



TITANIUM SIGNATURE SERIES INSTALLATION MANUAL

ALL 1/2" FUEL PORTS

APPLICATION:

TS-250G

OR

TS-290G

(250GPH @ 16-18 psi)

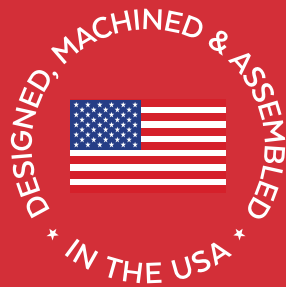
OR

(290GPH @ 16-18 psi)

CLASS 1-8 / SEMI / UNIVERSAL

NOTE:

Fuel Lines NOT Included
Visit www.FASSride.com for
application chart





www.fassride.com

(866) 769.3747

Thank you for choosing FASS, from Diesel Performance Products, Inc.

FASS specializes in building extremely high-quality fuel products. We have earned an unsurpassed reputation for excellence in our industry by using only the highest-quality American-made components. In order to support our American workers and our American economy, more than 98+ percent of our products are manufactured completely in the United States.

Of course, that dedication to excellence comes at a price, but it is important to remember that price does not dictate quality—quality dictates price! We will never compromise by using cheaper, foreign-made components, like so many of our competitors do.

Customer satisfaction is our top priority and we strive always to provide outstanding customer service. Our Research and Development department, in conjunction with our Dealer Support Department, continually searches for ways to improve quality, expand our product line, and provide superb support. Our exclusive ViP Network ensures that customers receive the proper products and support at the local level. The extended four-year warranty is only available on products purchased from the network. There is no warranty on products not purchased outside the network.

IMPORTANT:

In order to qualify for the Four-year extended warranty, your product registration form and proof of purchase from an authorized dealer must be submitted to FASS Fuel Systems within 30 days of purchase. Failure to comply will void the warranty. We have the right to deny any warranty believed to be false, altered or purchased through an unauthorized or terminated dealer. A current list of authorized dealers can be found on our website, FASSRide.com.

The complete conditions of the Limitation of Warranty can be found in the back of this manual, and FASSRide.com.

The installation of this product indicates that the buyer has read and understands the Warranty agreement and accepts its terms and conditions. In the event that the buyer does not agree with the terms, the product—in new, unused condition—along with the dated receipt should be returned within thirty (30) days of the date of purchase for a full refund less shipping costs.

**For more information,
contact Technical Support:
Diesel Performance Products, Inc.
16234 State Hwy O.
Marthasville, MO 63357
636-433-5410**



WARNING!

This product has NO WARRANTY unless:

- 1. It has been purchased from an **Authorized** or **ViP FASS Dealer**. If in doubt, check **www.FASSRide.com**. (If your purchase was made on Amazon.com, the warranty is void. Return the FASS product to the seller and get a refund).**
- 2. It is registered within thirty (30) days of purchase.**

Other conditions may apply. Please see full warranty information.

ATTENTION!

Before you begin installation

Register for your Warranty ONLINE at

<https://www.fassride.com/register-a-warranty/>

No online access, call our TECH Support at

1-866-769-3747

(Fuel Line Not Included See Below)

Before proceeding with the installation, **BE SURE** to identify that you have the proper **FASS System and Fuel Line Kit/Kits** by using our **Product Finder** at www.FASSride.com. Follow the instructions for proper identification.

IDENTIFY FUEL LINE CONFIGURATION

NOTE: Below is a chart of available fuel line kits FASS has to offer. Using one of these kits will make the installation cost effective and easier. This manual will refer to these **FLK (Fuel Line Kit)** numbers:

Be sure to identify the proper fuel line configuration. (For help, our product finder can be found at www.FASSride.com. Follow the instructions to see fuel line detail).

#10 Fuel Feed Line (From FASS to Engine 5') FLK-S01

Double Pickup/Return (20') FLK-S03
Double Return Line Kit (For Tanks With Extra Ports)

Double Vent Return Line Kit (20') FLK-S06
Double Vent Return Line Kit Dual Fuel Tanks (With No Extra Ports)

DD15 Complete Fuel Line Kit (22') FLK-S07
DD15 Supply/Double Return Fuel Line Kit

Single Pickup/Single Return (15') FLK-S08
Single Vented/Unvented Return line Kit (with & without extra ports)

For any questions regarding proper identification, please call **FASS Tech Support at (636) 433- 5410** prior to proceeding with installation.

Warning: If the fuel pressures of the FASS System are adjusted above 80 PSI the warranty will be void.

FOLLOW THESE STEPS TO ENSURE A SIMPLE, CORRECT INSTALLATION OF YOUR NEW TITANIUM FUEL SYSTEM

ATTENTION:

Be sure to identify the proper FASS System and fuel line configuration. For help, our product finder can be found at www.FASSride.com. Follow the instructions to see fuel line detail.

- 1** Be sure the serial number on this installation manual matches that on the outside of the box.
- 2** Pay close attention to ALL WARNINGS
- 3** Read all instructions before starting installation of this product.
- 4** Inventory the package components. Notify the place of purchase immediately of any parts missing or damaged.
- 5** The installation recommendations contained herein are guidelines. Use good judgment and take into consideration your vehicles' accessories.
- 6** For best results in accuracy and efficiency (due to training, communication, and our relationship with our dealer network), we recommend a VIP FASS dealer for the installation. They are prepared to install the FASS fuel pumps with the most efficiency. If a situation or problem arises during the installation, the dealer is prepared to handle it. Diesel Performance Products, Inc. is not responsible for any installation mistakes.
- 7** If you have any questions or concerns that cannot be addressed with your dealer, email or call FASS.

**If any installation procedure is uncertain, contact FASS technical support.
Call customer service at 636-433-5410,
or send us an e-mail: techsupport@FASSride.com
with the following information:**

Your name, address and daytime phone number

Model (**TS 290G** or **TS 250G**)

Serial Number

Last 6 digits of vehicles' VIN

Date of purchase

Nature of Your Concern

Serial number





INSTALLATION MANUAL **FASS TS-250G** or **FASS TS-290G**

www.fassride.com
(866) 769.3747

(Installation Videos are available at www.fassride.com)

Recommended Application

Class 8, Agricultural, Industrial, Recreational, Highway and Off-road Applications require fuel flow demands of 16-18 psi and less than 250 gph or 290 gph (For Applications, go to our Product Finder at www.FASSride.com)

NOTE: This unit was not designed to be used on Unit Injected Mechanical Engines. Refer to the FASS kits with UIME in the model number. Installing the improper FASS Pump can cause severe engine damage.

NOTE: A fuel pressure gauge is highly recommended to identify fuel filter condition and prevent engine damage.

WARNING! Do not tie FASS Return in with engine return. Back pressure can cause damage to engine.

NOTE: Do Not Remove any factory installed secondary fuel filter. Removal of a factory installed secondary fuel filter may void the engine manufacturer's warranty. This is the fuel filter between the engine's fuel pump and the injectors.

1. Keep debris from entering the internals of the system during installation. Getting debris in the water separator nipple can lock up the motor. If the motor does lock up from debris, call FASS for technical assistance.
2. Properly secure lines to prevent chaffing.

NOTE: Use caution when drilling. Steer clear of any electrical wires, air lines, or other components that can be damaged.

TITANIUM
SIGNATURE SERIES
250 GPH or 290 GPH
16-18 psi (Approximately)

Rear View



Front View



PUMP GUIDE:

- 1. "E" To Engine**
- 2. "R" Return to Tank**
- 3. "H" Coolant Heater Ports**
- 4. Serial Number**
- 5. "T" Fuel Inlet**
- 6. Electric Heater Ports**
- 7. "G" Gauge Port**

INSTALLATION GUIDE:

- Step 1. Install Electrical Harness**
- Step 2. Prep the FASS**
- Step 3. Mount the FASS**
- Step 4. Fuel Line Supply**
- Step 5. Review Installation**



www.fassride.com
(866) 769.3747

TITANIUM
SIGNATURE SERIES
250 GPH or 290 GPH
16-18 PSI (Approximately)

Note: Going over 80 PSI WILL void warranty.

NOTE: WARRANTY MAY BE VOID IF SILICONE BAND IS REMOVED FROM MOTOR!!

The silicone band is in place to retain motor wires, preventing damage to the electric motor.



CONTENTS

NOTE: Owner's Manual available for download on our website,
www.FASSride.com



MP-9050



BR-2001



WH-1006-3



**TWO (2)
OR-017**



OR-030

NOTE: THESE SPARE BASE O-RINGS ARE INCLUDED WITH THE KIT IN THE EVENT OF A PINCHED O-RING DURING ASSEMBLY

MOUNTING PACKAGE CONTENTS



10-273



RS-2684



RS-1001



DIELECTRIC GREASE



Ring Terminal



Spade Terminal



Four (4) Hex Bolts
3/8-16" x 1/2"



Four (4) Locking Nuts
3/8"

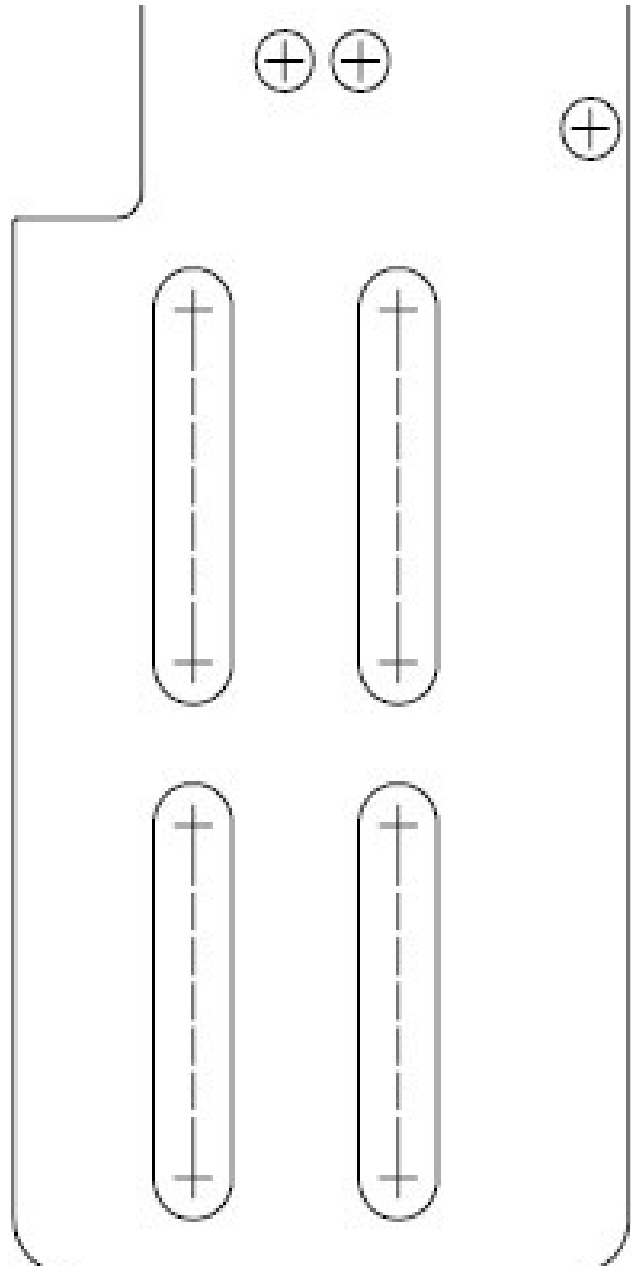


Three (3) Hex bolts
1/4-20 1 3/4"



Three (3) WA-1001

Mounting template



STEP 1:
INSTALL ELECTRICAL HARNESS

The installation of the electrical harness is done first, allowing power to be applied to the pump for lubrication purposes later in the installation.

**NOTE: USE SUPPLIED DIELECTRIC GREASE
SPARINGLY ON ALL ELECTRICAL
CONNECTIONS! BE SURE TO GREASE RELAY
PIGTAIL!**



STEP 1:
INSTALL ELECTRICAL HARNESS

The installation of the electrical harness is done first, allowing power to be applied to the pump for lubrication purposes later in the installation.

**NOTE: BE SURE TO INSTALL THE SUPPLIED
30 AMP FUSE INTO THE FASS WIRING
HARNESS!!**



STEP 1: INSTALL ELECTRICAL HARNESS

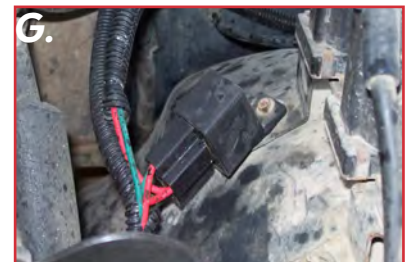
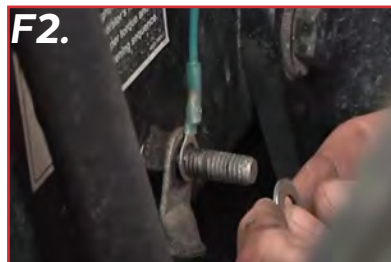
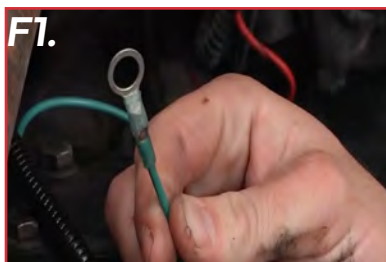
The installation of the electrical harness should be completed first. This will allow power to be applied to the pump during installation.

- A.** Select best location in firewall for passage of wiring harness from cab to engine compartment.
- B.** Use an existing hole in the firewall or drill a 7/8" hole in the firewall and install RS-2684 grommet for ease of installation and protection of wire harness.
- C.** Route red wire/ loom of the wire harness through the grommet in the firewall to the ignition or fuse panel.
- D.** Connect the "Red" lead to the "ON" terminal of the ignition switch or a terminal on the circuit breaker or a terminal on the circuit breaker board that is "hot" when the key is on.

NOTE: Use a test probe to locate the "hot side" of the circuit in the fuse block

Do not attach ground bolt to a painted, rusted, or corroded surface. This could shorten the life of the FASS motor.

- F.** Attach a ring terminal to the red and green wire. Connect the red wire to the positive battery terminal, connect the green wire to the negative battery terminal.
- G.** Secure relay in an upright position, preferably on the firewall out of the weather.
- H.** Properly secure all electrical leads and harness.



STEP 2: PREPPING THE FASS SYSTEM

NOTE 1: Before installing fittings make sure to inspect for burs or flare imperfections.

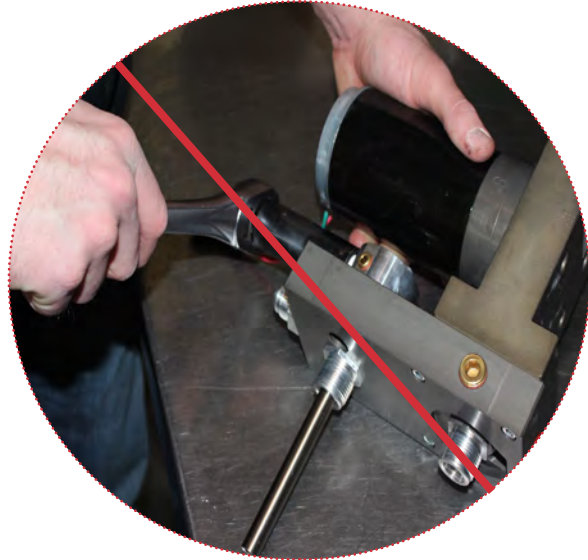
- A.** During this process be careful not to bend or damage the drawtube. Remove the RED “E” plug and the RED “T” plug
- B.** Install 2 brass fitting into the “E” port and “T” port. Properly torque fittings.

WARNING! While installing fittings, DO NOT apply side pressure to draw tube of pump.

PROPER



IMPROPER



C. If 90° fitting is needed to connect to the “E” port, contact Tech Support for additional installation options. Refer to rear of manual/online video for more information.

D. Place the 3 spacers on the FASS and install BR-2001 bracket to the FASS System using 1/4 bolts.

E. Properly torque bracket

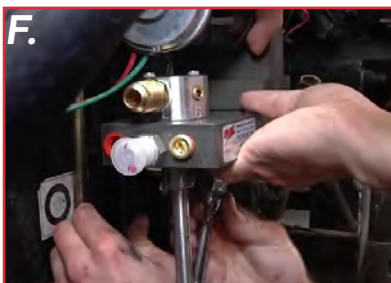


STEP 3: MOUNTING THE FASS

Option 1 - Installing an optional No Drill Semi Frame Bracket (Part #SFB-1001)

NOTE: Continue to next step if not using a No Drill Semi Frame Bracket

- A.** Find a clear space on the frame to use the No Drill Semi Frame Bracket. This may be the same area as the primary fuel filter discussed in the next step.
- B.** Remove primary fuel filter and/or water separator. If primary filter is part of the fuel pump or secondary filter base, ignore this step.
- C.** To install the no drill semi Frame Bracket. Place the angle bracket at the bottom or top of the frame. Drop bolts down the backside of the frame. Be sure to push bolts up against the frame while you are tightening down the bolts. Tighten the bolts in a crisscross pattern to properly secure the bracket to the frame. Properly torque bolts. (video at www.fassride.com)
- D.** Connect the FASS electrical harness to the FASS motor.
- E.** Turn the FASS system upside Down. Liberally spray WD-40 or equivalent into the water separator port lubricating the Gerotor with FASS pump operating. After completed, be sure to disconnect FASS motor.
- F.** Assemble to the frame bracket using the (4) - 3/8" bolts and flange nuts. Make sure to use the rubber isolator when mounting the FASS. This will significantly reduce noise levels.
- G.** Properly torque all bolts.
- H.** Prior to installing the Fuel Filters make sure to locate the loose O-ring that comes with the water separator and slide it around the water separator nipple.
- I.** Next apply grease or motor oil to O-rings located on the filters.
- J.** Attach to system and tighten appropriately. Do not over tighten the fuel filters.



STEP 3:
MOUNTING THE FASS

NOTE: DO NOT MOUNT THE FASS SYSTEM TO THE ENGINE! EXCESSIVE VIBRATION FROM THE ENGINE CAN DAMAGE THE FASS AND WILL VOID THE WARRANTY!



STEP 3: MOUNTING THE FASS

Option 2 - Installing the FASS Directly to the Frame

- A.** Remove existing fuel filter and/or water separator.
- B.** Connect the FASS electrical harness to the FASS motor.
- C.** Turn the FASS system upside Down. Liberally spray WD-40 or equivalent in to the water separator port lubricating the Gerotor with FASS pump operating. After completed, be sure to disconnect FASS motor.
- D.** Hold FASS in place, check for clearance. Mark the hole positions on the frame. You will want to drill your top 2 holes first. Using proper drill bit. Drill your marked holes on the frame. Position the FASS system and line up the holes. Insert bolts, position the FASS in proper location and tighten top 2 bolts.
- E.** Next drill the bottom 2 bolt holes. Insert bolts and properly torque all 4 bolts.
- F.** Prior to installing the Fuel Filters make sure to locate the loose O-ring that comes with the water separator and slide it around the water separator nipple.
- G.** Next apply grease or motor oil to O-rings located on the filters.
- H.** Attach to system and tighten appropriately. Do not over tighten the fuel filters.



NOTE : For optimal engine performance gains, the return line should return to its own port, separate from engine return.

FUEL LINE SUPPLY

(From Fuel tank to FASS & FASS to engine fuel pump)

A. Attach the fuel supply line from the fuel tank to "T" Port of the FASS using a 10-273, or one of the fittings from the filter housing removed in Step Two (2.) If the fuel supply line connects directly to the engine, the primary fuel filter is not remote mounted. Skip to Step C.



B. Attach the fuel supply line from the "E" Port of the FASS System to the injection pump using 10-273, or one of the fittings from the filter housing removed in Step two (2).



C. Attach the assembled fuel line to the FASS and engine.

NOTE: Secure all fuel lines with cable ties. Cable ties are an economical way to prevent the possibility of problems occurring.

REVIEW INSTALLATION AND SECURE CONNECTIONS

1. Submit the product registration via web or mail
2. Are the bolts and fasteners properly tightened?
3. Are both the electrical harness and the fuel lines properly tightened?
4. Has the system been primed? (Refer to owner's manual.)

If the above have been properly completed, then:

5. Check for leaks.
6. Start the engine
7. Recheck all fluid and filter connections for leaks

To assist with priming your FASS pump, with the FASS operating, crack the XWS-3002XL. When the tone of the pump changes, quickly tighten the fuel filter. If you need a video of the priming process go to www.FASSride.com.

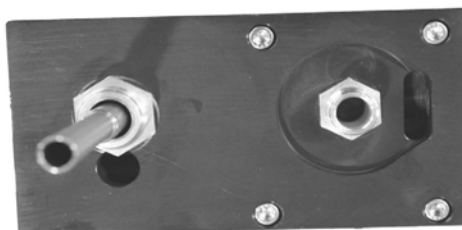
NOTE: Fuel may leak out during this process

NOTE: The red plastic plugs located in the "H" ports can stay in place. Fuel does not flow through these ports.

NOTE: O-Ring must be put back on suction side of pump. Failure to do so can result in priming issues, cavitation, or pressure losses.

Extreme Water Separator -Install XWS-3002XL on side of pump with draw tube in the middle of the filter nipple.

Particulate Filter -Install PF-3001XL on water separator nipple without the draw tube. Make sure to insert O-Ring provided on nipple.





www.fassride.com

(866) 769.3747

LIMITATION OF FOUR-YEAR FASS WARRANTY

DISCLAIMER: To insure that you receive the proper system and customer support at the local level, FASS has established a VIP and Authorized Dealer network to represent FASS products. You must purchase through a network dealer to be eligible for our Four-year Extended Warranty. If you do not, there is no warranty! To make certain your dealer is part of the network, go to www.FASSride.com, click "Find a Dealer," enter the dealer's ZIP code, and select the type of dealer. If the company is part of the network, it will be listed. If it is not, enter their phone number in the field below the ZIP code field to see if they are listed that way. If it still is not listed, check the list of "Terminated Dealers." If the dealer is not listed, or is on the "Terminated..." list, return the product immediately to that dealer and call FASS. We will recommend the nearest authorized dealer so you can be eligible for the Warranty.

Diesel Performance Products, Inc. (hereafter "SELLER") gives Limited Warranty as to description, quality, merchantability, fitness for any product's purpose, productiveness, or any other matter of SELLER'S product sold herewith. The SELLER shall be in no way responsible for the product's open use and service and the BUYER hereby waives all rights other than those expressly written herein. This Warranty shall not be extended or varied except by a written instrument signed by SELLER and BUYER.

When MANUFACTURER receives the "ORIGINAL" PRODUCT REGISTRATION form with a copy of the "BILL OF SALE/ SALES RECEIPT" within 30 days of the sale, then the following applies:

The Warranty will then and only then be validated with that of which typically accompanies your unit for your specific application from the date of sale or for recommended service life and limited solely to the original purchaser and/or vehicle and parts contained within the product's kit. This warranty does not cover normal wear on consumable items such as, but not limited to filters, fuel line, wire harness and others. The warranty does not cover seized gears due to lack of filtration. Warranty is voided if used with other than diesel fuel. Returned items must arrive prepaid to the place of purchase. Diesel Performance Products, Inc. will repair, without cost, any product found to be defective during the warranty period, or parts only, or at its option, will replace such products in exchange for the product. Repair or replacements are warranted for the remainder of the original warranty period. All Warranty claims are subject to approval by Diesel Performance Products, Inc.

A Return Material Authorization (RMA) number must be obtained before any product is to be returned to Diesel Performance Products, Inc. for warranty consideration, repair or product return. Requests for product returns must be offset by an equal value order. Returned parts must be complete and in resalable condition. No returns after 30 days.

The following information is required to obtain an RMA number before returning the product:
Your Name, Address & Phone Number(s)
Model and Serial Number (Not Motor Number) Example: Model HD Series, Serial: 00125966
VIN Number of Vehicle Date of Purchase
Nature of Problem

RMA and Product Serial Number must be on all paperwork and correspondence. Failure to obtain the required information or complete the proper paperwork will result in \$25.00 per /item penalty and delay or denial of any warranty claim.

Under no circumstances shall the SELLER and/or MANUFACTURER be liable for any labor charged or travel time incurred in diagnosis of defects, removal, or reinstallation of this product, or any other contingent expenses.

Under no circumstances shall the SELLER and/or MANUFACTURER be liable for any damage or expenses incurred by reason of the use or sale of any such equipment. This warranty does not apply to products which Diesel Performance Products, Inc. has determined to have been misused or abused, improperly maintained by the user, or where the malfunction or defect can be attributed to the use of non-genuine Diesel Performance Products, Inc. parts.

The installation of this product indicates that the buyer has read and understands the Warranty agreement and accepts its terms and conditions. In the event that the buyer does not agree with the terms, the product—in new, unused condition—along with the dated receipt should be returned within thirty (30) days of the date of purchase for a full refund less shipping costs.

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