

TECHNICAL BULLETIN

**TB NO.1007
REV. 0**

Subject: Maintenance Programs for Superior Engines

The basic intent of any preventive maintenance program is for unit protection to prevent major failures, insure on-line availability and to maintain cost of operating at a reasonable level per brake horsepower per year.

Each application must be reviewed and considerations would include: (1) annual operating hours, (2) load and general operating conditions, (3) importance of on-line availability, (4) manpower and (5) budgets.

The attached programs are typical for Superior gas engines operating under normal conditions. Please refer to each program as a reminder of important items which should be included in your existing programs. The actual intervals of service may vary dependent on your application.

If you need additional copies, have any questions or desire additional information, please contact **EnDyn's** Technical Service Department or your local **PowerParts**[®] Distributor.

5-10-90

MAINTENANCE PROGRAM - 51091-1

(Typical For Superior Naturally Aspirated Gas Engines)

INTRODUCTION

This maintenance schedule is for Superior G-825 series engines operating under normal conditions. It may be necessary to change some of the intervals of service due to abnormal conditions associated with load, fuel gas analysis, ambient temperatures, etc.

MAINTENANCE CHART

ITEM	SERVICE	Daily / As Required	1000 Hours	2000 Hours	4000 Hours	8000 Hours	24000 Hours
Operating Temperatures	Log Data	X					
Operating Pressures	Log Data	X					
Load & RPM	Log Data	X					
Air Cleaner Elements	Check Differential	X					
Water Level	Check	X					
Lube Oil Level	Check	X					
Lube Oil Consumption	Check	X					
Crankcase Vacuum	Check	X					
Governor Oil Level	Check	X					
Starter Lubricator	Fill	X					
Oil Filter Differential	Check	X					
Leaks	Check	X					
Control Linkage	Lubricate	X					
Fan Shaft Bearings	Lubricate	X					
Valve Clearances	Adjust (Hot)		X				
Oil Filter Elements	Replace		X				
Lube Oil	Analyze		X				
Spark Plugs	Replace		X				
Ignition Timing	Check		X				
Drive Chains	Adjust		X				
Gears & Sprockets	Inspect		X				
Drive Belt	Adjust		X				
Air Filters	Clean/Replace		X				
Carburetor	Adjust		X				
System Vents	Check		X				
Lube Oil	Change			X			
Crankcase	Clean			X			
Lube Oil Strainer	Clean			X			
Governor Oil	Change			X			
Crankcase Breather	Clean			X			
Safety Shutdowns	Test/Adjust			X			
Starter Alignment	Check			X			
Cam Lobes & Followers	Inspect			X			
Coupling Alignment	Check				X		
Crankshaft Distortion	Check				X		
Magneto	Replace				X		
Magneto Drive Coupling	Replace				X		
Cylinder Compression	Check				X		

ITEM	SERVICE	Daily / As Required	1000 Hours	2000 Hours	4000 Hours	8000 Hours	24000 Hours
Camshaft Timing	Check				X		
Main Bearings	Spot Check					X	
Rod Bearings	Spot Check					X	
Cam Bearings	Spot Check					X	
Rocker Arm Bushings	Spot Check					X	
Cylinder Head Torque	Check					X	
Rod Bolt Torque	Check					X	
Main Cap Torque	Check					X	
Flywheel Torque	Check					X	
Coupling Torque	Check					X	
Foundation Bolt Torque	Check					X	
Drive Belts	Replace					X	
Thermostat Elements	Test					X	
Backfire Relief Valve	Inspect					X	
Lube Oil Relief Valve	Inspect					X	
Secondary Ignition Wires	Replace					X	
Gaskets & Seals	Replace						X
Cylinder Heads	Rebuild						X
Exhaust Manifold	Inspect & Test						X
Thermostat Elements	Replace						X
Piston Rings	Replace						X
Pistons	Inspect						X
Cylinder Liners	Inspect & Hone						X
Cylinder Block	Inspect						X
Rod Bushings	Replace						X
Connecting Rods	Inspect						X
Rod Bearings	Replace						X
Main Bearings	Replace						X
Crankshaft	Inspect						X
Cam Bearings	Replace						X
Drive Bushings	Replace						X
Roller Bearings	Replace						X
Oil Pump Drive Springs	Replace						X
Hubs, Gears & Sprockets	Inspect						X
Lube Oil Pump	Rebuild						X
Water Pump & Idler	Rebuild						X
Drive Chains	Replace						X
Carburetor	Rebuild						X
Linkage Rod Ends	Replace						X
Linkage Bushings	Replace						X
Throttle Assemblies	Rebuild						X
Governor	Rebuild						X
Primary Ignition Wiring	Replace						X
Fan Shaft Bearings	Inspect						X
Lube Oil Cooler	Clean & Test						X
Ignition Coils	Clean & Test						X
Camshaft Idlers	Rebuild						X

MAINTENANCE PROGRAM - 51091-2

(Typical For Superior Turbocharged Gas Engines)

INTRODUCTION

This maintenance schedule is for Superior GT-825 & GTL-825 series engines operating under normal conditions. It may be necessary to change some of the intervals of service due to abnormal conditions associated with load, fuel gas analysis, ambient temperatures, etc.

MAINTENANCE CHART

ITEM	SERVICE	Daily / As Required	1000 Hours	2000 Hours	4000 Hours	8000 Hours	24000 Hours
Cylinder Balance	Check & Adjust	X					
Operating Temperatures	Log Data	X					
Operating Pressures	Log Data	X					
Load & RPM	Log Data	X					
Air Cleaner Element	Check Differential	X					
Water Level	Check	X					
Lube Oil Level	Check	X					
Lube Oil Consumption	Check	X					
Crankcase Vacuum	Check	X					
Governor Oil Level	Check	X					
Starter Lubricator	Fill	X					
Oil Filter Differential	Check	X					
Leaks	Check	X					
Control Leakage	Lubricate	X					
Fan Shaft Bearings	Lubricate	X					
Valve Clearance	Adjust (Hot)		X				
Oil Filter Elements	Replace		X				
Lube Oil	Analyze		X				
Spark Plugs	Replace		X				
Ignition Timing	Check		X				
Drive Chains	Adjust		X				
Gears & Sprockets	Inspect		X				
Drive Belts	Adjust		X				
Air Filters	Clean/Replace		X				
Fuel Mixture & Balance	Adjust		X				
System Vents	Check		X				
Lube Oil	Change			X			
Crankcase	Clean			X			
Lube Oil Strainer	Clean			X			
Governor Oil	Change			X			
Crankcase Breather	Clean			X			
Safety Shutdowns	Test/Adjust			X			
Starter Alignment	Check			X			
Cam Lobes & Followers	Inspect			X			
Coupling Alignment	Check				X		
Crankshaft Distortion	Check				X		
Magneto	Replace				X		
Magneto Drive Coupling	Replace				X		
Cylinder Compression	Check				X		

ITEM	SERVICE	Daily / As Required	1000 Hours	2000 Hours	4000 Hours	8000 Hours	24000 Hours
Camshaft Timing	Check				X		
Turbo-Impeller	Clean & Inspect				X		
Main Bearings	Spot Check					X	
Rod Bearings	Spot Check					X	
Cam Bearings	Spot Check					X	
Rocker Arm Bushings	Spot Check					X	
Cylinder Head Torque	Check					X	
Rod Bolt Torque	Check					X	
Main Cap Torque	Check					X	
Flywheel Torque	Check					X	
Coupling Torque	Check					X	
Foundation Bolt Torque	Check					X	
Drive Belts	Replace					X	
Thermostat Elements	Test					X	
Turbo-Turbine End	Clean & Inspect					X	
Lube Oil Relief Valve	Inspect					X	
Secondary Ignition Wires	Replace						X
Gasket Seals	Replace						X
Turbocharger	Rebuild						X
Cylinder Heads	Rebuild						X
Exhaust Manifold	Inspect & Test						X
Thermostat Element	Replace						X
Piston Ring	Replace						X
Pistons	Inspect						X
Cylinder Liners	Inspect & Hone						X
Cylinder Block	Inspect						X
Rod Bushings	Replace						X
Connecting Rods	Inspect						X
Rod Bearings	Replace						X
Main Bearings	Replace						X
Crankshaft	Inspect						X
Cam Bearings	Replace						X
Drive Bushings	Replace						X
Roller Bearings	Replace						X
Oil Pump Drive Springs	Replace						X
Hubs, Gears & Sprockets	Inspect						X
Lube Oil Pump	Rebuild						X
Water Pump & Idler	Rebuild						X
Drive Chains	Replace						X
Gas Valves	Rebuild						X
Linkage Rod Ends	Replace						X
Linkage Bushings	Replace						X
Governor	Rebuild						X
Primary Ignition Wiring	Replace						X
Fan Shaft Bearings	Inspect						X
Lube Oil Cooler	Clean & Test						X
Ignition Coils	Clean & Test						X
Camshaft Idlers	Rebuild						X

MAINTENANCE PROGRAM - 51091-3

(Typical For Superior Cleanburn Engines)

INTRODUCTION

This maintenance schedule is for Superior GTLA & GTLB series engines operating under normal conditions. It may be necessary to change some of the intervals of service due to abnormal conditions associated with load, diesel, fuel gas analysis, ambient temperatures, etc.

MAINTENANCE CHART

ITEM	SERVICE	Daily / As Required	1000 Hours	2000 Hours	4000 Hours	8000 Hours	24000 Hours
Cylinder Balance	Check	X					
Operating Temperatures	Log Data	X					
Operating Pressures	Log Data	X					
Load & RPM	Log Data	X					
Air Cleaner Elements	Check Differential	X					
Water Level	Check	X					
Lube Oil Level	Check	X					
Lube Oil Consumption	Check	X					
Crankcase Vacuum	Check	X					
Governor Oil Level	Check	X					
Starter Lubricator	Fill	X					
Oil Filter Differential	Check	X					
Leaks	Check	X					
Control Leakage	Lubricate	X					
Fan Shaft Bearing	Lubricate	X					
Valve Clearances	Adjust (Hot)		X				
Oil Filter Elements	Replace		X				
Lube Oil	Analyze		X				
Spark Plugs	Replace		X				
Ignition Timing	Check		X				
Drive Chains	Adjust		X				
Gears & Sprockets	Inspect		X				
Drive Belts	Adjust		X				
Air Filters	Clean/Replace		X				
Fuel Mixture & Balance	Adjust		X				
System Vents	Check		X				
Fuel Cell Check Valves	Clean & Test		X				
Exhaust Wastegate	Inspect		X				
Lube Oil	Change			X			
Crankcase	Clean			X			
Lube Oil Strainer	Clean			X			
Governor Oil	Change			X			
Crankcase Breather	Clean			X			

(Typical for Superior Cleanburn Engines)

ITEM	SERVICE	Daily / As Required	1000 Hours	2000 Hours	4000 Hours	8000 Hours	24000 Hours
Safety Shutdowns	Test/Adjust			X			
Starter Alignment	Check			X			
Cam Lobes & Follower	Inspect			X			
Coupling Alignment	Check				X		
Crankshaft Distortion	Check				X		
Magneto	Replace				X		
Magneto Drive Coupling	Replace				X		
Cylinder Compression	Check				X		
Camshaft Timing	Check				X		
Turbo-Impeller	Clean & Inspect				X		
Fuel Cell	Spot Check				X		
Main Bearings	Spot Check					X	
Rod Bearings	Spot Check					X	
Cam Bearings	Spot Check					X	
Rocker Arm Bushings	Check					X	
Cylinder Head Torque	Check					X	
Rod Bolt Torque	Check					X	
Main Cap Torque	Check					X	
Flywheel Torque	Check					X	
Coupling Torque	Check					X	
Foundation Bolt Torque	Check					X	
Drive Belts	Replace					X	
Thermostat Element	Test					X	
Turbo Turbine End	Clean & Inspect					X	
Lube Oil Relief Valve	Inspect					X	
Secondary Ignition Wires	Replace					X	
Cylinder Heads	Inspect With Scope					X	
Gaskets & Seals	Replace						X
Turbocharger	Rebuild						X
Cylinder Heads	Rebuild						X
Exhaust Manifold	Inspect & Test						X
Thermostat Element	Replace						X
Piston Rings	Replace						X
Pistons	Inspect						X
Cylinder Liners	Inspect & Hone						X
Cylinder Block	Inspect						X
Rod Bushings	Replace						X
Connection Rods	Inspect						X
Rod Bearings	Replace						X
Main Bearings	Replace						X
Crankshaft	Inspect						X
Cam Bearings	Replace						X
Drive Bushings	Replace						X
Roller Bearings	Replace						X
Oil Pump Drive Springs	Replace						X

(Typical for Superior Cleanburn Engines)

ITEM	SERVICE	Daily / As Required	1000 Hours	2000 Hours	4000 Hours	8000 Hours	24000 Hours
Hubs, Gears & Sprockets	Inspect						X
Lube Oil Pump	Rebuild						X
Water Pump & Idler	Rebuild						X
Drive Chains	Replace						X
Gas Valves	Rebuild						X
Linkage Rod Ends	Replace						X
Linkage Bushings	Replace						X
Governor	Rebuild						X
Primary Ignition Wiring	Replace						X
Fan Shaft Bearing	Inspect						X
Lube Oil Cooler	Clean & Test						X
Ignition Coils	Clean & Test						X
Camshaft Idlers	Rebuild						X

5/10/1990