

# SAVMI SNOWMOBILE AND SMALL ENGINE MAINTENANCE

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**KNOW THE RISKS,  
AND BE PREPARED.**



**And make every trip a round trip.**

A MESSAGE BROUGHT TO YOU BY



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# Initial Vehicle Inspection

## Things to check

- All fluids and make any notes of visible leaks or low fluids
- Throttle lever and cable for proper operation
- Test run machine

## Check:

- Heated grips
- Heated thumb lever
- Lights
  - Brake
  - Tail
  - High and low beams
  - Working LED safety lights
- Operation of kill switch and tether
- Engine light or run ability issues
- Wash vehicle extremely well, paying attention to any damage
- Run machine on a stand
- Clutches
  - Smooth operation
  - Any noises, clicking, clacking, etc.
- Skid Frame
  - Smooth operation
  - Bad bearings
  - Boggie wheels
  - Drive shaft
  - Rear axle
- Apply brake lever to feel for warped rotor.



<https://youtu.be/uCEvBGT8twM>

## Engine (4 stroke)

- Change oil and filter
- Change spark plugs (every 3,000 miles)
- Inspect:
  - Caps and coils
  - Exhaust for leaks and heat shields
  - Intake (including sensors, inspect/clean)
- Check all grounds and tighten
- Check motor mounts
- Replace fuel filter and inspect fuel lines
- Pressure test cooling system
  - Tighten all clamps and inspect hoses
- Inspect valve clearance and adjust (engine cold)

## Engine (2 stroke)

- Remove spark plugs and inspect
- Complete compression test ( 10% difference max between cylinders)
- Replace spark plugs
- Inspect:
  - Caps
  - Wires
  - Coils
  - Check resistance
  - Remove Carbs
  - Inspect:
  - Intake boots
  - Reeds/ Rotary plate
  - Oil lines
  - Oil pump cable
  - Check oil pump alignment and adjust

- Remove Exhaust
- Inspect:
  - Donuts
  - Heat shields
  - Carbon build up ( this will determine further inspection to rave valves)

Inspect fan belt and replace if applicable

- Pressure test cooling system
  - Inspect hoses and tighten clamps
- Inspect fuel lines and fuel pump
- Replace filter
- Check all ground wires and tighten
- Inspect motor mounts and engine stop



## Carburetor

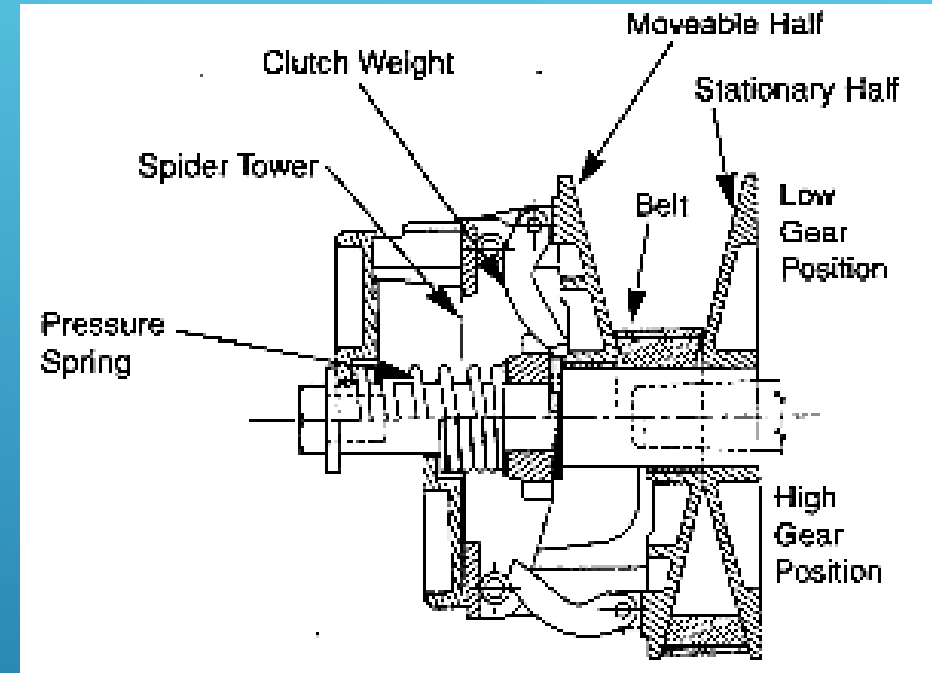
- Disassemble the following in a clean drain pan.
  - Float bowl
  - Main jet, pilot jet, starter jet
  - Remove fuel/ air screw ( make sure and count turns in before removal as well as remove metal washer and sealing ring)
  - Slide assembly
  - Float
  - Needle
- Clean Carb thoroughly with carb clean and compressed air.
- Repeat through all jets with a visual look to make sure hole is fully open.

### Inspect

- Slide assembly
- Metering rod
- Needle and seat
- Fuel/ air screw
- Reassemble making sure to check float hight and adjusting as needed
- Install carbs fully before adjusting throttle cable and make sure throttle lever has free play.

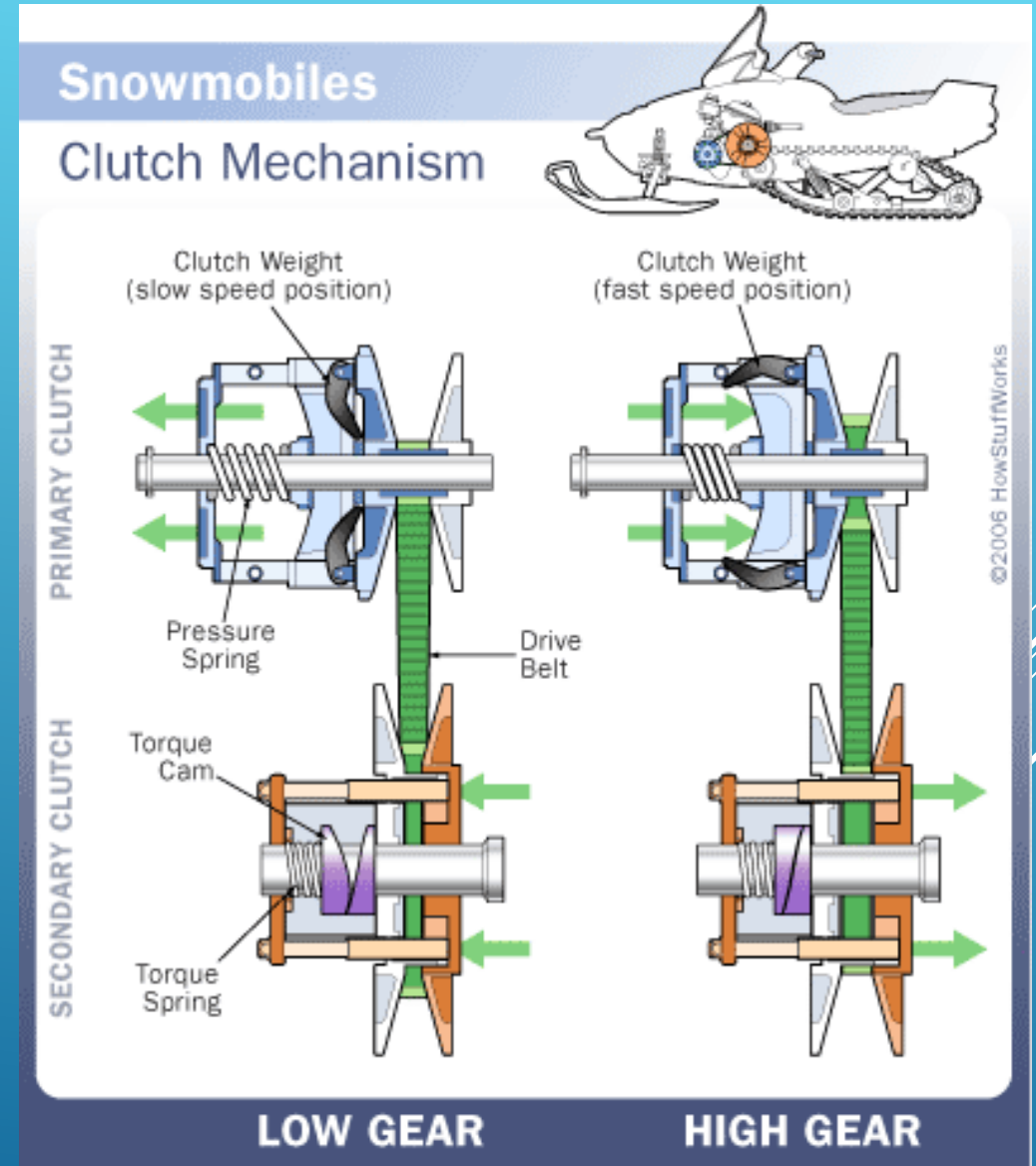
# Primary Clutch

- ▶ Remove clutch Make sure to mark and disassemble.
- ▶ Inspect
  - Sliders
  - Ramps
  - Rollers
  - Spring
  - Bushings
  - Sliding sheave
  - Fixed sheave
- ▶ Scuff up belt surfaces
- ▶ Clean Clutch
- ▶ Reassemble
- ▶ Torque clutch on to crank shaft
- ▶ Note that clutch will need to be torqued after warm up.



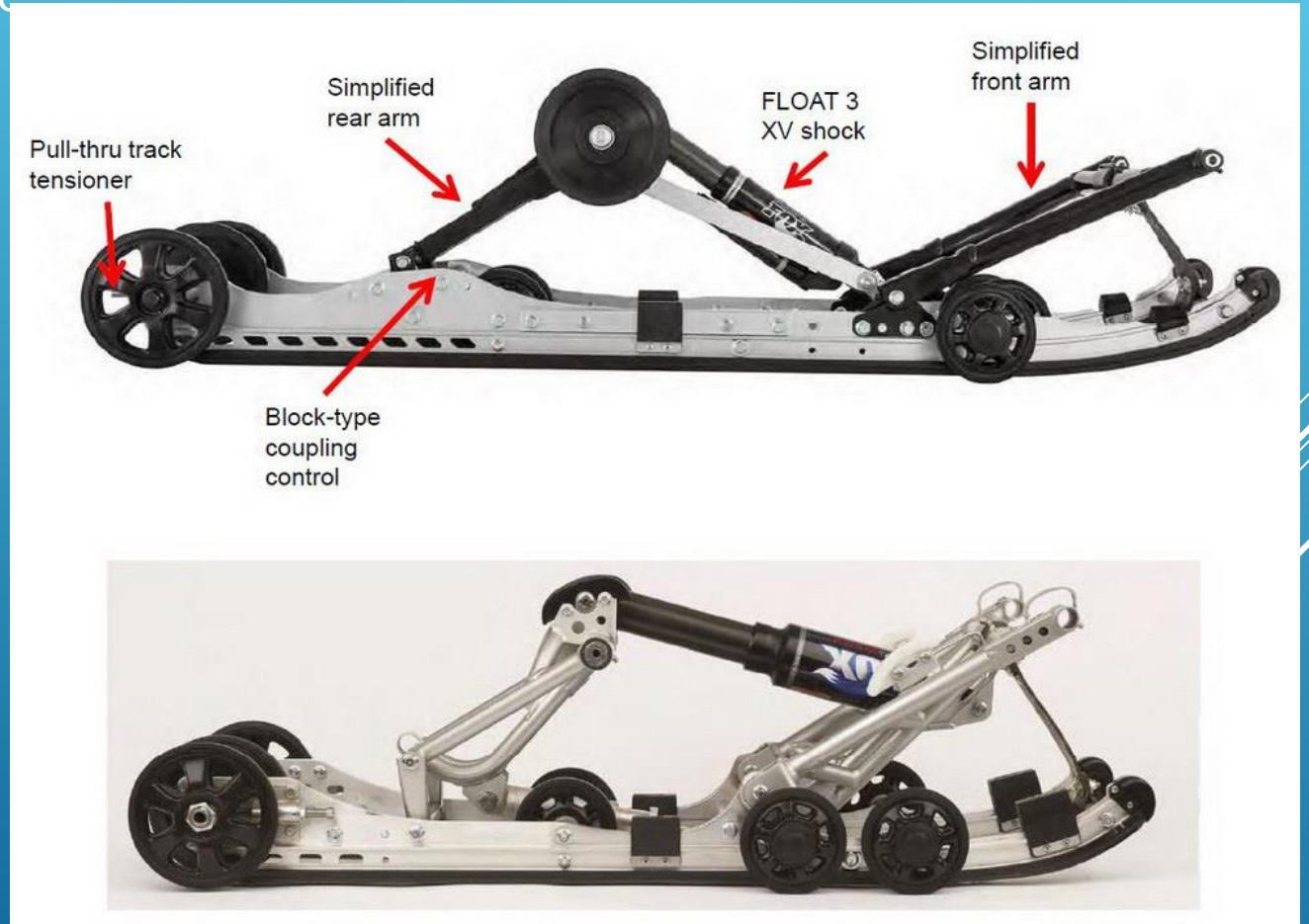
## Secondary Clutch

- Remove Clutch Make sure to mark before disassemble
- Inspect
  - Bushings
  - Rollers/ Sliders
  - Helix
  - Spring
  - Fixed sheave
  - Sliding flange
- Scuff up Belt surfaces
- Clean Clutch
- Reassemble making sure to clock correctly and line up



## Skid Frame

- Check for spring sag
- Check for shock compression and rebound
- Lift Rear end up and remove Skid frame
- Inspect
  - Bogie wheels
  - Rear axle and wheels
  - Hyfax
  - All Pivot points
  - Grease zerks
  - Rails
- Torque all bolts
- Before installing Skid
- Inspect
  - Drive shaft
  - Drivers
  - Bearings
  - Seals
- Install skid frame
- Adjust track

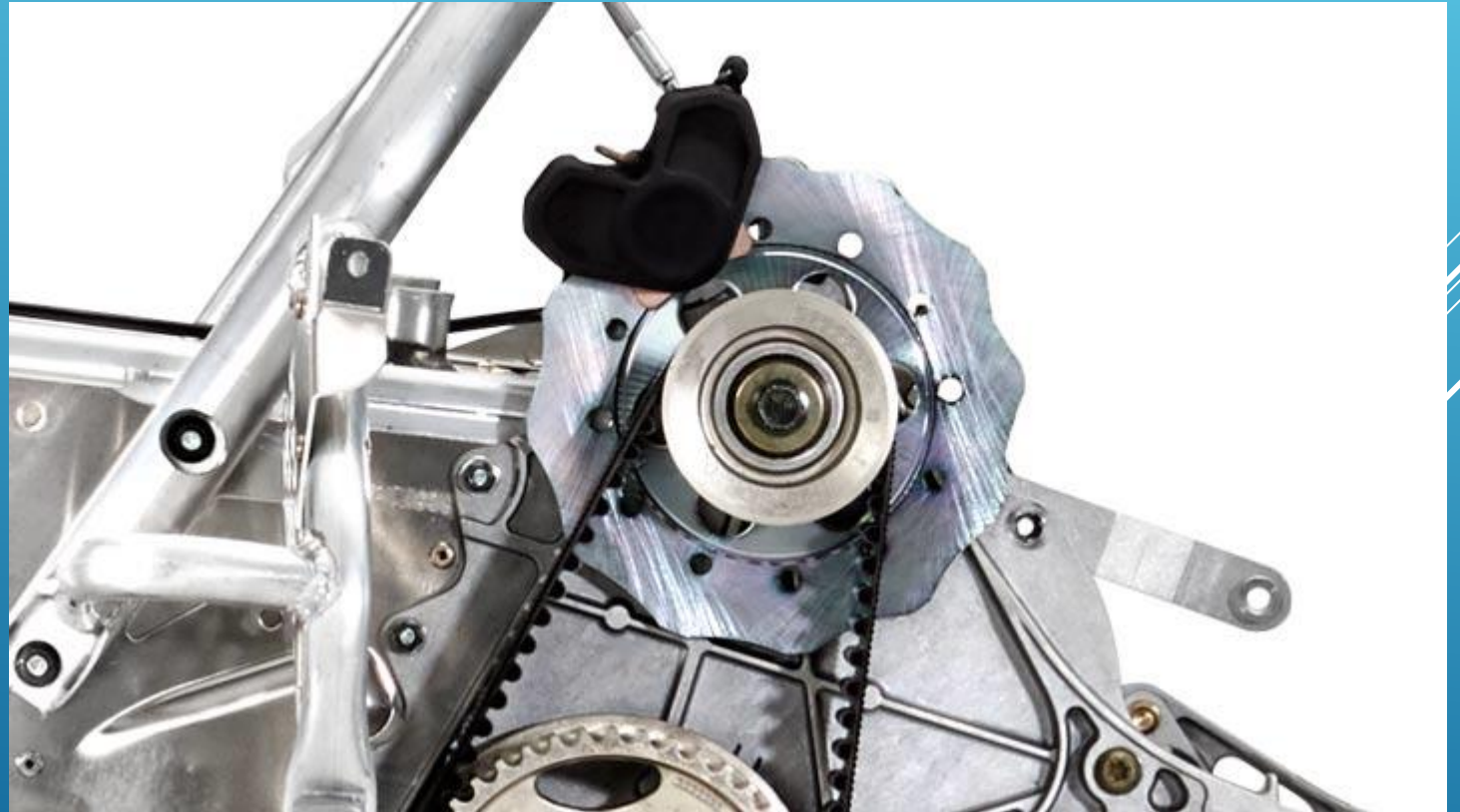






# Brakes

- Remove Pads and inspect for Cracks or Gloss
- Inspect rotor for Grooves or Excessive play
- Inspect caliper for damage or leaks
- Reassemble
- Flush brake fluid thoroughly



## Chain Case

- Remove cover
- Inspect
  - Oil
  - Chain
  - Gears
  - Tensioner
  - Cover gasket
- Adjust chain hand tight
- Clean and install cover
- Fill with oil

## Gear Box

- Drain oil
- Inspect
  - Oil
  - Gear slop
  - Shifter
  - Belt tension
- Fill with oil



## Front Suspension

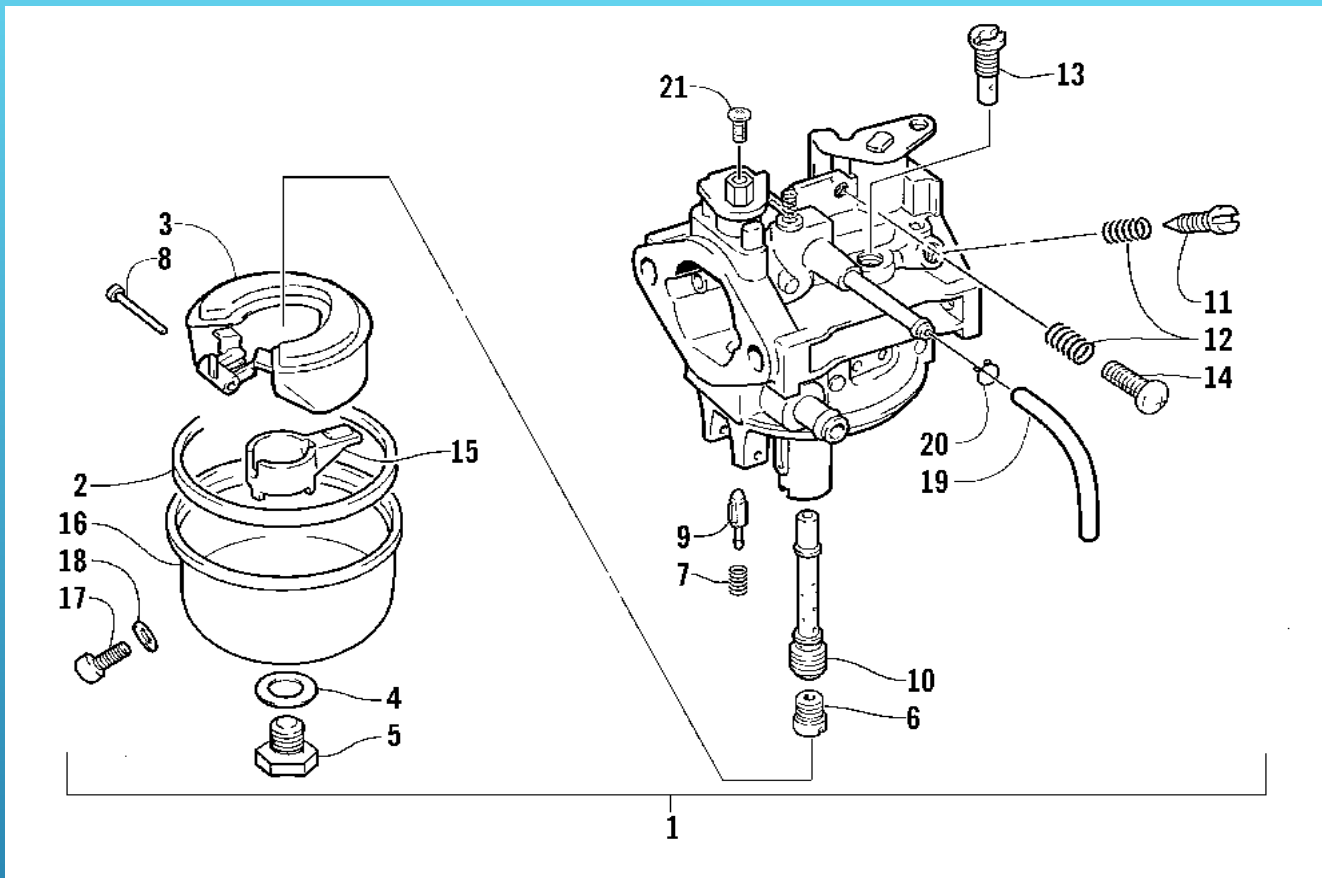
- Check for sag and shock compression and rebound.
- Jack up front end and Inspect.
  - Ball joints
  - Tie rods
  - Tie rod ends
  - Steering shaft and bushings
  - Handlebars
  - A arms/ trailing arms
  - Skis
  - Skegs
- Grease
- Check alignment and adjust on the ground if needed.



## Final Vehicle Touch Ups

- ✓ Seat Covers
- ✓ Patch or repair if necessary
- ✓ Check all brackets and tie downs
- ✓ Add fuel stabilizer
- ✓ Detail and Polish machine





A COMMON MISTAKE WITH THIS STYLE OF CARB IS MISSING THE PILOT JET WHEN SERVICING OR CLEANING THE CARB. NOT ONLY IS IT EASY TO MISS, BUT IMPROPERLY CLEANING IT WILL NOT FIX THE PROBLEM. THE PILOT JET IS NUMBER 13 AND IS LOCATED UNDER THE IDLE ADJUSTER SCREW. SOMETIMES IT IS PLASTIC AND ONLY HELD IN BY AN O-RING. THE FUEL IS SUCKED UP THROUGH A PIN HOLE IN THE BOTTOM OF THE JET AND FLOWS OUT THE SIDE OF IT. THE PIN HOLE ON THE BOTTOM IS HARD TO SEE THROUGH AND CAN BE EASILY OVERLOOKED. PROBLEMS CAN BE, ROUGH IDLE, AND NO IDLE, SPUTTERING, OR BOGGING.