BOMBARDIER SNOWMOBILES

# Competition Bulletin no. 81-2

Date: Year 1981 month 11 day 24

**MODELS: 1981 SUPER-MOD**

**Serial nos: All**

**Subject: Modifying 1981 Super-Mod to 1982 Formula Specifications**
- **Engine**
- **Carburation**
- **Drive clutch**
- **Front suspension**
- **Drive sprockets**
- **Rear suspension**
- **Frame**
- **Hood**

## ENGINE

To increase maximum engine R.P.M. (10,000 R.P.M.) the tuned pipe must be changed. This will increase R.P.M. from 9,200 to 10,000 R.P.M.

P/N 514 015 200 – PTO
P/N 514 015 300 – MAG

## CARBURATION

The carburetor needle jet must be changed to a 224-BB0.

P/N 404 114 000 (2)

## DRIVE CLUTCH

The drive clutch must be changed to a type A-1.

Parts required:

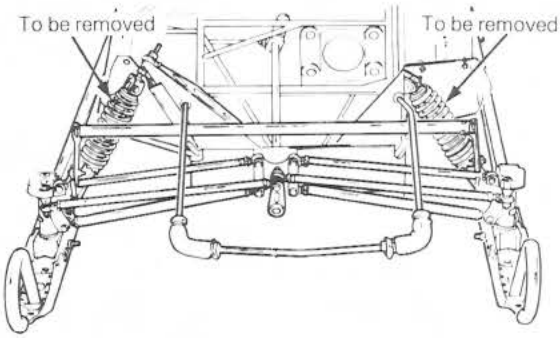
P/N 860 417 400 (3)

▼ CAUTION: To increase maximum engine R.P.M. to 10,000, the engine, carburation and clutch modifications must be done. If all three are not performed, engine damage could occur.

## FRONT SUSPENSION

To reduce the height of the front end, it is suggested that the front springs and dampers be replaced. This will lower the front end by 1/2" and increase the aerodynamics.

P/N 414 481 500 – Damper (2)
P/N 505 036 800 – Spring R.H. (1)
P/N 505 036 900 – Spring L.H. (1)




○ NOTE: If springs and dampers are changed, refer to Owner's Manual for correct front end adjustment procedure.

◆ **WARNING: This information relates to the preparation and use of snowmobiles in competitive events and has been utilized safely and effectively by Bombardier Inc. professional racing team. However, Bombardier Inc. disclaims liability for all damages and/or injuries resulting from the improper use of the contents. We strongly recommend that these modifications be carried out and/or verified by a highly skilled professional racing mechanic. It is understood that racing or modifications or any Bombardier made snowmobile voids the vehicle warranty and that such modifications may render use of the vehicle illegal in other than sanctioned racing events under existing federal, provincial and state regulations..**



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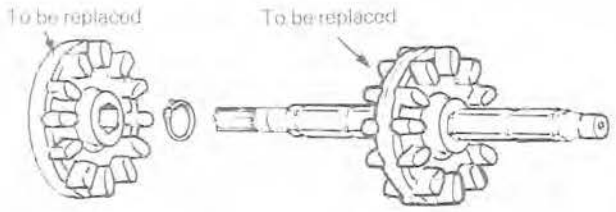
## DRIVE SPROCKETS

To ensure a more positive synchronization between sprocket and track, it is suggested that the sprockets (larger diameter) be changed.

P/N 414 481 300 – Centre sprocket (1)
P/N 414 481 200 – Side sprocket (2)

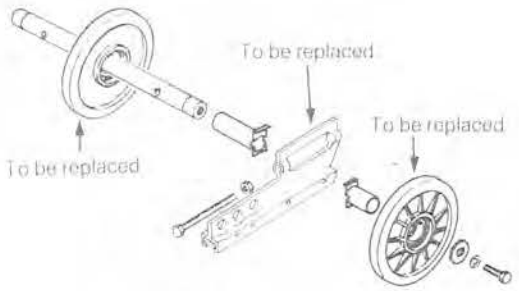


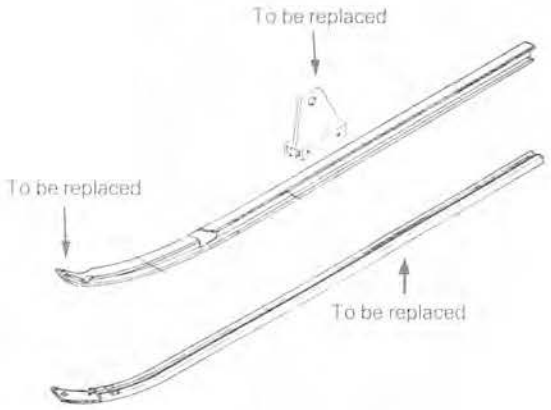

## REAR SUSPENSION

The modification of the rear suspension will make it more adjustable for different track conditions.

Parts to be replaced

P/N 503 069 800 – Runner (2)
P/N 560 305 900 – Slider (2)
P/N 503 069 900 – Arm support (2)
P/N 503 070 000 – Rear support (2)
P/N 503 070 100 – Inside rear idler (1)
P/N 503 070 200 – Outside rear idler (2)




### Runner

The runner is being replaced due to the angle not being as severe as the old one.

This gives the track more ground pressure at the front of the suspension.

### Slider

The slider has been changed to accommodate the new runner.

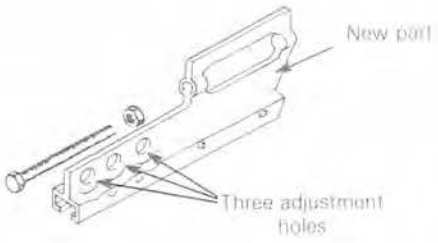
### Front arm support

The front arm support has been changed due to the fact that the arm is now located one inch lower than before. The relocation works directly with the new runner.

### Rear arm support

The new rear support now has three (3) position holes instead of one. This enables the driver to change the pivot point.

Front hole will give more transfer and more back end. Back hole will give less transfer and less back end.




NOTE: When installing the new arm supports, use the old runner as a template. Drill the holes using a no. 13 drill bit and install new spiral pins (P/N 372 009 200).

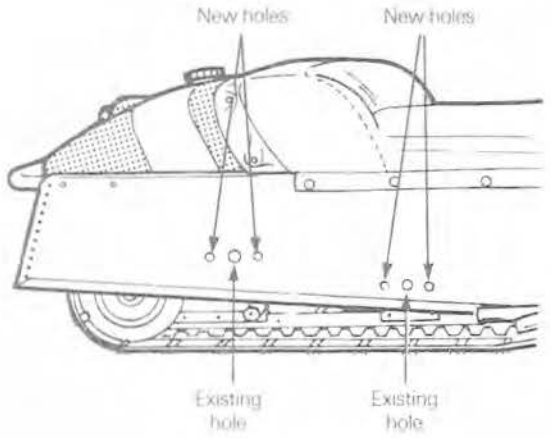
**CAUTION: The rear suspension modification must be done in conjunction with the frame modification.**

### Rear idlers

The rear idlers have been changed (larger diameter) to compensate for the increase in size of the drive sprockets.

## FRAME MODIFICATION

If the rear suspension has been modified, the frame requires additional holes to make it adjustable.




### Procedure

New holes for securing the rear arm are 3/8" or 9.53 mm and 1" or 25.4 mm centre to centre of existing hole.

New holes for securing the shock are 5/16" or 8 mm and 1" or 25.4 mm centre to centre of existing hole.

When adjusting the rear suspension and you want to position the rear arm in the back hole of the rear arm support, you must move the upper rear arm to the back hole on the frame. The shock mounting bolt must also be moved to the rear hole.

The same adjustment must be done when using the centre or front hole.

NOTE: It is suggested that new aluminum backing plates be installed on the frame when the new holes are drilled. This will strengthen the areas around where the rear arm and shock are mounted.

## HOOD

The new hood has a scoop built in just below the windshield. This improves carburation breathing. The new hood will back fit to the 1981 Super-Mod.

P/N 580 459 000 – Ski-Doo (1)
P/N 580 459 100 – Moto-Ski (1)
P/N 580 462 200 – Windshield (1)