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# X-1R FAQs

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Performance Lubricants

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<http://www.x1r.com>

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## X-1R General FAQs

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### 1) What is X-1R?

X-1R is a liquid synthetic metal conditioner that reduces friction and wear in your car's drive-train. X-1R is non-hazardous, non-flammable and environmentally-friendly.

### 2) Where do I use X-1R?

In all vehicles drive train fluids – engine oil, transmission oil, differential oil and power steering fluid.

### 3) Can I use X-1R Engine Treatment in my fuel system?

It is not recommended.

### 4) Can I use X-1R in my brake system? NO!

### 5) Can I use X-1R in all of my vehicles? Yes

### 6) Will using X-1R void my vehicle warranty?

No. X-1R is not listed on any void list from any manufacturer. Every manufacturer recommends a specific grade of lubricant for use in their vehicles or equipment; this grade classification is known as an A.P.I. rating (American Petroleum Institute). Lubricants have a certain performance limitation. The important thing to remember is the manufacturer is not concerned with the brand of lubricant you use as long as it has the proper A.P.I. rating recommended by the manufacturer. As long as the consumer is using the proper A.P.I. rated fluid, the warranties will not be voided by adding X-1R. X-1R is compatible with all A.P.I.-rated fluids

### 7) Is X-1R compatible with other additives? If problems occur, is it a direct result of X-1R and who assumes responsibility for any damage?

X-1R is compatible with other additives. The X-1R Corporation cannot control or guarantee the condition or service of vehicles prior to using X-1R. The X-1R Corporation can guarantee that X-1R protects and outperforms any other friction reducing additive on the market. With proper maintenance of equipment and the use of the X-1R additive, equipment life will always be extended.

### 8) Most P.T.F.E.-based lubricants claim that they last 50,000 miles. Why doesn't X-1R make the same claim?

Because the claim is a marketing gimmick. There is no evidence to support this outlandish claim. From an engineering point-of-view, the claim is completely groundless.

### 9) Why is X-1R superior to P.T.F.E.-based lubricants?

X-1R is free of any particulates and is non-clogging. It does not modify the viscosity characteristics of the host oil. It treats the metal surface at the molecular level and reduces surface roughness and increases surface hardness. X-1R can withstand temperatures greater than 500o F without breaking down. It can be used anywhere there is metal-to-metal contact. X-1R has no detrimental effect on automatic transmissions or any other fiber or ferrous metal to non-ferrous metal clutch mechanisms. X-1R contains anti-oxidants, anti-rust and anti-foaming agents not found in many other products.

### 10) To what standards does X-1R conform?

X-1R conforms to ASTM test procedures for fuel economy, compatibility and co-efficiency of friction standards.

## FAQs about X-1R Concentrated Engine Treatment

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### 1) How often do I need to add X-1R to my vehicle's drive train?

Every time you change the fluid. Preventative maintenance adds life to every vehicle.

### 2) Will X-1R increase the life of the oil in my vehicle?

The manufacturers of X-1R recommend you follow your owner's manual regarding when to change fluids.

### 3) Does X-1R change the viscosity of the oil?

No. X-1R is added at a small percentage to the total volume of oil (6% or less, depending on application), and through scientific technology, is able to assume the characteristic of the host oil.

### 4) Can you use X-1R to increase intervals between oil changes?

It is possible that X-1R oil additive/metal conditioner can increase the intervals between oil changes, but to specifically state how much longer is not possible because of variables such as:

- Condition of engine and quality of oil.
- Environmental conditions to which engines are exposed.
- Applications applied to the engine (i.e.: heavy hauling, short stops, highway driving, high speed/low speed driving).

### 5) How much X-1R do I use in my engine?

*Initial Treatment:*

Add 1 bottle (8 oz.) during oil change for capacities up to 5 quarts.

For oil capacities 6 quarts and greater, add 2 oz. of X-1R per quart.

*Retreatment:*

For optimum performance and protection use 1/2 bottle (4 oz.) every time you change your oil.

For capacities of 6 quarts and greater, add 1 oz. of X-1R every time you change your oil.

### 6) Why not a one-time dosage?

There is no scientific/government-approved one-time treatment for lubricating fluids. X-1R is not a "miracle oil". It works in conjunction with recommended service schedules as part of a preventative maintenance program. The X-1R Corporation does not make false and untested claims regarding any of the X-1R products. X-1R is a highly-tested lubrication product with the best documented results of any product of its kind.

### 7) Is X-1R safe for turbo engines?

Yes, it is safe for gas or diesel turbo-charged engines.

### 8) Will X-1R protect turbo-chargers on start-up and close-down while oil flows and pressure builds?

Yes. X-1R offers superior protection to turbo-charged units. The average turbo requires 20 seconds at start-up for full oil circulation. This is where the majority of wear occurs on a turbo unit. When you shut down a turbo, let it idle for approximately 20 seconds, this will give the unit a chance to cool and let the heat escape. With X-1R, the moving parts in the turbo are protected against these two major wear factors.

### 9) Will X-1R hurt my engine if I put too much in?

No. X-1R is not oil; it is a concentrated additive and should be used only as directed.

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## FAQs about X-1R Automatic Transmission Treatment

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### 1) If X-1R reduces friction, how does it work in an automatic transmission?

X-1R only conditions the metal, such as the valve body and front pump. In an automatic transmission there are no "fibrous" friction plates to engage the gears in the transmission. X-1R has no adverse effect on these friction plates.

### 2) How much X-1R do I use in my automatic transmission?

*Initial treatment:* Add 4 oz. total.

*Retreatment:* Add 4 oz. of X-1R every time you change the fluid.

### 3) How much X-1R do I use in my manual transmission/differential?

*Initial treatment* (manual transmission): Add 2 oz. per quart.

*Retreatment* (manual transmission): Add 2 oz. per quart every time you change the fluid

*Initial treatment* (differential): Add 2 oz. per quart.

*Retreatment* (differential): Add 2 oz. per quart every time you change the fluid.

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## FAQs about X-1R Complete Fuel System Treatment

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### 1) Will X-1R Complete Fuel System Treatment void my new vehicle's warranty?

No, X-1R Complete Fuel System Treatment is safe for all gasoline engines, new or old.

### 2) How often should I use X-1R Complete Fuel System Treatment?

A good rule of thumb is to add one bottle of X-1R Complete Fuel System Treatment to your gas tank every time your oil is changed. This will help prevent contamination build up while making it easier to remember when you last treated the fuel system.

### 3) Does X-1R Complete Fuel System Treatment help reduce emissions and increase fuel economy?

Yes, however results will vary depending on condition of the vehicle, driving styles and environment.

### 4) I've never used a fuel additive before, what should I expect?

Using X-1R Complete Fuel System Treatment on a regular basis will help keep your vehicle running at optimum performance by providing additional additives to keep the system clean of dirt and moisture. Depending on the condition of your vehicle's engine and fuel delivery system you may not notice an immediate improvement. It may take two or three treatments before the majority of the containments are removed.

If after three consecutive treatments you experience no improvements, you should have a technician check for some kind of internal problem.

### 5) Will X-1R Complete Fuel System Treatment clean up any dirty valves and or injectors in my engine?

Yes, some applications may take longer due to the amount of carbon and other residues that may exist in the system.

### 6) Will using X-1R increase my fuel economy?

Yes, depending on the condition of the vehicle, a 3 - 7% increase in fuel economy could be expected