

# 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 5500D Industrial Generator

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

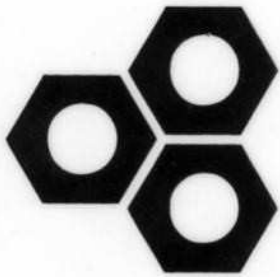
#### **IMPORTANT!**

It is extremely important to read and understand the entire contents of this Owner's Manual for the Titan Industrial Model TG 5500D 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 5500D  
Industrial Generator**

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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/she must call the factory at 1-800-845-4141 to answer these questions to his/her 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!



P.O. Box 791  
 Travelers Rest, S.C. 29690  
 864-834-8550  
 Toll Free 1-888-828-8126  
 Replacement Parts 1-800-845-4141

**MODEL TG 5500D  
 DIESEL POWERED  
 ELECTRIC GENERATOR**

Model	TG5500
Voltage	120/240
Frequency	60Hz
Continuous Watts	4200
Surge Watts	4800

## DESCRIPTION

**THE TITAN INDUSTRIAL INC. MODEL TG 5500D** 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 6).

The Model TG 5500D operates at 120 volt and/or 240 volt, single phase, and will operate devices that require up to 4200 watts, continuous and 4800 watts surge.



## CONNECTING LOADS

Add up the Watts of all devices you connect to the TITAN INDUSTRIAL GENERATOR at one time. Do not exceed 4800 Watts on (see wattage reference guide page 6), These are approximate wattages.

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.

## 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 is located on the control panel. 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.

## ⚡ SAFETY ⚡

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.

- 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.
- 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.
- 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.
- Use a ground fault circuit interrupter in any damp or highly conductive area such as metal decking or steel work.
- 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.
- Do not expose unit to excessive moisture, dirt or corrosive vapors. Unit must be operated on a level surface.
- 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.
- Do not overfill the fuel tank. 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.
- 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.
- 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.
- 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.
- 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.
- Never insert any object through the cooling slots of the engine. You could damage the unit or cause injury.
- **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
  - If unit vibrates excessively

**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  
engine oil.**

#### Fill with oil

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

### 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

- Use #1 diesel fuel only.
- Clean area around fuel cap.
- Remove fuel cap.
- Add diesel fuel to fuel tank.
- DO NOT overfill. Do not fill above the red plug inside the fuel tank filter (this allows for fuel expansion).
- Replace fuel cap.
- 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

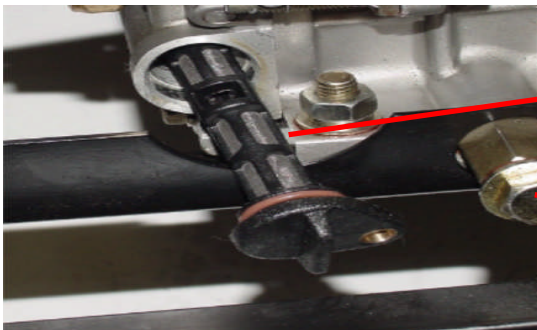
#### WARNING!

**Do not clean filter with any type of detergent.**

#### Check air filter

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

**Figure #2 - Air Filter Housing**



**Oil Filter/Screen**

**Oil Drain Plug**

#### **Oil Capacity:**

6-7 hp----- 28-30oz.  
8hp-----35oz

*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/ 30 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			
Change oil		X*		
Clean/Replace oil filter		X		
Replace air filter		X*	X*	
Clean/Replace fuel filter				X

\*First oil change should be after 5 hours. After initial break-in period change oil every (30) hours.

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



# 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.

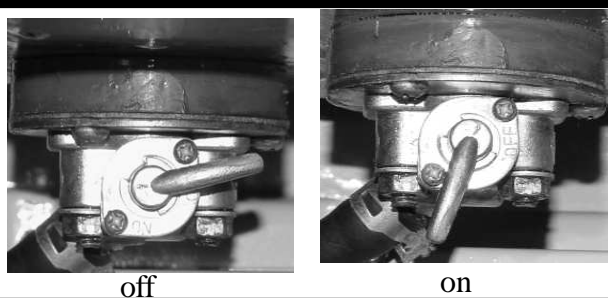
## **WARNING!**

To avoid burns, avoid muffler and nearby areas.

## Starting the Engine - Recoil starting

1. Be sure unit is at a level, well ventated position.
2. Check fluid for proper levels
3. Turn on fuel valve. (figure #3)
4. Put Throttle lever to the run position (figure #5)
5. Turn ignition key on control panel to the run positon.
6. Push and hold down the decompression lever (figure #4)  
Pull the recoil starter briskly until the engine is rotating, then, release lever.
7. Let engine settle before attaching any appliances

Figure #3 - Fuel Valve Positions



## Starting the Engine - Electric starting

1. Be sure unit is at a level, well ventated position
2. Check fluids for proper levels.
3. Turn on fuel valve. (figure #3)
4. Put Throttle lever in the run position (figure #5)
5. Turn the ignition key to the "Start" position
6. Once engine has started return the key to the "ON"
7. Let engine settle before attaching any appliances

Figure #5

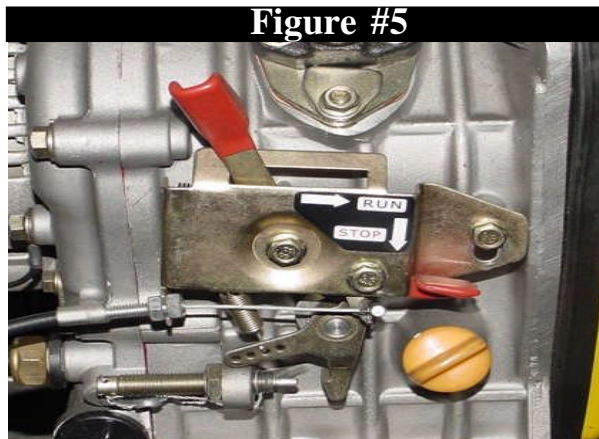


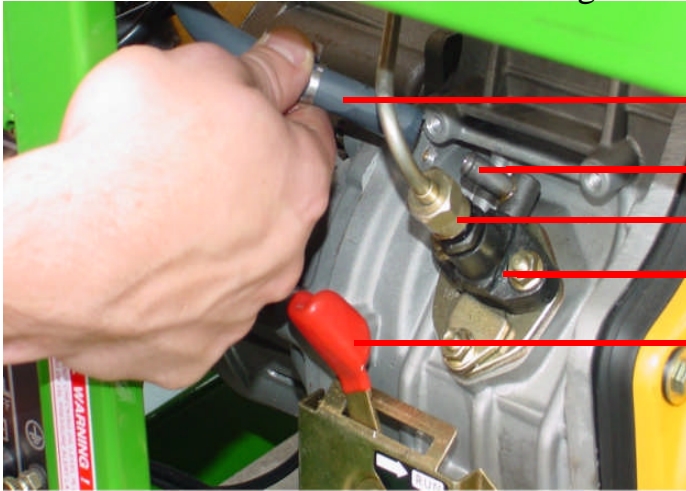
Figure #4 - Compression Release Switch



# OPERATION OF THE GENERATOR

## Bleeding Instructions

Figure #6



Rubber Fuel Line

Fuel Pump Port

Steel Fuel Line

Fuel Pump

Throttle Lever

1. With the fuel valve in the off position take off the rubber fuel line off the fuel pump port.
2. Open fuel valve and let rubber fuel line fill up with diesel fuel. Quickly replace rubber fuel line on the fuel pump port
3. Follow starting procedure(page7)

### **If the unit still won't start.**

1. Loosen\remove the steel fuel line compression nut. so you can see the top of the fuel pump.(figure #6)
2. With the throttle lever in the run position turn over the engine. Diesel fuel should squirt out of the top of fuel pump.

**\* If no fuel is coming out of pump retry bleeding procedures, if still no fuel, possible bad fuel pump.**

3. Reconnect fuel line and follow starting procedures.

### **Fuel pumping but unit will not start.**

1. Follow the steel fuel line up to the injector
2. Disconnect the fuel line from the injector with a 17mm wrench (figure #7)
3. Remove the fuel injector from head assembly and inspect it. Make sure injector tip is clean and free from debris. Invert it. Reconnect metal fuel line. (figure #8)
4. With the throttle lever in the run position turn over the engine. You should have four ports of fuel spraying from the injector tip.
5. Re-install injector in to the head assembly
6. Follow starting procedures.

If the fuel injector does not spray (possible bad injector)

If the fuel injector is working, look under the valve cover to see if the valves are function properly.

Figure #7

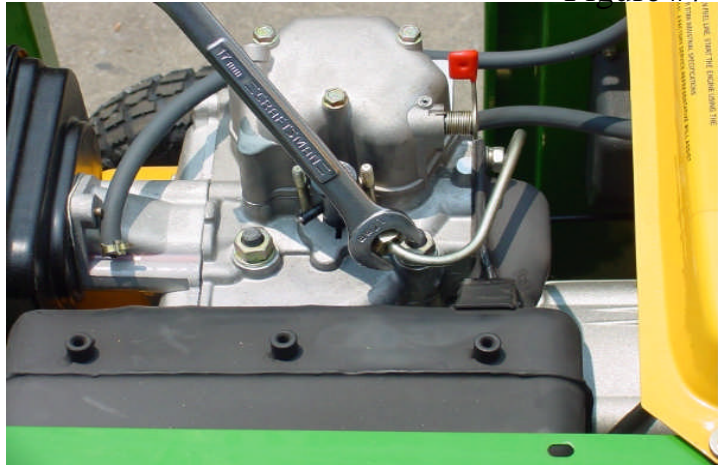
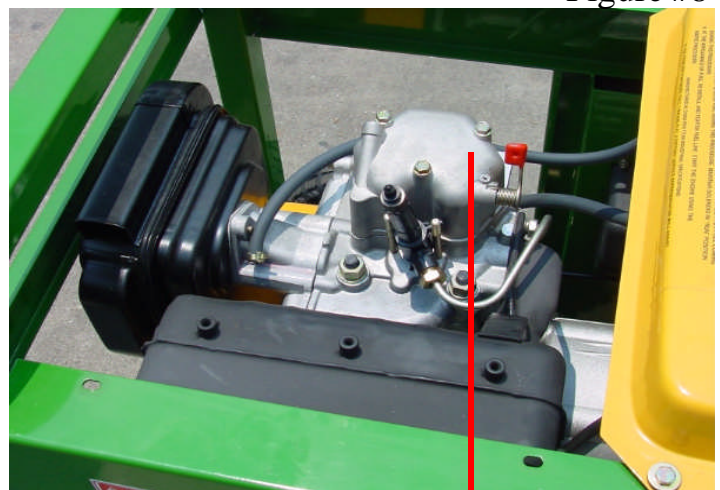


Figure #8



Valve Cover

Valve Settings

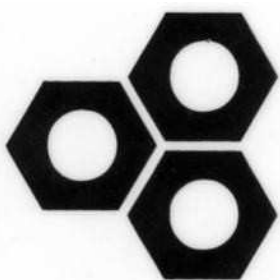
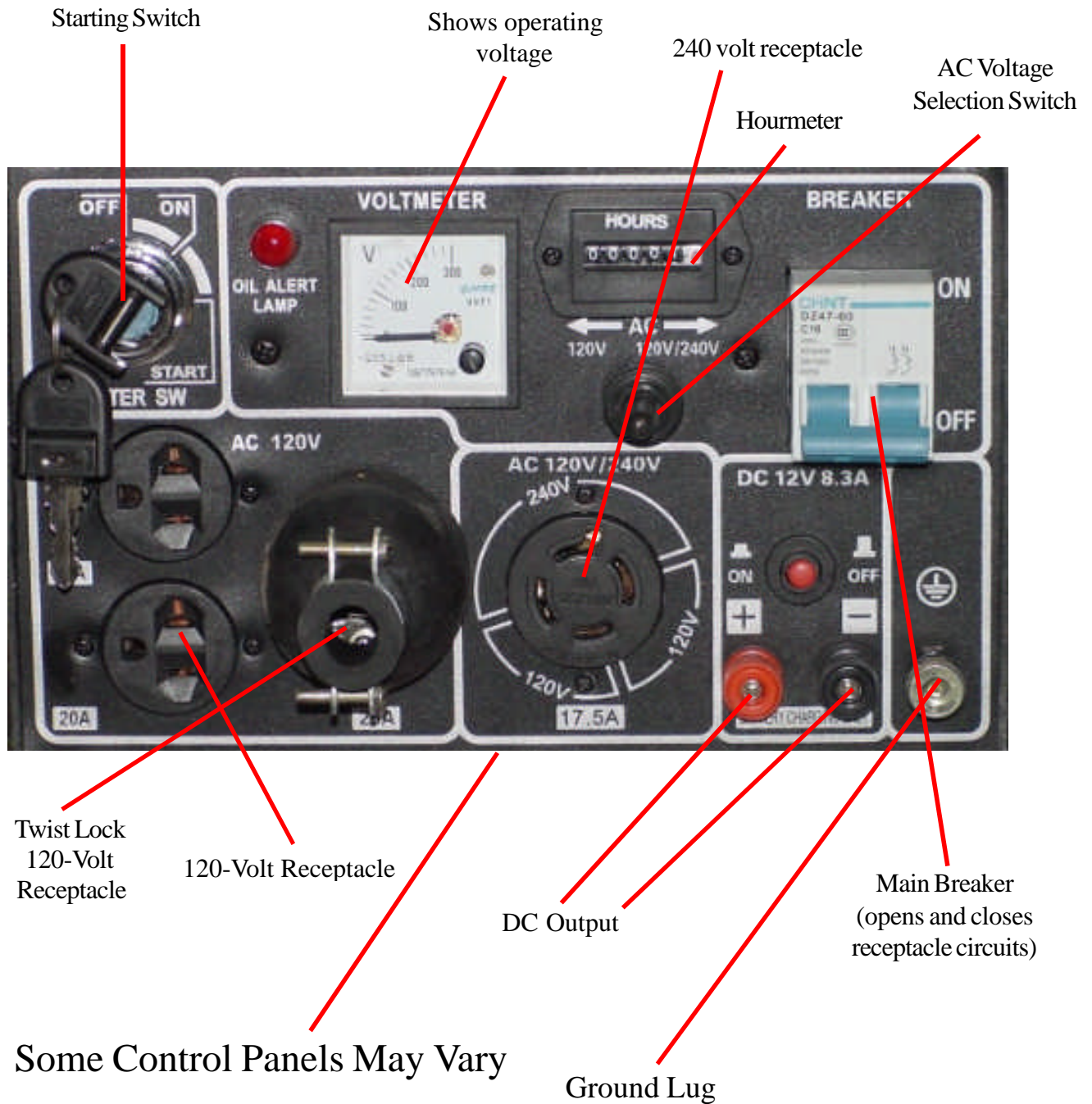
.012-intake

.013-exhaust

TDC see Page 20



# Control Panel



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# TROUBLESHOOTING

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

**Service**  
1-800-845-4141



**Fax**  
**864-834-5127**

**Replacement Parts**  
1-800-845-4141

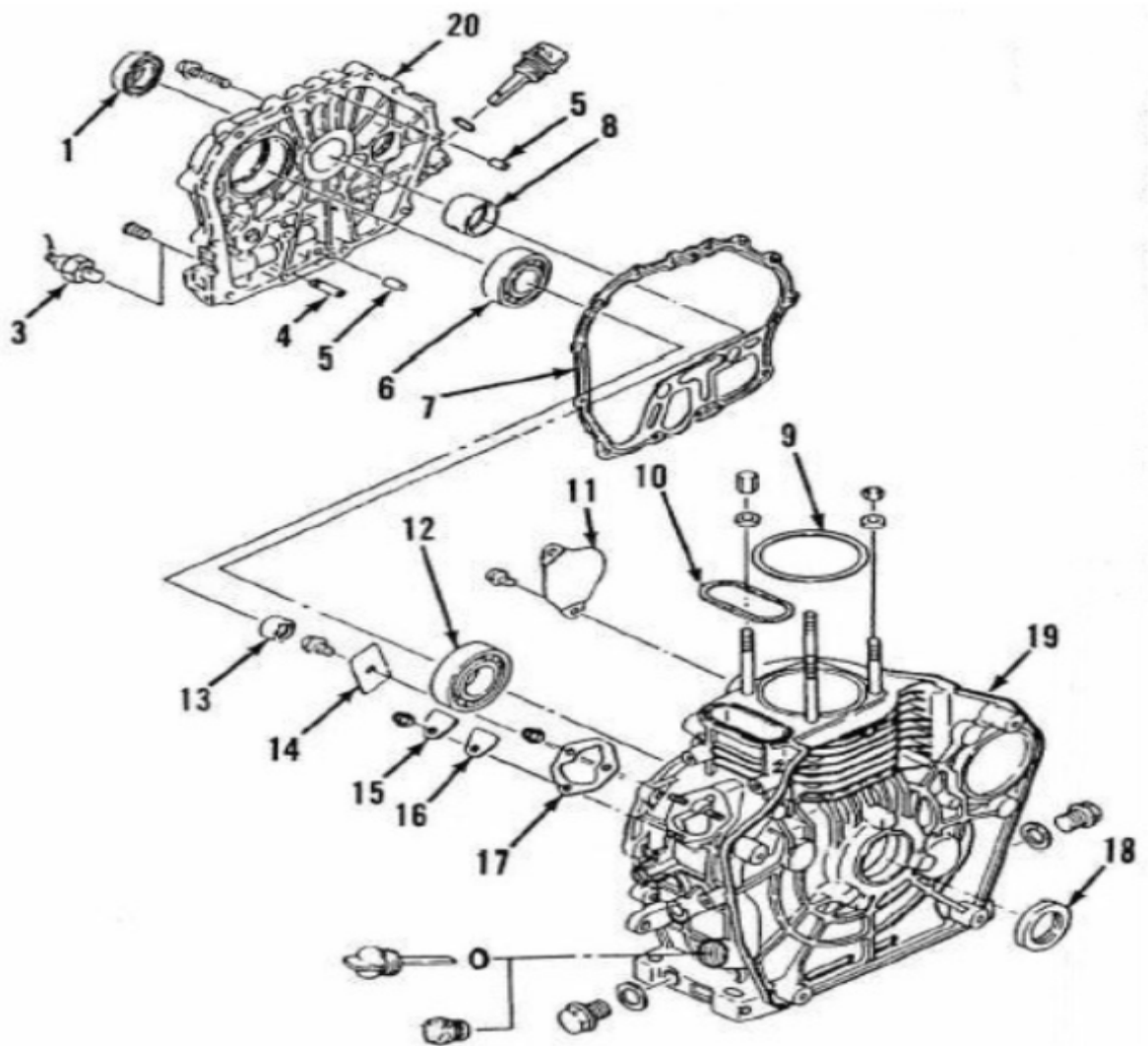
Toll Free 1-800-845-4141  
www.titanindustrial.com



# *Parts Catalog*

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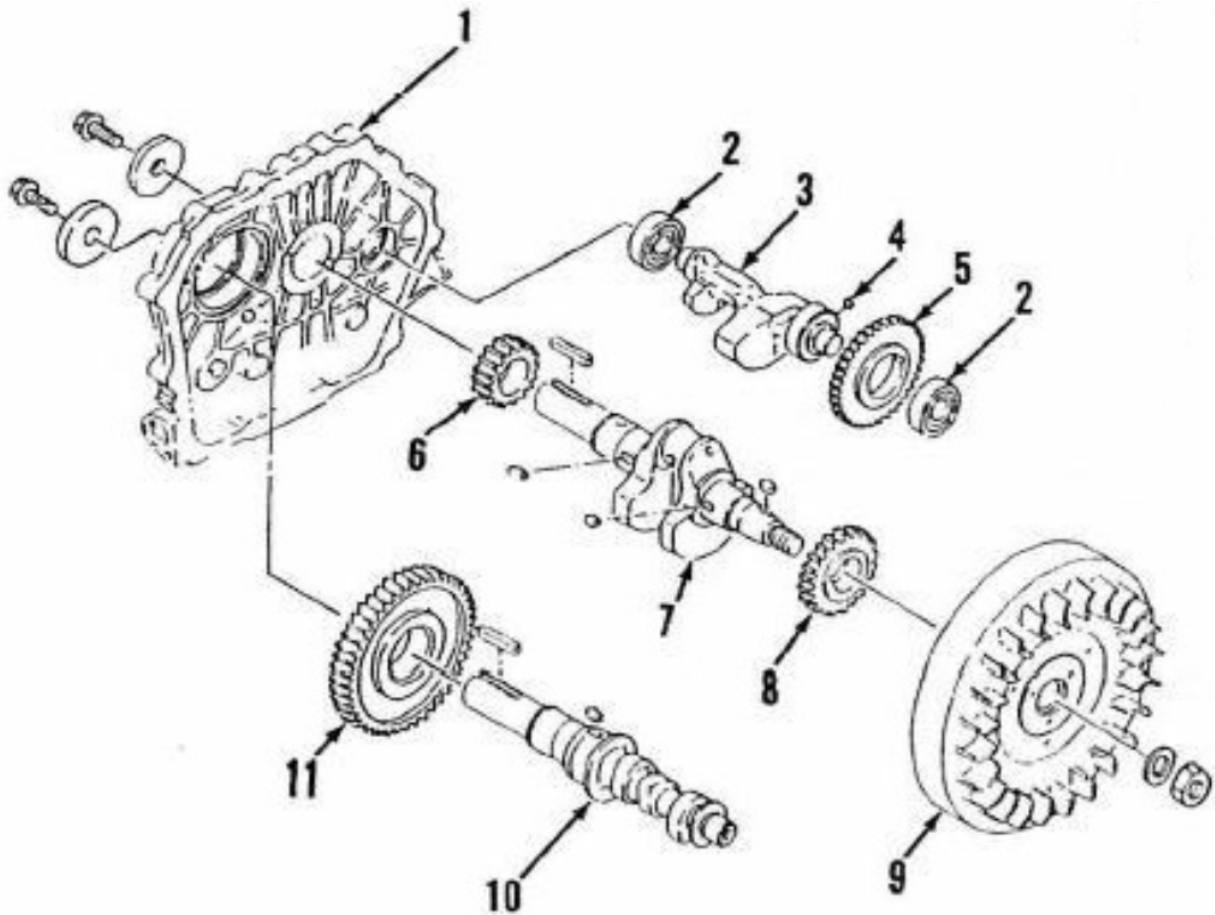
# 1. Cylinder Block Assembly



<u>Part Name</u>	<u>Titan Part #</u>	<u>Part Name</u>	<u>Titan Part #</u>
1. PTO Seal	LCT-5552	12. Crank Shaft Bearing	LCT-5515
3. Oil Sensor	LCT-016	13. Cam Shaft Bearing	LCT-5514
4. Oil Pipe	LCT-5528	14. Bearing Retainer Plate	LCT-5553
5. Dowel Pins	LCT-5528	15. Fuel Pump cover	LCT-5537
6. Cam Shaft Bearing	LCT-5528	16. Fuel Pump Gasket	LCT-5537
7. Crank Case Cover Gasket	LCT-5529	17. Fuel Pump Shims	LCT-5536
8. Main Bearing	LCT-5557	18. Crank Shaft Oil Seal	LCT-5552
9. Cylinder Head Gasket	LCT-5520	19. Cylinder Block	LCT-5553
10. Push Rod O-ring	LCT-5513	20. Crank Case Cover	LCT-5528
11. Starter Cover Plate	N/A		

Some Parts Sold As Assemblies

## **2. Crank Shaft Assembly**



### **Part Name**

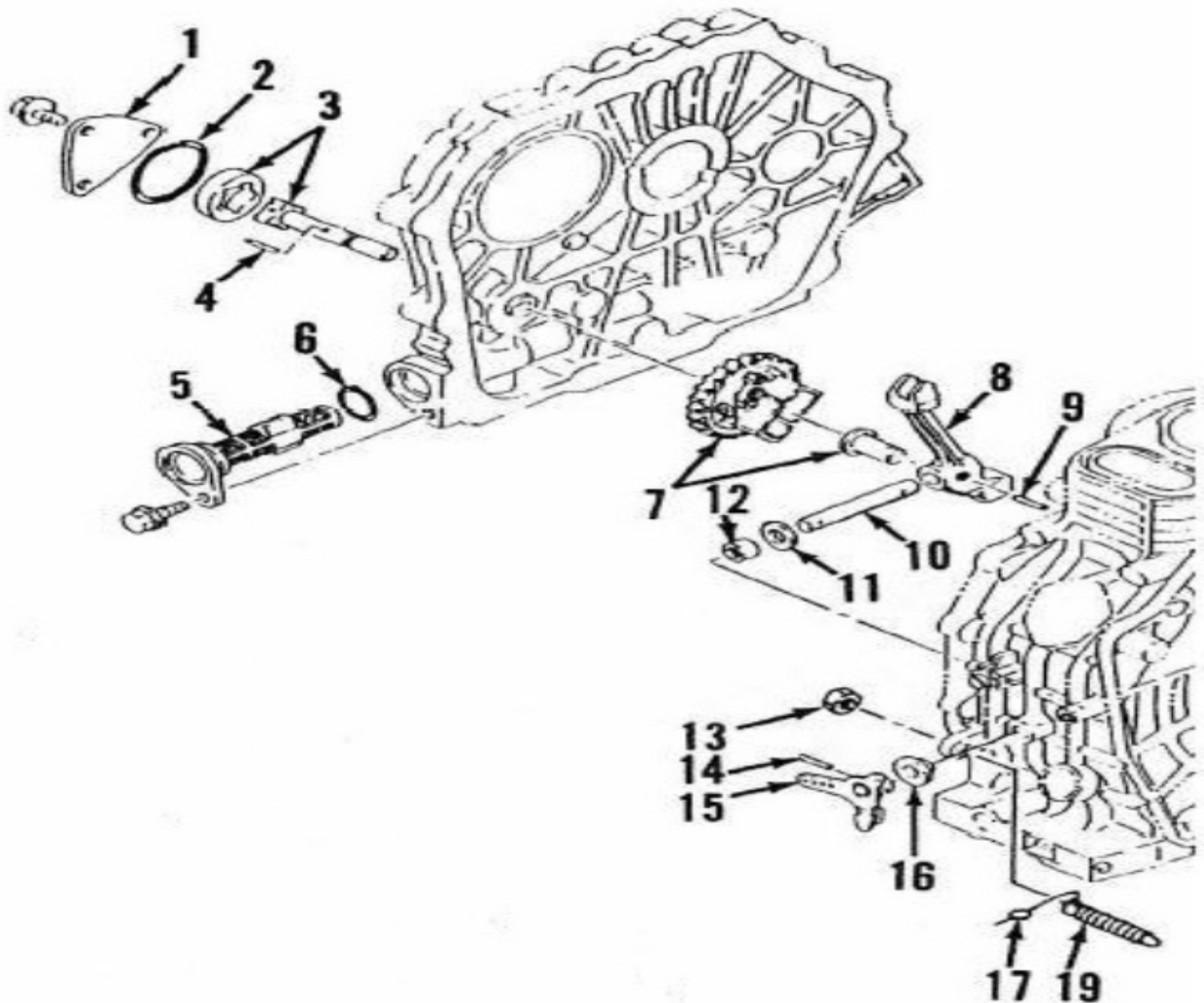
### **Titan Part #**

- |                              |          |
|------------------------------|----------|
| 1. Crank Case Cover          | LCT-5528 |
| 2. Balancer Shaft Bearing    | LCT-5522 |
| 3. Balancer Shaft            | LCT-5522 |
| 4. Key                       | LCT-5522 |
| 5. Balancer Shaft Gear       | LCT-5522 |
| 6. Camshaft Drive Gear       | LCT-5515 |
| 7. Crankshaft                | LCT-5515 |
| 8. Balancer Shaft Drive Gear | LCT-5515 |
| 9. Flywheel                  | LCT-5551 |
| 10. Camshaft                 | LCT-5514 |
| 11. Cam Shaft Drive Gear     | LCT-5514 |

Some Parts Sold As Assemblies



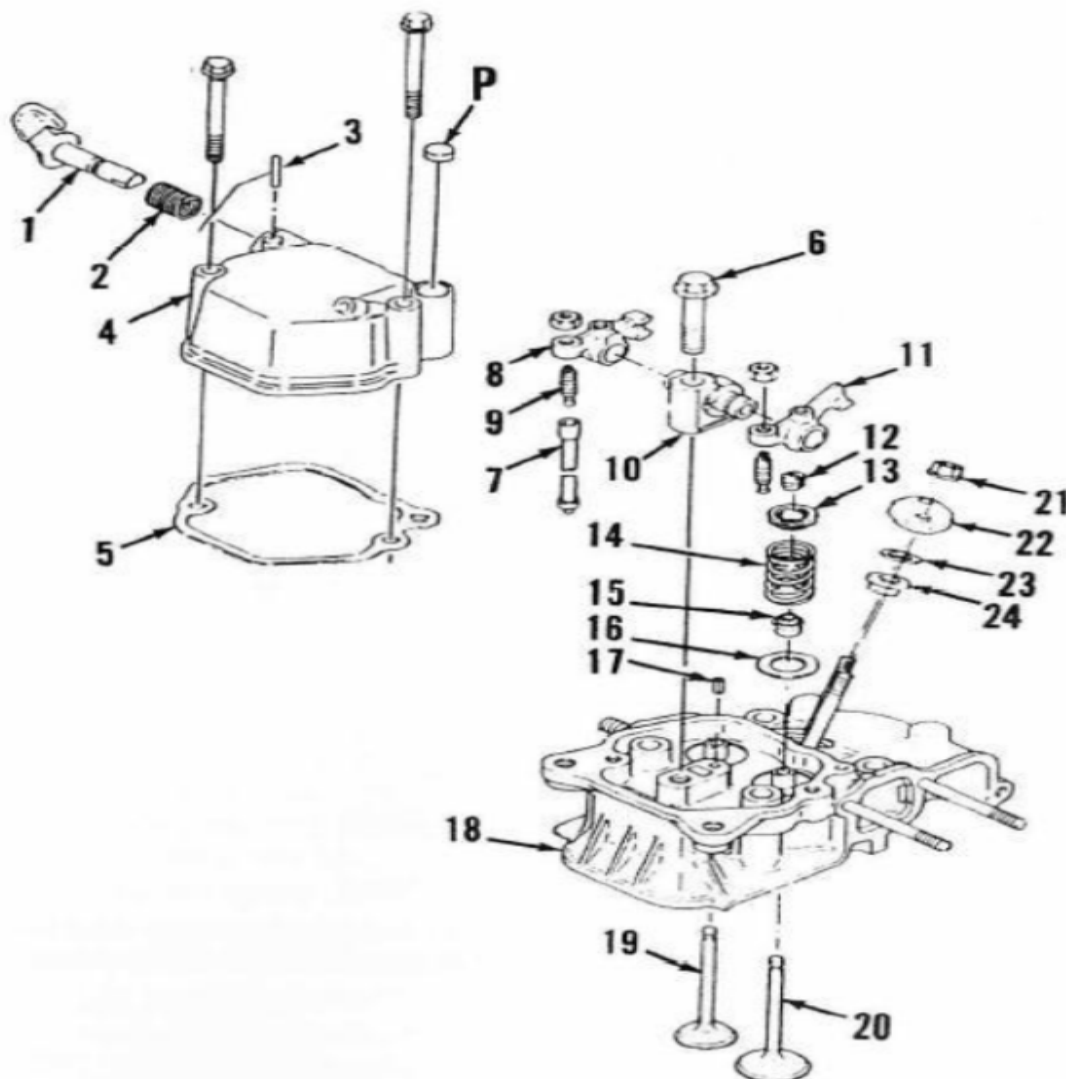
### 3. Governor Gear Assembly



<u>Part Name</u>	<u>Titan Part #</u>	<u>Part Name</u>	<u>Titan Part #</u>
1. Oil Pump	LCT-5527	10. Governor Arm Shaft	LCT-5525
2. Oil Pump O-ring	LCT-5527	11. Flat Washer	N/A
3. Oil Pump Rotor	LCT-5523	12. Governor Shaft Bearing	N/A
4. Oil Pump Drive Pin	LCT-5523	13. Lock Nut	LCT-5526
5. Oil Filter Screen	LCT-015	14. Dowel Pin	LCT-5525
6. O-Ring	LCT-015	15. Governor Arm	LCT-5525
7. Governor Assembly	LCT-5523	16. Thrust Bearing	LCT-5525
8. Governor Arm	LCT-5525	17. Seal Wire	N/A
9. Dowel Pin	LCT-5525	19. Governor Stop	LCT-5526

Some Parts Sold As Assemblies

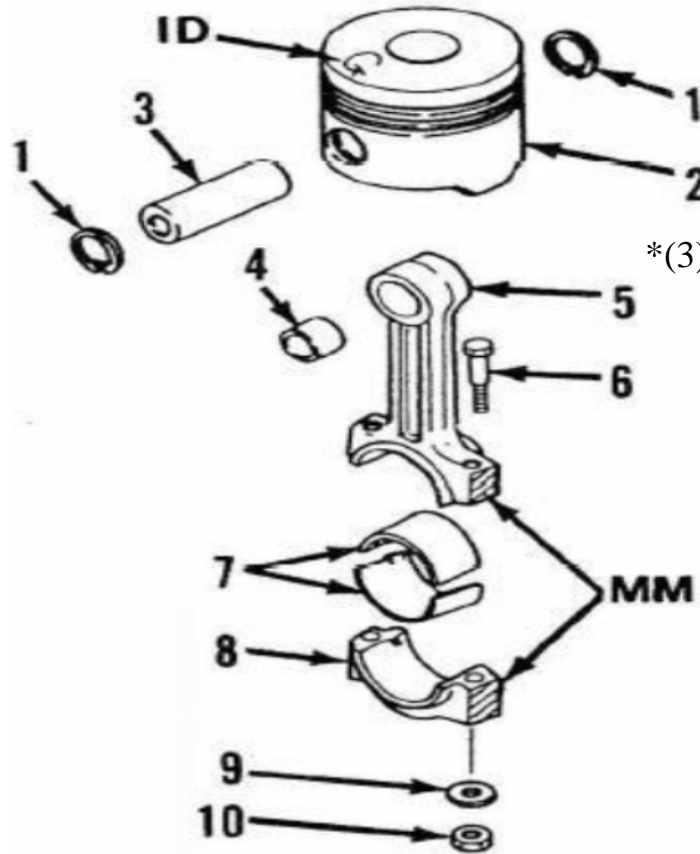
## 4. Head Assembly



<u>Part Name</u>	<u>Titan Part #</u>	<u>Part Name</u>	<u>Titan Part #</u>
1. Decompression Lever	LCT-5530	13. Valve Keepers	LCT-5511
2. Return Spring	LCT-5530	14. Valve Spring	LCT-5511
3. Retaining Pin	LCT-5530	15. Valve Guide Seal	LCT-5511
4. Valve Cover	LCT-5530	16. Spring Seat Washer	N/A
5. Valve Cover Gasket	LCT-5531	17. Padestal Dowel Pin	LCT-5501
6. Rocker Pedestal Bolt	LCT-5541	18. Cylinder Head	LCT-5501
7. Push Rod	LCT-5512	19. Exhaust Valve	LCT-5511
8. Exhaust Rocker Arm	LCT-5541	20. Intake Valve	LCT-5511
9. Adjusting Screw	LCT-5541	21. Injector Clamp Nuts	LCT-5504
10. Rocker Arm Pedestal	LCT-5541	22. Injector Clamp Plate	LCT-5504
11. Intake Rocker Arm	LCT-5541	23. Injector Spacer	N/A
12. Split Valve Locks	LCT-5511	24. Injector Gasket	LCT-5503

Some Parts Sold As Assemblies

## 5. Piston Assembly

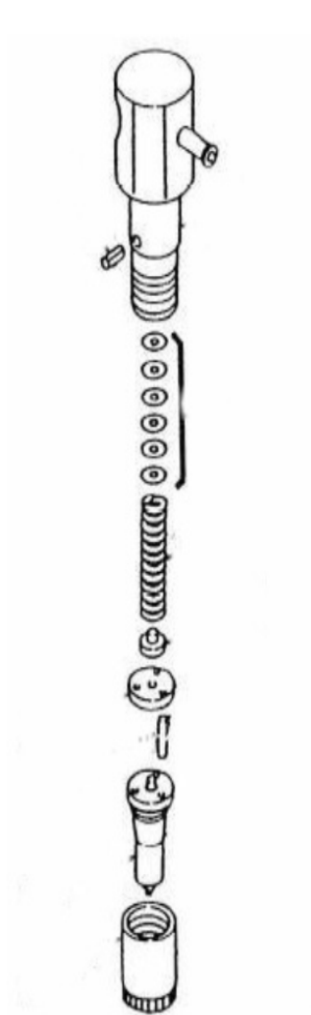


\*(3) Piston Rings Not Shown  
Part # LCT-5513A

<u>Part Name</u>	<u>Titan Part #</u>	<u>Part Name</u>	<u>Titan Part #</u>
1. Snap Rings	LCT-5516	6. Rod Cap Bolt	LCT-5517
2. Piston	LCT-5516	7. Rod Sleeve Bearing	LCT-5517
3. Piston Pin	LCT-5516	8. Rod Cap	LCT-5517
4. Pin Bushin	LCT-5517	9. Washer	N\A
5. Connecting Rod	LCT-5517	10. Nut	N\A

Some Parts Sold As Assemblies

## **6. Fuel Injection System**



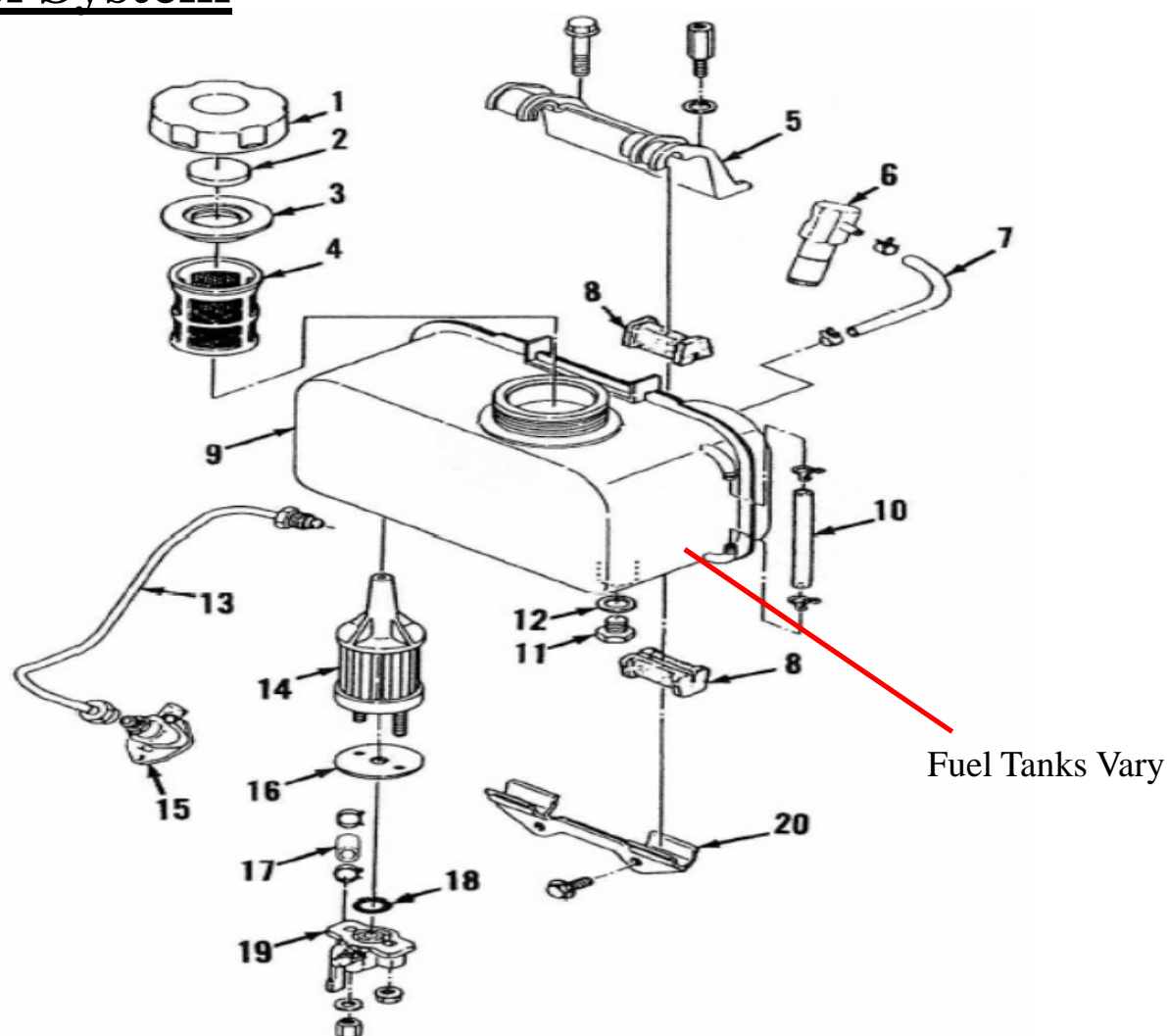
**Fuel Injector    LCT-5502**



**Fuel Pump    LCT-5535**

These Parts Sold As Assemblies

## 7. Fuel System

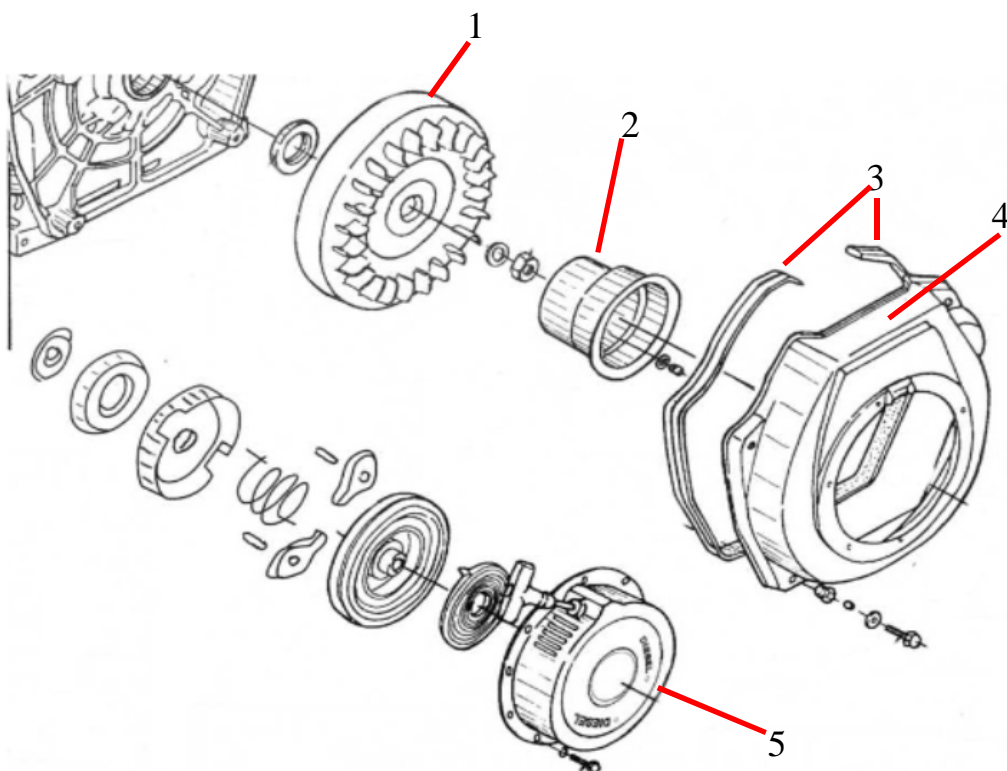


<u>Part Name</u>	<u>Titan Part #</u>	<u>Part Name</u>	<u>Titan Part #</u>
1. Fuel Cap	LCT-009	11. Drain Plug	N/A
2. Fuel Cap Seal	LCT-009	12. Gasket	N/A
3. Fuel Cap Gasket	LCT-009	13. Fuel Injector Line	LCT-5550
4. Filter Screen	LCT-009A	14. Fuel Filter	LCT-010
5. Mounting Clamp	N/A	15. Fuel Injector Pump	LCT-5535
6. Fuel Injector	LCT-5502	16. Fuel Filter Plate	LCT-10A
7. Fuel Return line	LCT-057	17. Rubber Fuel Line	LCT-056
8. Vibration Dampers	N/A	18. O-ring	LCT-011
9. Fuel Tank	LCT-008	19. Fuel Shut Off Valve	LCT-012
10. Fuel Gauge	LCT-008A	20. Mounting Clamp	N/A

Some Parts Sold As Assemblies



## **8. Starter Assembly**



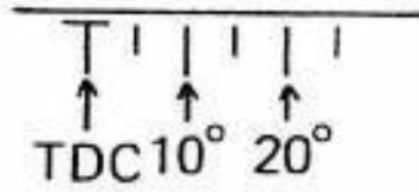
### **Part Name**

### **Titan Part #**

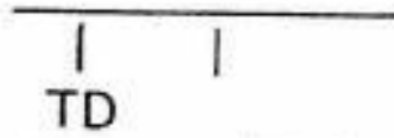
- 1. Fly Wheel
- 2. Recoil Cup
- 3. Blower Housing Gaskets
- 4. Blower Housing
- 5. Recoil Assembly

LCT-5551  
LCT-5544  
LCT-5546  
LCT-5546  
LCT-5542

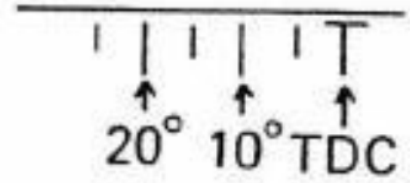
Some Parts Sold As Assemblies



D-Spec.Engine



D-Spec.(01d)

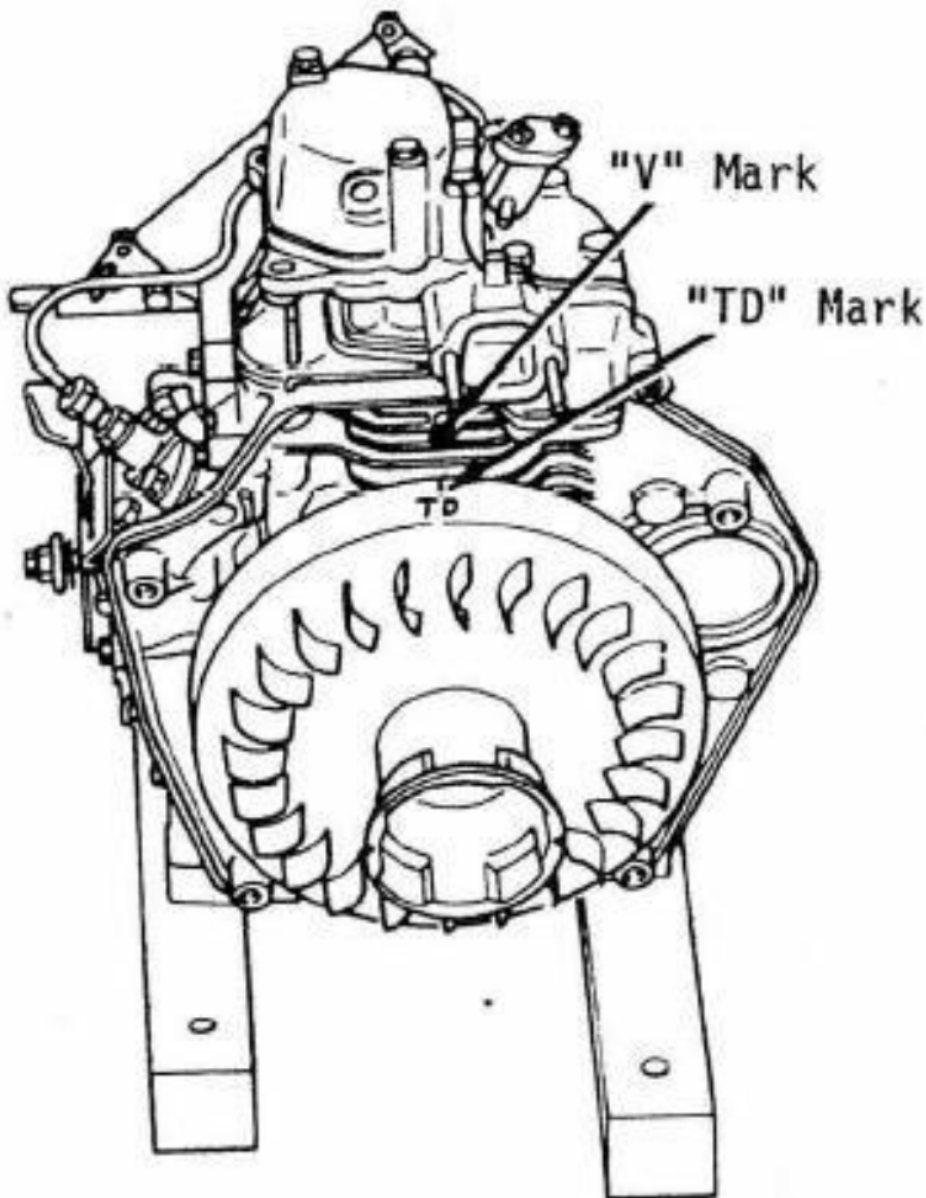


S-Spec.Engine



S-Spec.(01d)

Engine Timing  
Reference Information





The list of control torque on the 178 Diesel engine assembling line

Item	Torque(N.M)	Gap/Torque SAE		
		Lower	Upper	
Valve Rocker Arm Support	13-15	10	11	lb-ft
Flywheel End Nut	150-160	111	118	lb-ft
Crankcase Cover Bolt	18-23	13	17	lb-ft
Cylinder Head Nuts	42-46	31	34	lb-ft
Connecting Rod Bolts	28-30	21	22	lb-ft
FO Pump Stud Bolt (Stud Side)	30-35	22	26	lb-ft
FO Nozzle Case Nut	40-45	30	33	lb-ft
FO Injection Nozzle Nuts	10-12	7	9	lb-ft
FO Pump Nuts	10-12	7	9	lb-ft
Standard Bolts and Nuts (M6)	7-10	5	7	lb-ft
Standard Bolts and Nuts (M8)	18-20	13	15	lb-ft



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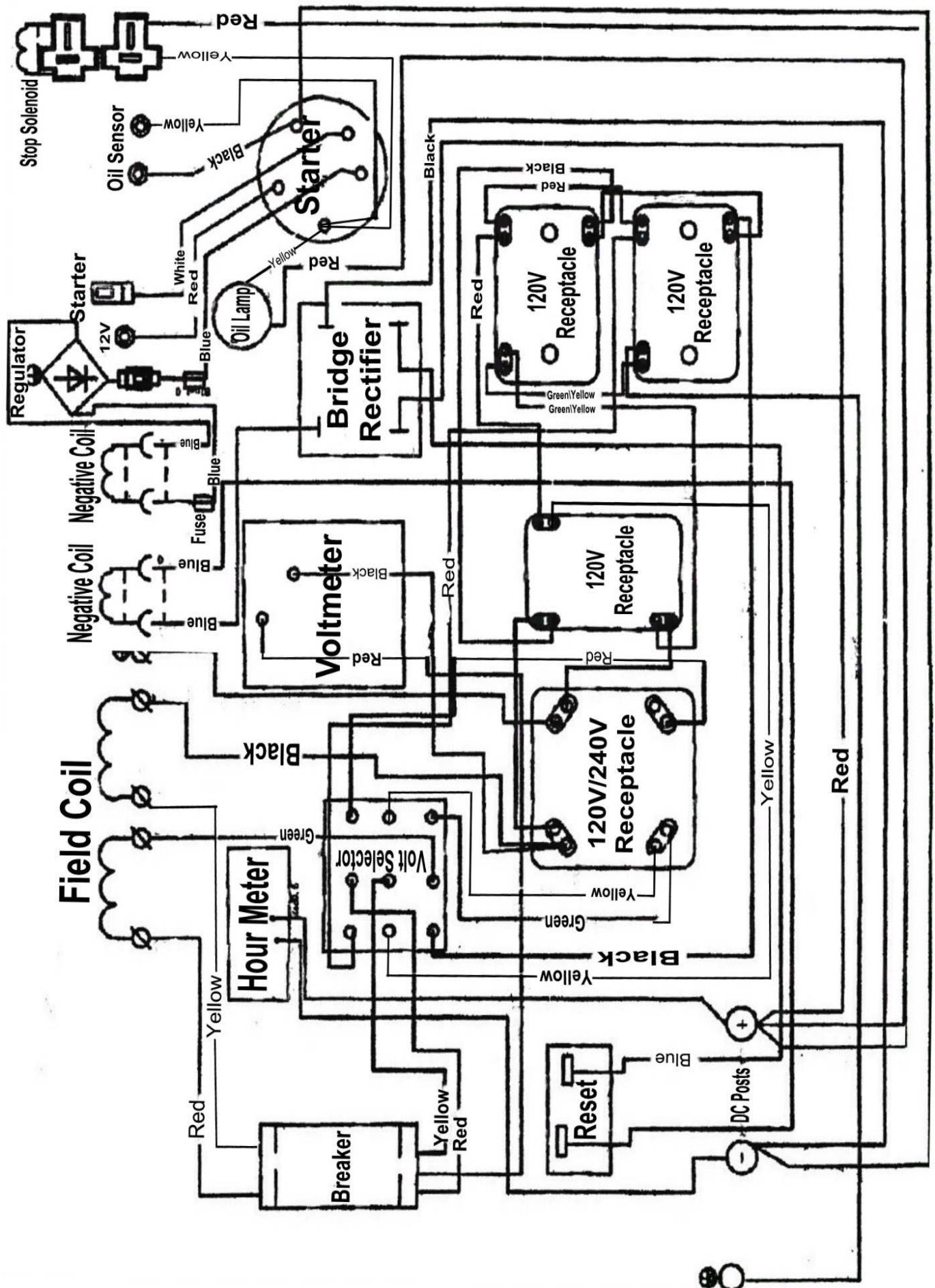
Service/Replacement Parts 800-845-4141



LIQUID COMBUSTION TECHNOLOGY

Part	Item/Model	HL178FA-A
		Standard
Engine	Maximum speed	3720±50rpm
	Idle speed	1850±150rpm
	Envelope Size	417mm×470mm×494mm
	Cylinder compression	20:1 at 600rpm
Cylinder	Sleeve	86mm
	Stroke	70mm
Cylinder head	Warpage	-----
Piston Pin & Rings	1st ring side clearance	.065 - .095mm
	2nd Ring side clearance	.03 - .065mm
	Oil ring side clearance	.02 - .055mm
	Pin O.D	22.991 - 23.000
	End Gap 1st&2nd Oil	.10 - .25mm/.15 - .35mm
Conn-rod	Small end I.D.	23.025 - 23.038mm
	Big end I.D	40.014 - 40.028mm
	Big end oil clearance	.025 - .047mm
Crankshaft	Pin O.D	39.965 - 39.982mm
	Plain Bearing Side - Bearing ID	40.009 - 40.078mm
	Plain Bearing Side - Journal OD	40.002 - 40.018mm
	Plain Bearing Side - Oil Clearance	.027 - .079mm
	Ball Bearing Side - Bearing ID	39.988 - 40.000mm
	Ball Bearing Side - Journal OD	40.007 - 40.018mm
	Fitting (Tight Fit)	.007 - .030mm
Valves		
	Stem OD	
	Intake	5.960 - 5.975mm
	Exhaust	5.945 - 5.960mm
	Guide ID	
	Intake & Exhaust	6.0 - 6.015mm
	Stem Clearance	
	Intake & Exhaust	0.012—0.028mm
	Seat width	1.5 - 3.0mm
	Spring free length	33mm





# TITAN INDUSTRIAL

P.O. Box 791  
Travelers Rest, S.C. 29690  
(800) 845-4141  
[www.titanindustrial.net](http://www.titanindustrial.net)

## Model 5500

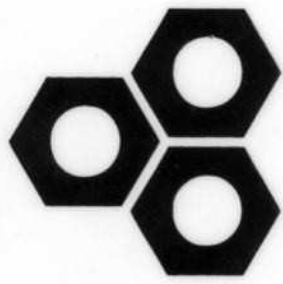


### Specifications:

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- Output 4200watts Continuous-  
5000watts Surge
- 2- L5-20 Receptacles
- 1- L14-20 Receptacle
- Circuit Breaker Protection
- 84 Decibel's @ 10'
- Electric Start\recoil
- 7hp Titan Diesel Engine
- (steel sleeve) Cylinder
- 3.5 Gallon Fuel Tank
- Approx. Run Time 10hrs  
@50% Load
- RPM 3720
- Brushless Generator Head
- Copper Windings
- Single Phase 60Hz.
- Low Oil Shut Down
- Oil Capacity 26-28oz. 15w-40
- Size: L-26" W-19" H-24"
- Net. Weight 230LBS.
- One Year Warranty (Residential)  
90day (commercial)





# 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