disc can no longer turn then back off the adjuster approximately 1 1/2 turns. Recheck brake operation.



**WARNING:** Whenever the brake is readjusted, the brake light switch operation must also be checked and adjusted.

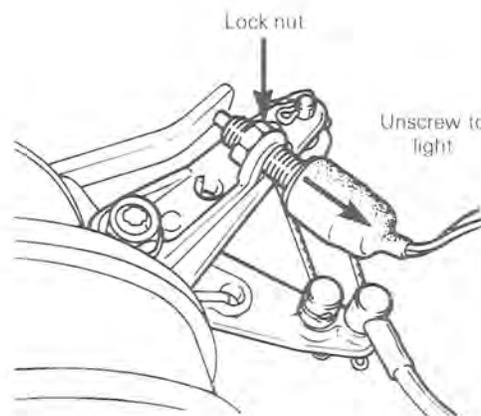
## BRAKE LIGHT SWITCH

### To Check Operation:

Pull the brake lever to hold the pads on the disc. Check that a light resistance is felt while rotating the driven pulley. This is the position where the switch should illuminate the brake light.

### To Adjust:

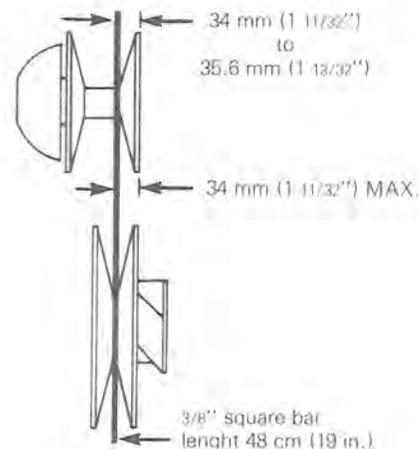
- Loosen the brake switch lock nut.
- Holding brake lever at the position mentioned above, turn switch clockwise or counter-clockwise as required.
- Tighten the brake switch lock nut and recheck brake light operation.



## PULLEY ALIGNMENT

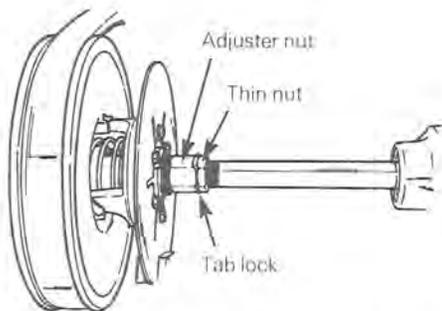
### Offset Measurement

- The dimension from the inside edge of the drive fixed pulley to the outside edge of the 3/8" square bar should be 34 mm (1 11/32").



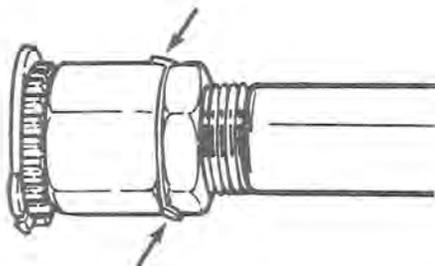
## Offset Adjustment

- Remove the air silencer.
- Straighten the tab lock.
- Loosen the thin nut.
- Turn the adjuster nut in order to have a dimension of 34 mm (1 11/32") at the offset measurement.



- Holding the adjuster nut, tighten the thin nut and bend the tab lock.

▼ **CAUTION:** Make sure the tab lock is bent on each of the two nuts.



- Reinstall the air silencer.

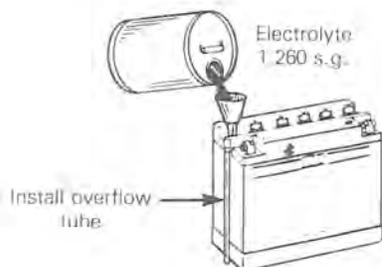
## BATTERY (CITATION 4500 E/MIRAGE II E)

▼ **CAUTION:** When removing or installing battery, be careful not to damage the oil injection pump lever.

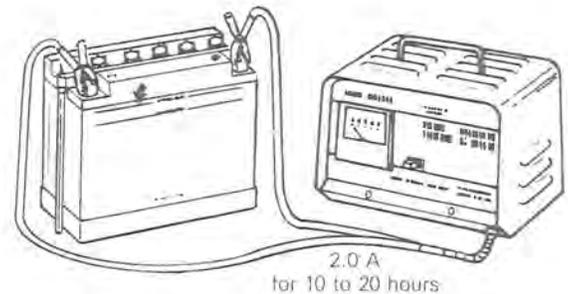
1. Remove the sealing tube from the vent elbow. Install overflow tube included in the bag kit.

◆ **WARNING:** Failure to remove the sealing tube could result in an explosion.

2. Remove caps and fill battery to the UPPER LEVEL line with electrolyte (specific gravity: 1.260 at 20°C (68°F)).



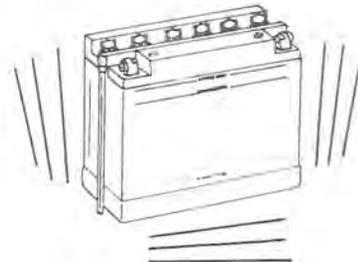
3. Allow the battery to stand for 30 minutes MINIMUM so that electrolyte can soak through battery cells.
4. Readjust the electrolyte level to the UPPER LEVEL.
5. Charge battery at a charging rate of 2.0 amperes for 10 to 20 hours.



▼ **CAUTION:** If cell temperature rises higher than 50°C (122°F) discontinue charging temporarily or reduce the charging rate.

◆ **WARNING:** Gases given off by a battery being charged are highly explosive. Always charge in a well ventilated area. Keep battery away from cigarettes or open flames.

6. After charging, allow the gas bubbles to escape by vibrating lightly the battery by hand.



7. Readjust electrolyte level to UPPER LEVEL.



8. Reinstall the caps and wipe off any spillage on battery using baking soda and water solution.

◆ **WARNING:** Overflow tube must be free and open. A kinked or bent tube will restrict ventilation and create gas accumulation that could result in an explosion.

Coat battery terminals with petroleum jelly to prevent corrosion. Connect one end of vent tube to battery vent elbow and other end to outlet tube in frame.



## CARBURETOR ADJUSTMENTS

|                   | CITATION 3500<br>MIRAGE I | CITATION 4500<br>4500 E<br>MIRAGE II III E | CITATION 55<br>MIRAGE SPECIAL |
|-------------------|---------------------------|--|-------------------------------|
| Air Screw         | 1 1/2                     | 1 1/2                                      | 1 1/2                         |
| Main Jet          | 220                       | 260  | 160                           |
| Idle Speed R.P.M. | 1100-1300                 | 1800-2000                                  | 1800-2000                     |

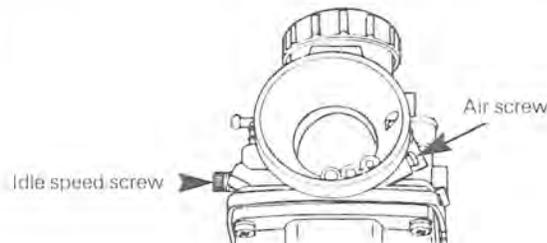
### Air Screw Adjustment

Completely close the air screw (until a slight sealing resistance is felt) then back off to specifications.

### Idle Speed Adjustment

Turn idle speed screw clockwise until it contacts the throttle slide then continue turning two (2) additional turns. This will provide a preliminary idle speed setting. Start engine and allow it to warm up then adjust idle speed to specifications by turning idle speed screw clockwise or counter-clockwise.

**CAUTION:** Do not attempt to set the idle speed by the air screw. Severe engine damage can occur.



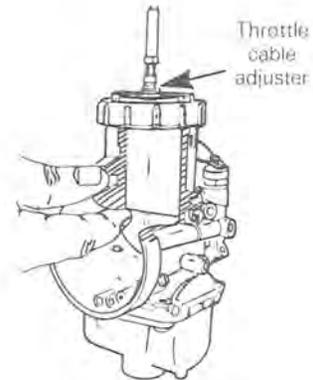
## Throttle Slide Adjustment

**WARNING:** Ensure the engine is turned **OFF**, prior to the throttle slide adjustment.

With the throttle cable adjuster jam nut unlocked, press the throttle lever against the handle grip.

By turning the cable adjuster, adjust the carburetor slide cut away so that it is flush with the top of the carburetor bore.

Tighten the cable adjuster jam nut.



**WARNING:** It is important that the throttle slide adjustment be performed to ensure proper functioning of throttle mechanism.

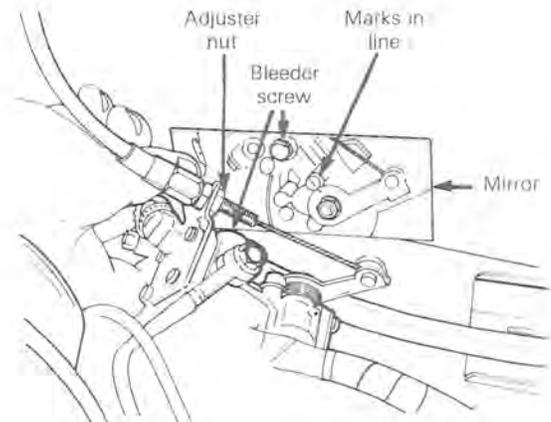
## OIL INJECTION PUMP ADJUSTMENT

### Adjustment

Prior to adjusting the pump, make sure all carburetor adjustments are completed.

Eliminate the throttle cable free play by pressing the throttle lever until a light resistance is felt, then hold in place. (a small rubber band can be used). The aligning marks on the pump casting and on the lever must align. If not, loosen the adjuster nut and adjust accordingly.

Retighten the adjuster nut.

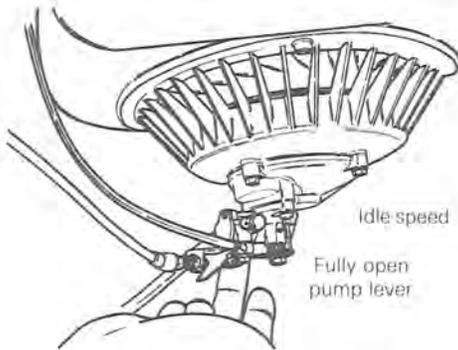


## Oil Lines

All oil lines should be full of oil. If required, bleed the main oil line (between reservoir and pump) by loosening the bleeder screw until all air has escaped from the line.

Make sure the reservoir has enough oil.

Check the small oil lines (between pump and intake manifold). If required, fill the lines by running the engine at idle speed while holding the pump lever in fully open position.



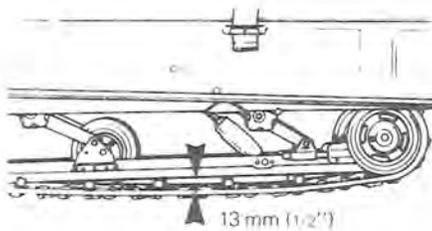
◆ **WARNING:** Ensure not to operate carburetor throttle mechanism. Secure the rear of the vehicle on a stand.

## TRACK

◆ **WARNING:** Before checking track tension and alignment, ensure that the track is free of all particle which could be thrown out while track is rotating. Keep hands, feet, tools and clothing clear of track.

## Tension

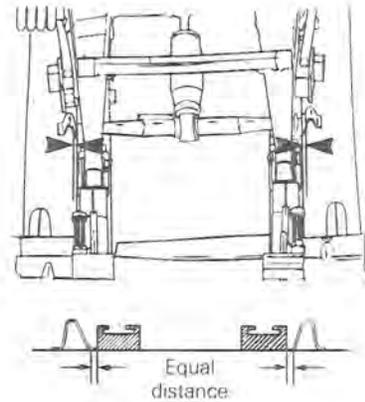
Lift rear of vehicle and support it off the ground. Allow slides to extend normally. A gap of 13 mm (1/2") should exist between slider shoe and bottom inside of tracks.



## Alignment

After track tension has been corrected start the engine and accelerate slightly so that track turns **slowly**. Check that track is well centered.

The distance between the edges of the track guides and the slider shoes should be equal on both sides.

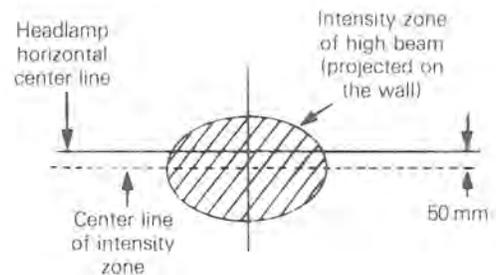


## Ride Adjustment

The rear adjuster blocks should be adjusted until a distance of 20 cm - 23 cm (8" - 9") is obtained between rear of footboard and ground when the customer is seated on the vehicle.

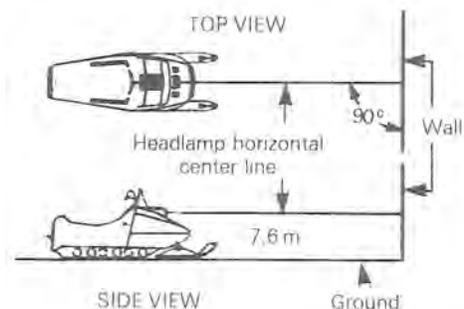
## BEAM AIMING

Beam aiming is correct when center of high intensity zone of high beam is 50 mm (2") below horizontal headlamp center line.



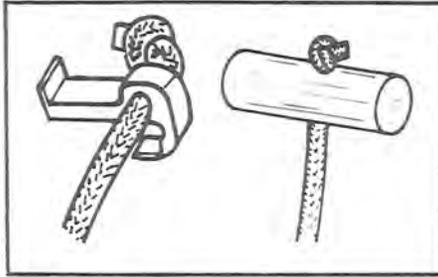
## Required Conditions

- Place vehicle on a flat surface 7.6 m (25') from a wall or screen.
- Suspension adjusted to obtain 20 cm - 23 cm (8"-9") between rear of footrest and ground (rider seated on vehicle).
- Turn High Beam ON.



## EMERGENCY STARTING ROPE (if applicable)

Assemble the emergency starting clip and handle to the rope in the tool kit. Make sure the knot is on the proper side of the clip (as illustrated).



Insert starter rope assembly in tool kit.

Install tool kit in tool box.

## GENERAL INSTRUCTIONS

Check vehicle performance. Inspect movement/operation of brake, steering mechanism, headlamp, tail/brake lights, emergency stop switch, dimmer switch and throttle lever. Thereafter, clean the vehicle thoroughly.

Explain the operator manual and warranty to the customer. **COMPLETE AND RETURN WARRANTY REGISTRATION.**

|   |  |   |  |  |
|---|--|---|--|--|
|  | <b>ENREGISTREMENT DE LA GARANTIE</b><br><b>WARRANTY REGISTRATION</b> |   | NO MODELE-MODEL NO<br><input type="text"/>                     | NO DE SERIE-SERIAL NO<br><input type="text"/>      |
|   | DATE DE LA VENTE<br>DATE OF SALE                                     | <input type="text"/> M <input type="text"/> J <input type="text"/> A <input type="text"/> Y | NOM DU CONCESSIONNAIRE - DEALER'S NAME<br><input type="text"/> | CODE DISTR / CODE<br><input type="text"/>          |
| IDENTIFICATION<br>DE L'ACHETEUR<br><br>CUSTOMER<br>IDENTIFICATION                   | M MR MME MRS, MLE MISS<br><input type="text"/>                       | PRENOM/FIRST NAME<br><input type="text"/>   |  |  |
|   | ADRESSE ADDRESS<br><input type="text"/>                              | NOM/NAME<br><input type="text"/>  |  |  |
|   | VILLE CITY<br><input type="text"/>                                   | <input type="text"/>  |  |  |
|   | PROVINCE STATE<br><input type="text"/>                               | <input type="text"/>  |  | CODE POSTAL<br>POSTAL CODE<br><input type="text"/> |
| P/N 414 4032 00   | <b>COPIE DU MANUFACTURIER / MANUFACTURER'S COPY</b>                  |   |  |  |

↑  
 Warranty registration  
 card

# 1982 CITATION/MIRAGE MODELS PRE-DELIVERY TECHNICAL DATA

|   | MIRAGE I<br>CITATION 3500  | MIRAGE II-II E<br>CITATION 4500-4500 E | MIRAGE SPECIAL<br>CITATION SS |               |
|---|--|--|-------------------------------|---------------|
| SKI ALIGNMENT                           | 3 mm (1/8'') toe-out   |  |                               |               |
| PULLEY ADJUSTMENT<br>— offset dimension | 34 mm (1 11/32'')  |  |                               |               |
| CARBURETOR ADJUSTMENT                   | 1 1/2 turn   |  |                               |               |
| — air screw                             |  |  |                               |               |
| — main jet                              | 220  | 260                                    | MAG.<br>160                   | P.T.O.<br>160 |
| — idle speed                            | 1100-1300 R.P.M.   | 1800-2000 R.P.M.                       | 1800-2000 R.P.M.              |               |
| TRACK ADJUSTMENT<br>— tension           | 13 mm (1/2'') gap should exist between slider shoe and bottom inside of track. |  |                               |               |

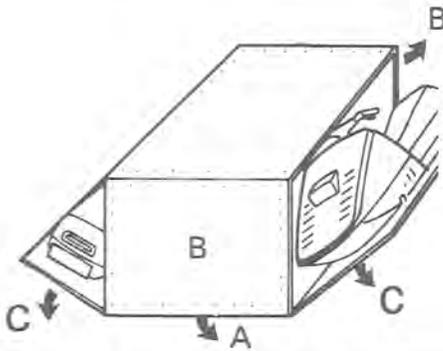


Date: 1981 03 10

Serial nos: All

## UNCRATING

Carefully lay the crate on the largest panel (panel A). Cut the two (2) straps binding the crate.



MODELS: 1982 EVEREST 500/500E  
1982 FUTURA 500/500E

Subject: Pre-Delivery

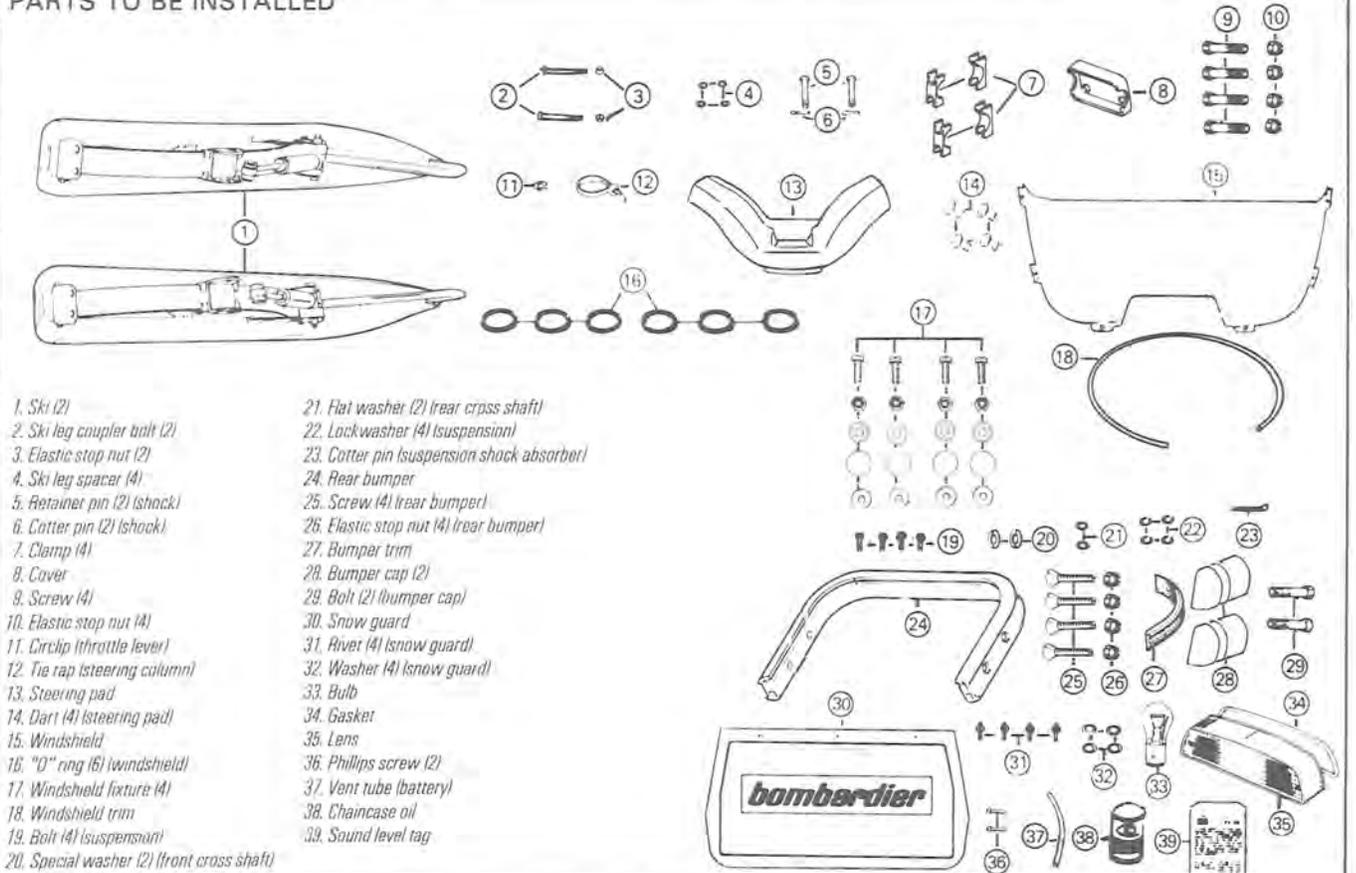
◆ **WARNING:** Strapping is under pressure therefore, care must be observed while cutting.

Detach the vehicle bases (panel C) from the end panels (B). Lay the vehicles on their bases.

◆ **WARNING:** Care should be taken when detaching vehicles bases (panels C) due to the inward movement of the bases.

Cut the strapping holding skis and suspension. Remove windshield, accessory kit, etc., from the vehicle. Remove the ski leg coupler bolts (2), detach and remove the vehicle from the wooden base.

## PARTS TO BE INSTALLED



- |  |  |
|--|--|
| 1. Ski (2)                                 | 21. Flat washer (2) (rear cross shaft)     |
| 2. Ski leg coupler bolt (2)                | 22. Lockwasher (4) (suspension)            |
| 3. Elastic stop nut (2)                    | 23. Cotter pin (suspension shock absorber) |
| 4. Ski leg spacer (4)                      | 24. Rear bumper                            |
| 5. Retainer pin (2) (shock)                | 25. Screw (4) (rear bumper)                |
| 6. Cotter pin (2) (shock)                  | 26. Elastic stop nut (4) (rear bumper)     |
| 7. Clamp (4)                               | 27. Bumper trim                            |
| 8. Cover                                   | 28. Bumper cap (2)                         |
| 9. Screw (4)                               | 29. Bolt (2) (bumper cap)                  |
| 10. Elastic stop nut (4)                   | 30. Snow guard                             |
| 11. Circlip (throttle lever)               | 31. Rivet (4) (snow guard)                 |
| 12. Tie rap (steering column)              | 32. Washer (4) (snow guard)                |
| 13. Steering pad                           | 33. Bulb                                   |
| 14. Dart (4) (steering pad)                | 34. Gasket                                 |
| 15. Windshield                             | 35. Lens                                   |
| 16. "O" ring (6) (windshield)              | 36. Phillips screw (2)                     |
| 17. Windshield fixture (4)                 | 37. Vent tube (battery)                    |
| 18. Windshield trim                        | 38. Chaincase oil                          |
| 19. Bolt (4) (suspension)                  | 39. Sound level tag                        |
| 20. Special washer (2) (front cross shaft) |  |

## BATTERY

A new battery is factory fresh dry charged. For storage purposes, it is fitted with a temporary sealing tube. Do not remove the sealing tube or loosen battery caps unless activation is desired. In case of accidental premature removal of caps or sealing tube, battery should be given a full charge.

Perform the following at pre-delivery operations and anytime you have to install a new battery.

- Remove the sealing tube from the vent elbow. Install vent tube (37).

◆ **WARNING:** Failure to remove the sealing tube could result in an explosion.

- Remove caps and fill battery to the UPPER LEVEL line with electrolyte (specific gravity: 1.280 at 20°C (68°F)).
- Allow the battery to stand for 30 minutes MINIMUM so that electrolyte can soak through battery cells.
- Readjust the electrolyte level to the UPPER LEVEL.
- Charge battery at a charging rate of 2.0 amperes for 10 to 20 hours.

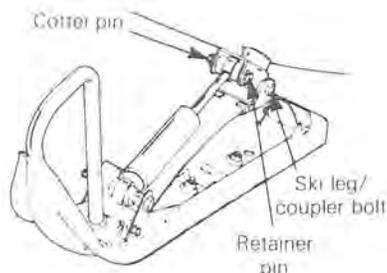
▼ **CAUTION:** If cell temperature rises higher than 50°C (122°F) discontinue charging temporarily or reduce the charging rate.

- After charging, allow the gas bubbles to escape by vibrating lightly the battery by hand.
- Readjust electrolyte level to UPPER LEVEL.
- Reinstall the caps and wipe off any spillage on battery using baking soda and water solution.

◆ **WARNING:** Vent tube must be free and open. A kinked or bent tube will restrict ventilation and create gas accumulation that could result in an explosion.

## SKIS

- Position the ski (1) with a spacer (4) on each side of the ski leg.
- Install the previously removed ski leg coupler bolt (2) until tight (ski must move freely by hand). Install the elastic stop nut (3) on the ski leg coupler, torque to 61 N•m (45 ft-lbs).
- Secure the shock absorber to the ski leg bracket using retainer (5) and cotter pins (6).

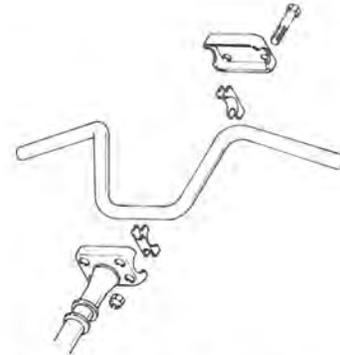


- Set the ski adjustment to obtain a toe-out of 3 mm (1/8").

## ADJUSTABLE STEERING HANDLE

If applicable, remove and discard the U clamp and nuts holding the steering handle to the steering column.

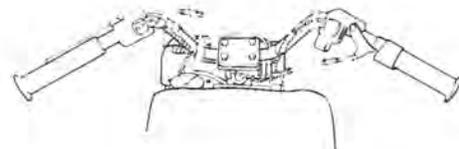
Install the four (4) clamps (7), the cover (8), the four (4) screws (9) and nuts (10) to the column, as illustrated.



On all vehicles, adjust the steering handle to the desired position.

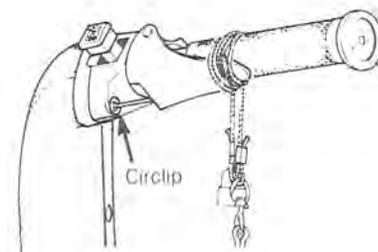
Lock the handle in place by tightening the four (4) screws to 26 N•m (19 ft-lbs).

▼ **CAUTION:** Tighten the screws equally in a criss-cross sequence and ensure there is an equal gap on each side of the clamps.

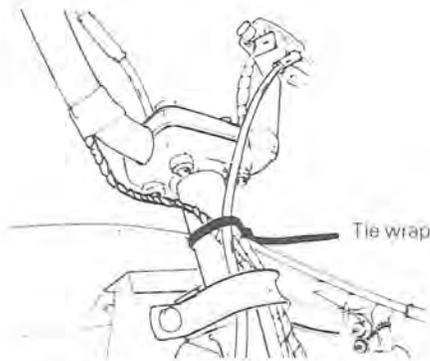


◆ **WARNING:** Do not adjust the handlebar too high to avoid contact between the brake lever and windshield, when turning.

- Remove the tape retaining the throttle lever.
- Pull back the throttle cable housing and insert the cable into the lever.
- Install the circlip (1) supplied with the kit.

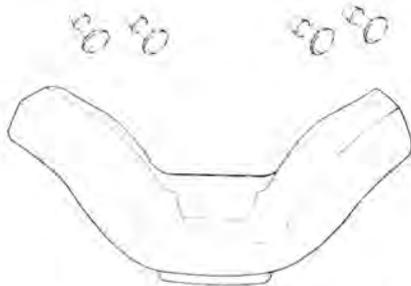


- Install the tie rap ⑫ (as illustrated).



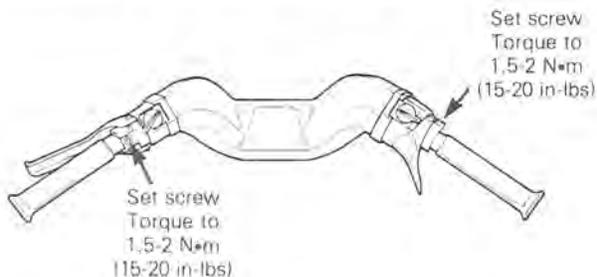
## STEERING PAD

- Properly fit the steering pad ⑬ to the handle.
- Assemble using the four (4) darts ⑭ supplied with the kit.



The throttle and brake handles can be adjusted to obtain a better fit with the steering pad. To adjust:

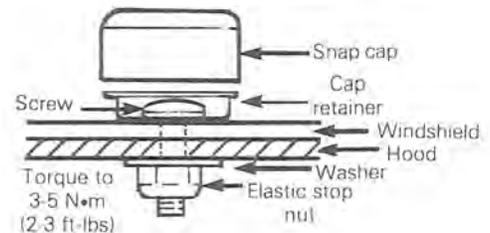
- Loosen the set screw.
- Position as required.
- Retighten set screws.
- Torque to 1.5 - 2 N•m (15-20 in-lbs).



**CAUTION:** Do not exceed recommended torque when tightening set screws, plastic housing may break.

## WINDSHIELD

- Position windshield ⑮ on the hood then push down until tabs are fully inserted into hood slots.
- Lock windshield tabs in position using the six (6) "O" rings ⑯ supplied in the kit.
- Properly seat the windshield in place.
- Using windshield holes as a guide, drill 3/16" dia. holes through the hood.
- Clean the hood.
- Peel off protective film from windshield.
- Install the four (4) windshield fixtures ⑰.



- Install the windshield trim ⑱.

**CAUTION:** Before installing windshield trim, make sure that the protective film is completely removed from edges of the windshield.

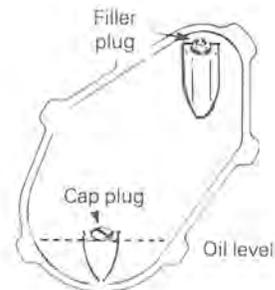
## INJECTION OIL SYSTEM RESERVOIR

**CAUTION:** Remove the pin from the vent hole of the reservoir cap.

Check reservoir oil level. Replenish with Bombardier Snowmobile oil or Castrol oil P/N 413 801 500.

## CHAINCASE

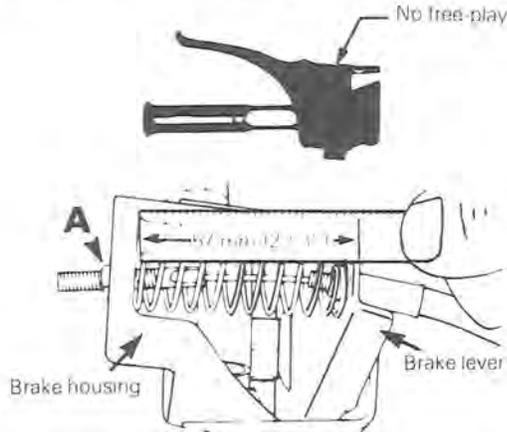
Fill the chaincase to the proper level using the oil supplied with the kit ⑳.



- The oil should be level with the bottom of the oil level orifice.

## BRAKE

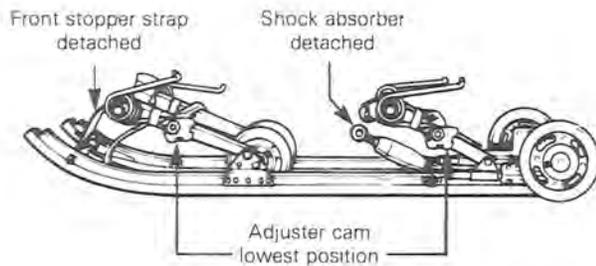
The brake system of these models is a self-adjusting type. However, for proper brake operation check that there is no free-play at the handlebar while there is a distance of  $57 \text{ mm} \pm 3$  ( $2 \frac{1}{4} \pm \frac{1}{8}$ ) between the brake lever and the brake housing.



○ **NOTE:** Before checking distance, apply brake repeatedly until ratchet "click" is no longer heard. To adjust, use adjuster nut "A".

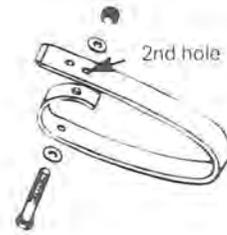
## SUSPENSION REPOSITIONING

- Lift the rear of vehicle off the ground and detach the front stopper strap.
- Remove cotter pin locking the shock absorber clevis pin and detach the shock absorber by removing the clevis pin.



- Attach front suspension arm to frame using two (2) bolts (19) special washers (20) and lockwashers (22). Torque to  $43 \text{ N}\cdot\text{m}$  (32 ft-lbs).
- Secure rear suspension arm to frame using two (2) bolts (19), flat washers (21) and lockwashers (22). Torque to  $43 \text{ N}\cdot\text{m}$  (32 ft-lbs).
- Reposition vehicle on the ground. Position adjuster blocks at the lowest elevation.
- Apply downward pressure on the seat and secure shock with clevis pin and a new cotter pin (23).

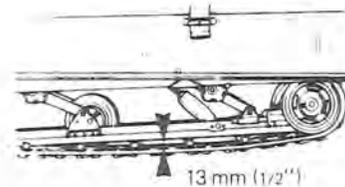
- Attach front stopper strap at 2nd hole.



## TRACK

### Tension

Lift rear of vehicle and support it off the ground. Allow slide to extend normally. A gap of  $13 \text{ mm}$  ( $\frac{1}{2}$ "') should exist between slider shoe and bottom inside of track.

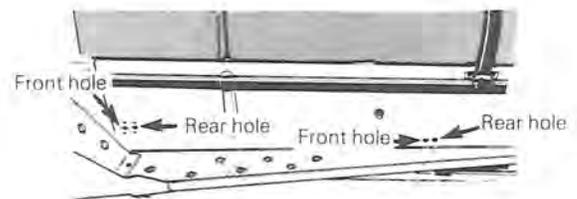


○ **NOTE:** On these vehicles, holes in the frame provide the possibility of relocating the suspension arms for easier track tension adjustment.

It means that if the slide suspension adjustment screws are at the maximum adjustment and the suspension arms are at the front holes in the frame, you may move the suspension arms at the rear holes and obtain more track tension adjustment.

▼ **CAUTION:** Ensure that suspension arms are at the same position on each side of the frame to avoid any damage to the suspension system and to the track.

(TYPICAL)

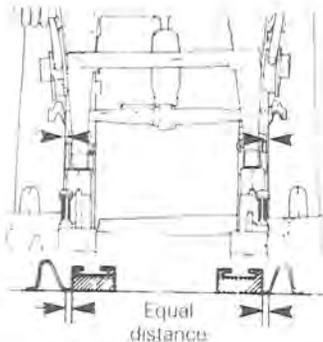


## Alignment

After track tension has been corrected start the engine and accelerate slightly so that track turns **slowly**. Check that track is well centered.

▼ **CAUTION:** On electric models, it is necessary to use a fully charged battery before starting the engine. This will prevent electrical damage.

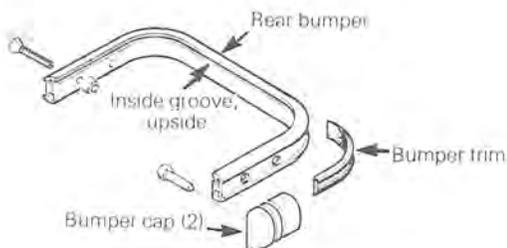
The distance between the edges of the track guides and the slider shoes should be equal on both sides.



◆ **WARNING:** Before checking track alignment, ensure that the track is free of all particles which could be thrown out while track is rotating. Keep hands, feet, tools and clothing clear of track.

## REAR BUMPER

- Install rear bumper (24) (inside groove, upside) with the four (4) screws (25) and nuts (26).
- Install bumper trim (27).
- Install bumper caps (28) with the two (2) retaining bolts (29).



## SNOW GUARD

Install snow guard (30) to the vehicle using the rivets (31) washers (32) supplied in the kit. The flat washers must be installed from inside the frame.

## BRAKE LIGHT

Remove the bulb from the wiring harness under the hood. Install the bulb (33), the gasket (34) and the lens (35). Secure with two Phillips screws (36).

◆ **WARNING:** Always check the brake light to see if it functions.

## PULLEY ADJUSTMENT

Nominal distance: 35 mm (1 3/8")  
between pulleys

Dimension X & Y: 33 mm (1 9/32")  
(offset)

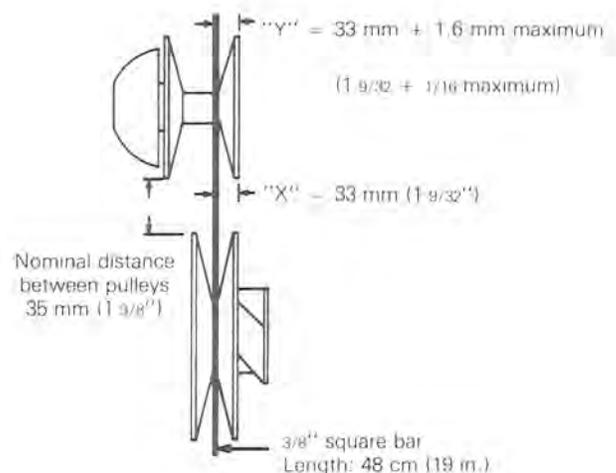
Floating type driven pulley requires a special procedure to measure offset and remove driven pulley assembly.

**IMPORTANT:** Make sure driven pulley assembly is fully seated against bearing plate.

- Measure offset as per usual method.
- If adjustment is required, remove the driven pulley, add or remove shims as required.
- Reinstall pulley, outer shims lockwasher and bolt. Torque to 9 N•m (7 ft-lbs).

**IMPORTANT:** Maximum free-play of the pulley must not exceed 3 mm (1/8").

▼ **CAUTION:** Always apply anti-seize compound (Loctite anti-seize lubricant) on cross shaft before final assembly.



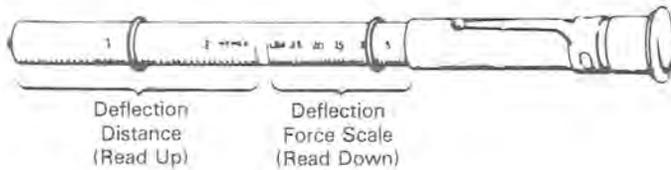
**Distance:** To obtain maximum vehicle performance, adjust pulley distance as follows:

1. Adjust pulley distance to nominal distance.
2. Prior to final adjustment, the drive belt **must** have a break-in period time of one to two minutes.

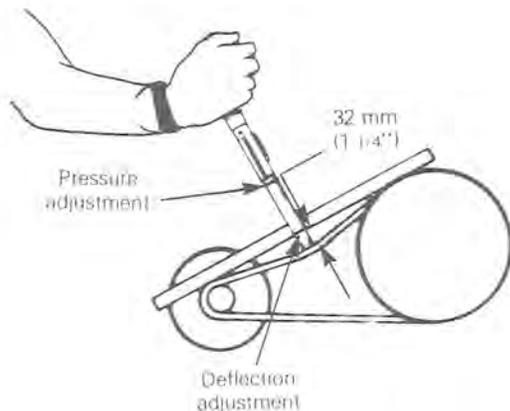
▼ **CAUTION:** On electric models, it is necessary to use a fully charged battery, this will prevent electrical damage.

3. The final adjustment of pulley distance should be performed by using the belt deflection method that follows:

"V" Belt tension tester method P/N 414 3482 00



1. Slide lower "O" ring of deflection distance scale to 32 mm (1 1/4").
2. Slide upper "O" ring to zero distance on the deflection force scale.
3. Using wooden rule and tester, apply pressure until lower "O" ring is flush with edge of rule.
4. Read deflection force on the upper scale (at top edge of "O" ring). Reading of 6.8 kg (15 pounds) should be obtained.



To correct, decrease or increase distance between pulleys by moving the engine bracket, as required.

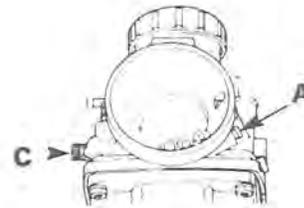
## CARBURETOR

|                   | EVEREST/FUTURA<br>500/500E |
|-------------------|----------------------------|
| Air Screw         | 1 1/2 turn $\pm$ 1/8       |
| Main Jet          | 300                        |
| Idle Speed R.P.M. | 1800-2000                  |

**CAUTION:** Never operate the snowmobile with the air intake silencer disconnected. Serious engine damage will occur if this notice is disregarded.

The carburetor adjustment are:

- A) Air Screw
- B) Throttle Slide Adjustment
- C) Idle Speed



### A) Air screw adjustment

Completely close the air screw (until a slight reseating resistance is felt) then back off screw: 1 1/2 turn  $\pm$  1/8.

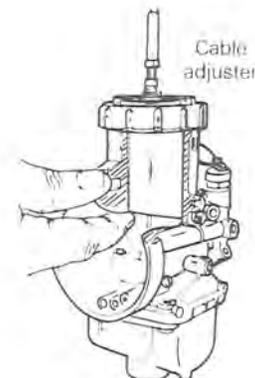
### B) Throttle slide adjustment

**WARNING:** Ensure the engine is turned **OFF**, prior to the throttle slide adjustment.

With the throttle cable adjuster jam nut unlocked, press the throttle lever against the handle grip.

By turning the cable adjuster, adjust the carburetor slide cut away so that it is flush with the top of the carburetor bore.

Tighten the cable adjuster jam nut.



**WARNING:** It is important that the throttle slide adjustment be performed to ensure proper functioning of the throttle mechanism.

### C) Idle speed adjustment

Turn idle speed screw clockwise until it contacts the throttle slide then continue turning two (2) additional turns. This will provide a preliminary idle speed setting. Start engine and allow it to warm then adjust idle speed to 1800-2000 R.P.M. by turning idle speed screw clockwise or counter-clockwise.

**CAUTION:** Do not attempt to set the idle speed by using the air screw. Severe engine damage can occur.

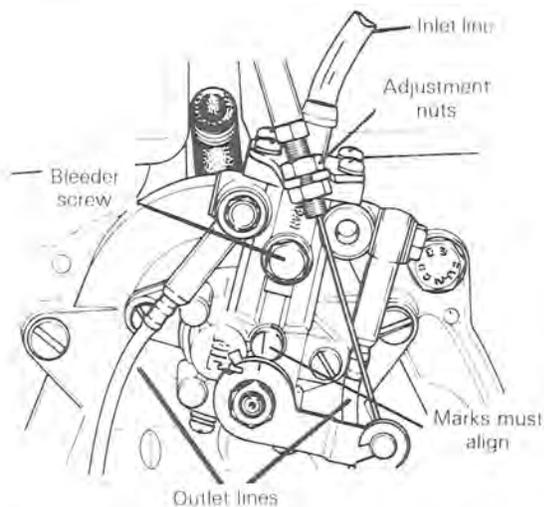
## OIL INJECTION PUMP ADJUSTMENT

**CAUTION:** The carburetor must be adjusted before adjusting the oil injection pump. Make sure idle speed is 1800-2000 RPM.

Eliminate the throttle cable free-play by pressing the throttle lever until a light resistance is felt, then hold in place. The aligning marks on the pump casting and lever must align perfectly. If not, loosen the adjuster nut and adjust accordingly.

Tighten the adjuster nut.

(TYPICAL)



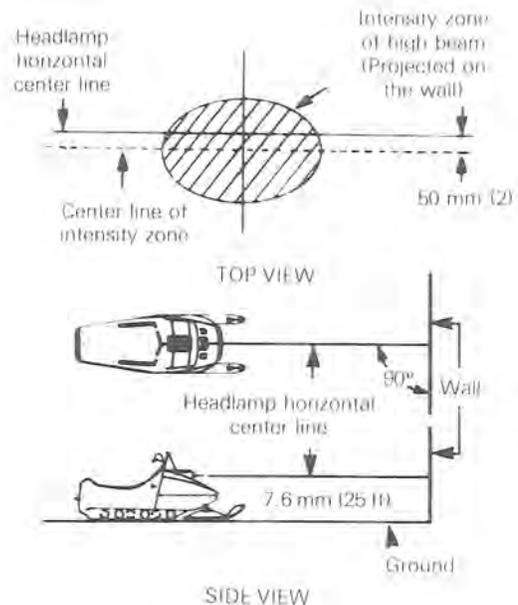
**CAUTION:** Proper oil injection pump adjustment is very important. Any delay in the opening of the pump can result in serious engine damage.

**IMPORTANT:** Make sure all oil lines are full. If required, bleed the inlet line and the pump by loosening the bleeder screw. To bleed the outlet lines, hold the pump lever in a fully open position with the engine at idle speed until the air is bleed off.

**WARNING:** Perform this operation in a well ventilated area.

## BEAM AIMING

Beam aiming is correct when center of high intensity zone of high beam is 50 mm (2") below horizontal headlamp center line.



### Required conditions

- Place vehicle on a flat surface 7.6 mm (25') from a wall or screen.
- Suspension adjusted to obtain 16.5-19 cm (6 1/2-7 1/2") between rear of footrest and ground (rider seated on vehicle).
- Turn High Beam ON.

### SOUND LEVEL TAG

Affix the sound level tag <sup>(39)</sup> to the steering (located in tool box).

**IMPORTANT:** This label is to be installed on every machine sold and should not be removed prior to purchase.

### GENERAL INSTRUCTIONS

Check vehicle performance. Inspect movement/operation of brake, steering mechanism, headlamp, tail/brake lights, emergency stop switch, dimmer switch and throttle lever. Thereafter, clean the vehicle thoroughly.

Explain the operator manual and warranty to the customer. **COMPLETE AND RETURN WARRANTY REGISTRATION.**

# 1982 EVEREST 500 & FUTURA 500 PRE-DELIVERY TECHNICAL DATA

|                                |   |
|--------------------------------|---|
| SKI ALIGNMENT                  | 3 mm (1/8'') toe out.   |
| PULLEY ADJUSTMENT              |   |
| — nominal distance             | 35 mm (1 3/8'')   |
| — dimensions X & Y<br>(offset) | 33 mm (1 9/32'')  |
| CARBURETOR ADJUSTMENT          |   |
| — air screw                    | 1 1/2 ± 1/8 turn  |
| — main jet                     | 300   |
| — idle speed                   | 1800-2000 R.P.M.  |
| TRACK ADJUSTMENT               |   |
| — tension (slide)              | 13 mm (1/2'') gap should exist between<br>slider shoe and bottom inside of track. |





# Pre-Delivery Bulletin

no. 82-5

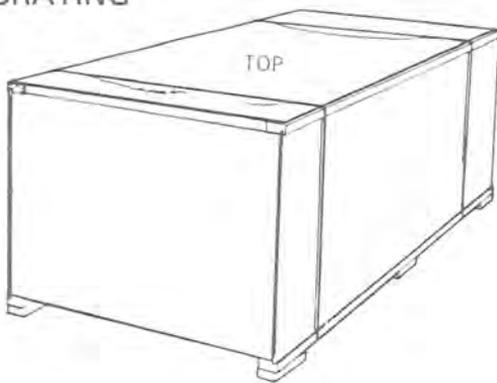
Date: 1981 03 18

MODELS: 1982 EVEREST LC  
1982 FUTURA LC

Serial nos: All

Subject: Pre-Delivery

## UNCRATING



**WARNING:** Strapping is under pressure therefore, care must be observed while cutting.

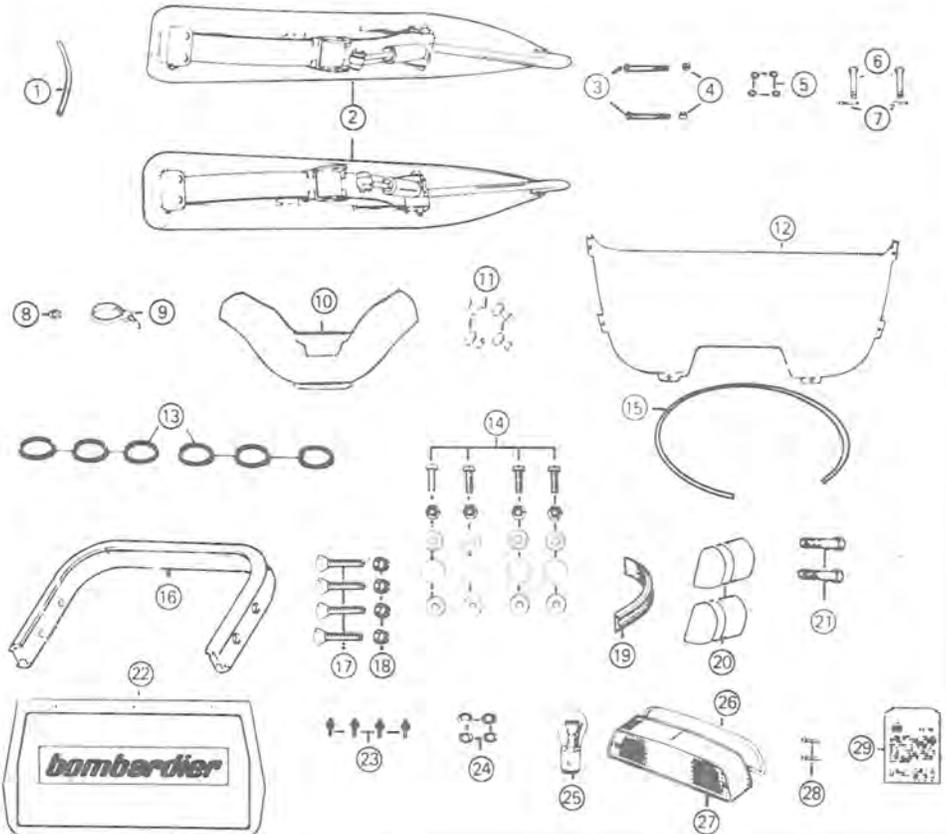
Lay the crate on its bottom. Cut the two (2) straps binding the crate.

Remove the top of the crate then the remaining sides.

Cut the strapping holding skis and suspension. Remove windshield, accessory kit, etc., from vehicle. Detach vehicle from wooden base and remove.

## PARTS TO BE INSTALLED

1. Vent tube (battery)
2. Ski (2)
3. Ski leg coupler bolt (2)
4. Elastic stop nut (2)
5. Ski leg spacer (4)
6. Retainer pin (2) (shock)
7. Cotter pin (2) (shock)
8. Circlip (throttle lever)
9. Tie rap (steering column)
10. Steering pad
11. Dart (4) (steering pad)
12. Windshield
13. "O" ring (6) (windshield)
14. Windshield fixture (4)
15. Windshield trim
16. Rear bumper
17. Screw (4) (rear bumper)
18. Elastic stop nut (4) (rear bumper)
19. Bumper trim
20. Bumper cap (2)
21. Bolt (2) (bumper cap)
22. Snow guard
23. Rivet (4) (snow guard)
24. Washer (4) (snow guard)
25. Bulb
26. Gasket
27. Lens
28. Phillips screw (2)
29. Sound level tag



## BATTERY

A new battery is factory fresh dry charged. For storage purposes, it is fitted with a temporary sealing tube. Do not remove the sealing tube or loosen battery caps unless activation is desired. In case of accidental premature removal of caps or sealing tube, battery should be given a full charge.

Perform the following at pre-delivery operations and anytime you have to install a new battery.

- Remove the sealing tube from the vent elbow. Install vent tube ①.

◆ **WARNING:** Failure to remove the sealing tube could result in an explosion.

- Remove caps and fill battery to the UPPER LEVEL line with electrolyte (specific gravity: 1.280 at 20°C (68°F)).
- Allow the battery to stand for 30 minutes MINIMUM so that electrolyte can soak through battery cells.
- Readjust the electrolyte level to the UPPER LEVEL.
- Charge battery at a charging rate of 2.0 amperes for 10 to 20 hours.

▼ **CAUTION:** If cell temperature rises higher than 50°C (122°F) discontinue charging temporarily or reduce the charging rate.

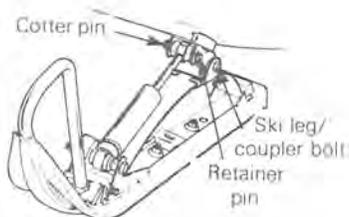
- After charging, allow the gas bubbles to escape by lightly vibrating the battery by hand.
- Readjust electrolyte level to UPPER LEVEL.
- Reinstall the caps and wipe off any spillage on battery using baking soda and water solution.

◆ **WARNING:** Vent tube must be free and open. A kinked or bent tube will restrict ventilation and create gas accumulation that could result in an explosion.

## SKIS

Position skis ② with a spacer ⑤ on each side of ski leg.

- Install the previously removed ski leg coupler bolt ③ until tight (ski must move freely by hand). Install then torque elastic stop nut ④ on ski leg coupler bolt to 61 N•m (45 ft-lbs).
- Secure shock absorber to ski leg bracket using retainer ⑥ and cotter pins ⑦.

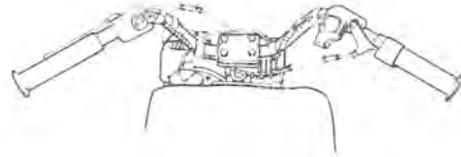


- Set ski adjustment to obtain a toe-out of 3 mm (1/8").

## ADJUSTABLE STEERING HANDLE

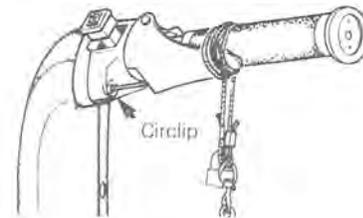
- Adjust the steering handle to the desired position.
- Lock the handle in place by tightening the four (4) screws to 26 N•m (19 ft-lbs).

▼ **CAUTION:** Tighten the screws equally in a criss-cross sequence and ensure there is an equal gap on each side of the clamps.

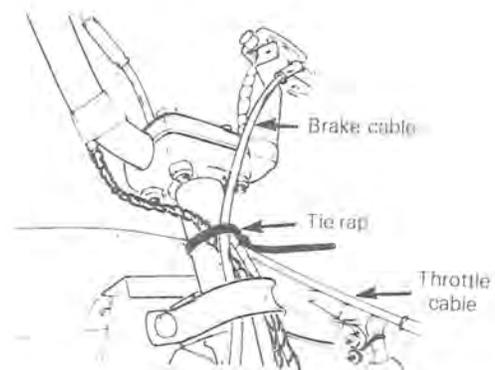


◆ **WARNING:** Do not adjust the handlebar to high to avoid contact between the brake lever and windshield, when turning.

- Remove the tape retaining the throttle lever.
- Pull back the throttle cable housing and insert the cable into the lever. *factory installed*
- Install the circlip ⑧ supplied with the kit.

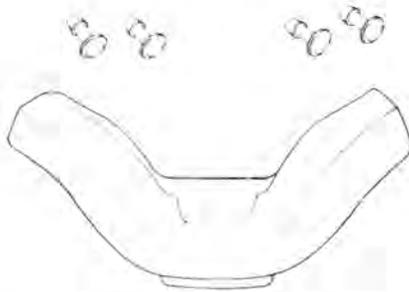


- Install the tie rap ⑨ as illustrated.



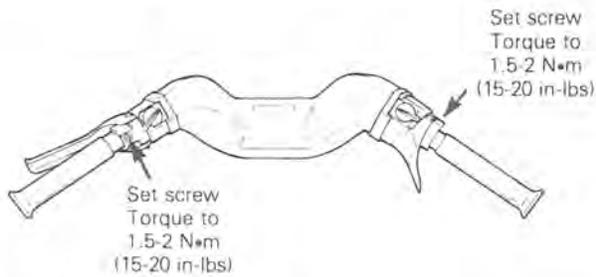
## STEERING PAD

- Properly fit the steering pad ⑩ to the handle.
- Assemble using the four (4) darts ⑪ supplied with the kit.



The throttle and brake handles can be adjusted to obtain a better fit with the steering pad. To adjust:

- Loosen the set screws.
- Position as required.
- Retighten set screws.
- Torque to 1.5 - 2 N•m (15-20 in-lbs).

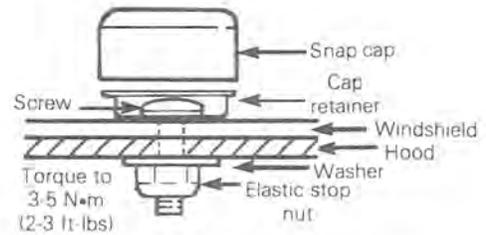


▼ **CAUTION:** Do not exceed recommended torque when tightening set screws, plastic housing may break.

## WINDSHIELD

- Position windshield ⑫ on the hood then push down until tabs are fully inserted into hood slots.
- Lock windshield tabs in position using the six (6) "O" rings ⑬ supplied in the kit.
- Properly seat the windshield in place.
- Using windshield holes as a guide, drill 3/16" dia. holes through the hood.
- Clean the hood.
- Peel off protective film from windshield.

- Install the four (4) windshield fixtures ⑭.



- Install the windshield trim ⑮.

▼ **CAUTION:** Before installing windshield trim, make sure that the protective film is completely removed from edges of the windshield.

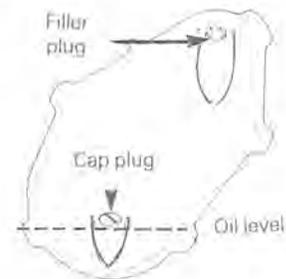
## INJECTION OIL SYSTEM RESERVOIR

Check reservoir oil level. Replenish with Bombardier Snowmobile oil or Castrol oil (P/N 413 701 500).

## CHAINCASE

*Capacity 200ml (7 fl. oz.)*

- Check oil level by removing oil level cap plug.

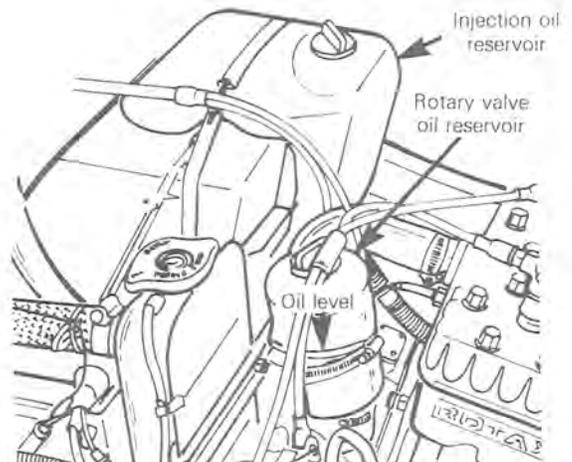


- The oil should be level with the bottom of the oil level orifice.

## ROTARY VALVE OIL RESERVOIR

Check reservoir oil level.

Level should not be below level line of plastic reservoir. If necessary to replenish use Bombardier Snowmobile oil.



## COOLING SYSTEM

Check tightness of all hose gear clamps and of engine filler and drain plugs.

Check coolant level, it should reach approximately 25 mm (1") below filler neck of reservoir.

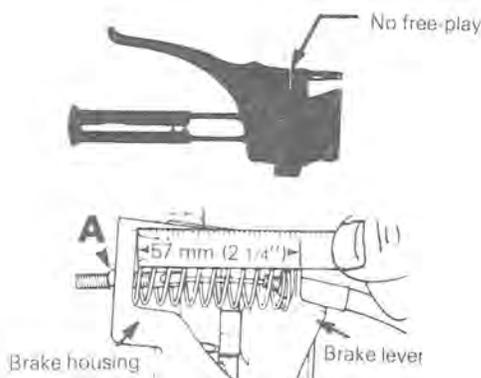
Reinstall tank cap and start engine; let engine run until it reaches its operating temperature and thermostat opens. Allow it to run a few minutes more.

▼ **CAUTION:** It is necessary to use a fully charged battery, this will prevent electrical damage.

Stop engine and check coolant level; refill as necessary.

## BRAKE

The brake system of these models is a self-adjusting type. However, for proper brake operation check that there is no free-play at the handlebar while there is a distance of 57 mm  $\pm$  3 (2 1/4  $\pm$  1/8) between the brake lever and the brake housing.



○ **NOTE:** Before checking distance, apply brake repeatedly until ratchet "click" is no longer heard. To adjust, use adjuster nut "A".

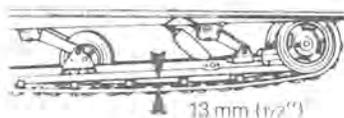
## SUSPENSION REPOSITIONING

— Install front spring on adjuster cam.

## TRACK

### Tension

Lift rear of vehicle and support it off the ground. Allow slide to extend normally. A gap of 13 mm (1/2") should exist between slider shoe and bottom inside of track.

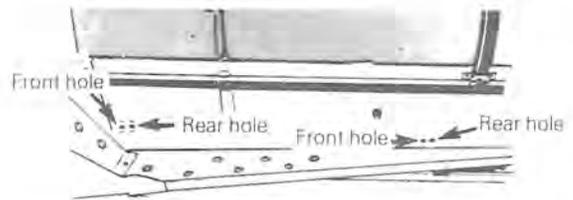


○ **NOTE:** On these vehicles, holes in the frame provide the possibility of relocating the suspension arms for easier track tension adjustment.

It means that if the slide suspension adjustment screws are at the maximum adjustment and the suspension arms are at the front holes in the frame, you may move the suspension arms at the rear holes and obtain more track tension adjustment.

▼ **CAUTION:** Ensure that suspension arms are at the same position on each side of the frame to avoid any damage to the suspension system and to the track.

(TYPICAL)

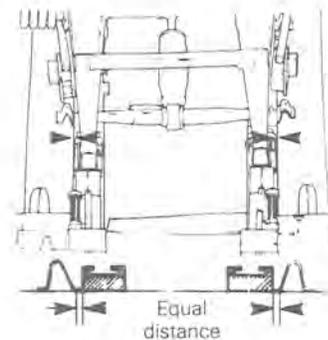


### Alignment

After track tension has been corrected start the engine and accelerate slightly so that track turns slowly. Check that track is well centered.

▼ **CAUTION:** It is necessary to use a fully charged battery, this will prevent electrical damage.

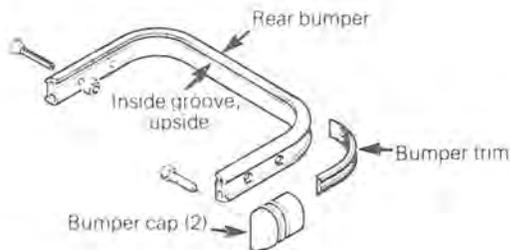
The distance between the edges of the track guides and the slider shoes should be equal on both sides.



◆ **WARNING:** Before checking track alignment, ensure that the track is free of all particles which could be thrown out while track is rotating. Keep hands, feet, tools and clothing clear of track.

## REAR BUMPER

- Install rear bumper (16) (inside groove upside) with the four (4) screws (17) and nuts (18).
- Install bumper trim (19).
- Install bumper caps (20) with the two (2) retaining bolts (21).



## SNOW GUARD

Install snow guard (22) to the vehicle using the rivets (23) and washers (24) supplied in the kit. The flat washers must be installed from inside the frame.

## BRAKE LIGHT

Remove the bulb from the wiring harness under the hood. Install the bulb (25), the gasket (26) and the lens (27), secure with two Phillips screws (28).

**WARNING:** Always check the brake light to see if it functions.

## PULLEY ADJUSTMENT

Nominal distance: 35 mm (1 3/8") between pulleys

Dimension X & Y: 33 mm (1 9/32") (offset)

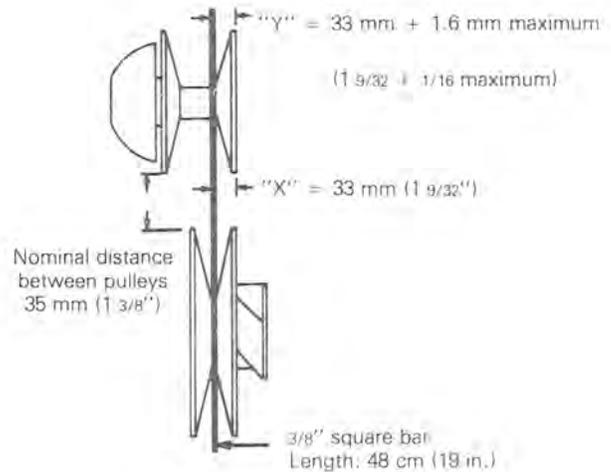
Floating type driven pulley requires a special procedure to measure offset and remove driven pulley assembly.

**IMPORTANT:** Make sure driven pulley assembly is fully seated against bearing plate.

- Measure offset as per usual method.
- If adjustment is required, remove the driven pulley, add or remove shims as required.
- Reinstall pulley, outer shims lockwasher and bolt. Torque to 9 N•m (7 ft-lbs).

**IMPORTANT:** Maximum free-play of the pulley must not exceed 3 mm (1/8").

**CAUTION:** Always apply anti-seize compound (Loctite anti-seize lubricant) on cross shaft before final assembly.



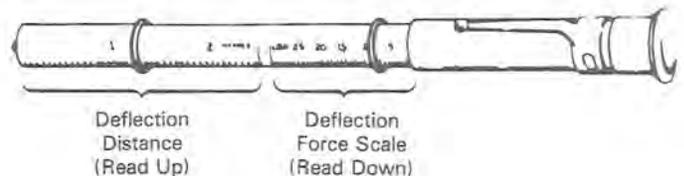
**Distance:** To obtain maximum vehicle performance, adjust pulley distance as follows:

1. Adjust pulley distance to nominal distance.
2. Prior to final adjustment, the drive belt **must** have a break-in period time of one to two minutes.

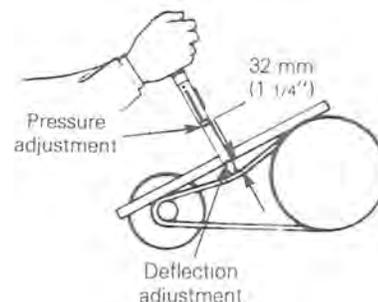
**CAUTION:** It is necessary to use a fully charged battery, this will prevent electrical damage.

3. The **final adjustment** of pulley distance should be performed by using the belt deflection method that follows:

"V" Belt tension tester method P/N 414 3482 00



1. Slide lower "O" ring of deflection distance scale to 32 mm (1 1/4").
2. Slide upper "O" ring to zero distance on the deflection force scale.
3. Using wooden rule and tester, apply pressure until lower "O" ring is flush with edge of rule.
4. Read deflection force on the upper scale (at top edge of "O" ring). Reading of 6.8 kg (15 pounds) should be obtained.



To correct, decrease or increase distance between pulleys by moving the engine bracket, as required.

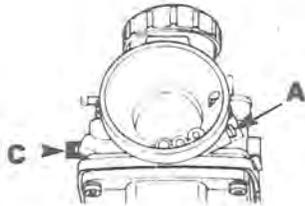
## CARBURETOR

|                   | EVEREST LC/FUTURA LC |
|-------------------|----------------------|
| Air Screw         | 1 1/2 ± 1/8 turn     |
| Main Jet          | 380                  |
| Idle Speed R.P.M. | 1800-2000            |

▼ **CAUTION:** Never operate the snowmobile with the air intake silencer disconnected. Serious engine damage will occur if this notice is disregarded.

The carburetor adjustment are:

- A) Air Screw
- B) Throttle Slide Adjustment
- C) Idle Speed



### A) Air screw adjustment

Completely close the air screw (until a slight reseating resistance is felt) then back off screw: 1 1/2 turn ± 1/8.

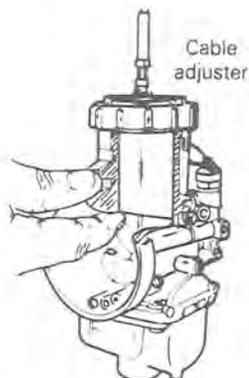
### B) Throttle slide adjustment

◆ **WARNING:** Ensure the engine is turned **OFF**, prior to the throttle slide adjustment.

With the throttle cable adjuster jam nut unlocked, press the throttle lever against the handle grip.

By turning the cable adjuster, adjust the carburetor slide cut away so that it is flush with the top of the carburetor bore.

Tighten the cable adjuster jam nut.



◆ **WARNING:** It is important that the throttle slide adjustment be performed to ensure proper functioning of the throttle mechanism.

### C) Idle speed adjustment

Turn idle speed screw clockwise until it contacts the throttle slide then continue turning two (2) additional turns. This will provide a preliminary idle speed setting. Start engine and allow it to warm up then adjust idle speed to 1800-2000 R.P.M. by turning idle speed screw clockwise or counter-clockwise.

▼ **CAUTION:** Do not attempt to set the idle speed by the air screw. Severe engine damage can occur.

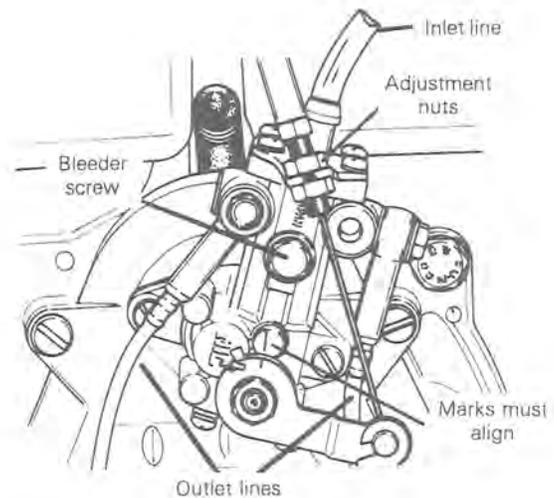
## OIL INJECTION PUMP ADJUSTMENT

▼ **CAUTION:** The carburetor must be adjusted before adjusting the oil injection pump. Make sure the idle speed is 1800-2000 R.P.M.

To adjust:

Eliminate the throttle cable free-play by pressing the throttle lever until a light resistance is felt, then hold in place. The aligning marks on the pump casting and lever must align perfectly. If not, loosen the adjuster nut and adjust accordingly.

Tighten the adjuster nut.



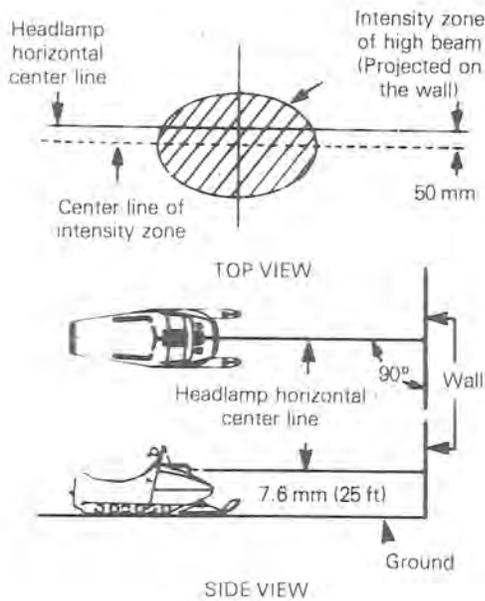
▼ **CAUTION:** Proper oil injection pump adjustment is very important. Any delay in the opening of the pump can result in serious engine damage.

**IMPORTANT:** Make sure all oil lines are full. If required, bleed the inlet line and the pump by loosening the bleeder screw. To bleed the outlet lines, hold the pump lever in a fully open position with the engine at idle speed until the air is bleed off.

◆ **WARNING:** Perform this operation in a well ventilated area.

## BEAM AIMING

Beam aiming is correct when center of high intensity zone of high beam is 50 mm (2") below horizontal headlamp center line.



### Required conditions

- Place vehicle on a flat surface 7.6 mm (25') from a wall or screen.
- Suspension adjusted to obtain 16.5-19 cm (6 1/2-7 1/2") between rear of footrest and ground (rider seated on vehicle).
- Turn High Beam ON.

### SOUND LEVEL TAG

Affix the sound level tag ②⑨ to the steering (located in tool box).

**IMPORTANT:** This label is to be installed on every machine sold and should not be removed prior to purchase.

### GENERAL INSTRUCTIONS

Check vehicle operation. Inspect movement/operation of brake, steering mechanism, headlamp, tail/brake lights, emergency stop switch, dimmer switch and throttle lever. Thereafter, clean the vehicle thoroughly.

Explain the operator manual and warranty to the customer. **COMPLETE AND RETURN WARRANTY REGISTRATION.**

# 1982 EVEREST LC / FUTURA LC MODELS PRE-DELIVERY TECHNICAL DATA

|                               |  |
|-------------------------------|--|
| SKI ALIGNMENT                 | 3 mm (1/8'') toe out.  |
| PULLEY ADJUSTMENT             |  |
| — distance                    | 35 mm (1 3/8'')  |
| — dimensions X and Y (offset) | 33 mm (1 9/32'')   |
| CARBURETOR ADJUSTMENT         |  |
| — air screw                   | 1 1/2 ± 1/8 turn   |
| — main jet                    | 380  |
| — idle speed                  | 1800-2000 R.P.M.   |
| TRACK ADJUSTMENT              |  |
| — tension                     | 13 mm (1/2'') gap should exist between slider shoe and bottom inside of track. |

**1982 EVEREST LC / FUTURA LC  
PRE-DELIVERY CHECK LIST**

| SERIAL NOS. |  |  |  |  |  |  |  |  |  |  |  |                               |
|-------------|--|--|--|--|--|--|--|--|--|--|--|-------------------------------|
|             |  |  |  |  |  |  |  |  |  |  |  | Battery                       |
|             |  |  |  |  |  |  |  |  |  |  |  | Skis                          |
|             |  |  |  |  |  |  |  |  |  |  |  | Steering handle               |
|             |  |  |  |  |  |  |  |  |  |  |  | Steering pad                  |
|             |  |  |  |  |  |  |  |  |  |  |  | Windshield                    |
|             |  |  |  |  |  |  |  |  |  |  |  | Injection oil                 |
|             |  |  |  |  |  |  |  |  |  |  |  | Chaincase oil                 |
|             |  |  |  |  |  |  |  |  |  |  |  | Rotary valve oil              |
|             |  |  |  |  |  |  |  |  |  |  |  | Cooling system                |
|             |  |  |  |  |  |  |  |  |  |  |  | Brake adjustment              |
|             |  |  |  |  |  |  |  |  |  |  |  | Suspension                    |
|             |  |  |  |  |  |  |  |  |  |  |  | Track                         |
|             |  |  |  |  |  |  |  |  |  |  |  | Rear bumper                   |
|             |  |  |  |  |  |  |  |  |  |  |  | Snow guard                    |
|             |  |  |  |  |  |  |  |  |  |  |  | Brake light                   |
|             |  |  |  |  |  |  |  |  |  |  |  | Pulley adjustment             |
|             |  |  |  |  |  |  |  |  |  |  |  | Carburetor adjustment         |
|             |  |  |  |  |  |  |  |  |  |  |  | Oil injection pump adjustment |
|             |  |  |  |  |  |  |  |  |  |  |  | Beam aiming                   |
|             |  |  |  |  |  |  |  |  |  |  |  | Sound level tag               |
|             |  |  |  |  |  |  |  |  |  |  |  | Test ride                     |
|             |  |  |  |  |  |  |  |  |  |  |  | PREPARED BY/Date              |
|             |  |  |  |  |  |  |  |  |  |  |  | INSPECTED BY/Date             |
|             |  |  |  |  |  |  |  |  |  |  |  | DELIVERED                     |

**IMPORTANT:** Explain the operator manual and warranty policy to the customer. Complete and re-turn warranty registration.

Year month day  
**Date: 1981 04 03**

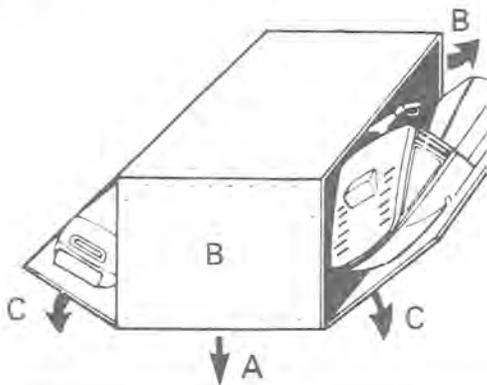
**MODELS: 1982 NORDIK  
 1982 SKANDIC**

**Serial nos: All**

**Subject: Pre-Delivery**

## UNCRATING

Carefully lay the crate on the largest panel (panel A).  
 Cut the two (2) straps binding the crate.



◆ **WARNING:** Strapping is under pressure therefore, care must be observed while cutting.

detach the vehicles bases (panel C) from the end panels (B). Lay the vehicles on their bases.

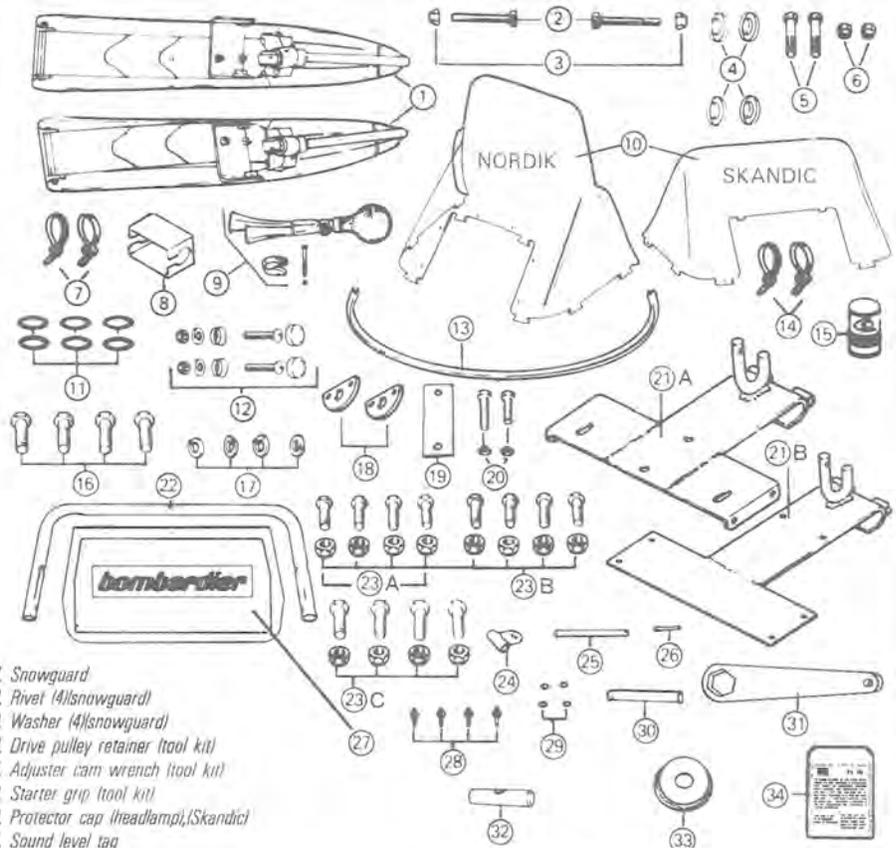
◆ **WARNING:** Care should be taken when detaching vehicles bases (panels C) due to the inward movement of the bases.

Cut the strapping holding skis and suspension. Remove windshield, tool box, accessory kit, etc., from the vehicle. Remove the ski leg coupler bolts (2), detach and remove the vehicle from the wooden base.

Set clearly all the parts on a plane surface.

## PARTS TO BE INSTALLED

1. Ski (2)
2. Ski leg coupler bolt M10 x 110 (2)
3. Elastic stop nut M10 (2)
4. Slider cup (4)
5. Bolt M6 x 40 (2)(shock)
6. Elastic stop nut M6 (2)(shock)
7. Tie rap (2)(steering handle)
8. Steering cap
9. Horn assembly
10. Windshield
11. "O" ring (6)(windshield)
12. Windshield texture (2)(Nordik)
13. Windshield trim
14. Windshield trim tie rap (2)(Nordik)
15. Chaincase oil
16. Bolt M10 x 35 (4)(suspension)
17. Lockwasher (4)(suspension)
18. Special washer (2)(front cross shaft)
19. Hitch retainer plate (Nordik)
20. a) Bolt M8 x 20 (2)(hitch), nut M8 (2)(Nordik)  
 b) Bolt M6 x 16 (2)(hitch), nut M6 x (2)(Skandic)
21. a) Hitch plate (Nordik)  
 b) Hitch plate (Skandic)
22. Rear bumper
23. a) Bolt M6 x 30 (4)(rear bumper & hitch), nut M6 (4)(Nordik)  
 b) Bolt M6 x 30 (8)(rear bumper & hitch), nut M6 (8)(Skandic)  
 c) Bolt M6 x 45 (4)(rear bumper & rack), nut M6 (4) (Skandic)
24. Hitch plate
25. Retainer pin (hitch)
26. Cotter pin (hitch)
27. Snowguard
28. Rivet (4)(snowguard)
29. Washer (4)(snowguard)
30. Drive pulley retainer (tool kit)
31. Adjuster cam wrench (tool kit)
32. Starter grip (tool kit)
33. Protector cap (headlamp), (Skandic)
34. Sound level tag

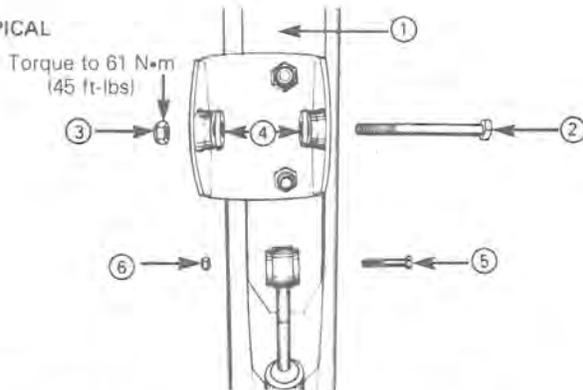


## SKIS

Position the skis ① with a slider cup ④ on each side of the ski leg.

- Install the previously removed ski leg coupler bolt ② until tight (ski must move freely by hand). Install the elastic stop nut ③ on the ski leg coupler, torque to 61 N•m (45 ft-lbs).
- Secure the shock absorber to the ski leg bracket using the bolts ⑤ and elastic stop nuts ⑥.
- Set the ski adjustment to obtain a toe out of 3 mm (1/8"). For proper procedure refer to 1981 Shop Manual (P/N 484 0442 00).

### TYPICAL



## ADJUSTABLE STEERING HANDLE

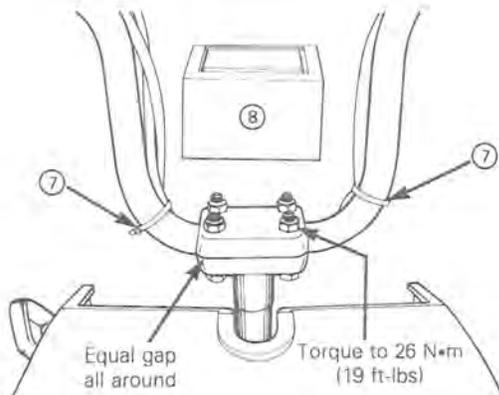
- Secure cut-out and dimmer switch wiring to the steering handle with two tie raps ⑦ supplied.

**WARNING:** Do not tie brake and throttle cables to steering handle.

- Adjust the steering handle to the desired position.
- Lock the steering handle in place by tightening the four (4) screws to 26 N•m (19 ft-lbs).

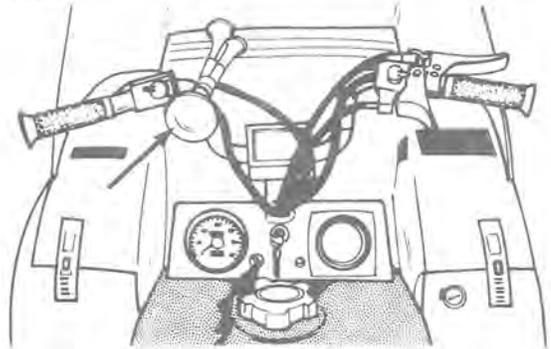
**CAUTION:** Tighten the screws equally and ensure there is an equal gap on each side of the cover.

- Install the steering cap ⑧.



## HORN (SKANDIC ONLY)

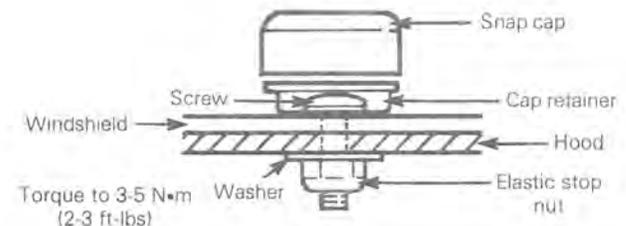
Install and secure the horn ⑨ to the left side of the handlebar.



## WINDSHIELD

- Position windshield ⑩ on the hood then push down until tabs are fully inserted into hood slots.
- Lock windshield tabs in position using the six (6) "D" rings ⑪ supplied in the kit.
- Properly seat the windshield in place.
- Using windshield holes as a guide, drill 5 mm dia. (3/16") holes through the hood. (Nordik only)
- Clean the hood. (Nordik only)
- Peel off protective film from windshield.
- Install the two (2) windshield fixtures ⑫. (Nordik only)

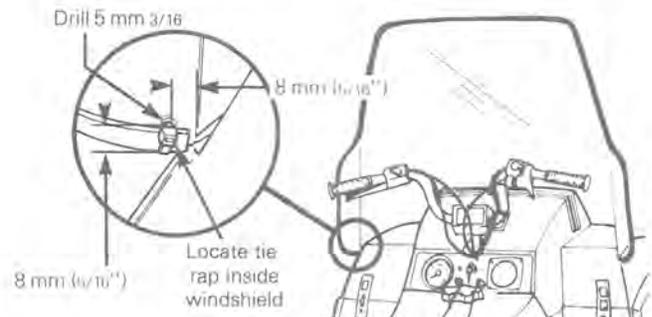
### (NORDIK ONLY)



- If applicable install the windshield trim ⑬.

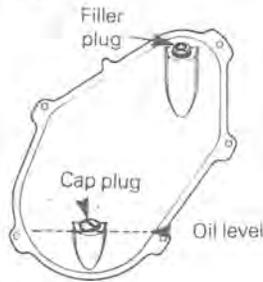
**CAUTION:** Before installing windshield trim, make sure that the protective film is completely removed from edges of the windshield.

If necessary, drill a 5 mm (3/16") hole in the windshield to install the two windshield trim retaining tie raps ⑭. Locate tie rap head inside the windshield. (Nordik only)



## CHAINCASE

Fill the chaincase to the proper level using the oil supplied with the kit (15).



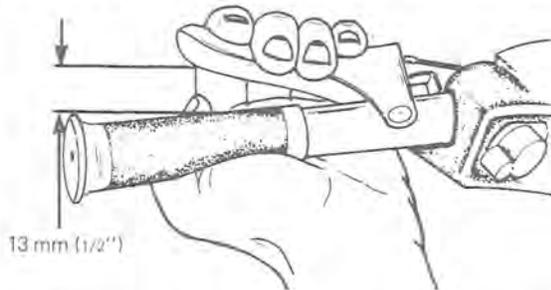
- The oil should be level with the bottom of the oil level orifice.

○ **NOTE:** The chaincase oil capacity is approximately 200 mL (7 oz.).

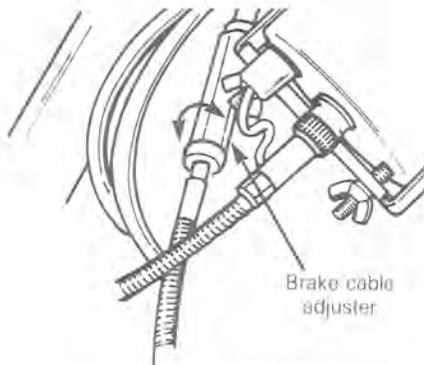
- Check drive axle seal for leaks.

## BRAKE

Brake should apply fully while the brake control lever is approximately 13 mm (1/2") from the handlebar grip.

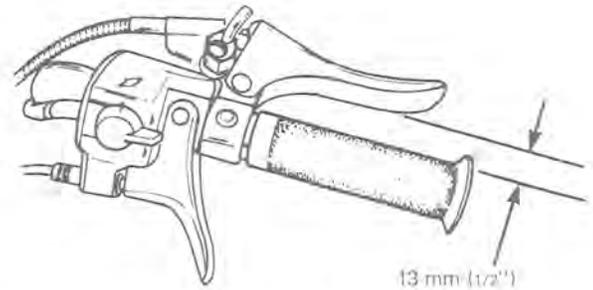


If adjustment is required, turn the brake cable adjuster until the disc brake can no longer turn, then back off the adjuster approximately 1 1/2 turns. Recheck brake operation.

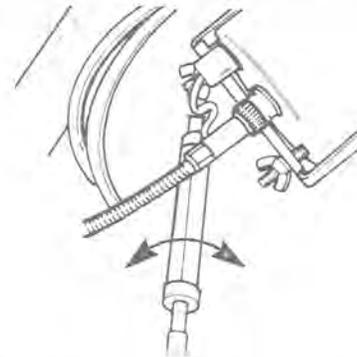


## PARKING BRAKE (SKANDIC ONLY)

Brake should apply fully while the brake control lever is approximately 13 mm (1/2") from the handlebar grip.



If adjustment is required, turn the brake cable adjuster until the disc brake can no longer turn then back off the adjuster approximately 1 1/2 turns. Recheck brake operation.



◆ **WARNING:** Whenever the brakes are readjusted, the brake light switch operation must also be checked and adjusted.

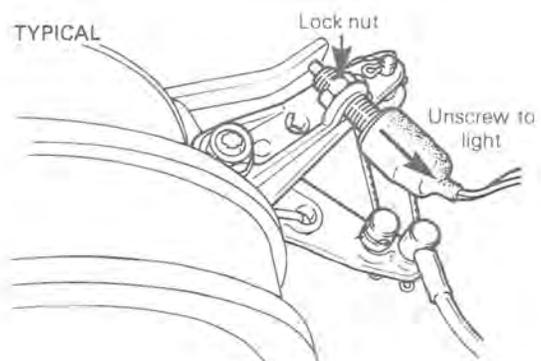
## BRAKE LIGHT SWITCH

### To check operation:

Pull the brake lever to hold the pads on the disc. Check that a light resistance is felt while rotating the driven pulley. This is the position where the switch should illuminate the brake light.

### To adjust:

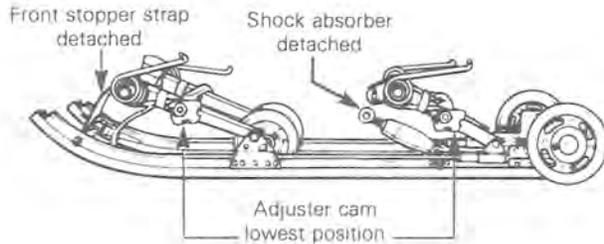
- Loosen the brake switch lock nut.
- Holding brake lever at the position mentioned above, turn switch clockwise or counter-clockwise as required.
- Tighten the brake switch lock nut and recheck brake light operation.



## SUSPENSION POSITIONING

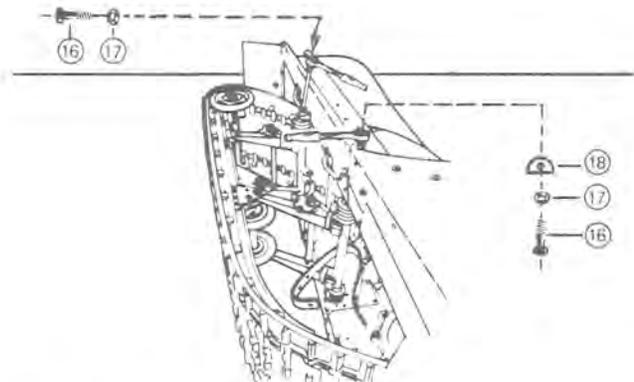
### Preparation

- Detach the front stopper strap.
- Remove cotter pin locking the shock absorber clevis pin and detach the shock absorber by removing the clevis pin.
- Set the adjuster cam to the lowest position and fix the springs with a tape.
- Push the rear idler wheel forward.

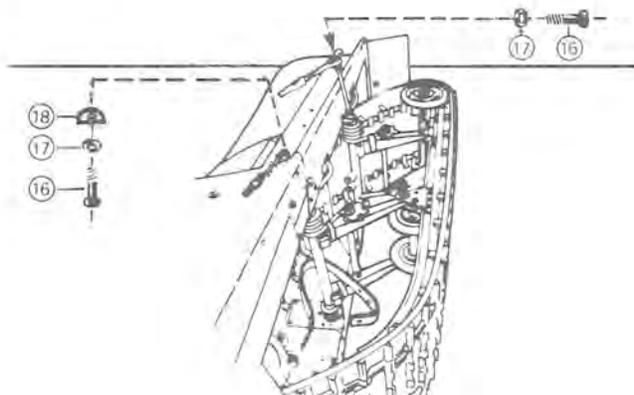


### Installation

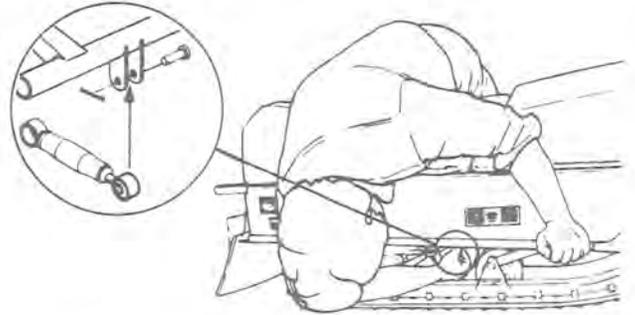
- Place a cardboard on the floor.
- Plug the chaincase vent hole with a small wire to prevent leaks.
- Tilt vehicle on one side.
- Attach front suspension and the rear suspension arm to frame. Do not torque.



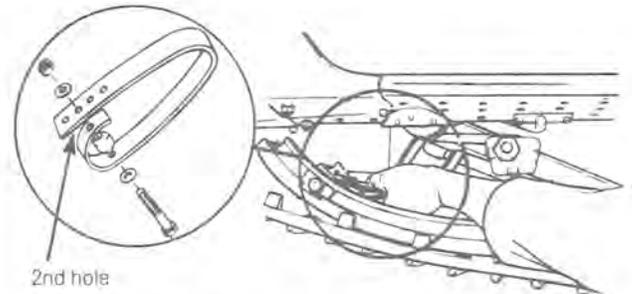
- Tilt the vehicle on the other side.
- Attach the front then the rear suspension arm to frame.



- Reposition vehicle on the ground. Position adjuster cams at the lowest elevation.
- Torque the four suspension retaining bolts to 43 N•m (32 ft-lbs).
- Apply downward pressure on the seat.
- Secure the extended shock with clevis pin and a new cotter pin.



- Attach front stopper strap at 2nd hole.



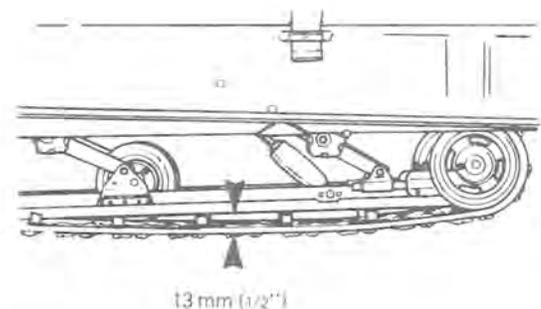
- Remove chaincase vent hole plug.

## TRACK

**WARNING:** Before checking track tension and alignment, ensure that the track is free of all particle which could be thrown out while track is rotating. Keep hands, feet, tools and clothing clear of track.

### Tension

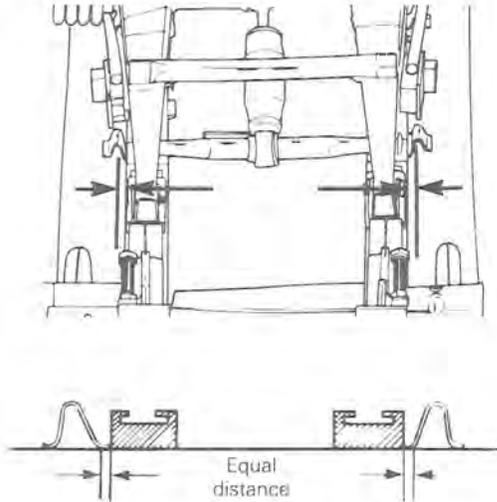
Lift rear of vehicle and support it off the ground. Allow slides to extend normally. A gap of 13 mm (1/2") should exist between slider shoe and bottom inside of tracks.



## Alignment

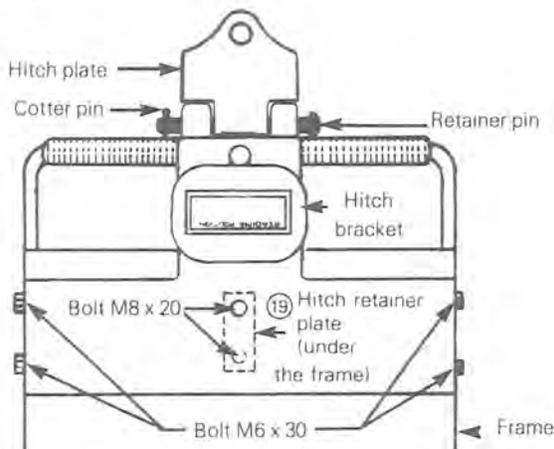
After track tension has been corrected start the engine and accelerate slightly so that track turns slowly. Check that track is well centered.

The distance between the edges of the track guides and the slider shoes should be equal on both sides.



## REAR BUMPER AND HITCH INSTALLATION (NORDIK)

- Push down the seat belt, remove the pin and pull out the belt.
- Remove the two nuts under the track tunnel to pull out the seat.
- Disconnect the connector block at the front of the seat.
- Install the retainer hitch plate (19) under the frame and the hitch bracket (21) over the frame and the rear bumper. Use the two (2) bolts and nuts (20) to secure.
- Install the rear bumper (22) and the four (4) bolts and nuts (23) A
- Install the hitch plate (24) with the retainer pin (25) and the cotter pin (26).

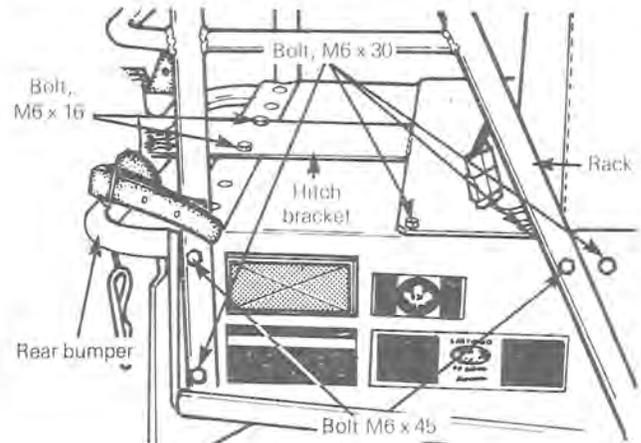


- Reinstall the seat, the seat belt and connect the plug connector.

## REAR BUMPER, RACK AND HITCH INSTALLATION (SKANDIC)

Pull back the rack to its position.

Mount the rear bumper (22) under the tunnel, install the hitch bracket (21) B secure using the screws supplied in the kit (20), (23) B, (23) C.



## SNOW GUARD

Install snow guard (27) to the vehicle using the rivets (28) and washers (29) supplied in the kit. The flat washers must be installed from the inside of the frame.

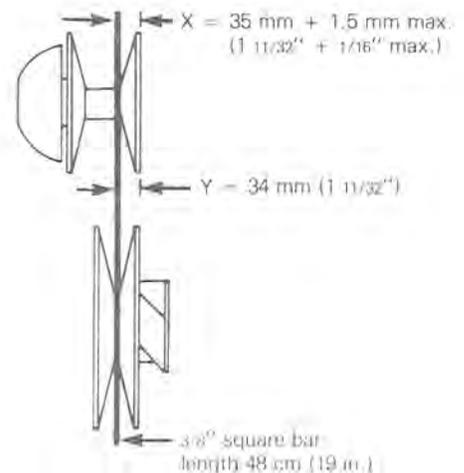
## TOOLS

Set the drive pulley retainer (30), the hexagonal wrench (31) and the emergency starter rope handle (32) in the tool kit.

## PULLEY ALIGNMENT

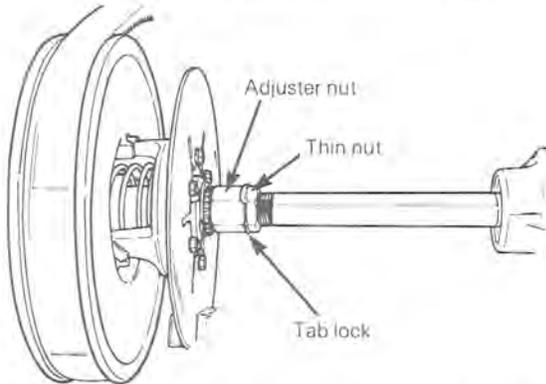
### Offset measurement

- The dimension from the inside edge of the drive fixed pulley to the outside edge of the 3/8" square bar should be 34 mm (1 11/32").



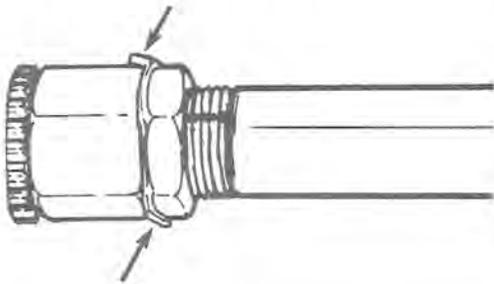
## Offset adjustment

- Remove the air silencer.
- Straighten the tab lock.
- Loosen the thin nut.
- Turn the adjuster nut in order to have a dimension of 34 mm (1 11/32") at the offset measurement.



- Holding the adjuster nut, tighten the thin nut and bend the tab lock.

▼ **CAUTION:** Make sure the tab lock is bent on each of the two nuts.



- Reinstall the air silencer.

## CARBURETOR ADJUSTMENTS

|                   | NORDIK/SKANDIC |
|-------------------|----------------|
| Air screw         | 1.5            |
| Main jet          | 260            |
| Idle speed R.P.M. | 1800-2000      |

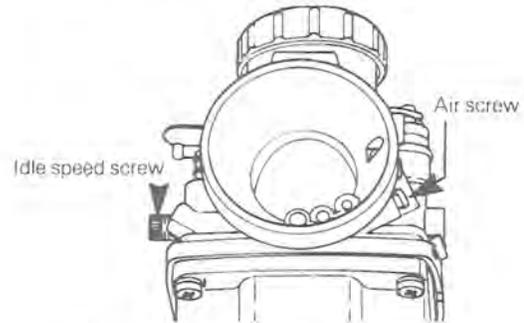
### Air screw adjustment

Completely close the air screw (until a slight sealing resistance is felt) then back off to specifications.

### Idle speed adjustment

Turn idle speed screw clockwise until it contacts the throttle slide then continue turning two (2) additional turns. This will provide a preliminary idle speed setting. Start engine and allow it to warm up then adjust idle speed to specifications by turning idle speed screw clockwise or counter-clockwise.

▼ **CAUTION:** Do not attempt to set the idle speed by the air screw. Severe engine damage can occur.



### Throttle slide adjustment

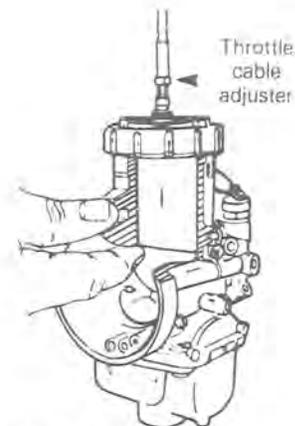
◆ **WARNING:** Ensure the engine is turned **OFF**, prior to the throttle slide adjustment.

- Remove the air in the silencer.

With the throttle cable adjuster jam nut unlocked, press the throttle lever against the handle grip.

By turning the cable adjuster, adjust the carburetor slide cut away so that it is flush with the top of the carburetor bore.

Tighten the cable adjuster jam nut.



◆ **WARNING:** It is important that the throttle slide adjustment be performed to ensure proper functioning of throttle mechanism.

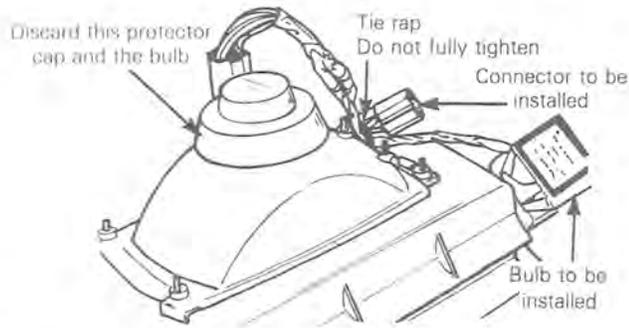
- Reinstall the air intake silencer.

## HEADLAMP (SKANDIC ONLY)

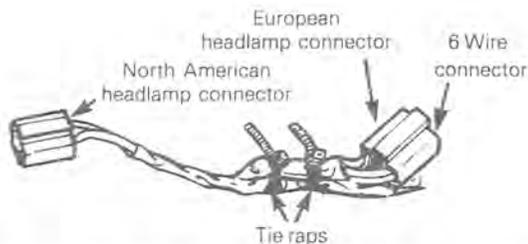
This vehicle is equipped with a headlamp bulb that meets the European standards only.

In order to meet the North American standards, the bulb, the protector cap and the headlamp connector have to be changed. To do this:

- Install the bulb attached to the wiring harness.



- Install the new protector cap ③③.
- Cut the tie rap and exchange the headlamp connectors.
- Fold and secure the European headlamp connector to the wiring harness, using tie raps.

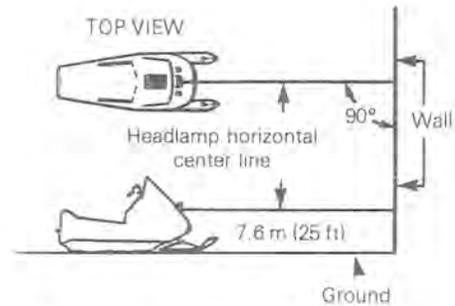
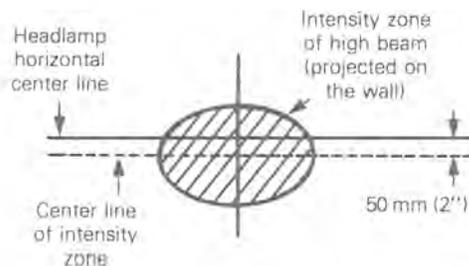


- Install a new tie rap to hold the wiring harness to the headlamp housing. Do not fully tighten the tie rap.

**CAUTION:** Ensure that the European headlamp connector will not vibrate against the hood.

### Beam aiming

Beam aiming is correct when center of high intensity zone of high beam is 50 mm (2") below horizontal headlamp center line.



### Required conditions

- Place vehicle on a flat surface 7,6 m (25') from a wall or screen.
- Suspension adjusted to obtain 20-23 cm (8"-9") between rear of footrest and ground (rider seated on vehicle).
- Turn High Beam ON.

### SOUND LEVEL TAG

Affix the sound level tag ③④ to the steering (located in tool box).

**IMPORTANT:** This label is to be installed on every machine sold and should not be removed prior to purchase.

### GENERAL INSTRUCTIONS

Check vehicle performance. Inspect movement/operation of brake, steering mechanism, headlamp, tail/brake lights, emergency stop switch, dimmer switch and throttle lever. Thereafter, clean the vehicle thoroughly.

Explain the operator manual and warranty to the customer. **COMPLETE AND RETURN WARRANTY REGISTRATION.**

### SPEEDOMETER DECAL (OPTIONAL)

These vehicles are equipped with a metric speedometer. If the customer requires a mile per hour (MPH) scale, a speedometer decal is available under the part number 414 4781 00.

To install:

- Clean the speedometer glass.
- Peel off the protective shield from the decal.
- Install the decal, index the decal "O" point to the speedometer "O" point.

○ **NOTE:** Allow the speedometer and the decal to reach room temperature before proceeding.

▼ **CAUTION:** Expel air bubbles from under the decal.

# 1982 NORDIK AND SKANDIC PRE-DELIVERY TECHNICAL DATA

|  | NORDIK-SKANDIC   |
|--|--|
| SKI ALIGNMENT  | 3 mm (1/8'') toe-out   |
| PULLEY ADJUSTMENT<br>— dimensions X & Y<br>(offset)                | 34 mm (1 11/32'')  |
| CARBURETOR ADJUSTMENT<br>— air screw<br>— main jet<br>— idle speed | 1 1/2 turn<br>260<br>1800-2000 R.P.M.  |
| TRACK ADJUSTMENT<br>— tension                                      | 13 mm (1/2'') gap should exist between slider shoe and bottom inside of track. |





# Pre-Delivery Bulletin

no. 82-7

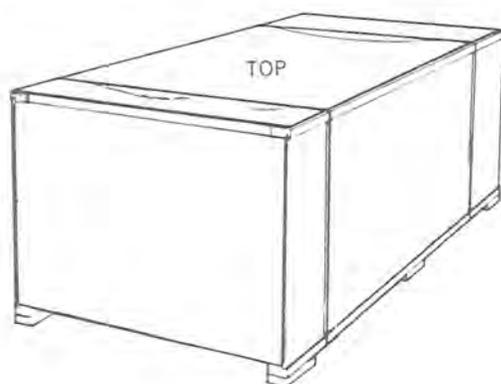
Date: <sup>Year</sup> 1981 <sup>month</sup> 04 <sup>day</sup> 22

MODELS: 1982 BLIZZARD 5500 MX  
1982 SONIC

Serial nos: All

Subject: Pre-Delivery

## UNCRATING



**WARNING:** Strapping is under pressure, therefore care must be observed while cutting.

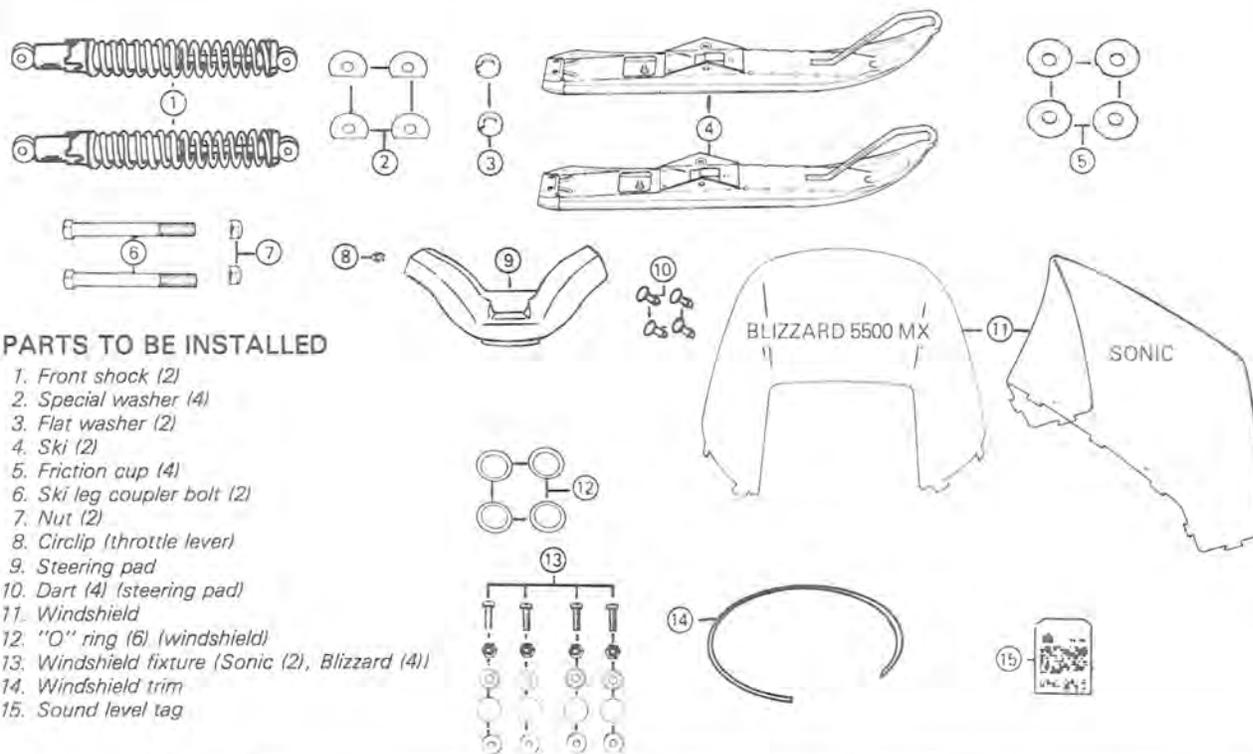
Carefully lay the crate on its bottom. Cut the two (2) straps binding the crate.

Remove the top of the crate then the remaining sides.

Cut the strapping holding skis and suspension. Remove windshield, tool box accessory kit, etc., from vehicle.

**CAUTION:** Loosen the two seat nuts under the track tunnel before pulling out the strapping holding rear portion of the snowmobile. Retorque the seat nuts. Remove the ski leg coupler bolts (6). Detach vehicle from wooden base and remove.

Set clearly all the parts on a plane surface.

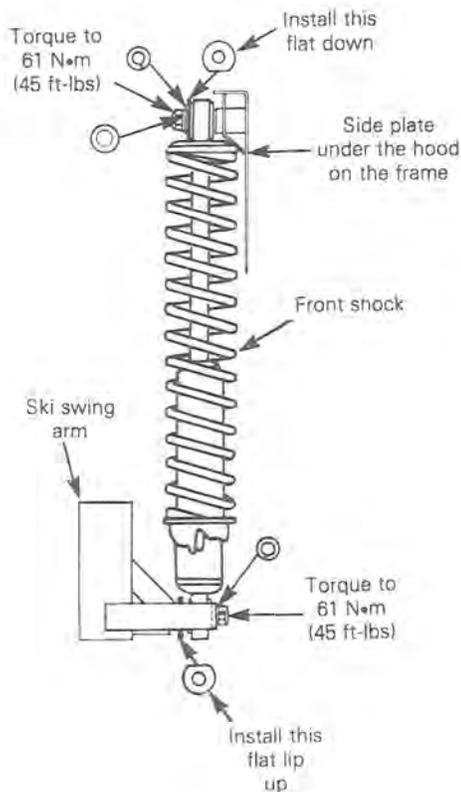


### PARTS TO BE INSTALLED

1. Front shock (2)
2. Special washer (4)
3. Flat washer (2)
4. Ski (2)
5. Friction cup (4)
6. Ski leg coupler bolt (2)
7. Nut (2)
8. Circlip (throttle lever)
9. Steering pad
10. Dart (4) (steering pad)
11. Windshield
12. "O" ring (6) (windshield)
13. Windshield fixture (Sonic (2), Blizzard (4))
14. Windshield trim
15. Sound level tag

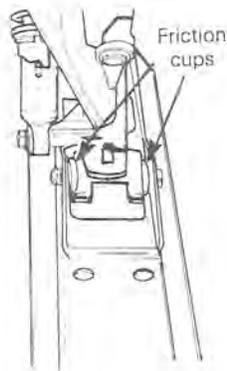
## FRONT SHOCKS INSTALLATION

- Raise the front of the vehicle on a stand.
- Remove the two shipping brackets replacing the shocks.
- Install the shocks ① in place using: the special washers ② (see the illustration), the washers ③, and the previously removed bolts and lockwashers.
- Torque the bolts to 61 N•m (45 ft-lbs).



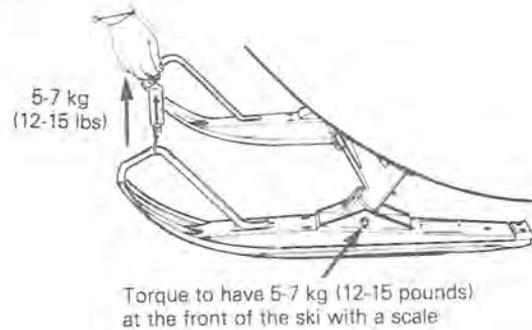
## SKIS

- Position the skis ④ with a friction cup ⑤ on each side of the ski.

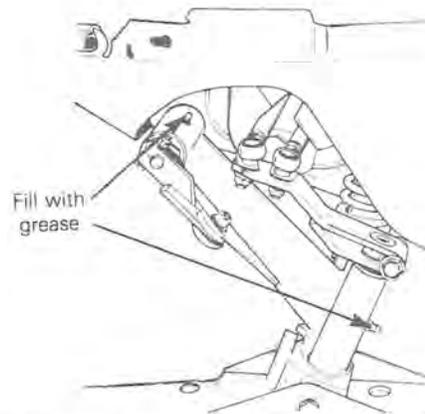


- Install the previously removed ski leg coupler bolt ⑥ and torque to obtain 5-7 kg (12-15 lbs) at the front of the ski.

○ **NOTE:** You must pull on the ski at an angle of 90° with the ski surface. (Front of vehicle Off" the ground).



- Torque the elastic stop nut ⑦ on the ski leg coupler to 56-57 N•m (44-50 ft-lbs).
- Set the ski adjustment to obtain a toe out of 3 mm (1/8").
- Lubricate the steering system.

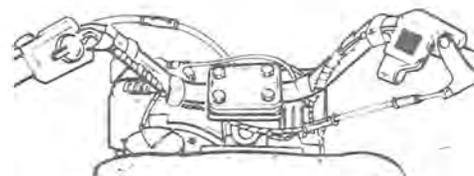


○ **NOTE:** The side pan cap has been removed only to show grease fittings locations, this is not required to lubricate.

## ADJUSTABLE STEERING HANDLE

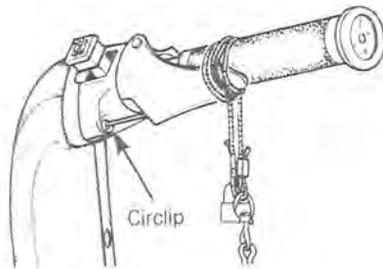
- Adjust the steering handle to the desired position.
- Lock the handle in place by tightening the four (4) screws to 26 N•m (19 ft-lbs).

▼ **CAUTION:** Tighten the screws equally in a criss cross sequence and ensure there is an equal gap on each side of the clamps.



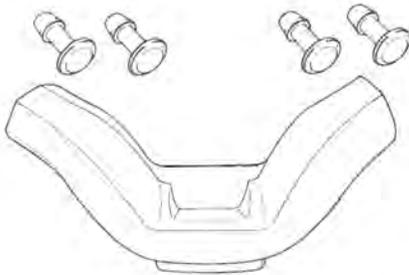
◆ **WARNING:** Do not adjust the handlebar to high to avoid contact when turning, between the brake lever and windshield.

- Remove the tape retaining the throttle lever.
- Pull back the throttle cable housing and insert the cable into the lever.
- Install the circlip (8) supplied with the kit.



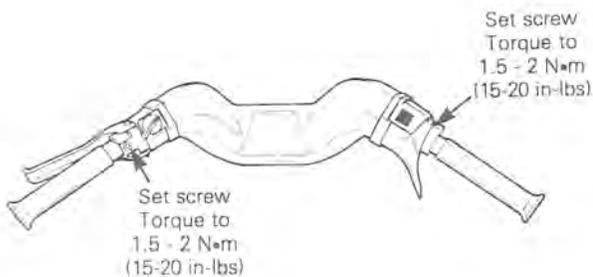
## STEERING PAD

- Properly fit the steering pad (9) to the handle.
- Assemble using the four (4) darts (10) supplied with the kit.



The throttle and brake handles can be adjusted to obtain a better fit with the steering pad. To adjust:

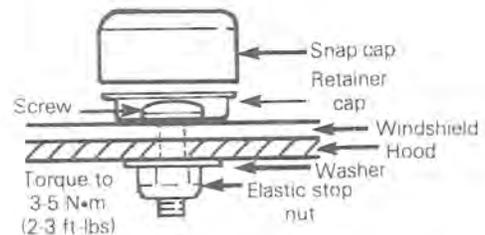
- Loosen the set screw.
- Position as required.
- Retighten set screws.
- Torque to 1.5 - 2 N•m (15-20 in-lbs).



**CAUTION:** Do not exceed recommended torque when tightening set screws, plastic housing may break.

## WINDSHIELD

- Position windshield (11) on the hood then push down until tabs are fully inserted into hood slots.
- Lock windshield tabs in position using the six (6) "O" rings (12) supplied in the kit.
- Properly seat the windshield in place.
- Using windshield holes as a guide, drill 3/16" dia. holes through the hood.
- Clean the hood.
- Peel off protective film from windshield.
- Install the windshield fixtures (13).

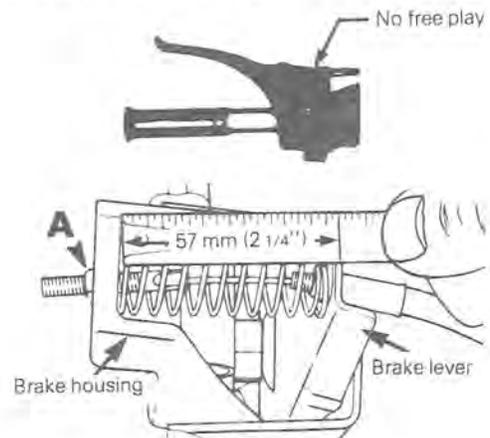


- If necessary, install the windshield trim (14).

**CAUTION:** Before installing windshield trim, make sure that the protective film is completely removed from edges of the windshield.

## BRAKE

The brake system of these models is a self-adjusting type. However, for proper brake operation check that there is no free-play at the handlebar while there is a distance of 57 mm  $\pm$  3 (2 1/4"  $\pm$  1/8) between the brake lever and the brake housing.



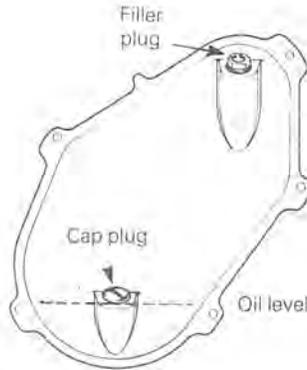
**NOTE:** Before checking distance, apply brake repeatedly until ratchet "click" is no longer heard. To adjust, use adjuster nut "A".

## INJECTION OIL SYSTEM RESERVOIR

Check reservoir oil level. Replenish with Bombardier Snowmobile oil or Castrol oil (P/N 413 801 500).

## CHAINCASE

- Check oil level by removing oil level cap plug.

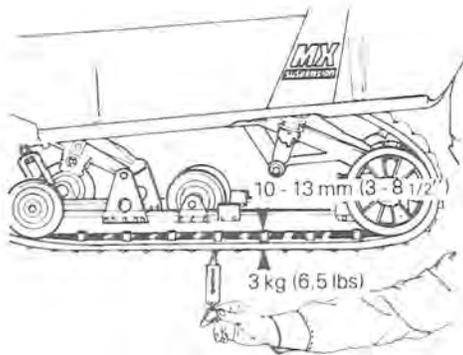


- The oil should be level with the bottom of the oil level orifice.

## TRACK TENSION

Install front springs on adjuster cams.

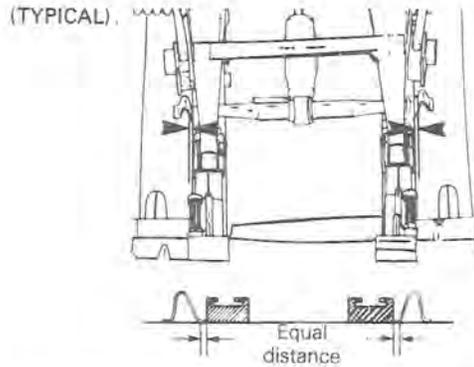
Lift rear of vehicle and support it off the ground. Allow the track to extend normally. Adjust the gap between track and slider shoe between 10 mm to 13 mm (3/8" - 1/2") when pulling down on the track with a force of 3 kg (6.5 lbs).



## TRACK ALIGNMENT

After track tension has been corrected start the engine and accelerate slightly so that track turns slowly. Check that track is well centered.

The distance between the edges of the track guides and the slider shoes should be equal on both sides.



**WARNING:** Before checking track alignment, ensure that the track is free of all particles which could be thrown out while track is rotating. Keep hands, feet, tools and clothing clear of track.

## PULLEY ADJUSTMENT

Nominal distance: 35 mm (1 3/8")  
between pulleys

Dimension X & Y: 34 mm (1 9/32")  
(offset)

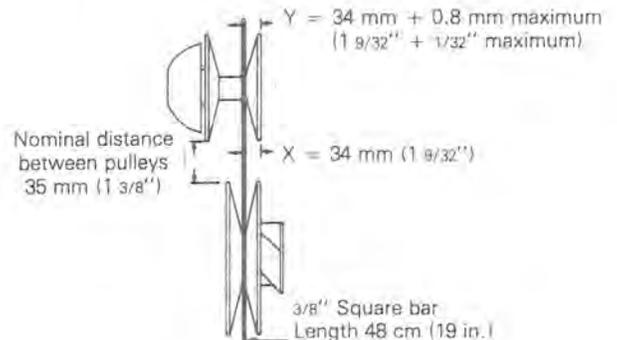
Floating type driven pulley requires a special procedure to measure offset and remove driven pulley assembly.

**IMPORTANT:** Make sure driven pulley assembly is fully seated against bearing plate.

- Measure offset as per usual method.
- If adjustment is required, remove the driven pulley, add or remove shims as required.
- Reinstall pulley, outer shims lockwasher and bolt. Torque to 9 N•m (7 ft-lbs).

**IMPORTANT:** Maximum free-play of the pulley must not exceed 3 mm (1/8").

**CAUTION:** Always apply anti-seize compound (Loctite anti-seize lubricant) on cross shaft before final assembly.

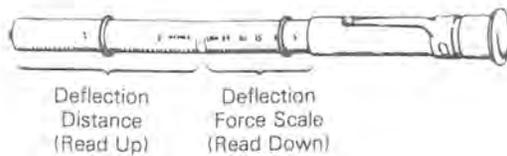


Distance: To obtain maximum vehicle performance, adjust pulley distance as follows:

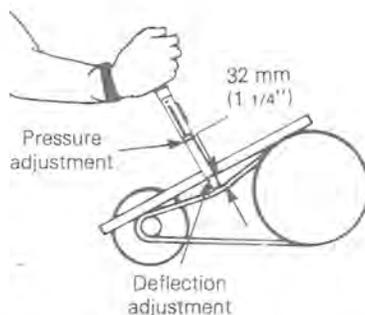
1. Adjust pulley distance to nominal distance.

2. Prior to final adjustment, the drive belt must have a break-in period time of one to two minutes.
3. The final adjustment of pulley distance should be performed by using the belt deflection method that follows:

"V" Belt tension tester method P/N 414 3482 00.



1. Slide lower "O" ring of deflection distance scale to 32 mm (1 1/4").
2. Slide upper "O" ring to zero distance on the deflection force scale.
3. Using wooden rule and tester, apply pressure until lower "O" ring is flush with edge of rule.
4. Read deflection force on the upper scale (at top edge of "O" ring). Reading of 6.8 kg (15 pounds) should be obtained.

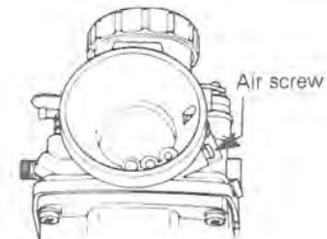


To correct, decrease or increase distance between pulleys.

| DOUBLE CARBURETORS ADJUSTMENTS |                        |
|--------------------------------|------------------------|
|                                | BLIZZARD 5500 MX SONIC |
| Air Screws                     | 1 1/2 turn             |
| Main Jets                      | 220                    |
| Idle Speed R.P.M.              | 1800-2000              |

## Air screws adjustment

On each carburetor, completely close the air screws (until a slight reseating resistance is felt) then back off screws: 1 1/2 turn.



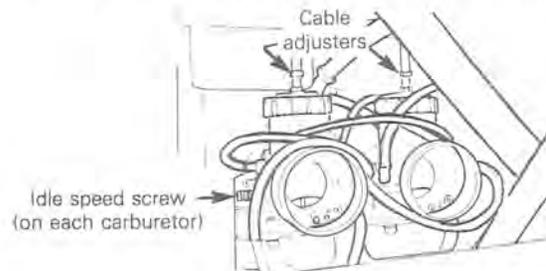
## Throttle slide & idle speed adjustments

With engine turned off:

- Remove the air intake silencer.

**CAUTION:** Never operate the snowmobile with the air intake silencer disconnected. Serious engine damage will occur if this notice is disregarded.

- Back off the idle speed screws completely.



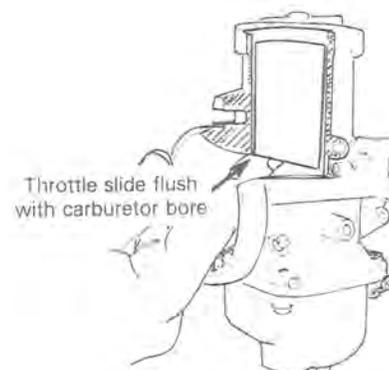
Turn the idle speed screw clockwise until it contacts the throttle slide then continue turning two (2) additional turns. Repeat on the other carburetor. This will ensure identical throttle slide setting.

With the throttle cable adjuster jam nuts unlocked, press the throttle lever against the handle grip.

By turning the cable adjuster, adjust the carburetor slide cut away so that it is flush with the top of the carburetor bore.

Tighten the cable adjuster jam nut.

Repeat for the other carburetor.



Once both carburetors are adjusted, check that with the throttle lever fully depressed, there is a minimum free play of 1/16" between the cover and throttle slide. Re-adjust accordingly.



**WARNING:** This gap is very important. If the throttle slide rests against the carburetor cover at full throttle opening, this will create too much strain and may damage the throttle cable.

Recheck carburetors synchronization.

Start the engine and allow it to warm then adjust the idle speed to 2000 R.P.M. by turning both idle speed screws equally clockwise or counterclockwise.

## OIL INJECTION PUMP ADJUSTMENT

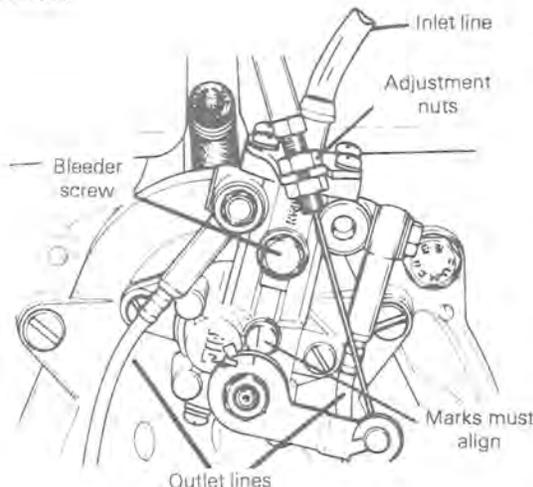
**CAUTION:** The carburetors must be adjusted before adjusting the oil injection pump. Make sure the idle speed is 1800-2000 R.P.M.

To adjust:

Eliminate the throttle cable free-play by pressing the throttle lever until a light resistance is felt, then hold in place. The aligning marks on the pump casting and lever must align perfectly. If not, loosen the adjuster nut and adjust accordingly.

Tighten the adjuster nut.

(TYPICAL)



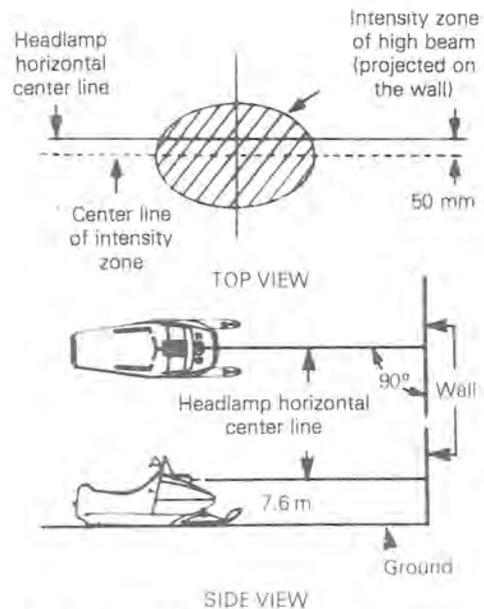
**CAUTION:** Proper oil injection pump adjustment is very important. Any delay in the opening of the pump can result in serious engine damage.

**IMPORTANT:** Make sure all oil lines are full. If required, bleed the inlet line and the pump by loosening the bleeder screw. To bleed the outlet lines, hold the pump lever in a fully open position with the engine at idle speed until the air is bleed off.

**Warning:** Perform this operation in a well ventilated area.

## BEAM AIMING

Beam aiming is correct when center of high intensity zone of high beam is 50 mm (2") below horizontal headlamp center line with the driver seated on the vehicle.



## Required conditions

- Place vehicle on a flat surface 7.6 m (25') from a wall or screen.
- Suspension adjusted to obtain 20-23 cm (8'-9") between rear of footrest and ground (rider seated on vehicle).
- Turn High Beam ON.

## SOUND LEVEL TAG

Affix the sound level tag  to the steering (located in tool box).

**IMPORTANT:** This label is to be installed on every machine sold and must not be removed prior to purchase.

## GENERAL INSTRUCTIONS

Check vehicle performance. Inspect movement/operation of brake, steering mechanism, headlamp, tail/brake lights, emergency stop switch, dimmer switch and throttle lever. Thereafter, clean the vehicle thoroughly.

Explain the Operator's Manual and warranty to the customer. COMPLETE AND RETURN WARRANTY REGISTRATION.

## 1982 BLIZZARD 5500 MX & SONIC PRE-DELIVERY TECHNICAL DATA

|                             |   |
|-----------------------------|---|
| SKI ALIGNMENT               | 3 mm (1/8'') toe out.   |
| PULLEY ADJUSTMENT           |   |
| — nominal distance          | 35 mm (1 3/8'')   |
| — dimensions X & Y (offset) | 34 mm (1 9/32'')  |
| CARBURETORS ADJUSTMENTS     |   |
| — air screws                | 1 1/2   |
| — main jets                 | 220   |
| — idle speed                | 1800-2000 R.P.M.  |
| TRACK ADJUSTMENT            |   |
| — tension (slide)           | 10-13 mm (3/8 - 1/2'') gap should exist between slider shoe and bottom inside of track when pulling down on track with a force of 3 kg (6.5 lbs). |





# Pre-Delivery Bulletin

no. 82-8

Date: 1981 04 23

Serial nos: All

MODELS: 1982 BLIZZARD 9500  
1982 ULTRA SONIC

Subject: Pre-Delivery

## UNCRATING

**WARNING:** Strapping is under pressure, therefore care must be observed while cutting.

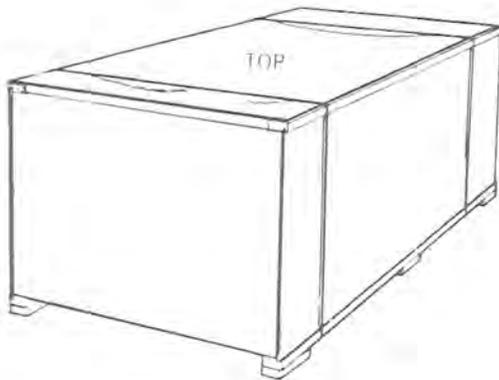
Carefully lay the crate on its bottom. Cut the two (2) straps binding crate.

Remove the top of the crate then the remaining sides.

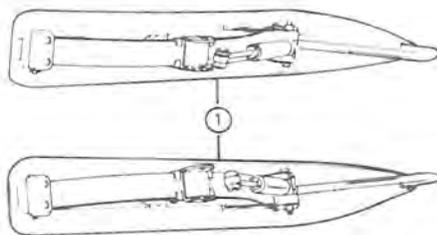
Cut the strapping holding skis and suspension. Remove windshield, tool box accessory kit, etc., from vehicle.

**CAUTION:** Loosen the two seat nuts under the track tunnel before pulling out the strapping holding rear portion of the snowmobile. Retorque the seat nuts. Remove the ski leg coupler bolts (2). Detach vehicle from wooden base and remove.

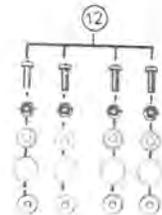
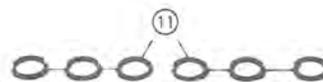
Set clearly all the parts on a plane surface.



## PARTS TO BE INSTALLED

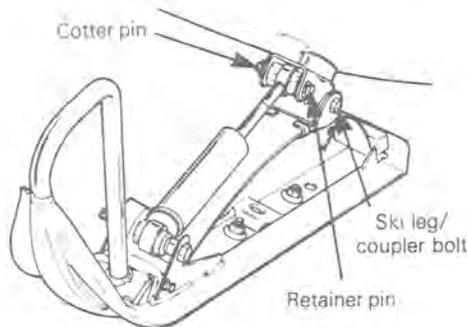


1. Ski (2)
2. Ski leg coupler bolt (2)
3. Elastic stop nut (2)
4. Ski leg spacer (4)
5. Retainer pin (2) (shock)
6. Cotter pin (2) (shock)
7. Circlip (throttle lever)
8. Steering pad
9. Dart (4) (steering pad)
10. Windshield
11. "O" ring (windshield)
12. Windshield fixture  
Blizzard 9500 (4), Ultra Sonic (2)
13. Windshield trim
14. Snow guard
15. Rivet (4) (snow guard)
16. Washer (4) (snow guard)
17. Sound level tag



## SKIS

- Position the skis ① with a spacer ④ on each side of the ski leg.
- Install the previously removed ski leg coupler bolt ② until tight (ski must move freely by hand). Install then torque elastic stop nut ③ on ski leg coupler bolt to 61 N•m (45 ft-lbs).
- Secure shock absorber to ski leg bracket using re-tainer ⑤ and cotter pins ⑥.

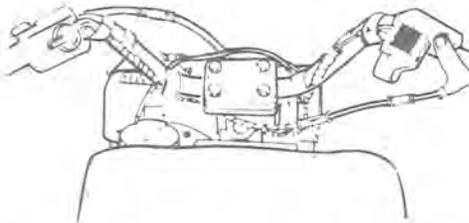


- Set ski adjustment to obtain a toe out of 3 mm (1/8").

## ADJUSTABLE STEERING HANDLE

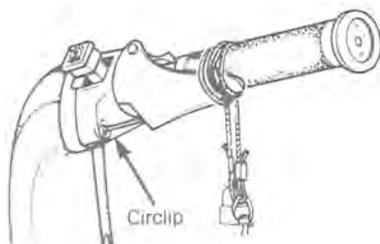
- Adjust the steering handle to the desired position.
- Lock the handle in place by tightening the four (4) screws to 26 N•m (19 ft-lbs).

**CAUTION:** Tighten the screws equally in a criss-cross sequence and ensure there is an equal gap on each side of the clamps.



**WARNING:** Do not adjust the handlebar to high to avoid contact between the brake lever and windshield when turning.

- Remove the tape retaining the throttle lever.
- Pull back the throttle cable housing and insert the cable into the lever.
- Install the circlip ⑦ supplied with the kit.



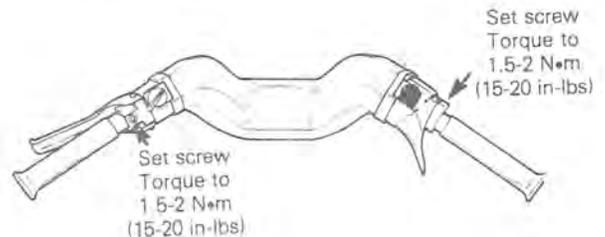
## STEERING PAD

- Properly fit the steering pad ⑧ to the handle.
- Assemble using the four (4) darts ⑨ supplied with the kit.



The throttle and brake handles can be adjusted to obtain a better fit with the steering pad. To adjust:

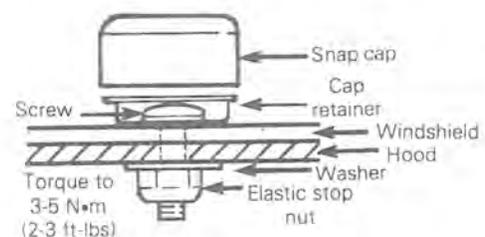
- Loosen the set screw.
- Position as required.
- Retighten set screws.
- Torque to 1.5 - 2 N•m (15-20 in-lbs).



**CAUTION:** Do not exceed recommended torque when tightening set screws, plastic housing may break.

## WINDSHIELD

- Position windshield ⑩ on the hood then push down until tabs are fully inserted into hood slots.
- Lock windshield tabs in position using the six (6) "O" rings ⑪ supplied in the kit.
- Properly seat the windshield in place.
- Using windshield holes as a guide, drill 3/16" dia. holes through the hood.
- Clean the hood.
- Peel off protective film from windshield.
- Install the windshield fixtures ⑫.



- If necessary, install the windshield trim ⑬.

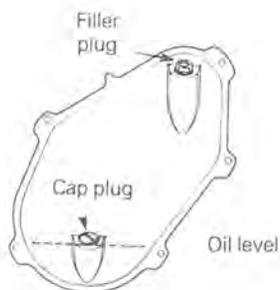
**CAUTION:** Before installing windshield trim, make sure that the protective film is completely removed from edges of the windshield.

## INJECTION OIL SYSTEM RESERVOIR

Check reservoir oil level. Replenish with Bombardier Snowmobile oil or Castrol oil P/N 413 801 500.

## CHAINCASE

— Check oil level by removing oil level cap plug.

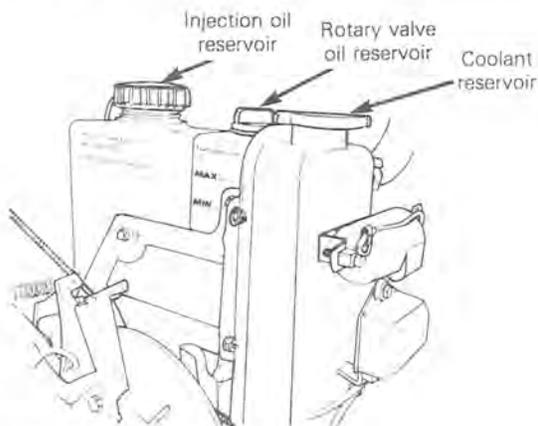


— The oil should be level with the bottom of the oil level orifice.

## ROTARY VALVE OIL RESERVOIR

Check reservoir oil level.

Level should be between level lines of plastic reservoir. If necessary to replenish use Bombardier Snowmobile oil.



## COOLING SYSTEM

Check tightness of all hose gear clamps and of engine filler and drain plugs.

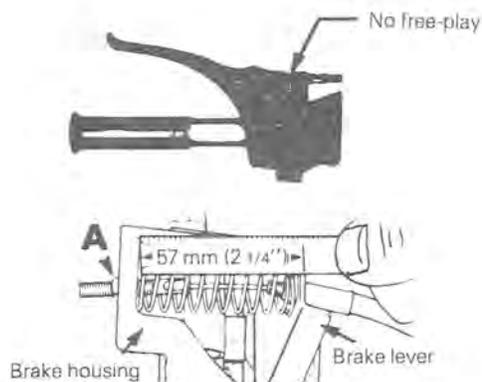
Check coolant level, it should reach approximately 25 mm (1") below filler neck of reservoir.

Reinstall tank cap and start engine; let engine run until it reaches its operating temperature and thermostat opens. Allow it to run a few minutes more.

Stop engine and check coolant level; refill as necessary.

## BRAKE

The brake system of these models is a self-adjusting type. However, for proper brake operation check that there is no free-play at the handlebar while there is a distance of 57 mm  $\pm$  3 (2 1/4  $\pm$  1/8) between the brake lever and the brake housing.



**NOTE:** Before checking distance, apply brake repeatedly until ratchet "click" is no longer heard. To adjust, use adjuster nut "A".

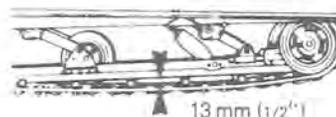
## SUSPENSION POSITIONING

— Install front springs on adjuster cams.

## TRACK

### Tension

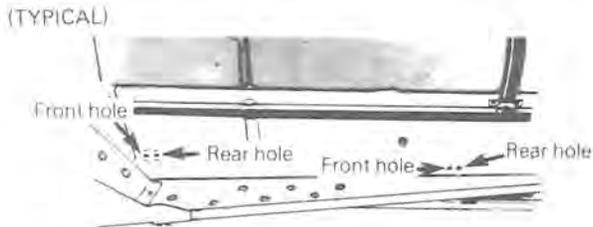
Lift rear of vehicle and support it off the ground. Allow slide to extend normally. A gap of 13 mm (1/2") should exist between slider shoe and bottom inside of track.



**NOTE:** On these vehicles, holes in the frame provide the possibility of relocating the suspension arms for easier track tension adjustment.

If the slide suspension adjustment screws are at the maximum adjustment and the suspension arms are at the front holes in the frame, you may move the suspension arms at the rear holes and obtain more track tension adjustment.

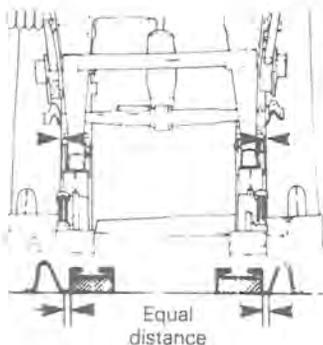
**CAUTION:** Ensure that suspension arms are at the same position on each side of the frame to avoid any damage to the suspension system and to the track.



### Alignment

After track tension has been corrected start the engine and accelerate slightly so that track turns **slowly**. Check that track is well centered.

The distance between the edges of the track guides and the slider shoes should be equal on both sides.



**WARNING:** Before checking track alignment, ensure that the track is free of all particles which could be thrown out while track is rotating. Keep hands, feet, tools and clothing clear of track.

### SNOW GUARD

Install snow guard (14) to the vehicle using the rivets (15) and washers (16) supplied in the kit. The flat washers must be installed from inside the frame.

### PULLEY ADJUSTMENT

Nominal distance: 35 mm (1 3/8")  
between pulleys

Dimension X & Y: 34 mm (1 9/32")  
(offset)

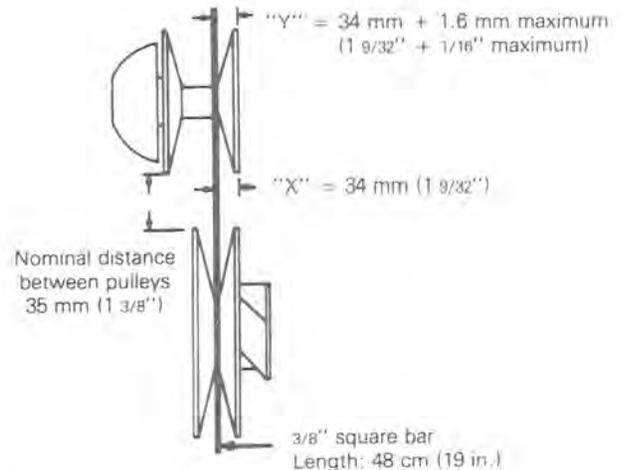
Floating type driven pulley requires a special procedure to measure offset and remove driven pulley assembly.

**IMPORTANT:** Make sure driven pulley assembly is fully seated against bearing plate.

- Measure offset as per usual method.
- If adjustment is required, remove the driven pulley, add or remove shims as required.
- Reinstall pulley, outer shims lockwasher and bolt. Torque to 9 N•m (7 ft-lbs).

**IMPORTANT:** Maximum free-play of the pulley must not exceed 3 mm (1/8").

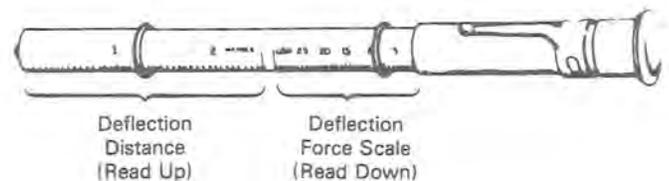
**CAUTION:** Always apply anti-seize compound (Loctite anti-seize lubricant) on cross shaft before final assembly.



**Distance:** To obtain maximum vehicle performance, adjust pulley distance as follows:

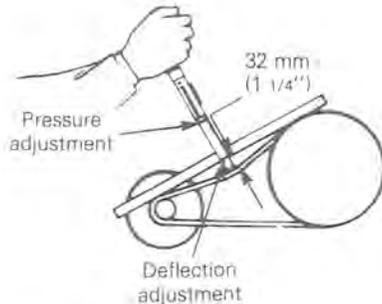
1. Adjust pulley distance to nominal distance.
2. Prior to final adjustment, the drive belt must have a break-in period time of one to two minutes.
3. The final adjustment of pulley distance should be performed by using the belt deflection method that follows:

"V" Belt tension tester method P/N 414 3482 00



1. Slide lower "O" ring of deflection distance scale to 32 mm (1 1/4").
2. Slide upper "O" ring to zero distance on the deflection force scale.

- Using wooden rule and tester, apply pressure until lower "O" ring is flush with edge of rule.
- Read deflection force on the upper scale (at top edge of "O" ring). Reading of 6.8 kg (15 pounds) should be obtained.



## CARBURETOR ADJUSTMENTS

**CAUTION:** Check oil injection pump adjustment each time carburetor are adjusted.

|                   | BLIZZARD 9500<br>ULTRA SONIC |
|-------------------|------------------------------|
| Air Screw         | 1.5 turn                     |
| Main Jet          | P.T.O.: 310    MAG.: 330     |
| Idle Speed R.P.M. | 1800-2000                    |

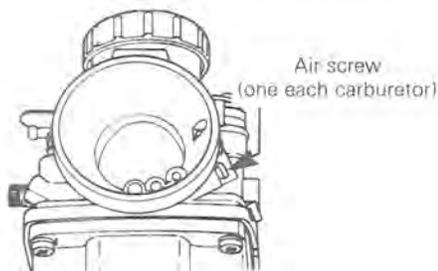
**CAUTION:** Never operate the snowmobile with the air intake silencer disconnected. Serious engine damage will occur if this notice is disregarded.

The carburetor adjustment are:

- Air Screw
- Throttle Slide Adjustment
- Idle Speed

### A) Air screw adjustment

Completely close the air screw (until a slight reseating resistance is felt) then back off screw is specified.



### B) Throttle slide adjustment

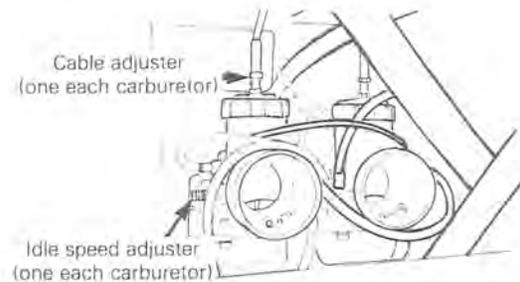
**WARNING:** Ensure the engine is turned **OFF**, prior to the throttle slide adjustment.

For maximum performance, correct carburetor throttle slide adjustment is critical.

The following method should be used:

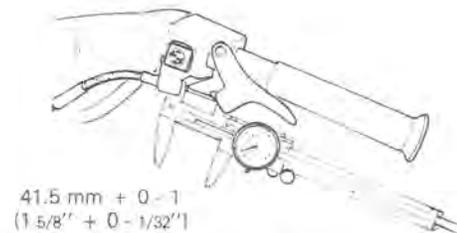
**With engine turned off:**

- Remove the air intake silencer.
- Back off the idle speed screws completely.



Turn the idle speed screw clockwise until it contacts the throttle slide then continue turning two (2) additional turns. Repeat on the other carburetor. This will ensure identical throttle slide idle setting.

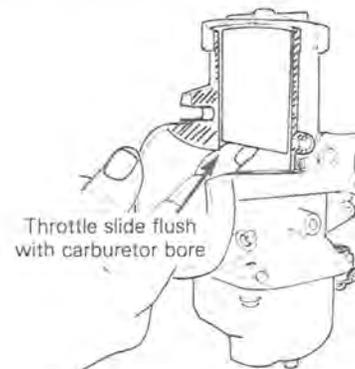
With the throttle cable adjuster jam nuts unlocked, press the throttle lever, until a distance of 41.5 mm + 0 - 1 (1 5/8" + 0 - 1/32") is obtained between lever and housing, and hold in this position.



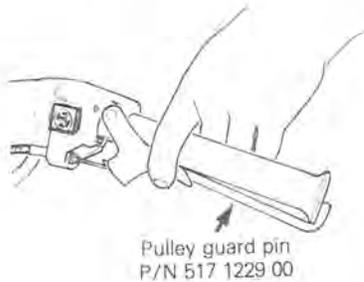
By turning the cable adjuster, adjust the carburetor slide cut away so that it is flush with the top of the carburetor bore.

Tighten the cable adjuster jam nut.

Repeat for the other carburetor.



If a precise measuring tool is unavailable, a pin P/N 517 1229 00 (pulley guard pin) can be used as illustrated. This will give the gap of 41.5 mm required.

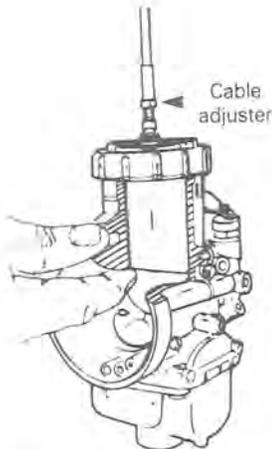


With the throttle cable adjuster jam nut unlocked, press the throttle lever against the handle grip.

By turning the cable adjuster, adjust the carburetor slide cut away so that it is flush with the top of the carburetor bore.

Tighten the cable adjuster jam nut.

Release the throttle lever.



▼ **CAUTION:** Make sure both carburetors start to operate simultaneously.

◆ **WARNING:** It is important that the throttle slide adjustment be performed to ensure proper functioning of throttle mechanism.

Once both carburetors are adjusted, check that with the throttle lever fully depressed, there is a free play of 1/16" between the cover and throttle slide. Readjust accordingly.



◆ **WARNING:** This gap is very important. If the throttle slide rests against the carburetor cover at full throttle opening, this will create too much strain and may damage the throttle cable.

Recheck carburetor synchronization.

### C) Idle speed adjustment

Start engine and allow it to warm up then adjust idle speed to 1800-2000 R.P.M. by turning idle speed screws equally clockwise or counter-clockwise.

▼ **CAUTION:** Do not attempt to set the idle speed by using the air screw. Severe engine damage can occur.

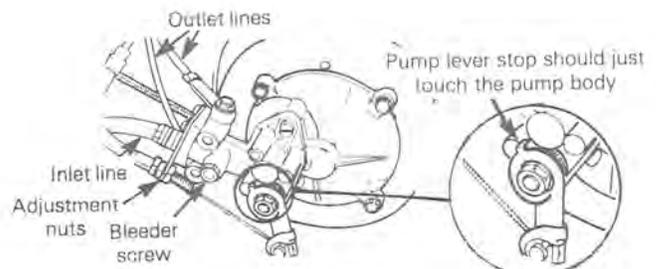
### OIL INJECTION PUMP ADJUSTMENT

▼ **CAUTION:** The carburetors must be adjusted before adjusting the oil injection pump. Make sure the idle speed is 1800-2000 R.P.M. and that the pump lever stop is bent to 90° with the lever.

To adjust:

Eliminate the throttle cable free-play by pressing the throttle lever until a light resistance is felt, then hold in place. The pump lever stop should just touch the pump body. If not loosen the adjuster nut and adjust.

Tighten the adjuster nut.



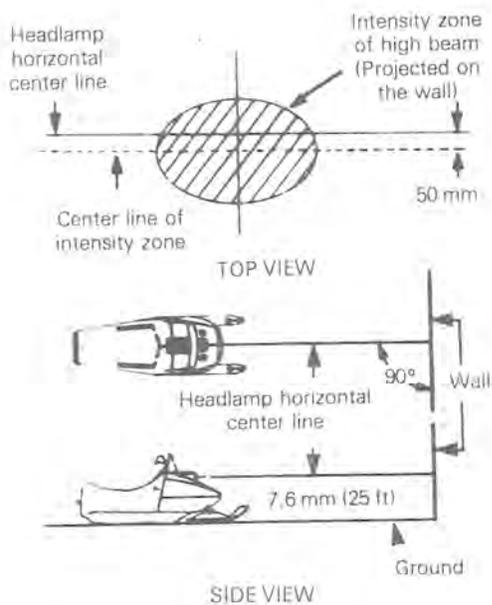
▼ **CAUTION:** Proper oil injection pump adjustment is very important. Any delay in the opening of the pump can result in serious engine damage.

**IMPORTANT:** Make sure all oil lines are full. If required, bleed the inlet line and the pump by loosening the bleeder screw. To bleed the outlet lines, hold the pump lever in a fully open position with the engine at idle speed until the air is bleed off.

◆ **WARNING:** Perform this operation in a well ventilated area.

## BEAM AIMING

Beam aiming is correct when center of high intensity zone of high beam is 50 mm (2") below horizontal head lamp center line.



## Required conditions

- Place vehicle on a flat surface 7.6 mm (25') from a wall or screen.
- Suspension adjusted to obtain 16.5-19 cm (6 1/2-7 1/2") between rear of footrest and ground (rider seated on vehicle).
- Turn High Beam ON.

## SOUND LEVEL TAG

Affix the sound level tag ① to the steering (located in tool box).

**IMPORTANT:** This label is to be installed on every machine sold and must not be removed prior to purchase.

## GENERAL INSTRUCTIONS

Check vehicle operation. Inspect movement/operation of brake, steering mechanism, headlamp, tail/brake lights, emergency stop switch, dimmer switch and throttle lever. Thereafter, clean the vehicle thoroughly.

Explain the operator manual and warranty to the customer. **COMPLETE AND RETURN WARRANTY REGISTRATION.**

# 1982 BLIZZARD 9500 1982 ULTRA SONIC PRE-DELIVERY TECHNICAL DATA

|  |   |
|--|---|
| SKI ALIGNMENT  | 3 mm (1/8'') toe out.   |
| PULLEY ADJUSTMENT<br><br>— nominal distance<br>(between pulleys)<br><br>— dimensions X and Y<br>(offset) | 35 mm (1 3/8'')<br><br>34 mm (1 9/32'')   |
| CARBURETOR<br><br>— air screw<br><br>— main jet<br><br>— idle speed                                      | 1.5 turn<br><br>P.T.O.: 310    MAG.: 330<br><br>1800-2000 R.P.M.                  |
| TRACK ADJUSTMENT<br><br>— tension (slide)  | 13 mm (1/2'') gap should exist between<br>slider shoe and bottom inside of track. |

**1982 BLIZZARD 9500 - ULTRA SONIC  
PRE-DELIVERY CHECK LIST**

| SERIAL NOS. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                               |
|-------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|-------------------------------|
|             |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Skis                          |
|             |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Steering handle               |
|             |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Steering pad                  |
|             |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Windshield                    |
|             |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Injection oil                 |
|             |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Chaincase oil                 |
|             |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Rotary valve oil              |
|             |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Cooling system                |
|             |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Brake adjustment              |
|             |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Suspension positioning        |
|             |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Track tension                 |
|             |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Track alignment               |
|             |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Snow guard                    |
|             |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Pulley adjustment             |
|             |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Carburetors adjustments       |
|             |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Oil injection pump adjustment |
|             |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Beam aiming                   |
|             |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Sound level tag               |
|             |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Test ride                     |
|             |  |  |  |  |  |  |  |  |  |  |  |  |  |  | PREPARED BY/Date              |
|             |  |  |  |  |  |  |  |  |  |  |  |  |  |  | DELIVERED                     |
|             |  |  |  |  |  |  |  |  |  |  |  |  |  |  | INSPECTED/Date                |

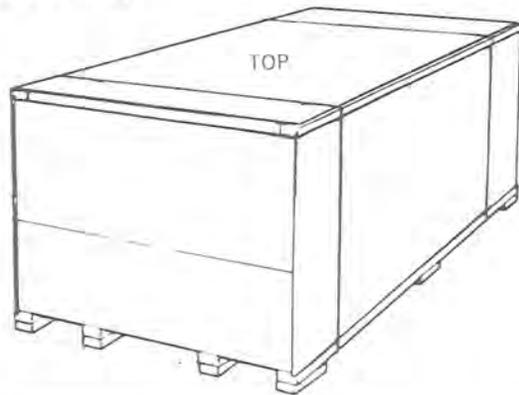
**IMPORTANT:** Explain the operator manual and warranty policy to the customer. Complete and return warranty registration.  
(BOMBARDIER SNOWMOBILE, PRE-DELIVERY 82-8), PAGE 9

Date: 1981 04 27

MODELS: 1982 ELITE

Subject: Pre-Delivery

## UNCRATING



Carefully lay the crate on its bottom. Cut the two (2) straps binding the crate.

◆ **WARNING:** Strapping is under pressure, therefore care must be observed while cutting.

Remove the top of the crate then the remaining sides.

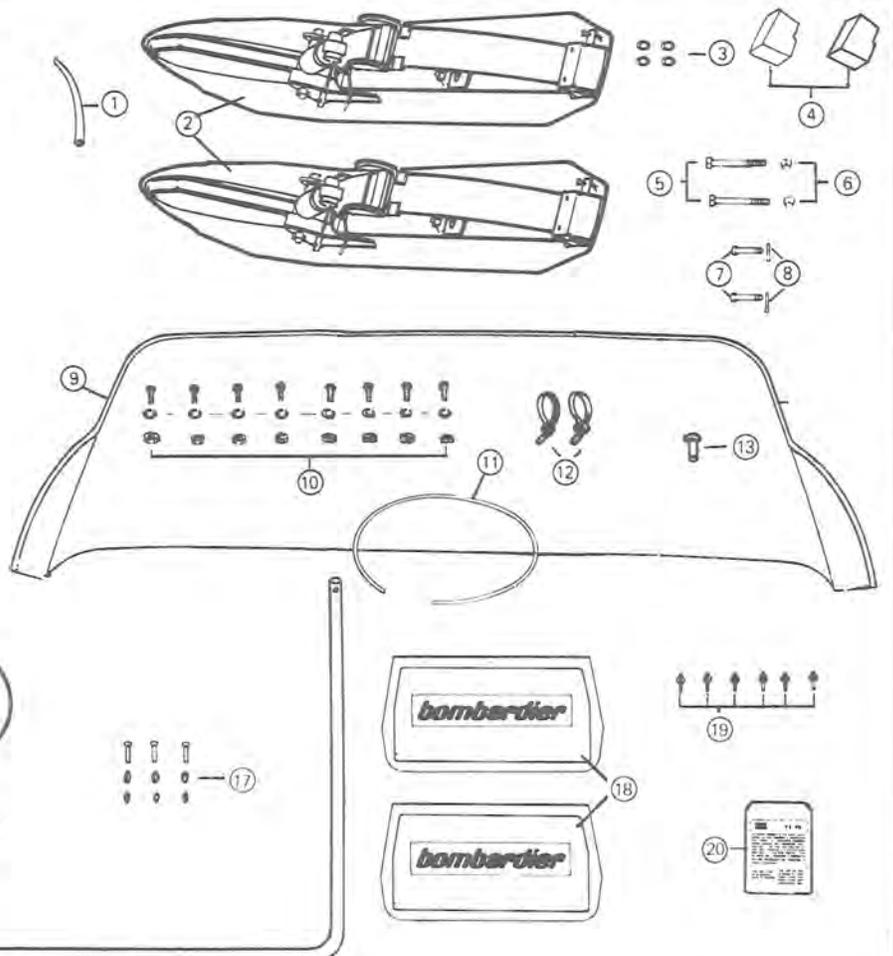
Remove skis, windshield, accessory kit, etc, from vehicle or crate.

Detach vehicle from wooden base and remove.

○ **NOTE:** Discard the two (2) large spacers used to secure the ski leg to the crate.

## PARTS TO BE INSTALLED

1. Vent tube (battery)
2. Ski (2)
3. Ski spacer (4)
4. Rubber stopper (2) (ski)
5. Ski leg coupler bolt (2)
6. Elastic stop nut (2)
7. Retainer pin (2) (shock)
8. Cotter pin (2) (shock)
9. Windshield
10. Windshield fixture (8)
11. Windshield trim
12. Windshield trim tie rap (2)
13. Trunk door stopper
14. Roll bar
15. Bolt & nut (2) (roll bar)
16. Mirror
17. Mirror fixture (2)
18. Snow guard (2)
19. Rivet (16) (snow guard)
20. Sound level tag



## BATTERY

Remove battery from vehicle. Remove small sealing tube and filler caps from battery. Fill with electrolyte to upper level line.

Let the battery stand for half an hour after filling, then readjust the electrolyte to the upper level line.

▼ **CAUTION:** Prior to filling and charging the battery, always remove it from the vehicle to prevent electrolyte spillage.

Charge battery at a charging rate of 2 amperes until specific gravity of 1.280 at 20°C (68°F) is attained.

◆ **WARNING:** If cell temperature exceeds 55°C (127°F) discontinue charging temporarily, or reduce charging rate. Gases given off by a battery being charged are highly explosive. Always charge in a well ventilated area. Keep battery away from cigarette or open flames.

Reinstall caps. Wipe battery clean then install on vehicle. Coat battery terminals with petroleum jelly to prevent corrosion. Connect one end of vent tube ① to battery vent elbow and other end to outlet hole in frame. (Located between the fuel tank and the battery).

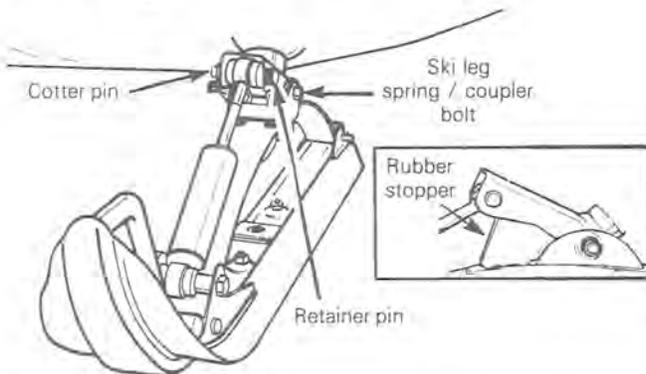
◆ **WARNING:** Vent must be free and open. A kinked or bent tube will restrict ventilation and create gas accumulation that could result in an explosion.

○ **NOTE:** Ensure to reposition the air intake elbow.

## SKIS

Position skis ② with a spacer ③ on each side of ski leg (with rubber stopper ④ positioned on spring coupler) then install the ski leg coupler bolt ⑤. Install then torque elastic stop nut ⑥ on ski leg coupler bolt to 61 N•m (45 ft-lbs). (Ski must move freely by hand).

Secure shock absorber to ski leg using retainer ⑦ and cotter pins ⑧.



Set ski adjustment to obtain a toe-out of 3 mm (1/8 in).

## WINDSHIELD

Align the windshield ⑨ in position (in order to have the windshield deflector pleat on each side in line with the body side).

Mark the body, and drill 17/64" holes. Secure the windshield in place using the windshield fixtures ⑩.

If required, install windshield trim ⑪ on outer edge, and secure both ends by installing the two (2) supplied tie wraps ⑫.

Install the trunk door stopper ⑬ in place by drilling a 1/8" hole in the center of the windshield at exactly 23 cm (9") from bottom edge of windshield and push the trunk door stopper in place.

## ROLL BAR

Insert the roll bar ⑭ in the respective holes. Align the roll bar hole with the body tube hole and secure the two (2) retaining bolts and nuts ⑮.

## MIRROR

Install the mirror ⑯ to the customer's preference using the supplied fixtures ⑰.

## INJECTION OIL SYSTEM RESERVOIR

Check reservoir oil level. Replenish with Bombardier Snowmobile oil or Castrol oil (P/N 413 8015 00).

## ROTARY VALVE RESERVOIR

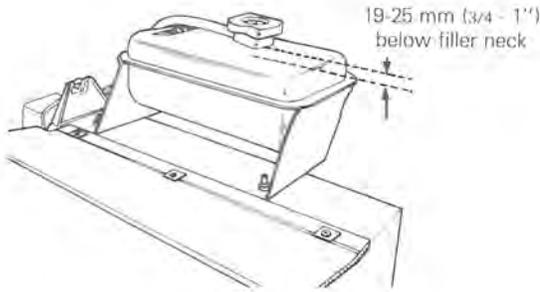
Check reservoir oil level.

Level should not be below level line of plastic reservoir. If necessary to replenish use Bombardier Snowmobile Oil.



## COOLING SYSTEM

Check coolant level, it should reach approximately 19-25 mm (3/4" - 1") below filler neck of reservoir.

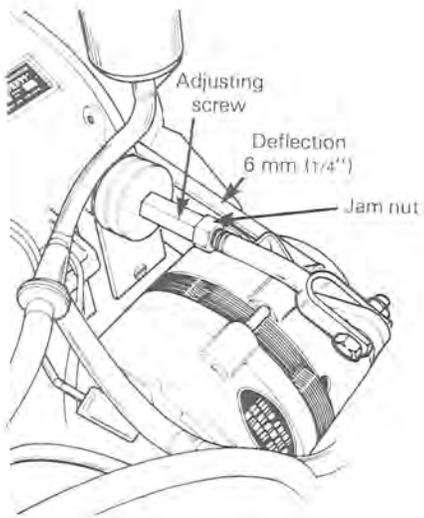


Start engine and allow it to warm up to 43°C (110°F) until thermostat opens then run engine for approximately one minute more. Stop engine and if necessary refill cooling system with a solution of 55% concentrated anti-freeze plus 45% of water.

◆ **WARNING:** To remove coolant tank pressure cap, place a cloth over the cap and unscrew it to the first step to release the pressure first.

## FAN BELT

Check fan belt deflection, it should be 6 mm (1/4") deflection.



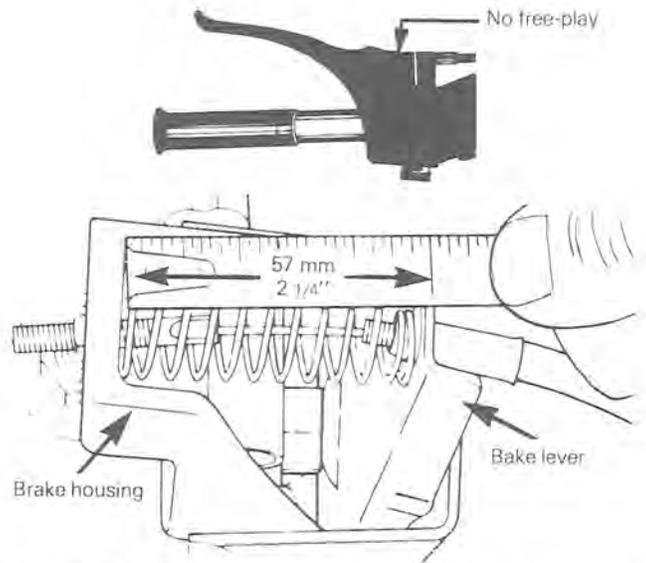
If the tension is incorrect:

Loosen the jam nut, turn adjusting screw in the direction to obtain the recommended belt tension. Retighten the jam nut.

## BRAKE

○ **NOTE:** To ease any adjustment or verification, the seats can be removed by unscrewing the 4 retaining wing nuts (located in the engine compartment) and by removing the two (2) access panels.

The brake system is a self-adjusting type, however, for proper brake operation check that there is no free-play at the handlebar while there is a distance of 57 mm ± 3 (2 1/4" ± 1/8) between the brake lever and the brake housing.

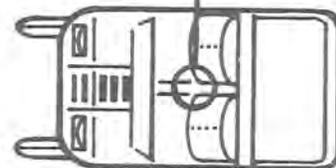
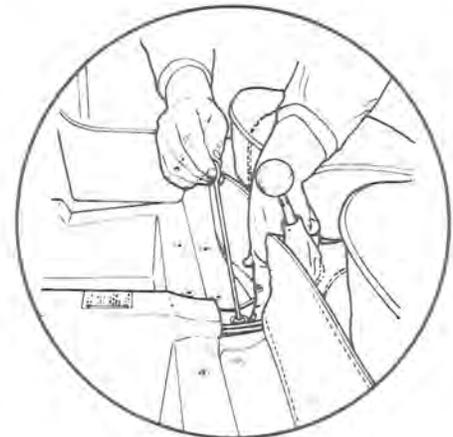


○ **NOTE:** Before checking distance, apply brake repeatedly until ratchet "click" is no longer heard. To adjust, use adjuster nut.

## GEARBOX OIL OIL LEVEL

Lift edge of seat leatherette and remove the bolt from the dipstick guide tube. (The tube is located in front of the gear shift lever). Insert dipstick into tube then withdraw. Oil should reach the **top** mark on the dipstick. If not remove filler cap on top of gearbox and replenish with Bombardier chaincase oil or equivalent. Reinstall bolt.

○ **NOTE:** The dipstick is in the tool bag.



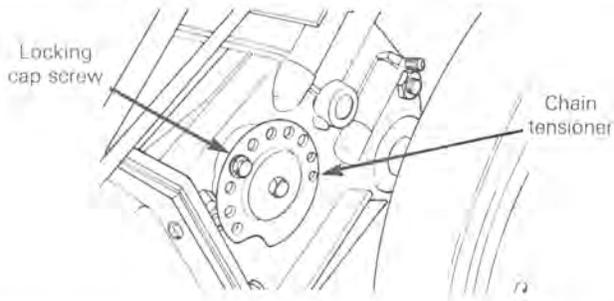
Check drive chain tension.

Remove the driver seat and the access panel.

Place the gear shift lever in the forward position.

Turn the driven pulley forward to obtain the maximum play.

Remove capscrew locking chain tensioner in place (tensioner is located at bottom left of gearbox).



While holding the driven pulley forward, rotate the tensioner until chain is tight, without over straining.

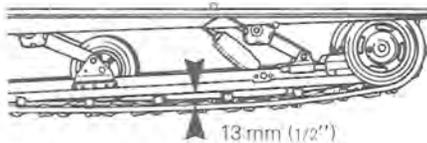
**CAUTION:** Do not overtighten.

Replace capscrew in one of the appropriate holes. Lock chain tensioner in place.

## TRACKS

### Tension

Lift rear of vehicle and support it off the ground. Allow slides to extend normally. A gap of 13 mm (1/2") should exist between slider shoe and bottom inside of tracks.

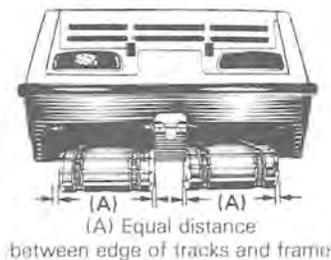


### Track Alignment

After track tension has been corrected start the engine and accelerate slightly so that tracks turn slowly. Check that tracks are well centered.

**CAUTION:** It is necessary to use a fully charged battery before starting the engine. This will prevent electrical damage.

**WARNING:** Before checking track alignment, ensure that the tracks are free of all particles which could be thrown out while tracks are rotating. Keep hands, feet, tools and clothing clear of tracks.



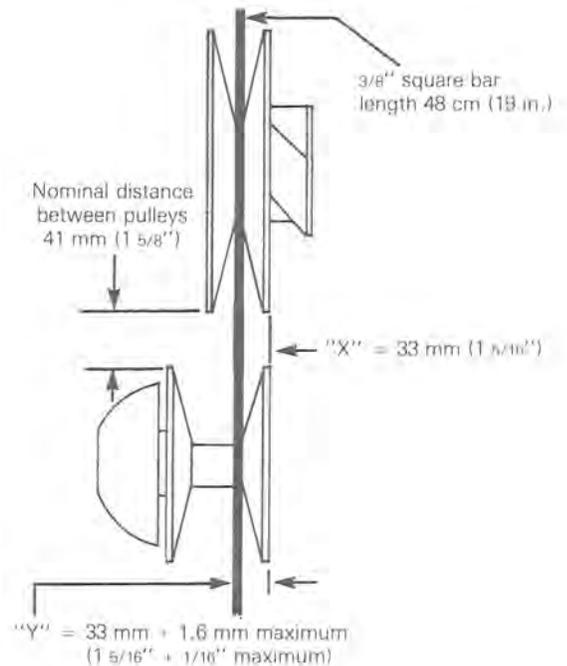
## SNOW GUARDS

Install snow guards (18) to the vehicle using the rivets (19).

## PULLEY ADJUSTMENT

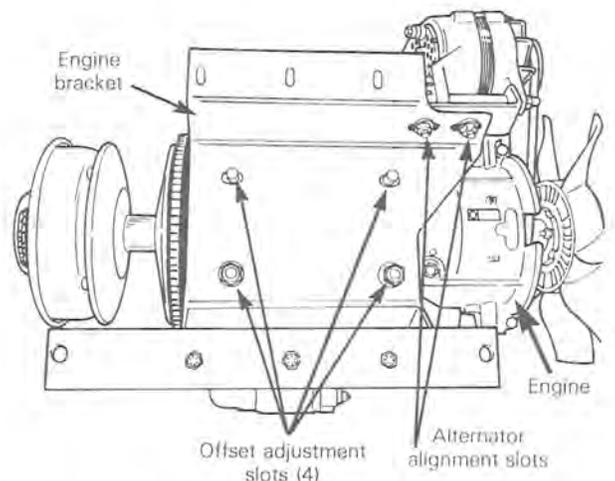
Nominal distance: 41 mm (1 5/8")  
between pulleys

Dimensions X & Y : 33 mm (1 5/16")  
(offset)



### Offset adjustment

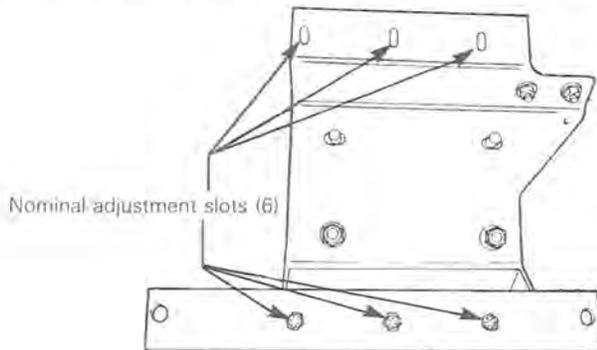
If necessary to adjust, loosen the four (4) nuts fixing the engine to the engine bracket.



**NOTE:** After performing this adjustment, it is necessary to align the alternator pulley to the engine pulley. To adjust, slide the alternator mount bracket on the engine bracket.

## Nominal distance adjustment

If necessary to decrease or increase the distance between pulleys, loosen the six (6) nuts fixing the engine bracket to the cross supports.



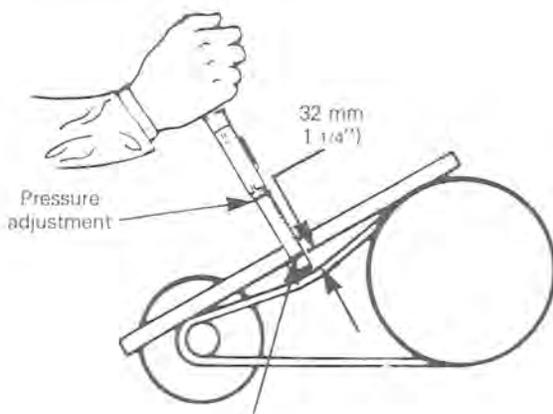
The final adjustment of pulley distance should be performed by using the belt deflection method that follows:

Prior to final adjustment, the drive belt must have a break-in period time of one to two minutes.

▼ **CAUTION:** It is necessary to use a fully charged battery, this will prevent electrical damage.



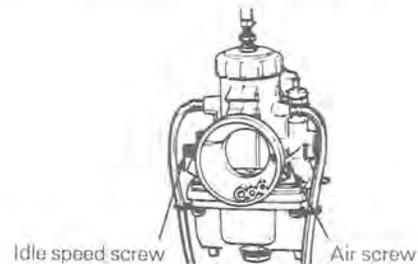
1. Slide lower "O" ring of deflection distance scale to 32 mm (1 1/4").
2. Slide upper "O" ring to zero distance on the deflection force scale.
3. Using wooden rule and tester, apply pressure until lower "O" ring is flush with edge of rule.
4. Read deflection force on the upper scale (at top edge of "O" ring). Reading of 6.8 kg 15 pounds should be obtained.



## CARBURETOR

|                   |                  |
|-------------------|------------------|
| Air Screw         | 1 turn           |
| Main Jet          | 340              |
| Idle Speed R.P.M. | 1800-2000 R.P.M. |

▼ **CAUTION:** Never operate the snowmobile with the air intake silencer disconnected. Serious engine damage will occur if this notice is disregarded.



## Air screw adjustment

Completely close the air screw (until a slight seating resistance is felt) then back off screw 1 turn.

## Throttle slide adjustment

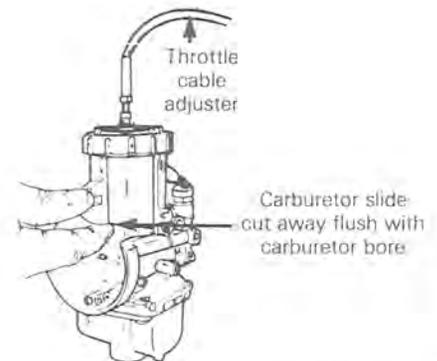
◆ **WARNING:** Ensure the engine is turned **OFF**, prior to the throttle slide adjustment.

With the throttle cable adjuster jam nut unlocked, press the throttle lever against the handle grip.

By turning the cable adjuster, adjust the carburetor slide cut away so that it is flush with the top of the carburetor bore.

Tighten the cable adjuster jam nut.

Release the throttle lever.



◆ **WARNING:** It is important that the throttle slide adjustment be performed to ensure proper functioning of throttle mechanism.

## Idle speed adjustment

Turn idle speed screw clockwise until it contacts the throttle slide then continue turning two (2) additional turns. This will provide a preliminary idle speed setting. Start engine and allow it to warm then adjust idle speed to 1800-2000 R.P.M. by turning idle speed screw clockwise or counter-clockwise.

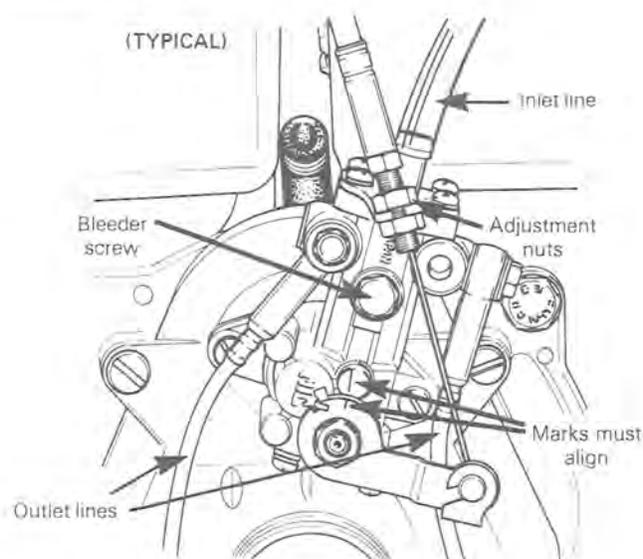
**CAUTION:** Do not attempt to set the idle speed by using the air screw. Severe engine damage can occur.

## OIL INJECTION PUMP ADJUSTMENT

**CAUTION;** The carburetor must be adjusted before adjusting the oil injection pump. Make sure idle speed is 1800-2000 R.P.M..

Eliminate the throttle cable free-play by pressing the throttle lever until a light resistance is felt, then hold in place. The aligning marks on the pump casting and lever must align perfectly. If not, loosen the adjuster nut and adjust accordingly.

Tighten the adjuster nut.



**CAUTION:** Proper oil injection pump adjustment is very important. Any delay in the opening of the pump can result in serious engine damage.

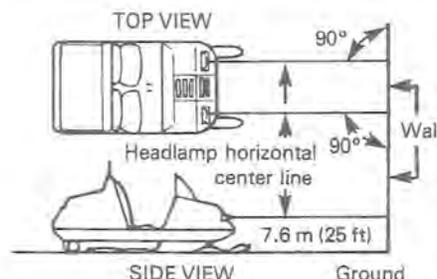
**IMPORTANT:** Make sure all oil lines are full. If required, bleed the inlet line and the pump by loosening the bleeder screw. To bleed the outlet lines, hold the pump lever in a fully open position with the engine at idle speed until the air is bled off.

**WARNING:** Perform this operation in a well ventilated area.

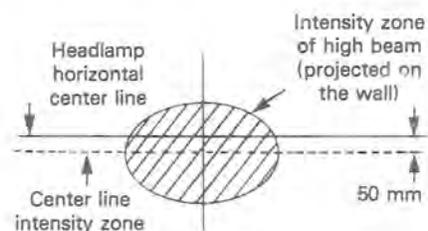
## BEAM AIMING

Check beam aiming.

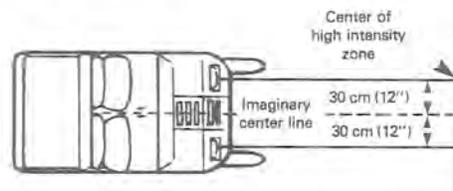
Place vehicle on a flat surface 7.6 m (25') from a wall or screen.



With the suspension correctly adjusted, the rider seated in the vehicle and the high beam ON (the ignition switch must be turn on) check that the center of high intensity zone of high beam is 50 mm (2") below horizontal line of headlamp height.



Ensure that the distance between the center of the high intensity zone and the imaginary line drawn in the vehicle axis is equal to 30 cm (12") on both sides.



To adjust, remove headlamp chrome ring, turn upper or lower adjusting screws to obtain desired beam position.

## SOUND LEVEL TAG

Affix the sound level tag  to the steering.

**IMPORTANT:** This label is to be installed on every machine and must not be removed prior to purchase.

## GENERAL INSTRUCTIONS

Check vehicle performance. Inspect movement / operation of brake, steering mechanism, headlamp, tail / brake lights, emergency stop switch, dimmer switch warning lamps and throttle lever. Thereafter, clean the vehicle thoroughly. Explain the operator manual and warranty to the customer. **COMPLETE AND RETURN WARRANTY REGISTRATION.**

## 1982 ELITE PRE-DELIVERY TECHNICAL DATA

|  |   |
|--|---|
| SKI ALIGNMENT  | 3 mm (1/8'') toe out.   |
| PULLEY ADJUSTMENT<br>— nominal distance<br>(between pulleys)<br>— dimensions X & Y | 41 mm (1 5/8'')<br><br>33 mm (1 5/16'')   |
| CARBURETOR<br>— air screw<br>— main jet<br>— idle speed                            | 1 turn<br><br>340<br><br>1800-2000 R.P.M.   |
| TRACK ADJUSTMENT<br>— tension (slide)  | 13 mm (1/2'') gap should exist between<br>slider shoe and bottom inside of track. |





Date: 1981 08 14

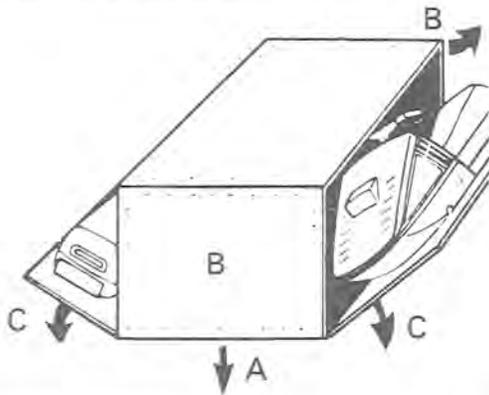
MODELS: FUTURA 300

Serial nos: All

Subject: Pre-Delivery

### UNCRATING

Carefully lay the crate on the largest panel (panel A). Cut the two (2) straps binding the crate.



**WARNING:** Strapping is under pressure therefore, care must be observed while cutting.

Detach the vehicles bases (panel C) from the end panels (B). Carefully lay the vehicles on their bases.

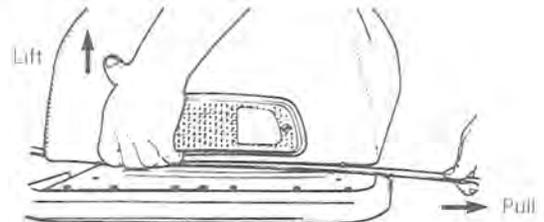
**WARNING:** Care should be taken when detaching vehicles bases (panels C) due to the inward movement of the bases.

Cut the strapping holding skis and suspension. Remove windshield, tool box, accessory kit, etc., from the vehicle. Remove the ski leg coupler bolts (2), detach and remove the vehicle from the wooden base using the following procedure:

- Cut the retaining stripe each side of the vehicle.
- Lift the rear of the vehicle.
- Remove the two (2) seat retaining nuts.
- Lift the rear end of the seat and remove the remaining retaining stripe from under the seat.

**CAUTION:** To prevent any damage to the seat, it is important to lift the rear end of the seat.

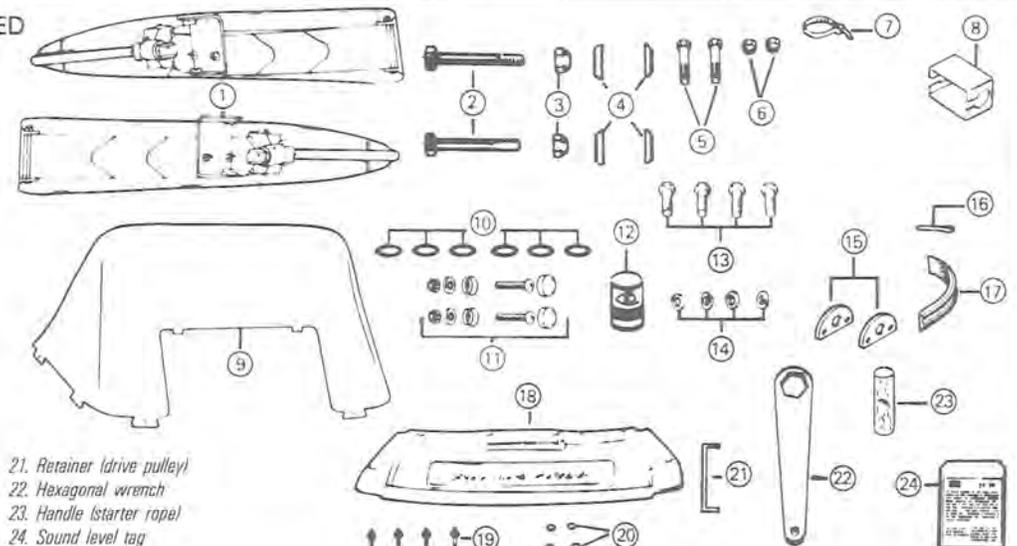
- Reinstall the washers and nuts, torque to: 6 N•m (4 ft-lbs).



Set clearly all the parts on a plane surface.

### PARTS TO BE INSTALLED

- Ski (2)
- Spring coupler bolt (2)
- Elastic stop nut (2)
- Slider cup (4)
- Bolt (shock) (2)
- Elastic stop nut (2)
- Tie rap (2)
- Steering cap
- Windshield
- "D" ring (6)
- Windshield fixture (2)
- Oil can
- Bolt (suspension) (4)
- Lockwasher (suspension) (4)
- Washer (suspension) (2)
- Cotter pin
- Trim (rear bumper)
- Snowguard
- Rivet (snowguard) (4)
- Washer (snowguard) (4)



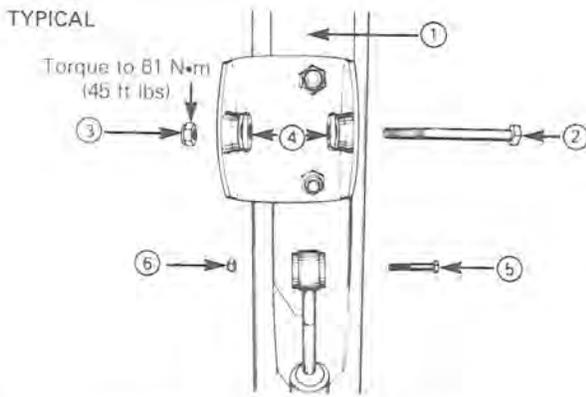
- Retainer (drive pulley)
- Hexagonal wrench
- Handle (starter rope)
- Sound level tag

## SKIS

Lift the front of the vehicle.

Position the skis ① with a slider cup ④ on each side of the ski leg.

- Install the previously removed ski leg coupler bolt ② until tight (ski must move freely by hand). Install the elastic stop nut ③ on the ski leg coupler, torque to 61 N•m (45 ft-lbs).
- Secure the shock absorber to the ski leg bracket using the bolts ⑤ and elastic stop nuts ⑥.
- Set the ski adjustment to obtain a toe out of 3 mm (1/8"). For proper procedure refer to 1981 Shop Manual (P/N 484 0442 00).



## ADJUSTABLE STEERING HANDLE

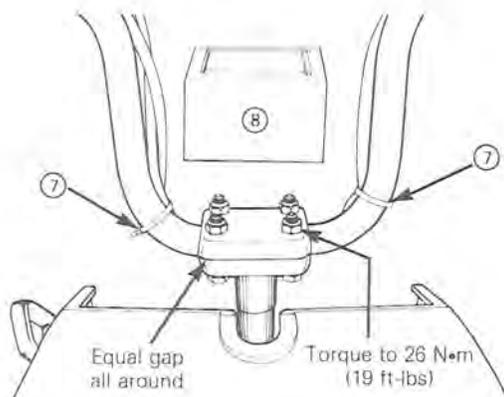
- Secure cut-out and dimmer switch wiring to the steering handle with two tie raps ⑦ supplied.

**WARNING:** Do not tie brake and throttle cables to steering handle.

- Adjust the steering handle to the desired position.
- Lock the steering handle in place by tightening the four (4) screws to 26 N•m (19 ft-lbs).

**CAUTION:** Tighten the screws equally and ensure there is an equal gap on each side of the cover.

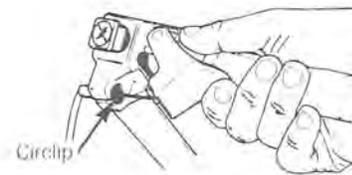
- Install the steering cap ⑧.



## THROTTLE CABLE INSTALLATION

(if applicable)

Install the throttle cable to the throttle handle and secure it using the circlip located on the cable.

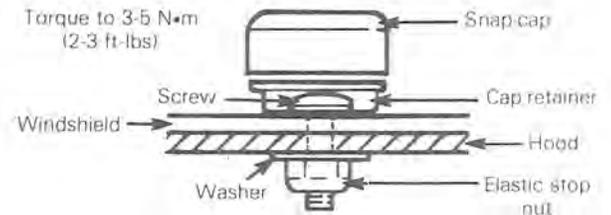


## WINDSHIELD

- Peel off protective film from windshield.
- Position windshield ⑨ on the hood then push down until tabs are fully inserted into hood slots.
- Lock windshield tabs in position using the six (6) "O" rings ⑩ supplied in the kit.
- Properly seat the windshield in place.
- Using windshield holes as a guide, drill 5 mm dia. (3/16") holes through the hood.

**CAUTION:** Ensure the electrical wires are protected inside the hood.

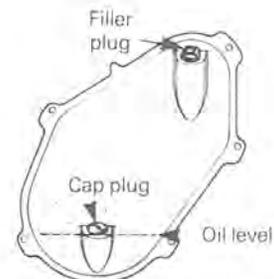
- Clean the hood.
- Peel off protective film from windshield.
- Install the two (2) windshield fixtures ⑪.



## CHAINCASE

Remove oil injection reservoir.

Fill the chaincase to the proper level using the oil supplied with the kit ⑫.



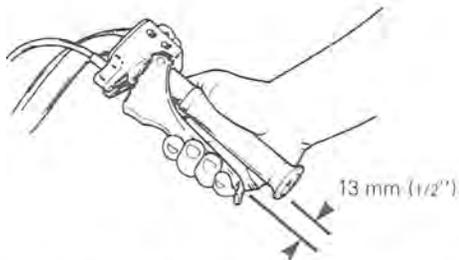
- The oil should be level with the bottom of the oil level orifice.

**NOTE:** The chaincase oil capacity is approximately 200 mL (7 oz.).

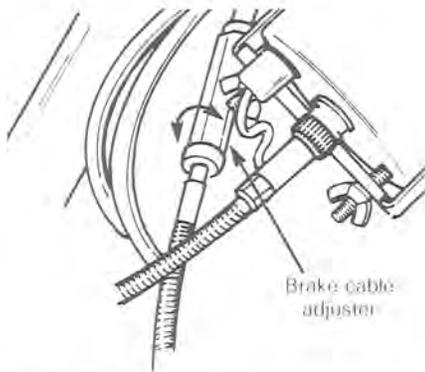
- Check drive axle seal for leaks.
- Reinstall the oil injection reservoir.

## BRAKE

Brake should apply fully while the brake control lever is approximately 13 mm (1/2") from the handlebar grip.



If adjustment is required, turn the brake cable adjuster until the disc brake can no longer turn, then back off the adjuster approximately 1 1/2 turns. Recheck brake operation.



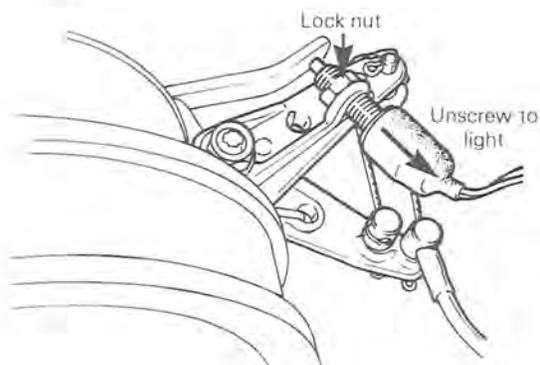
## BRAKE LIGHT SWITCH

### To check operation:

Pull the brake lever to hold the pads on the disc. Check that a light resistance is felt while rotating the driven pulley. This is the position where the switch should illuminate the brake light.

### To adjust:

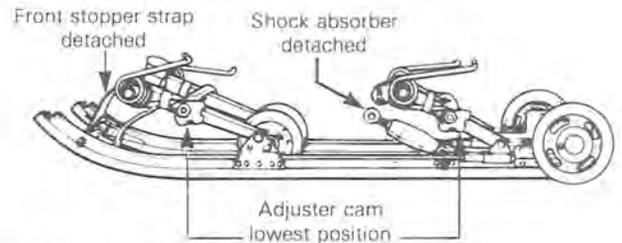
- Loosen the brake switch lock nut.
- Holding brake lever at the position mentioned above, turn switch clockwise or counter-clockwise as required.
- Tighten the brake switch lock nut and recheck brake light operation.



## SUSPENSION POSITIONING

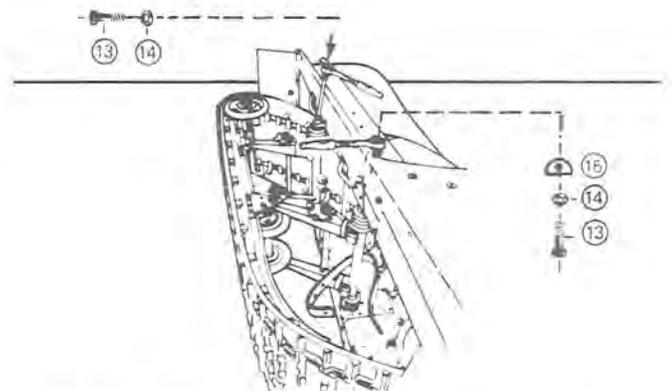
### Preparation

- Detach the front stopper strap.
- Remove cotter pin locking the shock absorber clevis pin and detach the shock absorber by removing the clevis pin.
- Set the adjuster cam to the lowest position and fix the springs with a tape.
- Push the rear idler wheel forward.

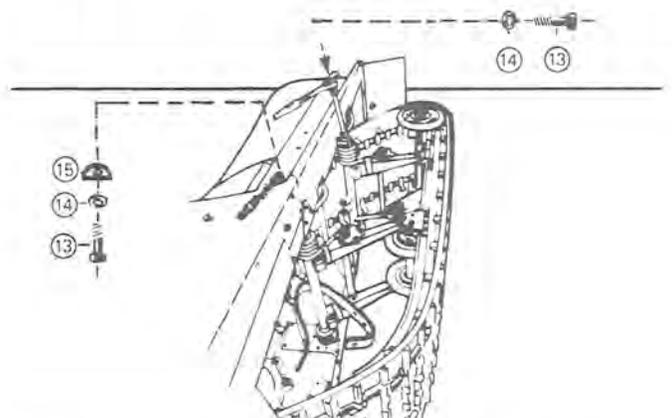


### Installation

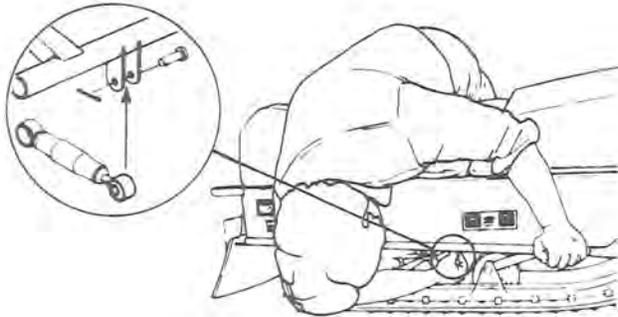
- Place a cardboard on the floor.
- Plug the chaincase vent hole with a small wire to prevent leaks.
- Tilt vehicle on one side.
- Attach front suspension and the rear suspension arm to frame. Do not torque.



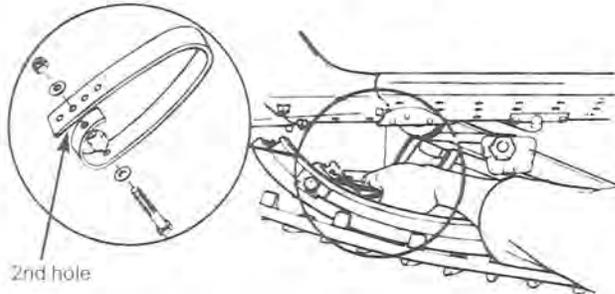
- Tilt the vehicle on the other side.
- Attach the front then the rear suspension arm to frame.



- Reposition vehicle on the ground. Position adjuster cams at the lowest elevation.
- Torque the four suspension retaining bolts to 43 N•m (32 ft-lbs).
- Apply downward pressure on the seat.
- Secure the extended shock with clevis pin and a new cotter pin (16).



- Attach front stopper strap at 2nd hole.



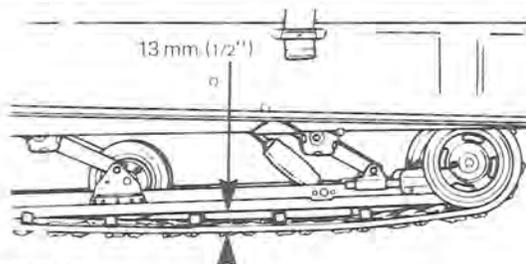
- Remove chaincase vent hole plug.

## TRACK

**WARNING:** Before checking track tension and alignment, ensure that the track is free of all particle which could be thrown out while track is rotating. Keep hands, feet, tools and clothing clear of track.

### Tension

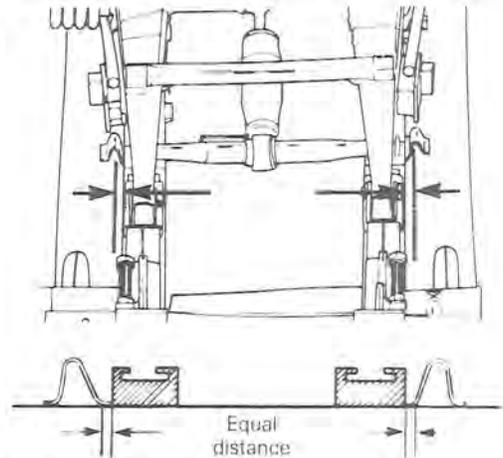
Lift rear of vehicle and support it off the ground. Allow slides to extend normally. A gap of 13 mm (1/2") should exist between slider shoe and bottom inside of tracks.



### Alignment

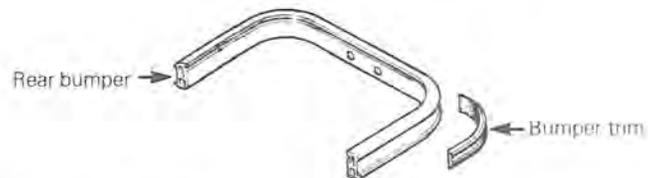
After track tension has been corrected start the engine and accelerate slightly so that track turns slowly. Check that track is well centered.

The distance between the edges of the track guides and the slider shoes should be equal on both sides.



## REAR BUMPER TRIM

- Install the rear bumper trim (17) to the rear bumper.



## SNOW GUARD

Install snow guard (18) to the vehicle using the rivets (19) and washers (20) supplied in the kit. The flat washers must be installed from the inside of the frame.

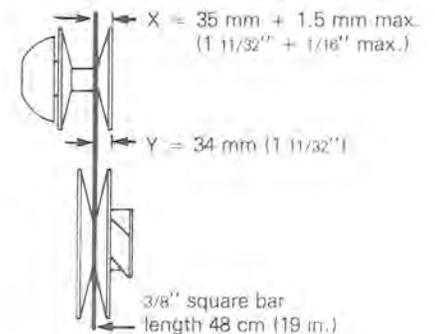
## TOOLS

Set the drive pulley retainer (21), the hexagonal wrench (22) and the emergency starter rope handle (23) in the tool kit.

## PULLEYS ADJUSTMENT

### Offset measurement

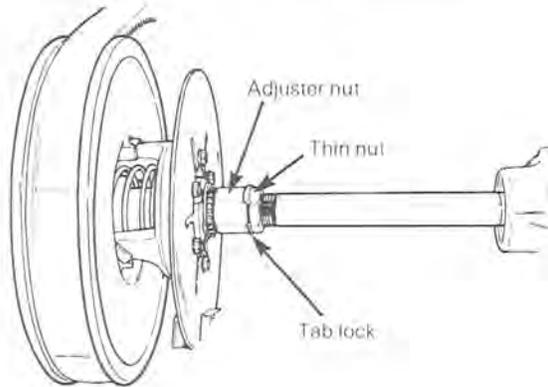
- The dimension from the inside edge of the drive fixed pulley to the outside edge of the 3/8" square bar should be 34 mm (1 11/32").



**NOTE:** The distance between pulleys is fixed.

## Offset adjustment

- Remove the air silencer.
- Straighten the tab lock.
- Loosen the thin nut.
- Turn the adjuster nut in order to have a dimension of 34 mm (1 11/32") at the offset measurement.

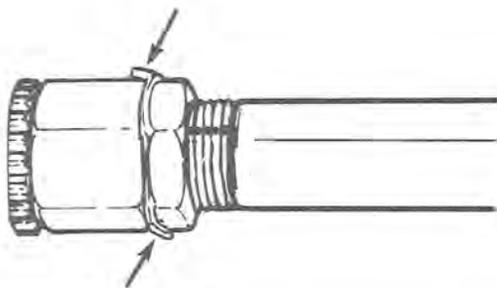


- Holding the adjuster nut, torque the thin nut to 60-70 N•m (45-52 ft-lbs) and bend the tab lock over each nut.

○ **NOTE:** To properly torque the nuts it is necessary to use the special extension key and the appropriate procedure explained in the Snowmobile Warranty Bulletin 82-2 or the 1982 Bombardier Snowmobile Shop Manual (P/N 484 0466 00), Section 03, Sub-section 05.

▼ **CAUTION:** If the pulleys offset has to be adjusted, it is of the utmost importance to refer to the above mentioned publications.

▼ **CAUTION:** Do not bend tab lock more than twice. If necessary install a new one (P/N 504 0480 00).



- Reinstall the air silencer.

## CARBURETOR ADJUSTMENTS

|                   | FUTURA 300 |
|-------------------|------------|
| Air screw         | 1.5        |
| Main jet          | 260        |
| Idle speed R.P.M. | 1800-2000  |

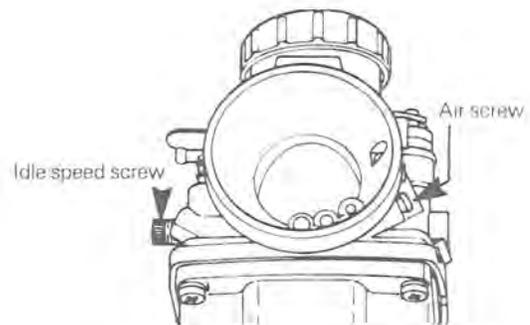
## Air screw adjustment

Completely close the air screw (until a slight sealing resistance is felt) then back off to specifications.

## Idle speed adjustment

Turn idle speed screw clockwise until it contacts the throttle slide then continue turning two (2) additional turns. This will provide a preliminary idle speed setting. Start engine and allow it to warm up then adjust idle speed to specifications by turning idle speed screw clockwise or counter-clockwise.

▼ **CAUTION:** Do not attempt to set the idle speed by the air screw. Severe engine damage can occur.



## Throttle slide adjustment

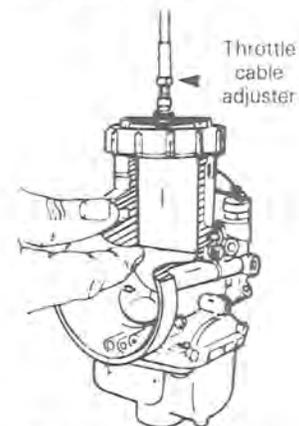
◆ **WARNING:** Ensure the engine is turned **OFF**, prior to the throttle slide adjustment.

- Remove the air in the silencer.

With the throttle cable adjuster jam nut unlocked, press the throttle lever against the handle grip.

By turning the cable adjuster, adjust the carburetor slide cut away so that it is flush with the top of the carburetor bore.

Tighten the cable adjuster jam nut.



◆ **WARNING:** It is important that the throttle slide adjustment be performed to ensure proper functioning of throttle mechanism.

- Reinstall the air intake silencer.

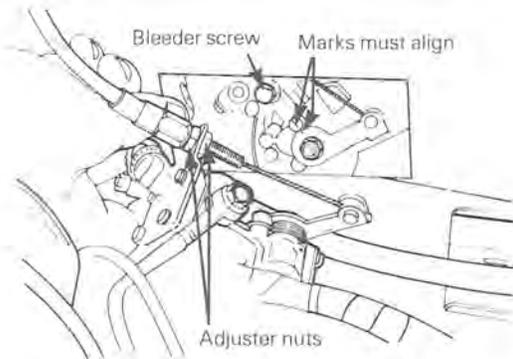
## OIL INJECTION PUMP ADJUSTMENT

**CAUTION:** The carburetor must be adjusted before adjusting the oil injection pump. Make sure the idle speed is 1800-2000 R.P.M.

To adjust:

Eliminate the throttle cable free-play by pressing the throttle lever until a light resistance is felt, then hold in place. The aligning marks on the pump casting and lever must align perfectly. If not, loosen the adjuster nut and adjust accordingly.

**NOTE:** The oil injection pump synchronizing marks can be seen by placing a mirror between the side pan and the pump.



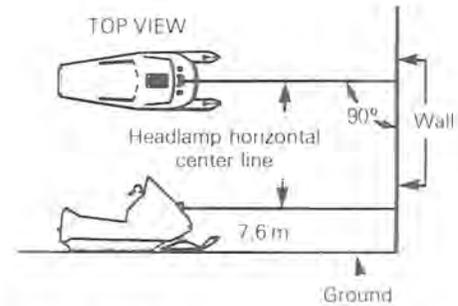
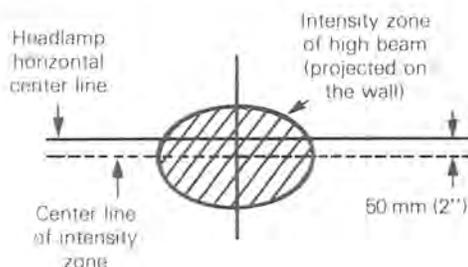
**CAUTION:** Proper oil injection pump adjustment is very important. Any delay in the opening of the pump can result in serious engine damage.

**IMPORTANT:** Make sure all oil lines are full. If required, bleed the inlet line and the pump by loosening the bleeder screw. To bleed the outlet lines, hold the pump lever in a fully open position with the engine at idle speed until the air is bleed off.

**WARNING:** Perform this operation in a well ventilated area.

## BEAM AIMING

Beam aiming is correct when center of high intensity zone of high beam is 50 mm (2") below horizontal headlamp center line.



## Required conditions

- Place vehicle on a flat surface 7,6 m (25') from a wall or screen.
- Suspension adjusted to obtain 20-23 cm (8"-9") between rear of footrest and ground (rider seated on vehicle).
- Turn High Beam ON.

## SOUND LEVEL TAG

Affix the sound level tag ②④ to the steering (located in tool box).

**IMPORTANT:** This label is to be installed on every machine sold and should not be removed prior to purchase.

## GENERAL INSTRUCTIONS

Check vehicle performance. Inspect movement/operation of brake, steering mechanism, headlamp, tail/brake lights, emergency stop switch, dimmer switch and throttle lever. Thereafter, clean the vehicle thoroughly.

Explain the operator manual and warranty to the customer. **COMPLETE AND RETURN WARRANTY REGISTRATION.**

# 1982 FUTURA 300 PRE-DELIVERY TECHNICAL DATA

|  | FUTURA 300   |
|--|--|
| SKI ALIGNMENT  | 3 mm (1/8'') toe-out   |
| PULLEY ADJUSTMENT<br>— dimensions X & Y<br>(offset)                | 34 mm (1 11/32'')  |
| CARBURETOR ADJUSTMENT<br>— air screw<br>— main jet<br>— idle speed | 1 1/2 turn<br>260<br>1800-2000 R.P.M.  |
| TRACK ADJUSTMENT<br>— tension                                      | 13 mm (1/2'') gap should exist between slider shoe and bottom inside of track. |





**SNOWMOBILES**

# Pre-Delivery Bulletin

no. 82-11

Date: 1981 09 29

Serial nos: 3329, 3168, 3169, 3170,  
3171, 5132, 5133, 5134,  
5135, 3487, 3488, 5431,  
5432, 3485, 5430, 3177,  
3179, 3584, 5319, 3587,  
5322, 3707

**MODELS: 1982 ALPINE**  
CITATION 3500, 4500, 4500E, SS  
MIRAGE I, II, IIE, SPECIAL  
EVEREST 500, 500E  
FUTURA 500, 500E  
EVEREST L/C, FUTURA L/C  
NORDIK, SKANDIC  
BLIZZARD 5500 MX, SONIC  
BLIZZARD 9500, ULTRA SONIC  
ELITE

**Subjects: A) Pre-delivery bulletin changes**  
**B) Suggested alternative pre-delivery operation sequence.**

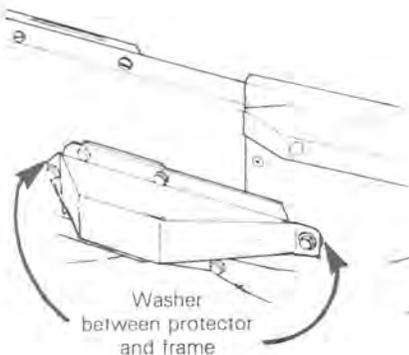
## A) PRE-DELIVERY BULLETINS CHANGES

The above mentioned models pre-delivery bulletins must be changed as follows:

### Pre-delivery bulletin no. 82-2—1982 Alpine

- On page 1, item ③ you should read "two(2) washers" instead of "one (1)" and you should remove item ②, washer (1).

○ **NOTE:** The two washers must be installed as illustrated.



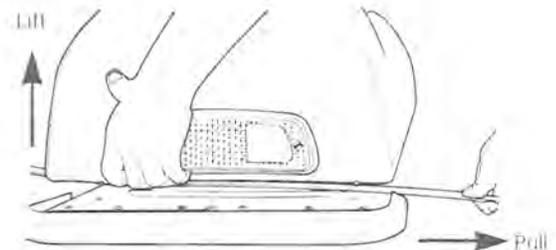
### Pre-delivery bulletin no. 82-3—1982 Mirage I, II, IIE, Mirage Spécial, Citation 3500, 4500, 4500E, Citation SS

- On page 1, item ② you should read "windshield trim" instead of "1 mm".
- To remove the vehicle from the bottom skid it is necessary to remove the retainer stripe from under the seat. Proceed as follows:

Cut the strapping holding skis and suspension. Remove windshield, tool box, accessory kit, etc., from the vehicle. Remove the ski leg coupler bolts ②, detach and remove the vehicle from the wooden base using the following procedure:

- Cut the retaining stripe each side of the vehicle.
- Lift the rear of the vehicle.
- Remove the two (2) seat retaining nuts.
- Lift the rear end of the seat and remove the remaining stripe from under the seat.

▼ **CAUTION:** To prevent any damage to the seat, it is important to lift the rear end of the seat.  
- Reinstall the washers and nuts, torque to: 6 N•m (4 ft•lbs).



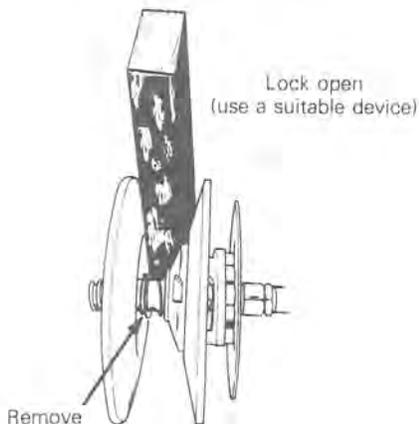
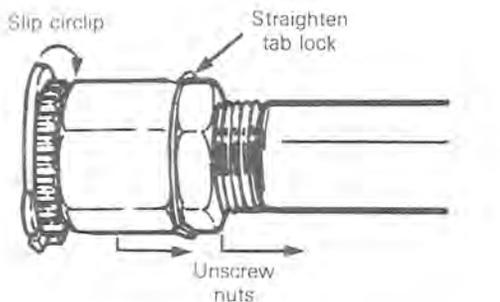
- To adjust the drive belt tension you must proceed as follows:  
Adjust tension by adding or removing shim between the two driven pulley halves.
- 1. Remove air intake silencer and drive belt.

2. Remove brake assembly as illustrated.



3. Straighten the tab lock and unscrew the two nuts on the countershaft.

4. Slip the circlip against the adjuster nut. This will allow to open and lock in place the two sliding halves.



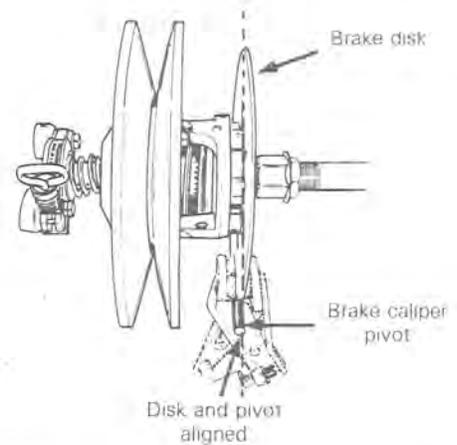
5. To increase tension, cut and remove one shim.

○ **NOTE:** On some models, shims will not need to be cut since the driven pulley is assembled with slit shims.

6. To decrease tension, add one slit shim.

○ **NOTE:** A slit shim must always be installed in between two standard shims. Slit shim (P/N 504 0491 00) is available through regular channel.

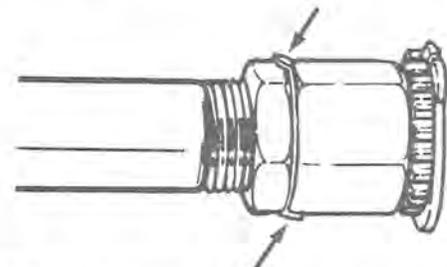
7. Reinstall circlip and screw the adjuster nut until the brake disk and the brake caliper pivot are aligning. This will provide a preliminary pulley alignment.



8. Reinstall belt and check tension. If tension need to be changed, add or remove one more shims.

9. If tension is correct, align pulleys with a rule or square bar (refer to pulley alignment, section 03-05 in Shop Manual).

10. To lock driven pulley, hold the adjuster nut, torque thin nut against adjuster nut to 65 N•m (48 ft-lbs) and bend the tab lock.



▼ **CAUTION:** The thin nut must be tightened firmly against the adjuster nut before bending the tab lock on each of the two nuts. To tighten the thin nut, use the "Snap-on" extension key no. FC-40. Torque thin nut to 65 N•m (48 ft-lbs).

Snap-on extension key FC-40

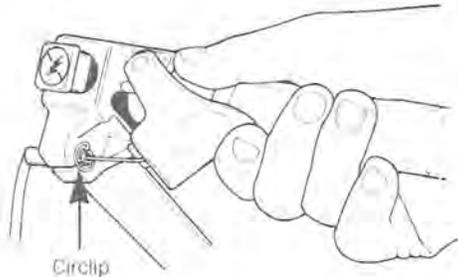


○ **NOTE:** Refer to Snowmobile Warranty bulletin no. 82-2 for the correction factor.

11. Reinstall brake caliper, washer and nut. Torque to 12 N•m (8 ft-lbs).

12. Reinstall the air silencer.

- For the skis assembly, you should lift the front of the vehicle.
- The steering cap (item ⑱ on page one (1)) must be installed with its longest side facing the driver.
- The throttle cable must be installed to the throttle lever using the throttle cable circlip.



- To verify the chaincase oil level, it is necessary to remove oil injection reservoir. Reinstall after verification.
- The snowguard must be installed using the four (4) rivets and washers supplied in the kit. The flat washers must be installed from the inside of the frame.

#### Pre-delivery bulletin no. 82-4—1982 Everest 500, 500E, Futura 500, 500E

- At "UNCRATING" operation, you should read, "Detach the vehicle bases (panel C) from the end panels (B). Carefully lay the vehicles on their bases (C)".
- At installation of the battery (electric models), the vent tube MUST be installed to the battery and its other end to the frame hole located near the chaincase and the footrest.
- After the tape and foams removal on the side pans, you should clean the side pans with a degreasing solvent and warm soapy water, rinse using LOW pressure spray.

**CAUTION:** Avoid use of harsh detergents and high pressure car wash sprays as this may cause damage to paint and metal surfaces.

- At installation of the windshield, care should be taken while drilling through the hood to prevent any damage to the electrical wiring.
- It is possible to use the tether cut-out switch cord to hold the throttle lever against the handlebar to ease the installation of the throttle cable housing circlip. Do not use pliers to pull the throttle cable while doing this procedure or damage could occur to the cable. At delivery of the vehicle to the customer insure to reinstall the tether cut-out switch wire to the dash board and explain him the use of this safety device.

#### Pre-delivery bulletin no. 82-5—1982 Everest L/C, Futura L/C

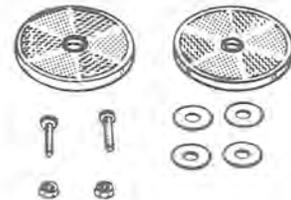
- At installation of the windshield, care should be taken while drilling through the hood to prevent any damage to the electrical wiring.
- The chaincase oil capacity is 200 mL (7 fl. oz).
- At "suspension repositioning" ensure the cams are positioned at the same step on each side of the vehicle.
- To perform the throttle slide adjustment, you must remove the air silencer and reinstall it after the adjustment.
- On page 2, you should not install the throttle cable, it is factory installed.

#### Pre-delivery bulletin 82-6—1982 Nordik & Skandic

- At "UNCRATING" operation you should read, "Detach the vehicle bases (panel C) from the end panels (B). Carefully lay the vehicles on their bases (C)."
- On page 2, at "windshield installation" you should read, "windshield fixtures (2) instead of (4) for the NORDIK model only". The windshield fixtures for the SKANDIC model are two (2) darts.
- On page 1, item ⑳ B, you should read "Bolt M6X 30 (6)" instead of (8).
- On page 1, item ㉑ B, you should read "Cotter pin (2)" instead of only one (1). One is for the hitch and the other is for the rear suspension shock installation.

**NOTE:** The rear suspension shock absorber should always be assembled with a new cotter pin.

- On the parts to be installed, you will find, two (2) reflectors, two (2) screws, two (2) nuts and four (4) flat washers. Those parts are for Skandic Europe only (rear lens).

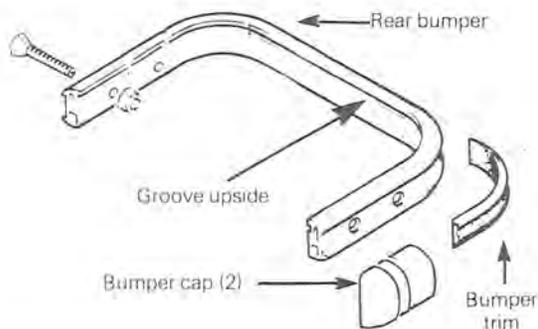


- At the rack installation on Skandic model, you must remove it from the vehicle and avoid to pull back to prevent any labels and reflectors damage. Reinstall the rack to the appropriate position with the hitch and the rear bumper.

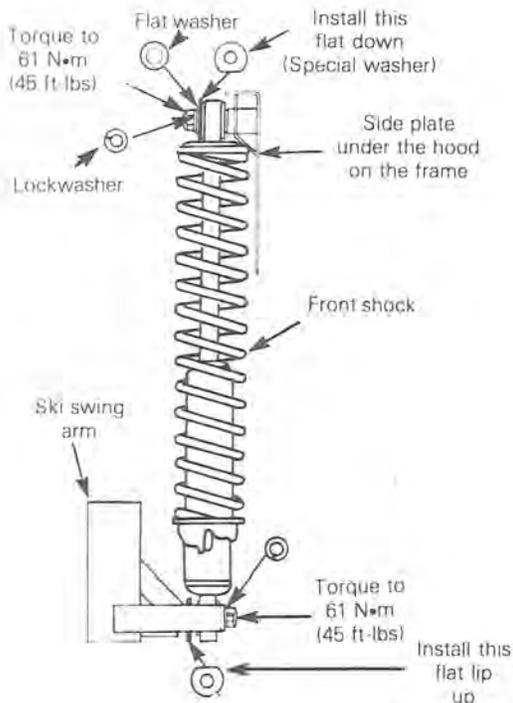
- At windshield installation, you have to drill 5 mm (3/16") holes through the hood for Nordik & Skandic. The fixtures are different but the operation is the same. The terms (NORDIK ONLY) must be removed. Care should be taken while drilling through the hood to prevent any damage to the electrical wiring.

### Pre-delivery bulletin no. 82-7—1982 Blizzard 5500 MX, Sonic

- On the above mentioned models, the rear bumper must be installed with a bumper trim and two (2) bumper caps. Proceed as follows: Install the rear bumper on the vehicle with the groove UPSIDE to obtain a proper match with the bumper caps. Refer to illustration.



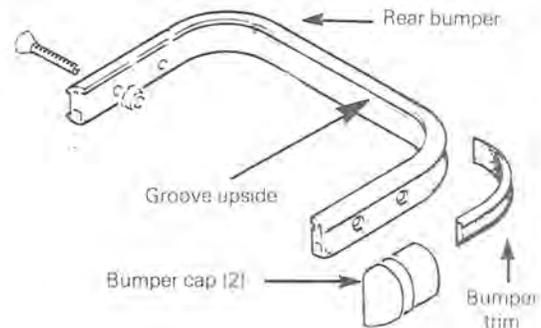
- At installation of the windshield, care should be taken while drilling through the hood to prevent any damage to the electrical wiring.
- The throttle cable is factory installed at the throttle lever, you only have to install the adjustable steering handle and the steering pad.
- At installation of the front shocks upper end, the lock-washers MUST be installed closer to the screw head.



- At installation of the skis, the two (2) friction cups **MUST** be installed each side of the ski leg, not each side of the ski.
- At track tension adjustment, the front suspension springs are factory installed, you should not have to position the springs on the adjuster cams.
- At installation of the windshield, the windshield trim is factory installed, you should not have to position the trim on the windshield.

### Pre-delivery bulletin 82-8—1982 Blizzard 9500, Ultra-Sonic

- On the above mentioned models, the rear bumper must be installed with a bumper trim and two (2) bumper caps. Proceed as follows: Install the rear bumper on the vehicle with the groove UPSIDE to obtain a proper match with the bumper caps. Refer to illustration.



- At installation of the windshield, care should be taken while drilling through the hood to prevent any damage to the electrical wiring.
- After the tape and foams removal on the side pans, you should clean the side pans with a degreasing solvent and warm soapy water, rinse using LOW pressure spray.

**CAUTION:** Avoid use of harsh detergents and high pressure car wash sprays as this may cause damage to paint and metal surfaces.

- At installation of the throttle cable, (if necessary) the required circlip is factory installed to the cable.
- It is possible to use the tether cut-out switch cord to hold the throttle lever against the handlebar to ease the installation of the throttle cable housing circlip. Do not use pliers to pull the throttle cable while doing this procedure or damage could occur to the cable. At delivery of the vehicle to the customer insure to reinstall the tether cut-out switch wire to the dash board and explain him the use of this safety device.
- Always remove the windshield protective film before its installation.
- The snowguard is factory installed.

– Carburetors adjustments; proceed as follows.

▼ **CAUTION:** Check oil injection pump adjustment each time carburetor is adjusted.

|                   | BLIZZARD 9500<br>ULTRA SONIC |
|-------------------|------------------------------|
| Air Screw         | 1.5 turn                     |
| Main Jet          | P.T.O.: 310 MAG.: 330        |
| Idle Speed R.P.M. | 1800-2000                    |

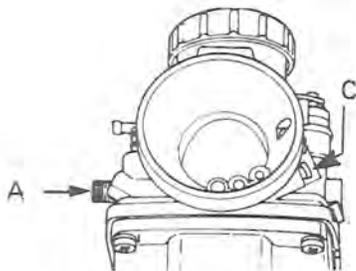
▼ **CAUTION:** Never operate the snowmobile with the air intake silencer disconnected. Serious engine damage will occur if this notice is disregarded.

The carburetor adjustment are:

- A) Air Screw
- B) Throttle Slide Adjustment
- C) Idle Speed

### A) Air screw adjustment

Completely close the air screw (until a slight reseating resistance is felt) then back off screw as specified.



### B) Throttle slide adjustment

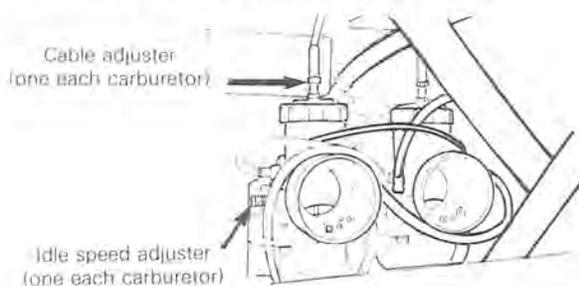
◆ **WARNING:** Ensure the engine is turned **OFF**, prior to the throttle slide adjustment.

For maximum performance, correct carburetor throttle slide adjustment is critical.

The following method should be used:

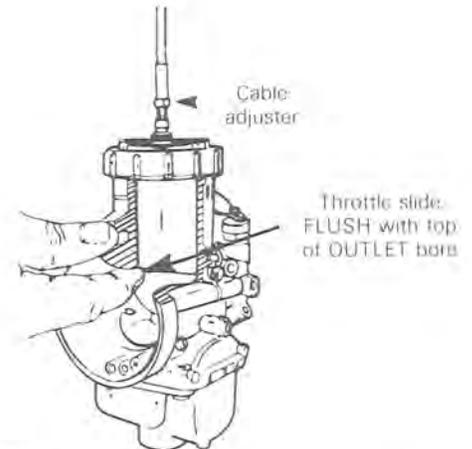
With engine turned off:

- Remove the air intake silencer.
- Back off the idle speed screws completely.



Turn the idle speed screw clockwise until it contacts the throttle slide then continue turning two (2) additional turns. Repeat on the other carburetor. This will ensure identical throttle slide idle setting.

With the throttle cable adjuster jam nuts unlocked, fully DEPRESS the throttle lever and check to have the throttle **FLUSH** with the top of the carburetor **OUTLET** bore. To adjust, turn the carburetor cable adjuster, clockwise or counter-clockwise.



Repeat for the other carburetor.

▼ **CAUTION:** Make sure both carburetors start to operate simultaneously.

◆ **WARNING:** It is important that the throttle slide adjustment be performed to ensure proper functioning of throttle mechanism.

Once both carburetors are adjusted, check that with the throttle lever fully depressed, there is a free play of 1.5 mm (1/16") between the cover and throttle slide. Readjust accordingly.



◆ **WARNING:** This gap is very important. If the throttle slide rests against the carburetor cover at full throttle opening, it will create too much strain and may damage the throttle cable.

Recheck carburetor synchronization.

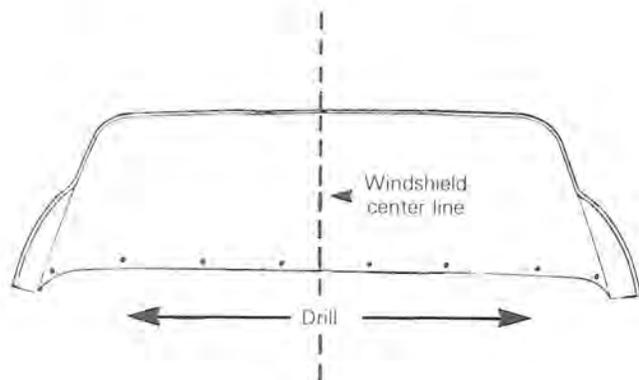
### C) Idle speed adjustment

Start engine and allow it to warm up then adjust idle speed to 1800-2000 R.P.M. by turning idle speed screws equally clockwise or counter-clockwise.

**CAUTION:** Do not attempt to set the idle speed by using the air screw. Severe engine damage can occur.

#### Pre-delivery bulletin no. 82-9—1982 Elite

- At installation of the windshield, ensure to drill the 6.5 mm (17/64") holes through the windshield location from the center line then to the outside as per illustration:



- If the fan belt tension is incorrect, use the standard procedure for adjustment and torque the jam nut to: 22-27 N•m (16-20 ft-lbs).
- If the gearbox chain tension has to be adjusted, the deflection should 6 mm (1/4").
- If the pulley offset has to be adjusted, the engine retaining nuts must be torqued to: 33-40 N•m (24-29 ft-lbs).
- If the alternator support bracket has to be moved for the alternator pulley alignment, torque the retaining nuts to: 48-61 N•m (35-45 ft-lbs).
- If the pulley nominal distance has to be adjusted, the engine support retaining nuts must be torqued to: 30-34 N•m (22-25 ft-lbs).

# **B) SUGGESTED ALTERNATIVE PRE-DELIVERY OPERATION SEQUENCE**

1. UNCRATING
2. BATTERY PRE-PARATION \*
3. SKI(S)/FRONT SUSPENSION \*
4. FRONT BUMPER/SPEEDO DRIVE INSTALLATION \*
5. SUSPENSION POSITIONING
6. ADJUSTABLE STEERING HANDLE \*
7. HORN \*
8. CHAINCASE OIL LEVEL \*
9. OIL INJECTION RESERVOIR \*
10. ROTARY VALVE RESERVOIR \*
11. GEARBOX/SHIFTING MECHANISM \*
12. TOOLS
13. EMERGENCY STARTING ROPE \*
14. PULLEY ADJUSTMENT
15. THROTTLE CABLE \*
16. STEERING PAD INSTALLATION \*
17. REAR BUMPER/HITCH/RACK INSTALLATION \*
18. TRACK TENSION
19. BRAKE ADJUSTMENT
20. PARKING BRAKE \*
21. BRAKE LIGHT SWITCH
22. SPEEDOMETER DECAL (OPTIONAL) \*
23. CARBURETOR(S) ADJUSTMENT
24. OIL INJECTION PUMP ADJUSTMENT \*
25. COOLING SYSTEM \*
26. SNOWGUARD \*
27. HEADLAMP/BEAM AIMING
28. WINDSHIELD
29. SKI TIE DOWN \*
30. SOUND LEVEL TAG
31. GENERAL INSTRUCTIONS



**CUSTOMER  
DELIVERY**

\* = IF APPLICABLE