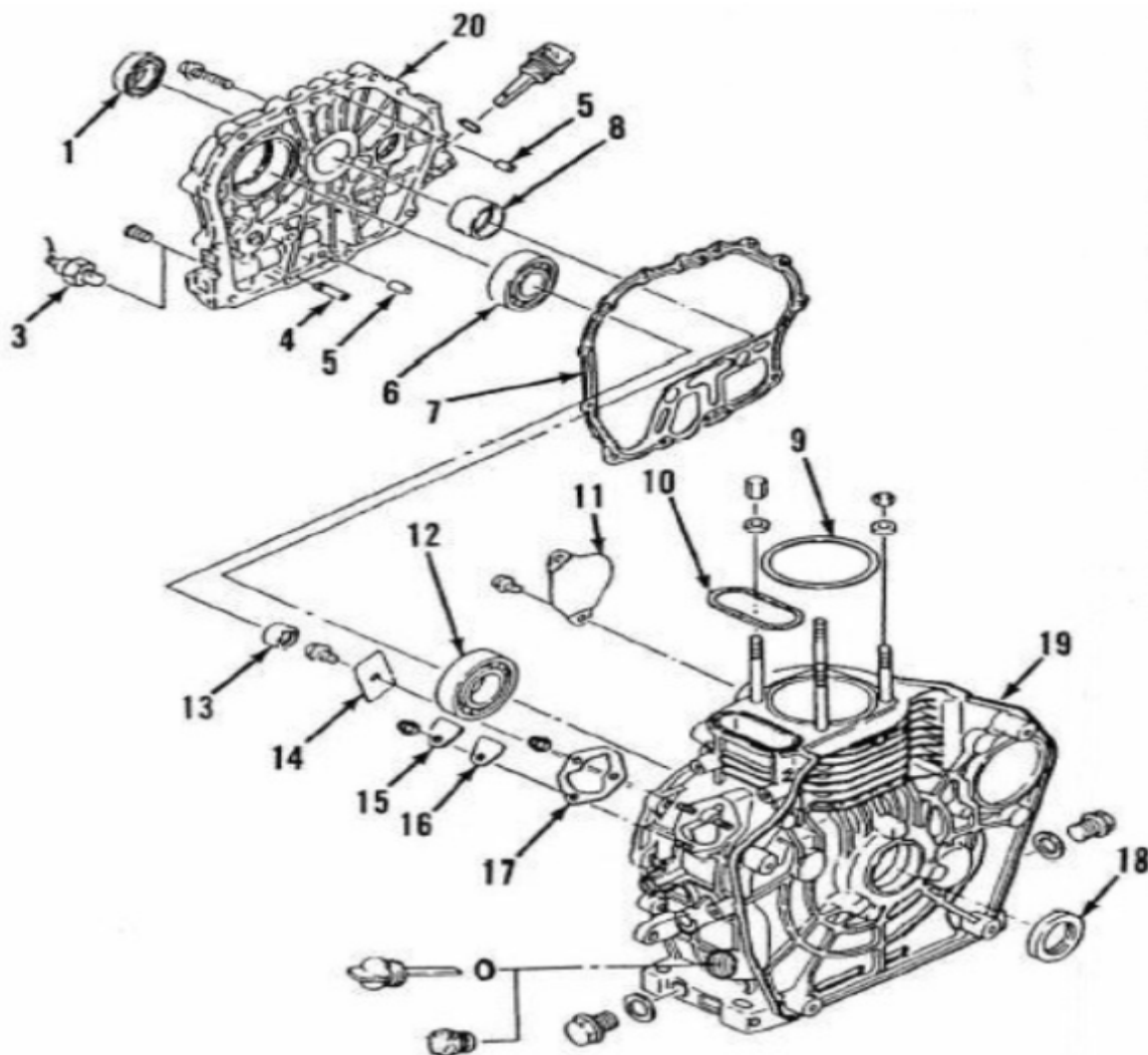


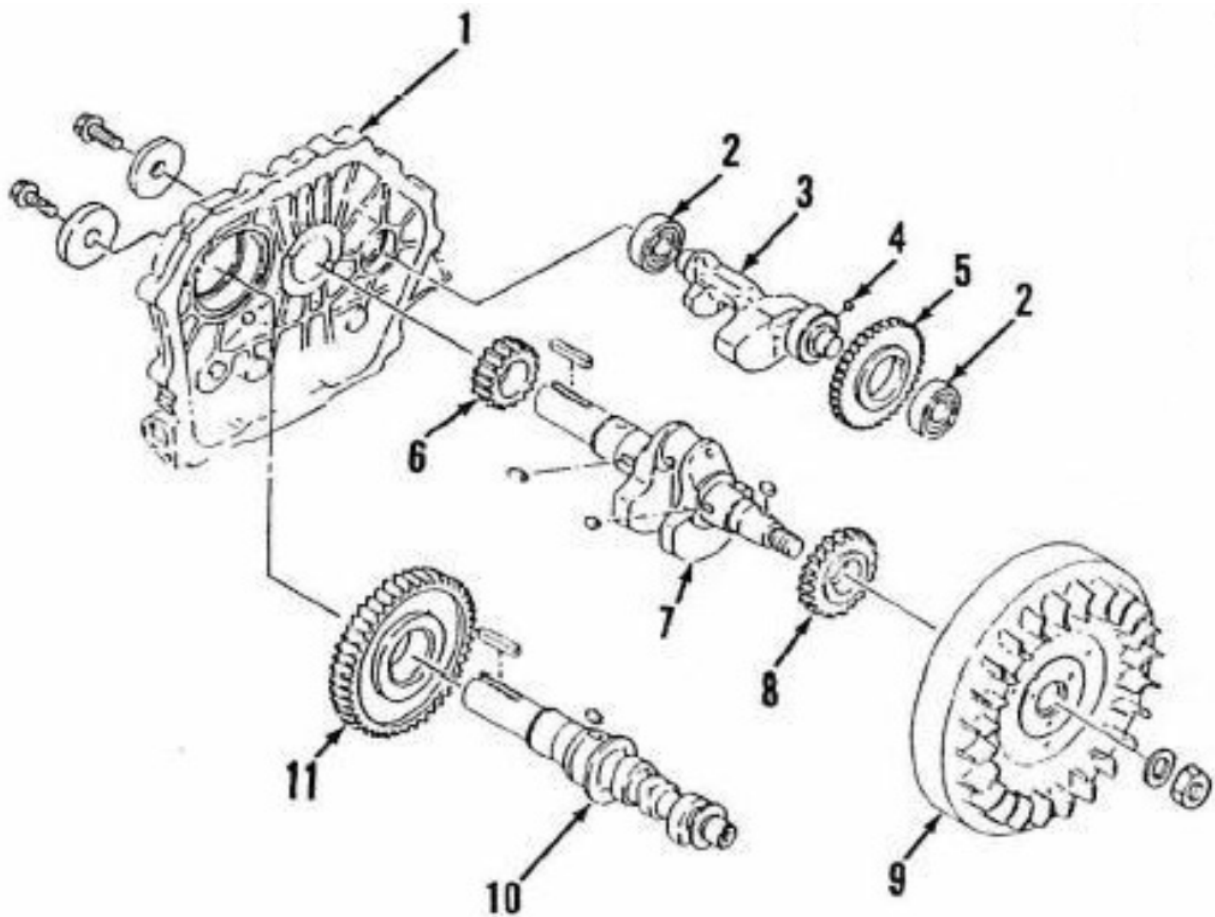
1. Cylinder Block Assembly



<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. CamShaft 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. CrankShaft 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



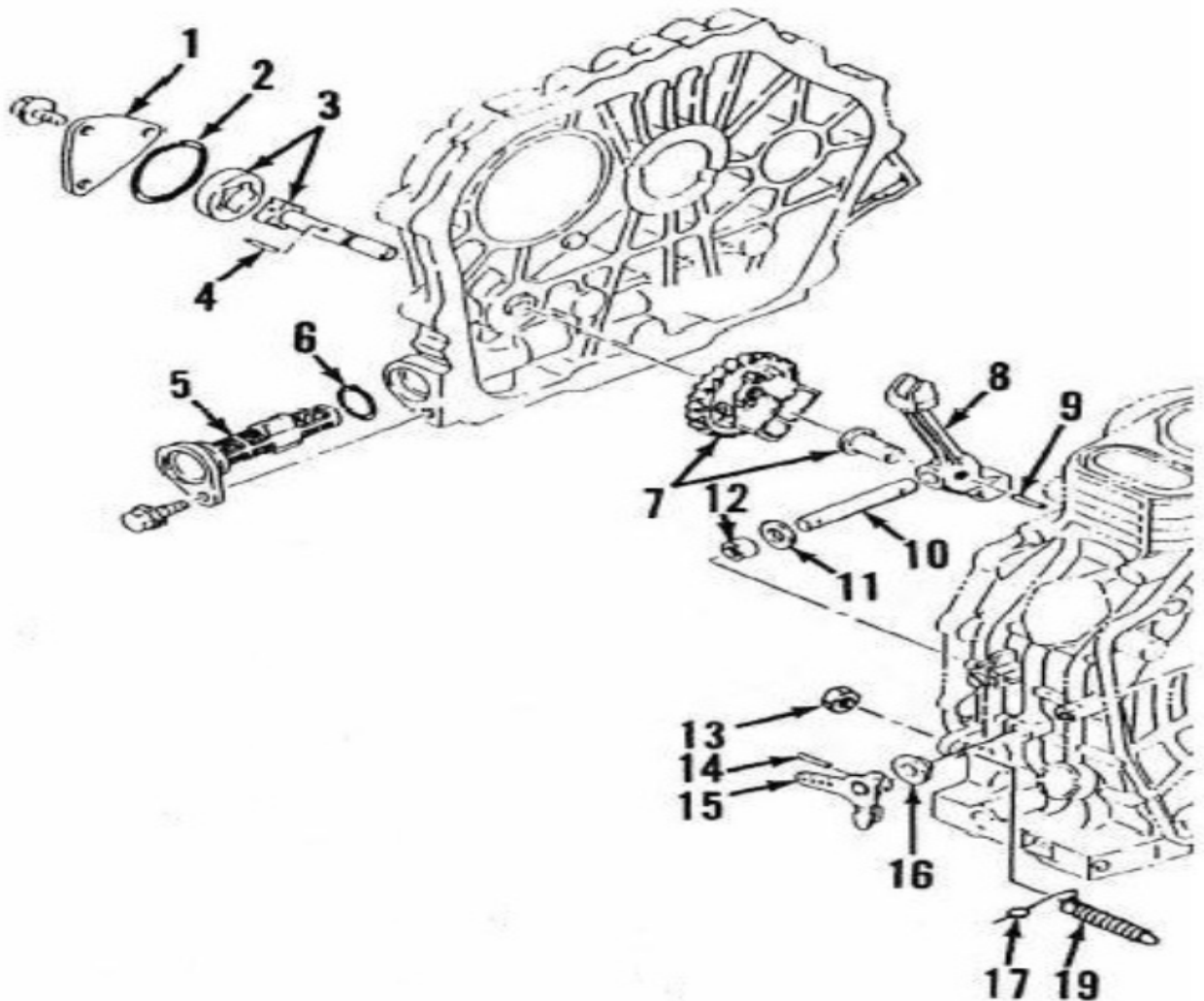
Part Name

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

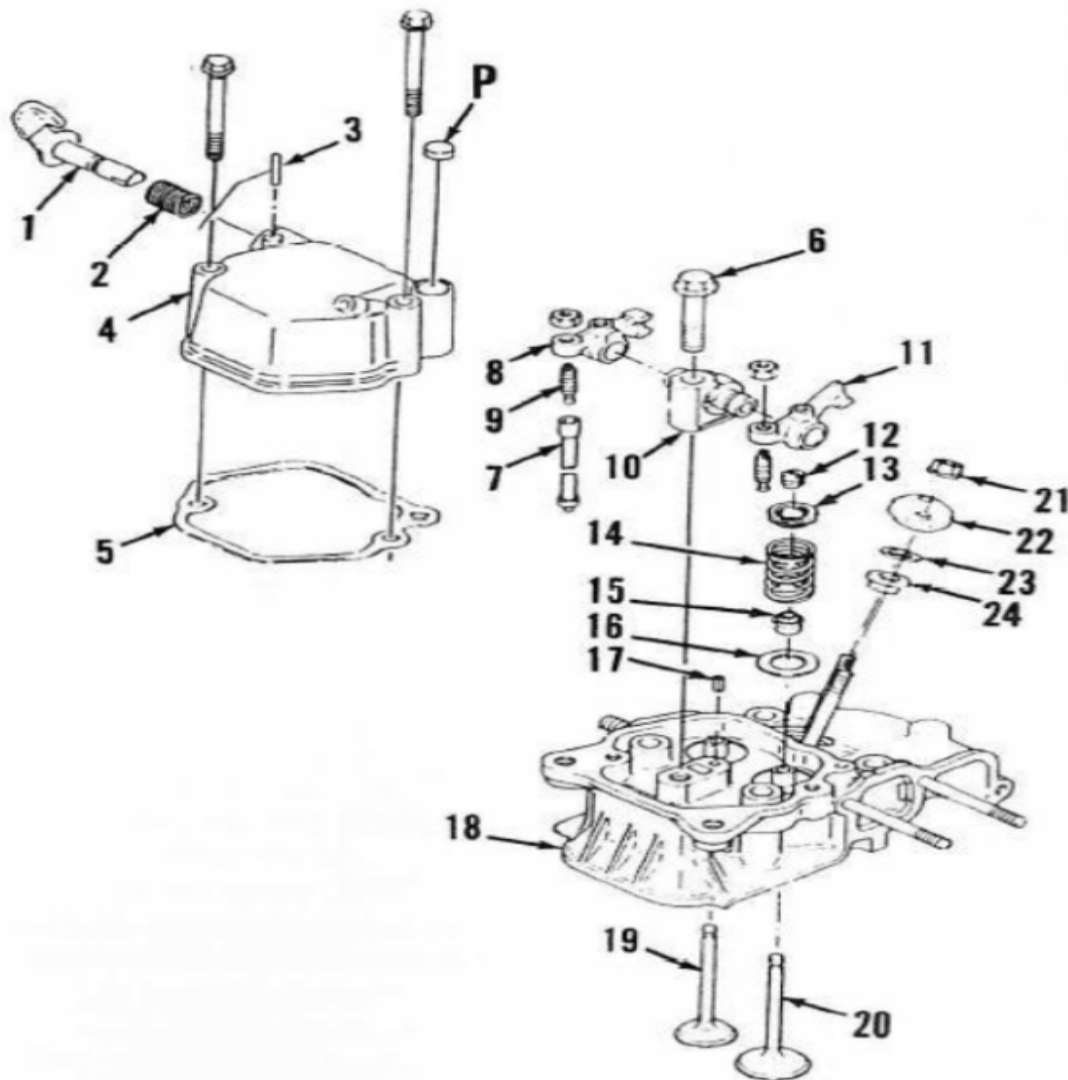
3. Governor Gear Assembly



<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

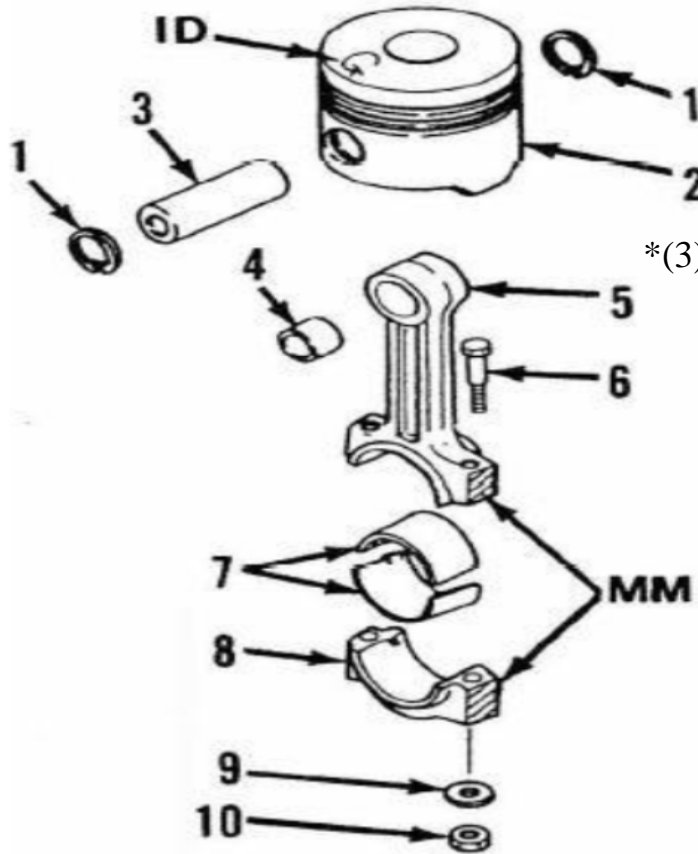
4. Head Assembly



<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. Pedestal 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

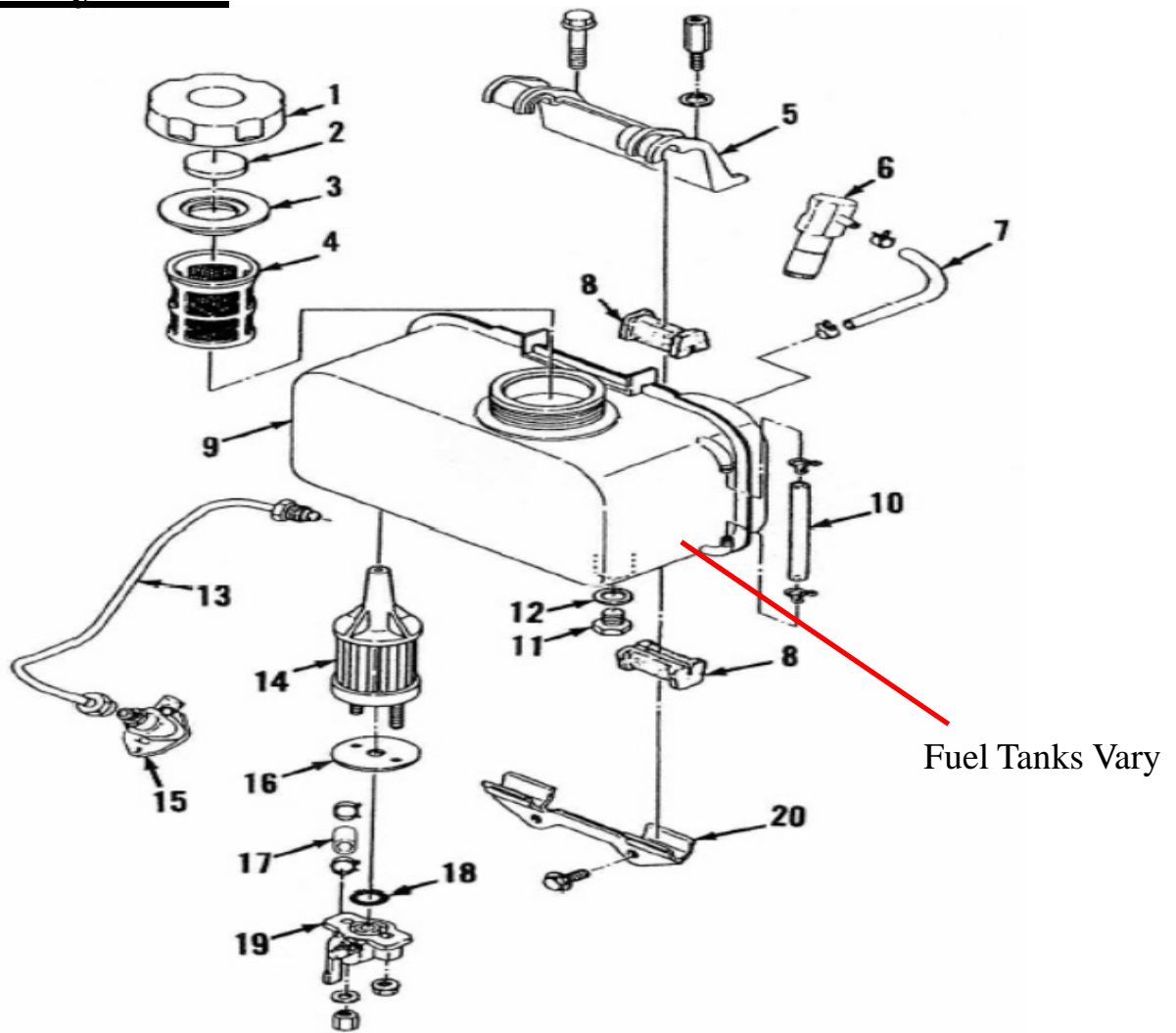


*(3) Piston Rings Not Shown
Part # LCT-5513A

<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

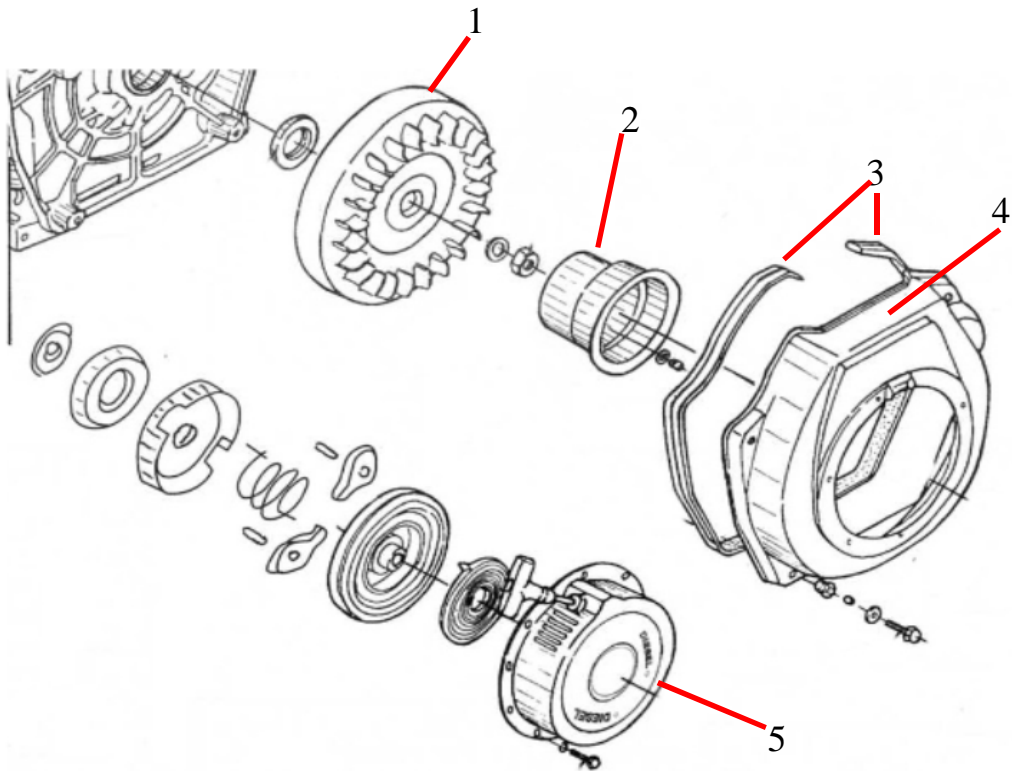
7. Fuel System



<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



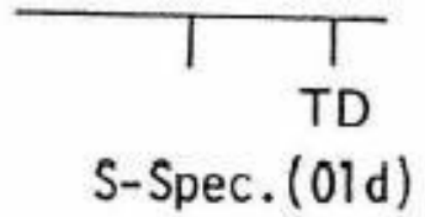
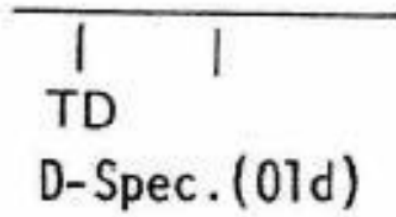
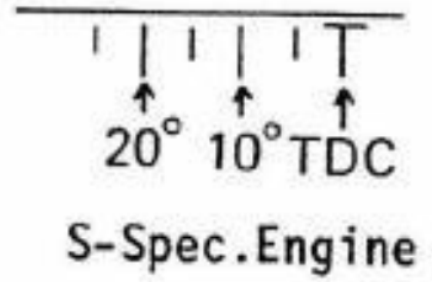
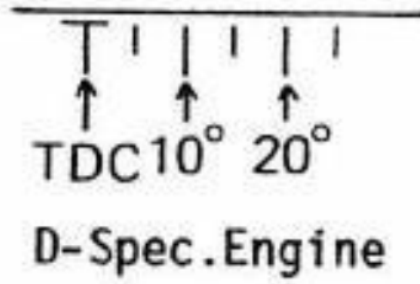
Part Name

Titan Part

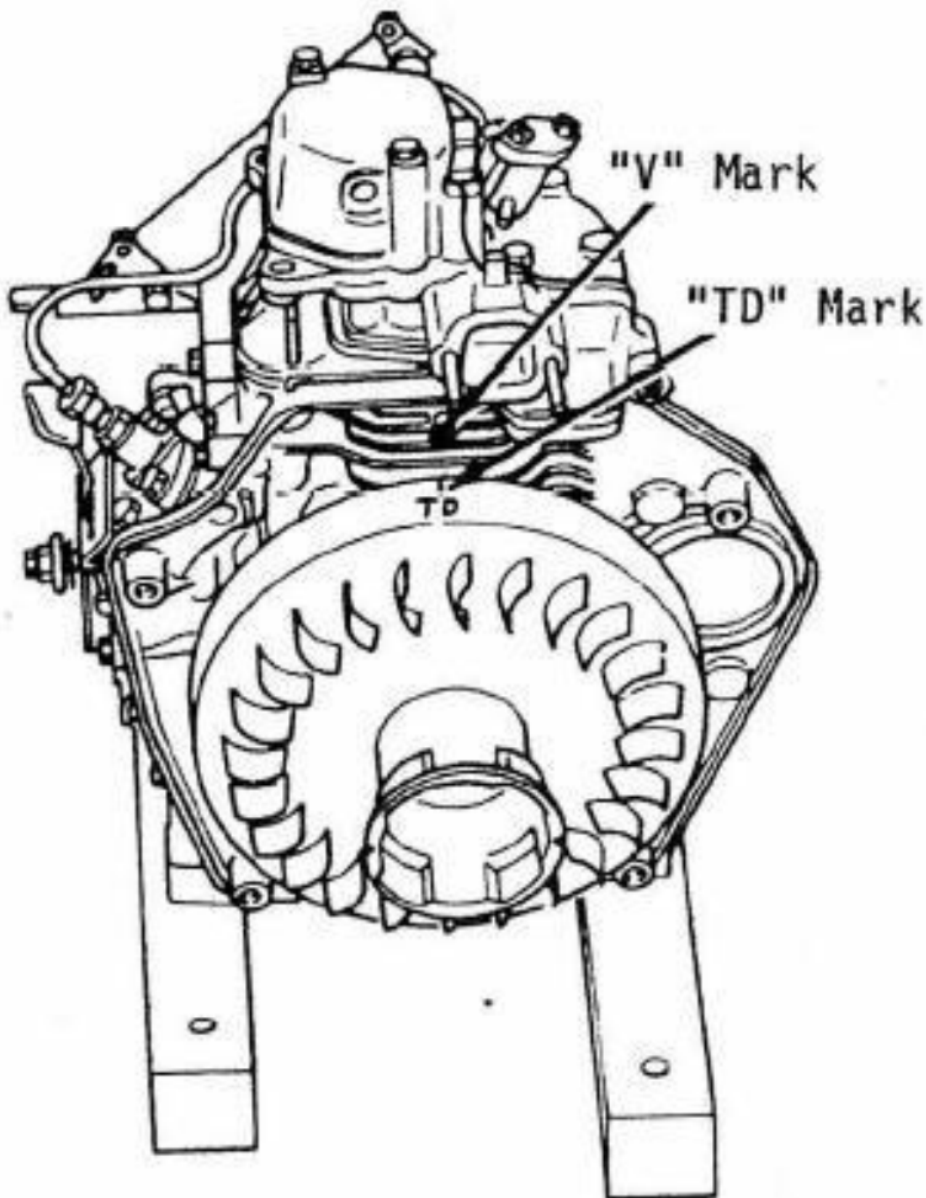
1. Fly Wheel
2. Recoil Cup
3. Blower Housing Gaskets
4. Blower Housing
5. Recoil Assembly

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

Some Parts Sold As Assemblies



Engine Timing
Reference Information





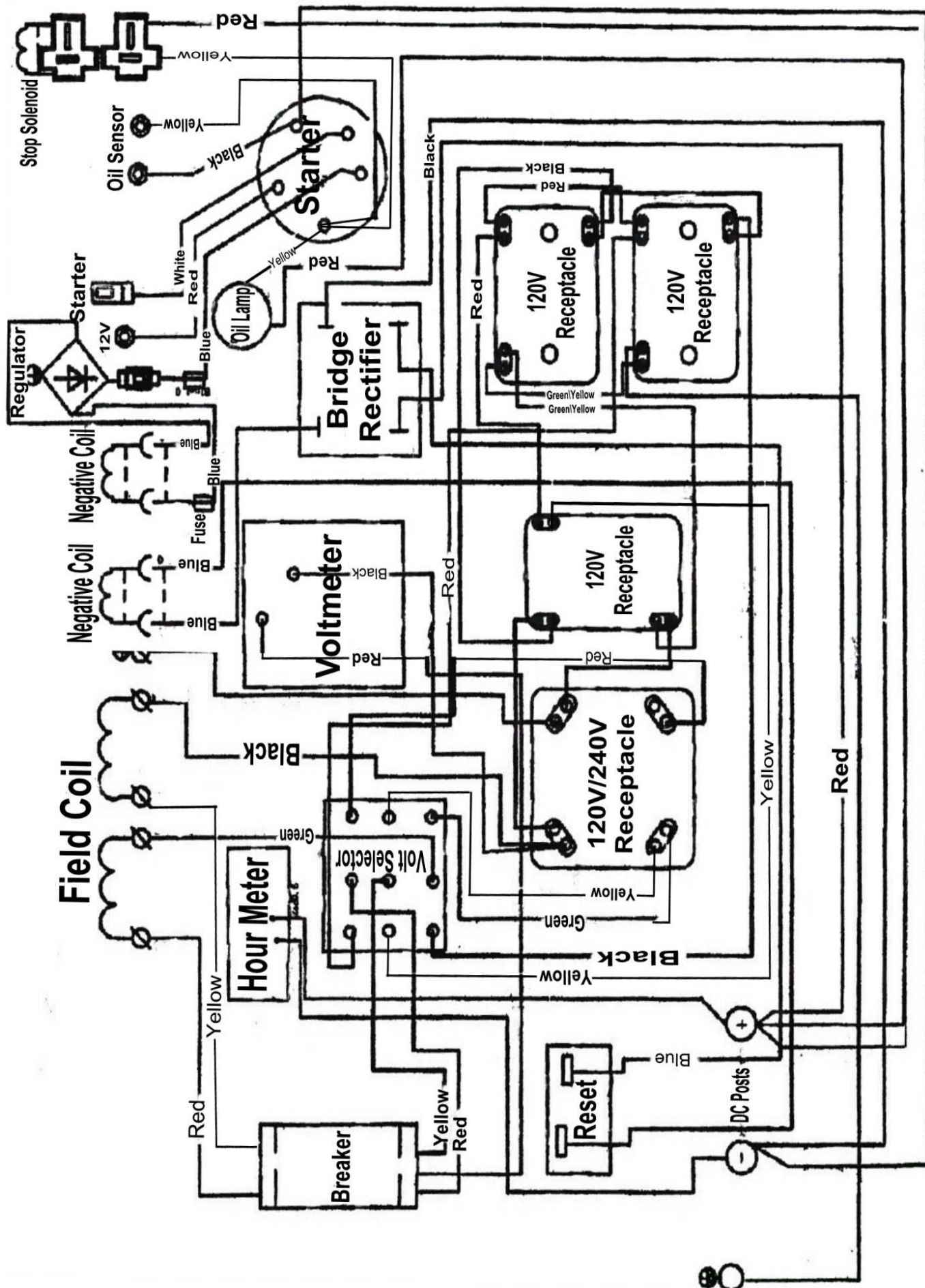
The list of control torque on the 178 Diesel engine assembling line

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



P.O.Box 791, Travelers Rest, S.C. 29690
 Phone 864-834-7212
 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&2ndOil	.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

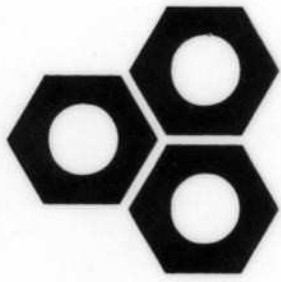
P.O. Box 791
Travelers Rest, S.C. 29690
(800) 845-4141
www.titanindustrial.net

Model 5500



Specifications:

- 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



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