

TITAN

I N D U S T R I A L

P.O.Box 791, Travelers Rest, S.C. 29690
Phone 864-834-7212
Service/Replacement Parts 800-845-4141



OWNER'S MANUAL

MODEL TG 7500D Industrial Generator

The Emission Control System for this generator is warranted for standards set by the Environment Protection Agency.

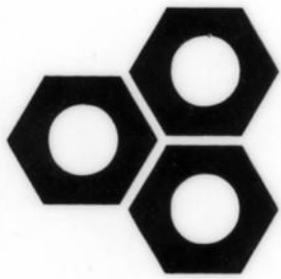
IMPORTANT!

It is extremely important to read and understand the entire contents of this Owner's Manual for the Titan Industrial Model TG 7500D before attempting to operate the generator. This is a diesel engine powered, industrial strength generating unit of electrical power. The diesel engine and the generator are both potentially extremely hazardous and could cause physical injury or even death if improperly used.

WARNING!

Do Not Operate Equipment until reading & understanding Owner's Manual!
Disconnect all loads before starting or stopping generator.
Allow to run for a few minutes with no load before stopping.

**IMPORTANT !
READ FIRST**



TITAN
I N D U S T R I A L

**OWNER'S MANUAL
MODEL TG 7500D
Industrial Generator**

It is extremely important to read and understand the entire contents of this Owner's Manual for the Titan Industrial- Model TG 7500D before attempting to operate the generator. This is a diesel engine powered, industrial strength generating unit of electrical power. The diesel engine and the generator are both potentially extremely hazardous and could cause physical injury or even death if improperly used.

TITAN INDUSTRIAL shall not be responsible for any consequences resulting from improper use of this equipment. The operator is required to read the entire contents of this manual before attempting to operate the unit. If the operator does not completely understand the instructions and all of the hazards of operating this unit after reading this manual, he must call the factory at 1-800-845-4141 to answer these questions to his complete satisfaction before proceeding.

READ AND COMPLETELY UNDERSTAND entire contents of this Owner's Manual and become familiar with the unit before attempting to start using this equipment! It is your responsibility to know its applications, limitations, and hazards! Call the factory at 1-800-845-4141 with any questions.

FOR OUTDOOR USE ONLY! Never use this unit inside any enclosure including the generator compartment of a recreation vehicle (RV) or inside any building. No modifications will eliminate the danger of possible carbon monoxide poisoning, fire, or explosion.

TWO (2) FEET OF CLEARANCE on all sides is required even while using outdoors.

THIS UNIT IS SOLD SOLELY FOR THE PURPOSE OF PORTABLE POWER. OTHER APPLICATIONS COULD VOID WARRANTY. USER ACCEPTS RESPONSIBILITY FOR INJURIES AND/OR DAMAGE RESULTING FROM OTHER APPLICATIONS.

This Manual contains information to ensure your safety and to prevent any equipment problems. Various terms such as 'WARNING', 'CAUTION', 'DANGER', 'IMPORTANT', and the SYMBOL are all used to signify information that is essential for the operator of this equipment to understand and to practice!



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**MODEL TG 7500D
 DIESEL POWERED
 ELECTRIC GENERATOR**

Model	TG 7500
Voltage	120/240
Current	40/20
Frequency	60Hz
Power Output	6 KW
Surge Watts	6.6KW

DESCRIPTION

THE TITAN INDUSTRIAL INC. MODEL TG 7500D is a diesel engine driven, revolving field, alternating current (AC) generator designed to supply electrical power for compatible electrical tools, motors, appliances, and lighting (see wattage reference guide on page 10).

The Model TG 7500D operates at 120 volt and/or 240 volt, single phase, 60 Hz and will operate devices that require up to 6000 watts (6 KW) up to 20 Amps at 120 Volts or 20 Amps at 240 Volts.



CONNECTING LOADS

The Model TG 7500D operates at 120 volt and/or 240 volt, single phase, 60 Hz and will operate devices that require up to 6000 watts (6 KW).

Add up the Watts of all devices you connect to the TITAN INDUSTRIAL GENERATOR at one time. Do not exceed 6000 Watts on TITAN INDUSTRIAL Generator Model TG 7500D (see wattage reference guide).

The rated Watts of most electrical devices can be found on its nameplate. The rated Watts of lights can be taken from the light bulbs. In cases where only Volts and Amps are shown on the nameplate, simply multiply Volts by the Amps to get Watts (Volts X Amps = Watts).

Some electric motors require about three times the rated Watts of power for start-up. This surge of power is required for only a few seconds. Be sure to allow for this high starting wattage when selecting electrical devices to connect to the generator.

First, figure the watts needed to start the largest motor. Add to that figure the running watts of all other connected loads.

Please see the Wattage Reference Guide. It provides an estimated approximation of running watts, to help determine which devices to select to connect to the generator.

CAUTION! Do not tamper with engine governed speed. The TITAN INDUSTRIAL GENERATOR supplies correct rated frequency and voltage when running at the proper governed speed. Incorrect frequency and/or voltage could damage connected electrical devices. Changing settings voids the warranty.

GROUNDING THE GENERATOR

It is required by The National Electrical Code to have the frame and all external conductive parts of the generator connected to an earth ground. Proper grounding also satisfies most local electrical codes.

Connect a No. 12 AWG standard copper wire to the Grounding Lug Block (See Figure 1). The grounding lug can be found inside the rear access panel near the oil cap. Connect the other end of the wire to an earth driven copper or brass grounding rod (electrode).

CAUTION! Do not connect ground to a preexisting ground rod, water pipe, or building frame.

Consult with a licensed electrician in your area because local codes vary. Properly grounding the generator helps prevent electrical shock if a ground fault condition exists in the generator or in connected electrical devices. This will also help to dissipate static electricity resulting from ungrounded devices.

Z SAFETY Z

This generator was designed for specific applications. DO NOT attempt to modify the unit in any way or use it for any application that it was not designed to do. Ask the dealer or contact the factory if you have any questions concerning the generator's application.

Warnings and cautions in this manual and on decals and tags on the unit are not all inclusive. It would be impossible to anticipate every circumstance that might involve a hazard. Handling, operating, or servicing this unit by any procedure not recommended by the manufacturer may render this equipment unsafe and may pose a threat to you or to others.

- Z The generator produces a very powerful voltage that can cause extremely dangerous electrical shock. Avoid contact with bare wires, terminals, etc. never permit an unqualified person to operate or service the generator.
- Z Never handle any kind of electrical cord or device while standing in water, while barefoot or with wet hands or when feet are wet. Dangerous electrical shock could result.
- Z The National Electric Code requires that the frame and external conductive parts be properly connected to an approved earth ground. Local electrical codes may vary. Check with an electrician for local grounding requirements.
- Z Use a ground fault circuit interrupter in any damp or highly conductive area such as metal decking or steel work.
- Z Do not use worn, bare, frayed or otherwise damaged electrical cords or wiring with the generator. A defective cord may result in electrical shock or may cause damage to equipment.
- Z Do not expose unit to excessive moisture, dirt or corrosive vapors. Unit must be operated on a level surface.
- Z Comply with all laws regulating the storage and handling of diesel fuel. Diesel fuel is highly flammable and explosive. Avoid spilling diesel fuel on a hot engine. Do not allow smoking, open flames, sparks or heat in the vicinity while handling diesel fuel.
- Z Do not overfill the fuel tank. Leave one inch below fill neck. Always allow room for diesel fuel expansion. Diesel fuel could overflow and cause fire or explosion if tank is overfilled. Allow for a 20 minute cool down before refueling. Never refuel tank while engine is running.
- Z Only operate this unit outside with adequate ventilation. This generator's diesel engine exhaust produces carbon monoxide gas that can cause unconsciousness or even death.
- Z Never store a generator with fuel in the tank where diesel fuel vapors could be ignited by a flame, spark, or pilot light from an appliance such as a furnace, water heater, or clothes dryer or other sources of heat.
- Z Always allow a minimum of 2 feet of clearance on all sides for ventilation while unit is operating. Allow 2 feet of clearance from all combustibles.
- Z Generator must always be stopped or started with all loads unconnected. Start the engine and let it stabilize before connecting any loads. Disconnect all loads before shutting down the generator. Change oil per published schedule
- Z Never insert any object through the cooling slots of the engine. You could damage the unit or cause injury.
- Z NEVER OPERATE THE GENERATOR:
 - In rain
 - In an enclosed compartment
 - If connected devices overheat
 - If electrical output is lost
 - If engine or generator sparks
 - If flame or smoke is observed

CAUTION! The engine exhaust contains chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.

CAUTION! If it is your first time starting the generator, allow it to run for 30 minutes before connecting electrical loads. This is for wet seating purposes

CAUTION: Customer takes full responsibility for use of this unit as a home generation system.

IMPORTANT ! IMPORTANT ! IMPORTANT ! IMPORTANT ! IMPORTANT

BEFORE STARTING THE ENGINE

CHECK AND/OR FILL OIL

WARNING!

DO NOT ATTEMPT TO START THE ENGINE BEFORE FILLING WITH OIL!

**Titan Industrial
Recommends
ONLY
Using Rotella T
Multigrade
15W - 40 Type
engine oil.**

Fill with oil

- z Place generator on a level surface.
- z Clean area around oil fill opening.
- z Remove the dipstick.
- z Wipe the dipstick clean.
- z Pour oil in until it reaches the FULL mark on dipstick.
- z **DO NOT OVERFILL!**
- z **CLOSE OIL CAP!**
Change oil as published

Note:

The generator's revolving field rides on a sealed ball bearing that requires no additional lubrication for the life of the bearing.

CHECK AND/OR FILL DIESEL

WARNING!

Do not overfill! Leave room for fuel expansion. Never fill fuel indoors. Never fill fuel when engine is hot or running. Do not smoke or fill fuel near an open flame or sparks.

Fill with diesel fuel only

- z Use diesel fuel only.
- z Clean area around fuel cap.
- z Remove fuel cap.
- z Add diesel fuel to fuel tank.
- z DO NOT overfill. Do not fill above the red plug inside the fuel tank filter (this allows for fuel expansion).
- z Replace fuel cap.
- z Wipe up any spilled diesel fuel.

Note:

Because this is a diesel engine, frequent oil and filter changes are required.

CHECK AND/OR REPLACE FILTER

WARNING!

Do not clean filter with any type of detergent.

Check air filter

- z Remove cover panel. Loosen wingnut and remove air filter cover.
- z Never wash air cleaner with any kind of detergent or cleaning solvent.
- z Air filter should be changed if engine performance decreases or color of exhaust changes.
- z Never run engine without air filter. This can cause rapid engine wear.

Figure #2 - Air Filter Housing



CHECK AND/OR ADD BATTERY FLUID

WARNING!

Do not try to start engine with a "dry" battery! This cause irreversible damage to the battery!

Check Battery

- z BATTERY MAY BE SHIPPED WITHOUT BATTERY ACID! Your local auto parts store will have battery acid available. Use caution when filling battery. Fill to the "full" line on the battery. Follow all safety directions on the battery acid container!

IMPORTANT ! IMPORTANT ! IMPORTANT ! IMPORTANT ! IMPORTANT

OPERATION OF THE GENERATOR

CAUTION!

DO NOT start or stop the engine with electrical loads connected to the receptacles. Be certain connected devices are OFF before connecting or disconnecting.

DANGER!

DO NOT run generator indoors or in poorly ventilated areas. Engine exhaust contains carbon monoxide which is an odorless, deadly gas.

WARNING!

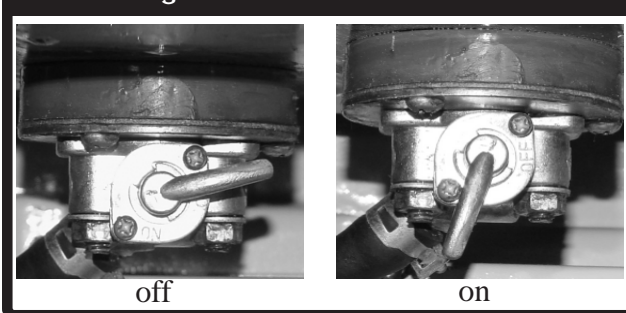
To avoid burns, avoid muffler and nearby areas.

Starting the Engine - Recoil starting

(Only available on the TG 7500D & TGCE 5500)

- Z** Be Sure all loads are unplugged from the generator before attempting to start it.
- Z** Place unit at a level position.
- Z** Turn fuel cock to the on position (figure #3).
- Z** Turn the key switch to the "RUN" position and move the red engine speed lever to the "RUN" position (push to the right, it will click into place).
- Z** Push the compression release switch, located on the top of the generator, to the down position (figure #4). It is important to do this. It will be too hard to pull the recoil start handle if you do not.
- Z** Pull Starter Handle slowly until you feel some resistance. Then pull cord out with a rapid, full arm stroke. Always let the rope return slowly. Never allow the rope to 'snap back' against the starter.

Figure #3 - Fuel Cock Positions



Starting the Engine - Electric starting

- Z** Be Sure all loads are unplugged from the generator before attempting to start it.
- Z** Place unit in a level position.
- Z** Turn fuel cock to the on position. (On the TGQBE 6500 and TGQBE 5000 the fuel cock is accessed through the rear access panel. Reach under the fuel tank, on the left hand side, locate the fuel cock and turn the lever to the down position).
- Z** Move the engine speed lever to the "RUN" position (TG 7500D & TGCE 5500).
- Z** Turn the key clockwise to the "START" position.
- Z** As soon as the engine starts, let go of the key. The key will return to the "ON" position.
- Z** If the engine does not start after 10 seconds, wait about 15 seconds before attempting to start it again. **If starting motor is run for too long it may cause the battery to become weak and could have pre-mature failure.**

MAKE SURE THAT BATTERY FLUID HAS BEEN ADDED!

BATTERY MAY BE SHIPPED WITHOUT FLUID.

IF STARTING ENGINE FOR FIRST TIME, ALLOW IT TO RUN FOR 5 MINUTES BEFORE CONNECTING ANY ELECTRICAL LOADS!

Figure #4 - Compression Release Switch



OPERATION OF THE GENERATOR

Starting the engine

- Z** Always check the oil level and air filter before starting the engine. This unit is equipped with a low oil shutdown system and will not allow normal engine start with 10W oil levels.
- Z** NOTE:
(If starting manually).
Do not allow the handle grip to snap back against the engine. Always return it gently to prevent damage to the starter.
- Z** NOTE:
(If electric starting).
Release key and allow it to return to the "ON" position as soon as engine starts. Key must be in the "ON" position to generator to run.
- Z** NOTE:
Allow generator to settle. Run for at least 3 minutes, before connecting any electrical loads or appliances. Failure to do so may result in generator damage!

Connecting electrical loads

- Z** Let engine stabilize and warm up for at least 3 minutes.
- Z** Make sure devices to be connected are in good working order and in the "OFF" position before connecting to the generator.
- Z** Make sure to plug in desired devices into the correct receptacle. **Make sure that the voltage selector switch is on the right setting.**
- Z** DO NOT connect 240 Volt loads to the 120 Volt duplex receptacles.
- Z** DO NOT connect 3 phase loads to the generator.
- Z** DO NOT connect 50 Hz loads to the generator. This is a 60HZ Generator.
- Z** DO NOT overload the generator. Add up the rated Watts of all loads to be connected. This total should not exceed the total watts of the generator.

Stopping the engine

- Z** Turn off all electrical devices connected to the generator.
- Z** Turn off the main breaker on the receptacle panel. Unplug all devices from the generator.
- Z** **WARNING:**
DO NOT start or stop generator with electrical devices plugged in.
- Z** Allow the generator engine to run at a 'No Load' condition for several minutes to stabilize internal engine temperature before stopping
- Z** Turn key to the "OFF" position. (The 7500 also has a stop switch that can be used if key switch was to fail.)
- Z** Close the fuel cock valve.

Generator maintenance

(see maintenance table for list).

- Z** Keep the generator clean and dry. Use a damp cloth to clean exterior surfaces. Remove caked on dirt with a soft brush.
- Z** Never spray with water. Water can contaminate the engine fuel system and cause serious problems in the generator.
- Z** **USE DIESEL FUEL ONLY!**
Never use gasoline, alcohol, or blended fuel (gasohol, ethanol, or methanol). They will damage a diesel engine. Do not use ether to start engine as this will void warranty.
- Z** Damage may occur if engine or carburetor cleaning products are used.

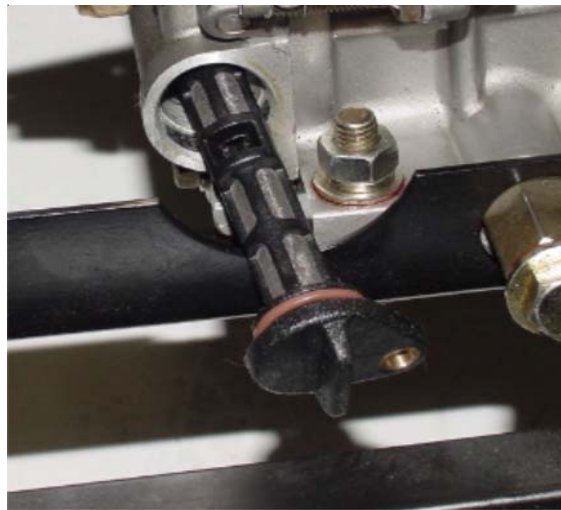
Storage

- Z** **IMPORTANT:**
Empty fuel system if unit is to be stored for 30 days or more. This will help prevent gum deposits from forming in fuel system such as the carburetor, glow plug, fuel filter, fuel hose, and fuel tank during storage.

RECEPTACLES



OIL FILTER



Clean/Change filter after the first 5 hours of operations.

Change oil every 30 hours, or sooner in adverse conditions. Replace/Clean oil filter each and every time oil is changed. Failure to do so, will cause engine damage and void the warranty.

Wattage Reference Guide

Device	Running Watts	Device	Running Watts
*Air Conditioner (12,000 BTU)	1700	Impact Wrench	500
Battery Charger (20 Amp)	500	*Jet Pump	800
Belt Sander (3")	1000	Lawn Mower	1200
Chain Saw	1200	Light Bulb	100
Circular Saw (6-1/2")	800 to 1000	Microwave Oven	700
Coffee Maker	1000	*Milk Cooler	1100
Compressor (1 HP)	2000	Oil Burner on Furnace	300
Compressor (3/4 HP)	1800	Oil Fired Space Heater (140,000 BTU)	400
Compressor (1/2 HP)	1400	Oil Fired Space Heater (85,000 BTU)	225
Curling Iron	700	Oil Fired Space Heater (30,000 BTU)	150
*Freezer	500	*Airless Paint Sprayer (1/3 HP)	600
Disc Sander (9")	1200	Handheld Airless Paint Sprayer	150
Edge Trimmer	500	Radio	50 to 200
Electric Nail Gun	1200	Refrigerator	600
Electric Range (one element)	1500	Slow Cooker	200
Electric Skillet	1250	*Submersible Pump (1-1/2 HP)	2800
*Furnace Fan (1/3 HP)	1200	*Submersible Pump (1 HP)	2000
Hair Dryer	1200	*Submersible Pump (1/2 HP)	1500
Hand Drill (1")	1100	Sump Pump	600
Hand Drill (1/2")	750 to 1000	*Table Saw (10")	1750 to 2000
Hand Drill (3/8")	500	Television	200 to 500
Hand Drill (1/4")	250	Weed Trimmer	500

***Allow 3 times the listed Watts for starting these devices**
These wattages shown are approximate and may vary with each specific device

WARNING:

Factory warranty is voided if fuel, other than specified diesel fuel, is used in this engine, refer to owners manual for fuel.

Maintenance Guide

	DAILY	EVERY MONTH/ 20 HRS	EVERY 3 MONTHS/ 100 HRS	EVERY 6 MONTHS/ 500 HRS
Check/Refill Fuel	X			
Drain fuel from tank		X		
Check/Refill Oil	X			
Check for oil leakage	X			
Check battery fluid		X		
Change oil		*		
Clean/Replace oil filter			X	
Replace air filter		X*	X*	
Clean/Replace fuel filter				X

*First oil change should be after 5 hrs. of use. After initial break-in period change oil every 30 hours or sooner, if under adverse conditions.

X* Air filter may need to be replaced frequently, due to adverse conditions. Check filter frequently.

TROUBLESHOOTING

Problem	Cause	Solution
Engine is running but no power output is available.	<ol style="list-style-type: none"> 1. Circuit breaker is open. 2. Poor connection or defective cord set. 3. Connected device is bad. 4. Fault in generator. 	<ol style="list-style-type: none"> 1. Reset the circuit breaker. 2. Check & repair. 3. Connect another device that is in good condition. 4. Contact service center.
Engine runs good until loads are connected, then bogs down.	<ol style="list-style-type: none"> 1. Short circuit in a connected load. 2. Overloaded generator. 3. Engine speed is too slow. 4. Short in generator circuit. 	<ol style="list-style-type: none"> 1. Disconnect shorted load. 2. See 'Connecting Electrical Loads' section of manual. 3. Contact service center. 4. Contact service center.
Engine will not start or engine starts but runs rough.	<ol style="list-style-type: none"> 1. On/Off Switch is turned 'OFF'. 2. Battery is dead 3. Dirty air cleaner. 4. Out of diesel fuel. 5. Stale diesel fuel. 6. Not enough speed or force is used for recoil start. 7. Water in diesel fuel. 8. Speed control is not set to "RUN". 9. Low oil level. 10. Oil nozzle is dirty. 11. Engine has lost compression. 	<ol style="list-style-type: none"> 1. Turn On/Off Switch to 'ON'. 2. Charge or replace it. 3. Clean air filter 4. Fill fuel tank. 5. Drain fuel tank and refill. 6. Read and follow directions. 7. Drain and refill tank. 8. Move speed control to "RUN" position. 9. Add oil to proper level. 10. Clean oil nozzle. 11. Contact service center.
Engine shuts down during operation.	<ol style="list-style-type: none"> 1. Out of diesel fuel. 2. Fault in engine. 	<ol style="list-style-type: none"> 1. Fill fuel tank. 2. Contact service center
Engine lacks power	<ol style="list-style-type: none"> 1. Load is too high. 2. Dirty air filter. 3. Engine needs to be serviced. 	<ol style="list-style-type: none"> 1. See 'Connecting Electrical Loads' section of manual. 2. Replace the air filter. 3. Contact service center.
If engine has a difficult time starting around freezing temperatures.		Add 2-5 oz. 15W-40 motor oil into the air intake manifold.

Service
1-800-845-4141



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