

ski-doo®

2002

MX Z X 440 Operator's Guide Supplement



BOMBARDIER
RECREATIONAL PRODUCTS

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484 100 057

This supplement must be used
in conjunction with *2002 ZX
Series Operator's Guide*
(P/N 484 100 044)



WARNING

Read this guide thoroughly.
It contains important safety information.

SAFETY WARNING

Disregarding any of the safety precautions and instructions contained in this *Operator's Guide*, *Safety Handbook*, *Safety Video* or on-product warnings may result in injury, including the possibility of death.

This *Operator's Guide*, *Safety Handbook* and *Safety Video* should remain with the unit at time of resale.

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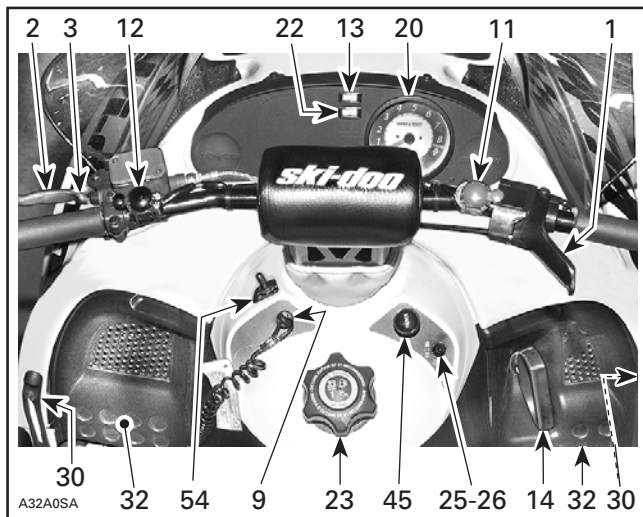
Dear 2002 MX Z X 440 owner, all informations on MX Z 600 in the 2002 ZX Series Operator's Guide (P/N 484 100 044) also applies to your MX Z X 440 except for the following.

LIMITED WARRANTY VALIDATION

The 2002 MX Z X 440 is shipped from the factory with high compression ratio (CR) combustion chamber inserts installed.

To validate limited warranty coverage, low CR combustion chamber inserts must be installed on engine **at predelivery before using the vehicle**. The high CR combustion chamber inserts must be returned to BOMBARDIER Warranty Department.

CONTROLS/INSTRUMENTS



NOTE: See description or numbered items in *2002 ZX Series Operator's Guide* (P/N 484 100 044) except for the following.

11) Tether Cut-Out Switch

Attach tether cord to clothing then snap tether cut-out cap over receptacle before starting engine.

To stop engine, completely pull cap from safety switch.

53) Primer Button

Pull and push button. It is not necessary when engine is warm.

To prime, activate button until a pumping resistance is felt. From this point, pump 2 or 3 times to inject fuel in intake manifold. After priming, ensure that primer button is pushed back.

NOTE: In very cold temperature, it is recommended to rotate primer button 3-4 turns prior to pull it. This will eliminate the possibility of sticking.

54) Octane Level Switch

NOTE: This switch is disabled (not operative) on vehicles modified for warranty validation.



Select octane level according to fuel octane number used.

FUEL AND OIL

Recommended Fuel

Vehicles with Valid Warranty (Octane Level Switch Disabled)

Use super unleaded gasoline, available from most service stations or oxygenated fuel containing less than 10% of ethanol or 5% of methanol. The gasoline used must have an octane number $(R + M)/2$ of 91 or higher.

NOTE: In most service station pump octane number corresponds to $(R + M)/2$ octane number.

Vehicles without Warranty (Octane Level Switch Enabled)

Use one of the three following fuels depending of the type of racing.

1. Super unleaded gasoline, available from most service stations or oxygenated fuel containing less than 10% of ethanol or 5% of methanol. The gasoline used must have an octane number $(R + M)/2$ of 91 or higher.
2. Racing fuel with motor octane number of 100.
3. Racing fuel with motor octane number of 108 and more.

Use octane level switch to select octane level corresponding to the fuel octane number used.

All Vehicles

CAUTION: Never experiment with other fuels or fuel ratios. The use of unrecommended fuel can result in snowmobile performance deterioration and damage to critical parts in the fuel system and engine components.



WARNING

Fuel may be pressurized, open cap slowly. Fuel is flammable and explosive. Never use an open flame to check fuel level. Never smoke or allow flame or spark in vicinity. Never top up the fuel tank before placing the vehicle in a warm area. As temperature increases, fuel expands and may overflow. Always wipe off any fuel spillage from the vehicle.

Fuel System Antifreeze

NOTE: Fuel antifreeze may add alcohol to fuel which may lead to disqualification by technical inspection after the race.

When using oxygenated fuel, additional gas line antifreeze or water absorbing additives are not required and should be not used.

When using non-oxygenated fuel, we highly recommend the use of iso-propyl base gas line antifreeze in a proportion of 150 mL (5 U.S. oz) of gas line antifreeze added to 40 liters (10-1/2 U.S. gal) of gas.

This precaution is in order to reduce the risk of frozen carburetor(s) which may lead, in certain cases, to high fuel consumption or severe damage to engine.

IMPORTANT: Use only methyl hydrate free gas line antifreeze.

Recommended Oil

CAUTION: Use only oil that flows at - 40°C (- 40°F).

Oil must be mixed with fuel in proper ratio in a jerrycan then, be poured in the fuel tank.

Use only two-stroke engine injection oil sold by authorized SKI-DOO dealers.

MODEL	OIL TYPE
MX Z X 440	BOMBARDIER Formula XP-S synthetic injection oil (or equivalent) OR BOMBARDIER injection oil (or equivalent) ① ②

① If BOMBARDIER injection oil is not available, API TC high-quality ashless two-stroke injection oil may be used.

② BOMBARDIER Formula XP-S synthetic injection oil and BOMBARDIER injection oil are compatible, they can be mixed together.

BOMBARDIER injection oil is a special blend of basic oil and additives especially selected to ensure unequalled lubrication, engine cleanliness and minimum spark plug fouling.

The BOMBARDIER Formula XP-S synthetic injection oil **provides superior lubrication**, reduced engine component wear and oil deposit, thus maintaining maximum-level performance and antifriction properties. This synthetic injection oil meets the latest ASTM and JASO standards by ensuring high biodegradability and low exhaust smoke.

CAUTION: Never use four-stroke petroleum or synthetic motor oil and never mix these with outboard motor oil. Do not use NMMA TC-W, TC-W2 or TC-W3 outboard two-stroke motor oils. Avoid mixing different brands of API TC oil as resulting chemical reactions may cause severe engine damage.

 **WARNING**

Wipe off any oil spills. Oil is highly flammable.

OIL/FUEL 33/1



METRIC (SI)

1 L of oil + 33 L of fuel = 33/1

IMPERIAL

35 imp. oz of oil + 7.2 imp. gal of fuel = 33/1

1 L of oil + 7.2 imp. gal of fuel = 33/1

UNITED STATES

34 U.S. oz of oil + 8.8 U.S. gal of fuel = 33/1

1 L of oil + 8.8 U.S. of fuel = 33/1

STARTING PROCEDURE

- Re-check throttle control lever operation.
- Ensure that the emergency cut-out switch is in the ON position.
- Ensure the tether cut-out cap is in position and that the cord is attached to your clothing.
- If applicable use the octane level switch to select proper octane number according to fuel used.
- To prime, activate button until a pumping resistance is felt. From this point, pump 2 or 3 times to inject fuel in intake manifold. After priming, ensure that primer button is pushed back.

NOTE: In very cold temperature, it is recommended to rotate primer button 3-4 turns prior to pull it. This will eliminate the possibility of sticking.

NOTE: Priming is not necessary when engine is warm.

FLUID LEVEL

Coolant Pump Shaft Oil Reservoir

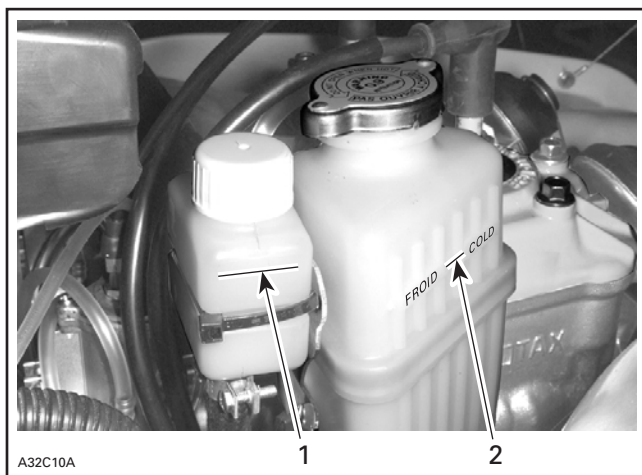
Use BOMBARDIER injection oil (P/N 413 802 900) (12 x 1 L).

Fill up to mark.

Coolant Reservoir

Use a blend of 50/50 distilled water and ethylene-glycol. That blend will protect the system from freezing as low as -37°C (-35°F).

Fill up to mark when engine is cold.

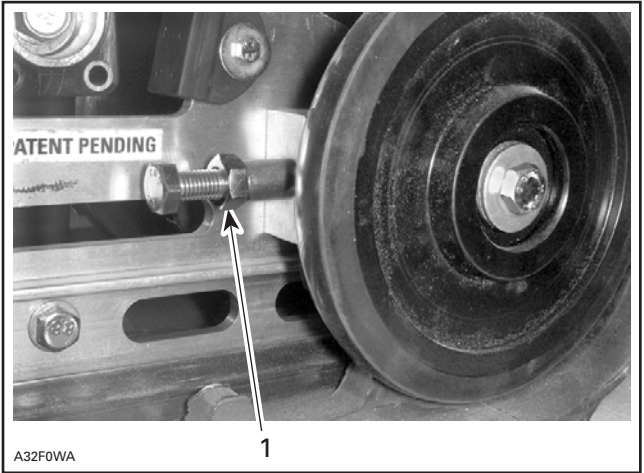


1. Coolant pump shaft oil filling mark
2. Coolant cold level mark

MAINTENANCE

Track Tension and Alignment

Loosen lock nut on both adjustment screws before adjusting track tension and/or alignment. Retighten after adjustments are done.



LEFT SIDE SHOWN

1. Lock nut on adjustment screw

SPECIFICATIONS

GENERAL		MX Z X 440
Engine		
- Maximum power engine speed	± 50 RPM	8450
Drive belt		
- Number		414 860 700
- New belt width	mm (in)	34.9 (1-3/8)
- Wear limit width	mm (in)	32.5 (1-1/4)
Spark plug		
- Type		NGK BR 9 ECS
- Gap	mm (in)	0.45 (.018)
Track		
- Tension	mm (in)	30 to 35 (1-3/16 to 1-3/8) ①
- Alignment		②
FLUIDS		
Fuel		
- Type		③
- Tank capacity	L (U.S. gal)	37 (9.86)
Oil (engine)		
- Type		④
- Premix ratio		33/1
Chaincase/Transmission Oil		
- Type		⑤
- Capacity	mL (U.S. oz)	250 (8.5)
Cooling System		
- Type		⑥
- Capacity	L (U.S. oz)	3.5 (118)
Brake System Fluid		
- Type		DOT 4

① Measure gap between slider shoe and bottom inside of track when exerting a downward pull of 7.3 kg (16 lb) to the track.

② Equal distance between edges of track guides and slider shoes.

③ Super unleaded gasoline with a minimum octane number of 91 (R + M)/2 or racing fuels depending of type of racing.

④ BOMBARDIER Formula XP-S synthetic injection oil (or equivalent) OR BOMBARDIER injection oil (or equivalent).

⑤ BOMBARDIER synthetic chaincase oil (P/N 413 803 300) (12 x 355 mL).

⑥ Blend of 50/50 distilled water and ethylene-glycol. That blend will protect the system from freezing as low as - 37°C (- 35°F).

Bombardier reserves the right at any time to discontinue or change specifications, designs features, models, prices or equipment without incurring obligation.