



1977

BOX 563 FORT COLLINS, COLORADO 80521 - PHONE (303) 482-7271

EFFECTIVE:

ENGINE DRIVEN GENERATORS

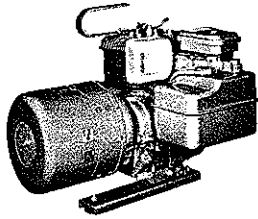
CAT. #	MODEL #	DESCRIPTION AND SPECIFICATIONS
D-1006E	105PTH-1M	1500W, 115/60/1, 3600 RPM, Recoil Start, 64 lbs.
D-1007E	105PTH-2M	1500W, 230/60/1, 3600 RPM, Recoil Start, 64 lbs.
D-1010E	109PBH-1M	1900W, 115/60/1, 3600 RPM, Recoil Start, 79 lbs.
D-1011E	109PBH-2M	1900W, 230/60/1, 3600 RPM, Recoil Start, 79 lbs.
D-1014E	205PBH-1M	2500W, 115/60/1, 3600 RPM, Recoil Start, 85 lbs.
D-1015E	205PBH-2M	2500W, 230/60/1, 3600 RPM, Recoil Start, 85 lbs.
D-1016E	307PBH-1M	3700W, 115/60/1, 3600 RPM, Recoil Start, 122 lbs.
D-1017E	307PBH-1E	3700W, 115/60/1, 3600 RPM, Electric Start, 124 lbs.
D-1018E	307PBH-3M	3700W, 115/230/60/1, 3600 RPM, Recoil Start, 122#
D-1019E	307PBH-3E	3700W, 115/230/60/1, 3600 RPM, Elec. Start, 124#
D-1024E	503PBH-3M	5300W, 115/230/60/1, 3600 RPM, Rope Start, 193 lbs.
D-1025E	503PBH-3E	5300W, 115/230/60/1, 3600 RPM, Elec. Start, 197#
D-1027E	703PWH-3E	7300W, 115/230/60/1, 3600 RPM, Elec. Start, 293#
D-1031E	10PWH-3E	10,000W, 115/230/60/1, 3600 RPM, Elec. Start, 485#
D-1032E	10PWH-3RNC*	10,000W, 115/230/60/1, 3600 RPM, Remote Start, 485#
D-1033E	10PWH-5RNC*	10,000W, 230/60/3, 3600 RPM, Remote Start, 485#
D-1035E	101PBS-1M	1100W, 115/60/1, 1800 RPM, Recoil Start, 71 lbs.
D-1036E	101PBS-2M	1100W, 230/60/1, 1800 RPM, Recoil Start, 71 lbs.
D-1039E	2PBS-1M	2000W, 115/60/1, 1800 RPM, Recoil Start, 113 lbs.
D-1040E	2PBS-2M	2000W, 230/60/1, 1800 RPM, Recoil Start, 113 lbs.
D-1041E	208PBS-1M	2800W, 115/60/1, 1800 RPM, Rope Start, 176 lbs.
D-1042E	208PBS-3M	2800W, 115/230/60/1, 1800 RPM, Rope Start, 177 lbs.
D-1043E	208PBS-3E	2800W, 115/230/60/1, 1800 RPM, Elec. Start, 203 lb.
D-1044E	4PWS-1M	4000W, 115/60/1, 1800 RPM, Rope Start, 289 lbs.
D-1050E	4PWS-3M	4000W, 115/230/60/1, 1800 RPM, Rope Start, 289 lbs.
D-1051E	4PWS-3E	4000W, 115/230/60/1, 1800 RPM, Elec. Start, 296#
D-1052E	4PWS-3R	4000W, 115/230/60/1, 1800 RPM, Remote Start, 296#
D-1055E	6PWS-3E	6000W, 115/230/60/1, 1800 RPM, Elec. Start, 415#
D-1056E	6PWS-3R	6000W, 115/230/60/1, 1800 RPM, Remote Start, 384#
D-1058E	10PWS-3R	10,000W, 115/230/60/1, 1800 RPM, Remote Start, 547#
D-1061E	1205PWS-3R	12,500W, 115/230/60/1, 1800 RPM, Remote Start, 640#
D-1062E	1205PWS-4R	12,500W, 120/208/60/3, 1800 RPM, Remote Start, 640#

\*Available in Natural Gas or LP fuel only (SPECIFY)

All Engine Driven Generators are drop shipped from factory FOB point of shipment.

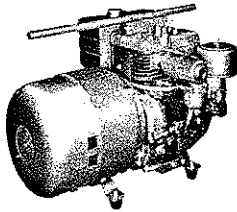
50 Cycle Engine Driven Generator information available upon request.

# 60 CYCLE 1800 RPM — LONG-LIFE GENERATOR SETS



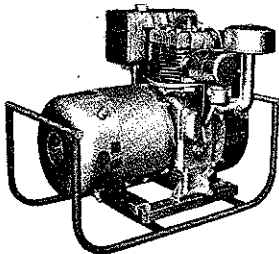
Static excited, no DC brushes or commutators. Overload protection built-in. Equipped with carrying handle. Recoil manual start.

MODEL NO.	WATTS	VOLTS	CYCLES	PHASE	ENGINE		STARTING METHOD	FUEL TANK CAPACITY (Gals.)	DIMENSIONS (INCHES)			APPOX. WT.	
					MAKE	H. P.			L	W	H	NET LBS.	DOM. SHIP
101PBS-1M	1100	115	60	1	B & S	2.2	Recoil	.75	19½	14	15½	71	81
101PBS-2M	1100	230	60	1	B & S	2.2	Recoil	.75	19½	14	15½	71	81



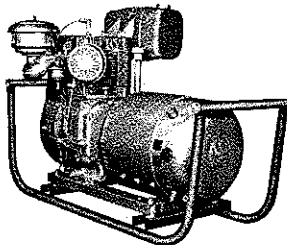
Static excited, no DC brushes or commutators. Overload protection built-in. Recoil manual start. Equipped with carrying handle.

MODEL NO.	WATTS	VOLTS	CYCLES	PHASE	ENGINE		STARTING METHOD	FUEL TANK CAPACITY (Gals.)	DIMENSIONS (INCHES)			APPOX. WT.	
					MAKE	H. P.			L	W	H	NET LBS.	DOM. SHIP
2PBS-1M	2000	115	60	1	B & S	3.4	Recoil	1.0	23	17½	17	113	123
2PBS-2M	2000	230	60	1	B & S	3.4	Recoil	1.0	23	17½	17	113	123



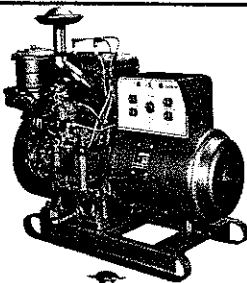
Manual rope start or 12 Volt electric start available. Overload protection built-in. Equipped with carrying cradle. Engine is Briggs & Stratton, cast iron block.

MODEL NO.	WATTS	VOLTS	CYCLES	PHASE	ENGINE		STARTING METHOD	FUEL TANK CAPACITY (Gals.)	DIMENSIONS (INCHES)			APPOX. WT.	
					MAKE	H. P.			L	W	H	NET LBS.	DOM. SHIP
207PBS-1M	2700	115	60	1	B & S	5.3	Rope	1.5	28	20	23	176	191
207PBS-3M	2700	115/230	60	1	B & S	5.3	Rope	1.5	28	20	23	177	192
207PBS-3E	2700	115/230	60	1	B & S	5.3	Electric	1.5	28	20	23	203	218



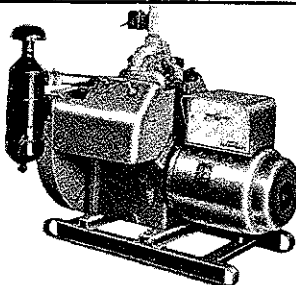
Wisconsin engine powered unit. Available in manual rope start or 12 Volt electric start. Overload protection built-in. Equipped with carrying cradle.

MODEL NO.	WATTS	VOLTS	CYCLES	PHASE	ENGINE		STARTING METHOD	FUEL TANK CAPACITY (Gals.)	DIMENSIONS (INCHES)			APPOX. WT.	
					MAKE	H. P.			L	W	H	NET LBS.	DOM. SHIP
4PWS-3M	4000	115/230	60	1	Wisc.	7.3	Rope	1.5	35	20½	26	289	319
4PWS-3E	4000	115/230	60	1	Wisc.	7.3	Electric	1.5	35	20½	26	296	326
4PWS-3R	4000	115/230	60	1	Wisc.	7.3	Remote	None	35	19½	26	296	326



12 volt electric start, or remote start available. Overload protection built-in. Unit mounted on skid base. Trickle charge circuit included.

MODEL NO.	WATTS	VOLTS	CYCLES	PHASE	ENGINE		METHOD STARTING	FUEL TANK CAPACITY (Gals.)	DIMENSIONS (INCHES)			APPOX. WT.	
					MAKE	H. P.			L	W	H	NET LBS.	DOM. SHIP
6PWS-3E	6000	115/230	60	1	Wisc.	11.7	Electric	3.5	32	22	30	415	454
6PWS-3R	6000	115/230	60	1	Wisc.	11.7	Remote	None	32	17½	30	384	423



12 volt electric start, or remote start available. Overload protection built-in. Unit mounted on skid base. Trickle charge circuit included. 1205PWS-4R and 10PWS-54R are 3 phase 4 wire units.

MODEL NO.	WATTS	VOLTS	CYCLES	PHASE	ENGINE		METHOD STARTING	FUEL TANK CAPACITY (Gals.)	DIMENSIONS (INCHES)			APPOX. WT.	
					MAKE	H. P.			L	W	H	NET LBS.	DOM. SHIP
10PWS-3R	10000	115/230	60	1	Wisc.	19.5	Remote	None	35½	27½	34	547	602
1205PWS-3R	12500	115/230	60	1	Wisc.	22.5	Remote	None	37½	27½	34	640	693
1205PWS-4R	12500	120/208	60	3	Wisc.	22.5	Remote	None	37½	27½	34	640	693



BOX 563 FORT COLLINS, COLO. 80522 (303) 482-7271

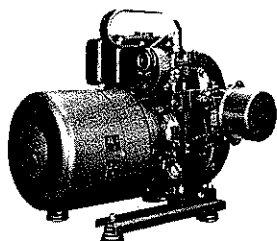
SOLD BY

# ELECTRIC POWER PLANTS

for PORTABLE — STANDBY — MOBILE  
and PRIME ELECTRIC POWER

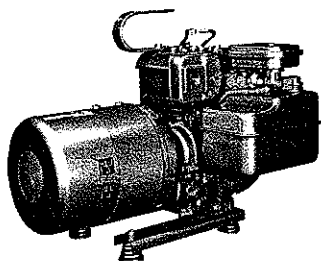
## 60 CYCLE 3600 RPM — GENERATOR SETS

Static excited, no DC brushes or commutator, overload protection built-in. Equipped with carrying handle.



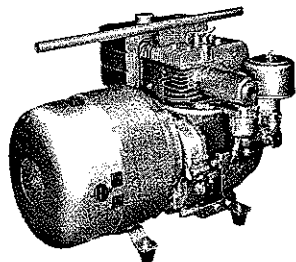
MODEL NO.	WATTS	VOLTS	CYCLES	PHASE	ENGINE		METHOD STARTING	FUEL TANK CAPACITY (Gals.)	DIMENSIONS (INCHES)			APPOX. WT.	
					MAKE	H. P.			L	W	H	NET LBS.	DOM. SHIP
1PTH-1M	1000	115	60	1	Tec.	2.5	Rope	.5	17½	17	15½	60	70
1PTH-2M	1000	230	60	1	Tec.	2.5	Rope	.5	17½	17	15½	60	70
10SPTH-1M	1500	115	60	1	Tec.	3.5	Recoil	.5	17½	17	15½	64	74
10SPTH-2M	1500	230	60	1	Tec.	3.5	Recoil	.5	17½	17	15½	64	74

Static excited, no DC brushes or commutator. Recoil starter. Overload protection built-in. Equipped with carrying handle.



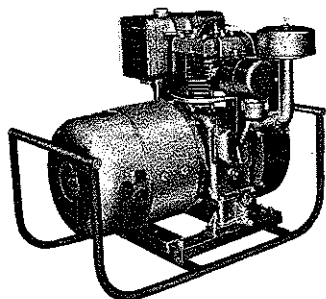
MODEL NO.	WATTS	VOLTS	CYCLES	PHASE	ENGINE		METHOD STARTING	FUEL TANK CAPACITY (Gals.)	DIMENSIONS (INCHES)			APPOX. WT.	
					MAKE	H. P.			L	W	H	NET LBS.	DOM. SHIP
109PBH-1M	1900	115	60	1	B & S	4.0	Recoil	.75	19¾	14	16	79	89
109PBH-2M	1900	230	60	1	B & S	4.0	Recoil	.75	19¾	14	16	79	89
205PBH-1M	2500	115	60	1	B & S	5.0	Recoil	.75	20½	14	16	85	95
205PBH-2M	2500	230	60	1	B & S	5.0	Recoil	.75	20½	14	16	85	95

Available in manual recoil start, 12 volt electric start, or remote start that can also be started by manual rope start if no battery is available. Overload protection built-in. Equipped with carrying handle.



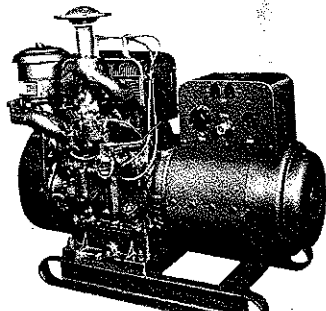
MODEL NO.	WATTS	VOLTS	CYCLES	PHASE	ENGINE		METHOD STARTING	FUEL TANK CAPACITY (Gals.)	DIMENSIONS (INCHES)			APPOX. WT.	
					MAKE	H. P.			L	W	H	NET LBS.	DOM. SHIP
307PBH-3M	3700	115/230	60	1	B & S	7.0	Recoil	1.0	22	17½	17	122	137
307PBH-3E	3700	115/230	60	1	B & S	7.0	Electric	1.0	22	17½	17	124	139

Available in manual rope start, or 12 Volt electric start that can also be started by manual rope start if no battery is available. Overload protection built-in. Equipped with carrying cradle.



MODEL NO.	WATTS	VOLTS	CYCLES	PHASE	ENGINE		STARTING METHOD	FUEL TANK CAPACITY (Gals.)	DIMENSIONS (INCHES)			APPOX. WT.	
					MAKE	H. P.			L	W	H	NET LBS.	DOM. SHIP
503PBH-3M	5300	115/230	60	1	B & S	10.0	Rope	1.0	28	20	23	193	213
503PBH-3E	5300	115/230	60	1	B & S	10.0	Electric	1.0	28	20	23	197	217
703PWH-3E	7300	115/230	60	1	Wisc.	14.1	Electric	1.5	35	20½	26	293	323

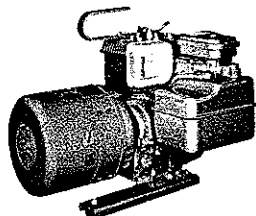
Available in single and 3 phase; 10PWH-5R and 8PWH-55R are 3 wire. Available in electric and remote start that can also be started by hand crank if no battery available. Overload protection built-in. Equipped with skid base.



MODEL NO.	WATTS	VOLTS	CYCLES	PHASE	ENGINE		STARTING METHOD	FUEL TANK CAPACITY (Gals.)	DIMENSIONS (INCHES)			APPOX. WT.	
					MAKE	H. P.			L	W	H	NET LBS.	DOM. SHIP
10PWH-3E	10000	115/230	60	1	Wisc.	16.8	Electric	3.5	33	22	30	485	525
10PWH-3R *	10000	115/230	60	1	Wisc.	16.8	Remote	None	33	17½	30	485	525
10PWH-5R *	10000	230	60	3	Wisc.	16.8	Remote	None	33	17½	30	485	525

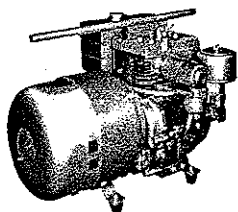
\* LP or Natural Gas Only

# 60 CYCLE 1800 RPM — LONG-LIFE GENERATOR SETS



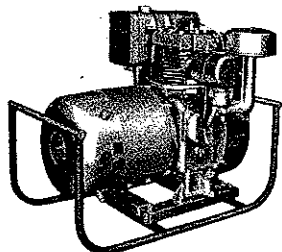
Static excited, no DC brushes or commutators. Overload protection built-in. Equipped with carrying handle. Recoil manual start.

MODEL NO.	WATTS	VOLTS	CYCLES	PHASE	ENGINE		STARTING METHOD	FUEL TANK CAPACITY (Gals.)	DIMENSIONS (INCHES)			APPOX. WT.	
					MAKE	H. P.			L	W	H	NET LBS.	DOM. SHIP
101PBS-1M	1100	115	60	1	B & S	2.2	Recoil	.75	19½	14	15½	71	81
101PBS-2M	1100	230	60	1	B & S	2.2	Recoil	.75	19½	14	15½	71	81



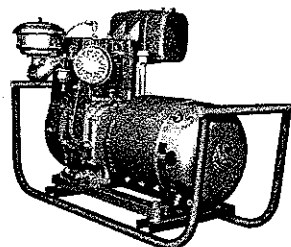
Static excited, no DC brushes or commutators. Overload protection built-in. Recoil manual start. Equipped with carrying handle.

MODEL NO.	WATTS	VOLTS	CYCLES	PHASE	ENGINE		STARTING METHOD	FUEL TANK CAPACITY (Gals.)	DIMENSIONS (INCHES)			APPOX. WT.	
					MAKE	H. P.			L	W	H	NET LBS.	DOM. SHIP
2PBS-1M	2000	115	60	1	B & S	3.4	Recoil	1.0	23	17½	17	113	123
2PBS-2M	2000	230	60	1	B & S	3.4	Recoil	1.0	23	17½	17	113	123



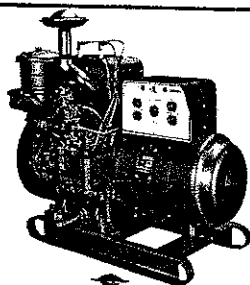
Manual rope start or 12 Volt electric start available. Overload protection built-in. Equipped with carrying cradle. Engine is Briggs & Stratton, cast iron block.

MODEL NO.	WATTS	VOLTS	CYCLES	PHASE	ENGINE		STARTING METHOD	FUEL TANK CAPACITY (Gals.)	DIMENSIONS (INCHES)			APPOX. WT.	
					MAKE	H. P.			L	W	H	NET LBS.	DOM. SHIP
207PBS-1M	2700	115	60	1	B & S	5.3	Rope	1.5	28	20	23	176	191
207PBS-3M	2700	115/230	60	1	B & S	5.3	Rope	1.5	28	20	23	177	192
207PBS-3E	2700	115/230	60	1	B & S	5.3	Electric	1.5	28	20	23	203	218



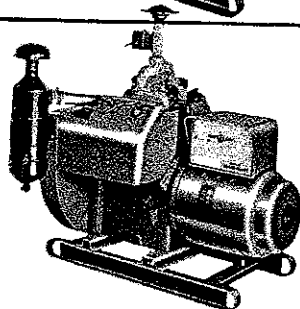
Wisconsin engine powered unit. Available in manual rope start or 12 Volt electric start. Overload protection built-in. Equipped with carrying cradle.

MODEL NO.	WATTS	VOLTS	CYCLES	PHASE	ENGINE		STARTING METHOD	FUEL TANK CAPACITY (Gals.)	DIMENSIONS (INCHES)			APPOX. WT.	
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4PWS-3M	4000	115/230	60	1	Wisc.	7.3	Rope	1.5	35	20½	26	289	319
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4PWS-3R	4000	115/230	60	1	Wisc.	7.3	Remote	None	35	19½	26	296	326



12 volt electric start, or remote start available. Overload protection built-in. Unit mounted on skid base. Trickle charge circuit included.

MODEL NO.	WATTS	VOLTS	CYCLES	PHASE	ENGINE		METHOD STARTING	FUEL TANK CAPACITY (Gals.)	DIMENSIONS (INCHES)			APPOX. WT.	
					MAKE	H. P.			L	W	H	NET LBS.	DOM. SHIP
6PWS-3E	6000	115/230	60	1	Wisc.	11.7	Electric	3.5	32	22	30	415	454
6PWS-3R	6000	115/230	60	1	Wisc.	11.7	Remote	None	32	17½	30	384	423



12 volt electric start, or remote start available. Overload protection built-in. Unit mounted on skid base. Trickle charge circuit included. 1205PWS-4R and 10PWS-54R are 3 phase 4 wire units.

MODEL NO.	WATTS	VOLTS	CYCLES	PHASE	ENGINE		METHOD STARTING	FUEL TANK CAPACITY (Gals.)	DIMENSIONS (INCHES)			APPOX. WT.	
					MAKE	H. P.			L	W	H	NET LBS.	DOM. SHIP
10PWS-3R	10000	115/230	60	1	Wisc.	19.5	Remote	None	35½	27½	34	547	602
1205PWS-3R	12500	115/230	60	1	Wisc.	22.5	Remote	None	37½	27½	34	640	693
1205PWS-4R	12500	120/206	60	3	Wisc.	22.5	Remote	None	37½	27½	34	640	693

**Forney**  
INDUSTRIES, INC.  
BOX 563 FORT COLLINS, COLO. 80522 (303) 482-7271

SOLD BY

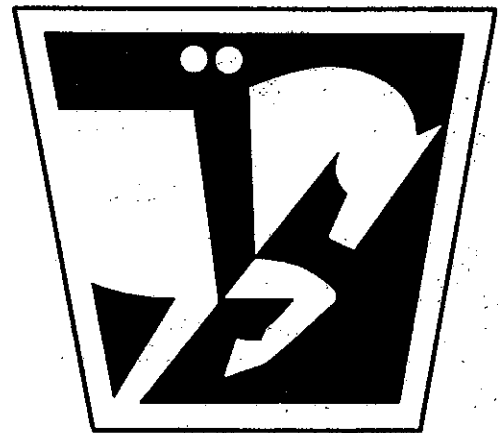
PS-25 - 75AMP  
PS-18-WH  
3Ph. 115/230-45AMP.

# STARTING and OPERATING INSTRUCTIONS

ISSUE MM-342

# W I S C O N S I N

## *Air-Cooled* Engines



### Two Cylinder - Four Cycle

## MODELS THD and TJD

 **TELEDYNE WISCONSIN MOTOR**

WORLD'S FOREMOST SOURCE FOR HEAVY DUTY AIR COOLED ENGINES

# NEW ENGINE Instructions

READ THOROUGHLY BEFORE STARTING ENGINE; also SAFETY PRECAUTIONS on back cover.

## LUBRICATION

Operating without oil will ruin engine.

### IMPORTANT

There is **NO OIL** in this unit.  
Fill crankcase to proper oil level, also clutch or gear box if either accessory is furnished.

Refer to *GRADE OF OIL* chart and fill with proper oil *before* starting engine.

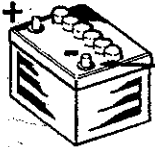
- **AIR CLEANER** Must be cleaned regularly – very frequently in dusty and dry grass conditions.  
*Damage will result from operating with dirty air cleaner.*

*Oil bath type* – Add same grade oil as used in crankcase to the level line indicated on cleaner bowl. Maintain oil level or dirt will be drawn in and damage engine.

*Dry element type, optional equipment* – **DO NOT OIL** – Follow instructions on cleaner body.

- **FUEL** Use '**REGULAR**' grade gasoline. Engines built to operate on **FUEL OIL, KEROSENE, L.P.G.** or **NATURAL GAS** are so identified in the model designation. Refer to '**FUEL**' paragraphs of instructions. Buy fresh fuel. Do not use *out-of-season* gasoline.

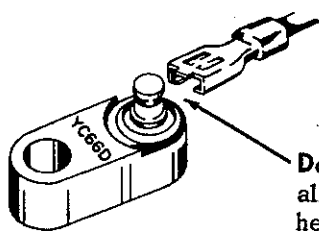
- **NEGATIVE GROUND CIRCUIT**, if engine is equipped with **STARTING MOTOR, DISTRIBUTOR IGNITION** and **FLYWHEEL ALTERNATOR**.



**GROUND ENGINE TO NEGATIVE TERMINAL ON BATTERY.**

*CAUTION:* Be absolutely sure of proper connection or damage to coil, points and regulator will result.

- **PREVENT OVERHEATING**



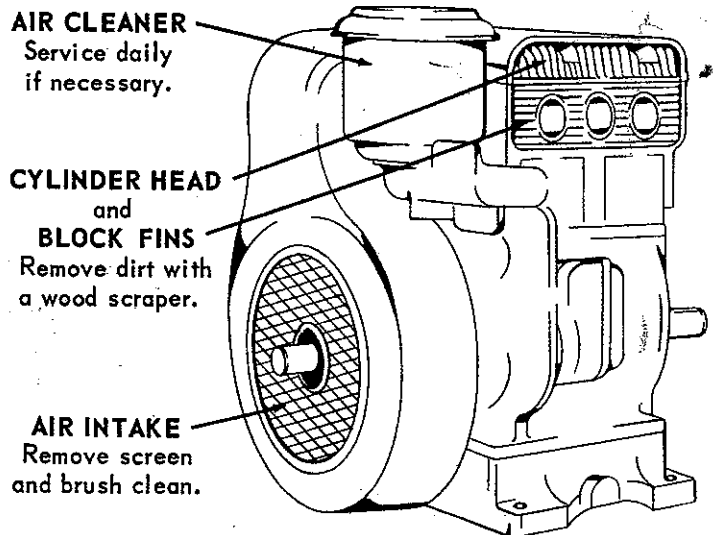
### Temperature Safety Switch

Do not disconnect wire or allow terminal to touch head fins or shrouding.

Optional accessory mounted to cylinder head bolt near spark plug – **TO PROTECT ENGINE AGAINST OVERHEATING**. If engine stops, check first to see if engine is overheated. Other conditions may have caused the engine to stop. Clean air cleaner, air intake screen, fins, and check oil level, spark plugs and wiring. Let engine cool at least **10 minutes** before re-starting.

### Keep Engine Clean

External dirt restricts cooling and internal dirt causes wear.



- **NEW ENGINE BREAK-IN**

Proper *break-in* will lead to trouble-free operation and increased engine life. The factory test given to a new engine is not sufficient to establish the polished bearing surfaces which are so necessary for good performance and long engine life. There is no quick way to force the establishment of good bearing surfaces, and these can only be obtained by running a new engine carefully and under re-

duced speeds and loads for a short period of time. Run the engine for a half hour without load at idle speed (1000 to 1200 R.P.M.). The speed should then be increased gradually, to engine operating r.p.m. still without load, for an additional two hours. If at all possible, operate the engine at light loads for a period totaling about eight hours, before maximum load is applied.

# Models THD and TJD

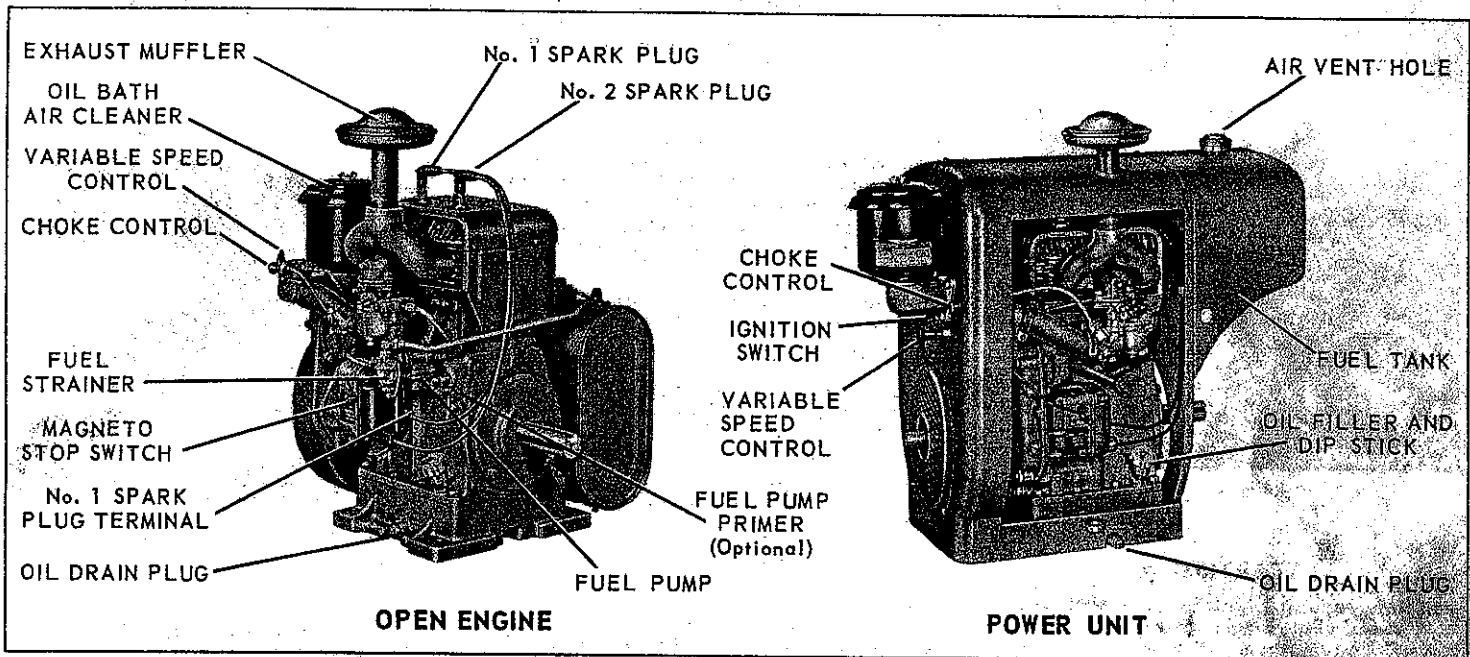


Fig. 1, REFERENCE VIEWS

## GENERAL INFORMATION

These engines are of the four cycle type, in which each of the four operations of suction, compression, expansion and exhaust constitutes a complete stroke. This gives one power stroke per cylinder for each two revolutions of the crankshaft.

## COOLING

Cooling is accomplished by a flow of air circulated over the cylinders and heads of the engine from a combination fan-flywheel encased in a sheet metal shroud. The air is divided and directed by ducts and baffle plates to insure uniform cooling of all parts.

**NEVER OPERATE AN ENGINE WITH ANY PART OF THE SHROUding REMOVED** — this will retard air cooling.

Keep the air intake screen, and the cylinder and head fins free from dirt and chaff. Improper circulation of cooling air will cause engine to overheat.

## IGNITION

The spark for ignition of the fuel mixture is furnished by a high tension magneto driven by the timing gears at crankshaft speed. The magneto is fitted with an impulse coupling that produces a strong spark for easy starting. Also, the impulse coupling automatically retards the timing of the spark during cranking, thus eliminating the danger of a kick back while cranking.

Battery ignition (12 volt) distributor, is furnished in place of magneto on engines equipped with flywheel alternator, or as optional ignition.

## ROTATION

The rotation of the crankshaft is clockwise when viewing the flywheel or starting end of the engine. This gives counter-clockwise rotation when viewing the power take-off end of the crankshaft.

## BEFORE STARTING ENGINE

1. Fill tank with Regular grade gasoline.

**OIL BURNING** engine has letter 'O' suffixed to model designation — use 35 minimum octane fuel oil.

**L.P.G. BURNING** engine has letter 'G' added to model designation — use propane HD5.

**NATURAL GAS** burning engines require a B.T.U. content of at least 1000.

2. Fill crankcase base with the proper grade of engine oil as specified in "GRADE OF OIL CHART". The capacity is 3-1/2 quarts, indicated by a FULL mark on the dip stick. The combination OIL FILLER and DIP STICK is mounted on the carburetor side of engine, Fig. 1, but can be located on the starting motor side as an option.

For run-in of new engines, use same oil as recommended in GRADE OF OIL CHART.

Check crankcase oil level every 8 hours, change oil every 50 hours of operation.

## GRADE OF OIL

SEASON OR TEMPERATURE	GRADE OF OIL
Spring, Summer or Autumn + 120°F to + 40°F	SAE 30
Winter + 40°F to + 15°F + 15°F to 0°F Below Zero	SAE 20-20W SAE 10W SAE 5W-20
Use oils classified as Service MS or SD	
Crankcase Capacity	3½ Quarts

3. Fill clutch and gear reduction units to the height of the oil level plug opening.

Use same grade oil as used in engine crankcase.

With reference to Fig's. 2 and 3, all units are furnished with an oil filler opening, level and drain plugs, suitable for the various take-off shaft positions.

Change oil at least every 500 hours of operation.

Add sufficient oil between changes to keep oil up to the level plug opening.

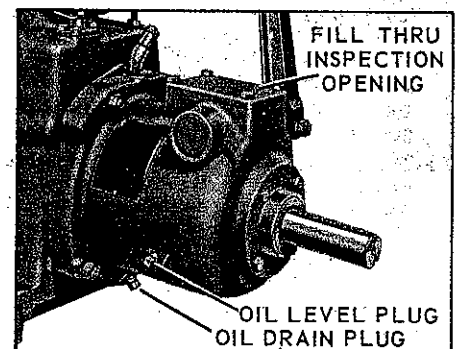


Fig. 2

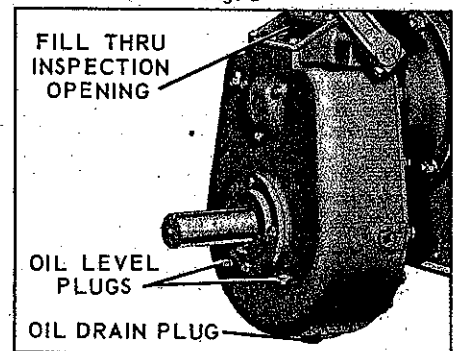


Fig. 3

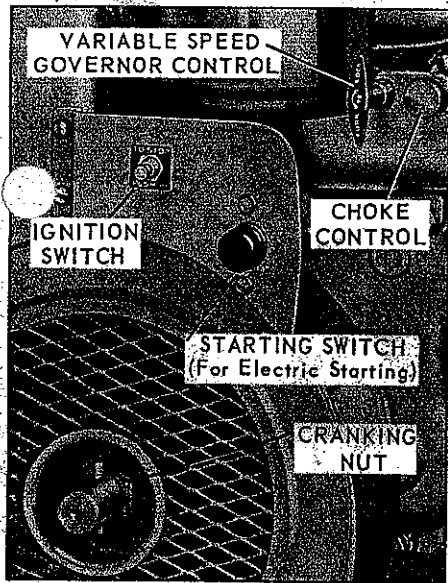


Fig. 4

### STARTING

With reference to Fig. 1: Engines enclosed in a sheet metal house are referred to as Power Units, whereas those without a house are called Open Engines.

Power Unit side doors should always be removed when operating.

#### STARTING PROCEDURE (Fig. 4)

1. Check crankcase oil level and gasoline supply. Open shut-off valve in fuel strainer.

**OIL BURNING** engines must be started on gasoline and run for 2 or 3 minutes before switching to oil. Special instructions are available for starting L.P.G. and NATURAL GAS burning engines.

2. Disengage clutch, if furnished.

3. Prime new engine - if necessary. Hand primer lever at fuel pump (available option), should be worked up and down until strainer bowl is full - then an additional 5 or 10 strokes to fill carburetor bowl. If primer does not function - turn crankshaft one complete revolution.

Gravity feed (power units), and electric start engines do not require priming.

4. Set throttle about 1/2 open if variable speed governor control is furnished. With a two speed control, start in full load position - idle when engine starts.

5. Pull out ignition switch, if applicable (tag reads "TO STOP PUSH IN").

Magneto ignition engines (less ignition switch), have a lever type ground switch which is always in the ON or running position, except when depressed for stopping.

6. Close choke by pulling choke button to extreme out position.

7. Turn engine over slowly one or two revolutions. **CAUTION:** Be sure that crank does not bind - apply oil to the crank jaw and crank nut extension for ease of engagement and release.

Push choke control button in about halfway and then pull up rapidly on the starting crank. Do not attempt to spin the engine with the starting crank. If engine does not start on the first pull up of the crank, re-engage the crank and repeat the operation.

With electric starting motor; depress starter switch in place of hand cranking.

8. After engine starts, push choke button in as required for smooth running. Choke should be completely open (button in), when engine is warmed up.

Less choking is necessary in warm weather or when engine is warm, than when cold. Should flooding occur, open choke fully and continue cranking.

If all conditions are right, engine will start promptly in one or two attempts. After engine starts, allow it to warm up a few minutes before applying load. Do not race or gun engine to hurry WARM-UP, as the proper oil film on various surfaces of the pistons, cylinders, bearings, etc., cannot be established until the oil has warmed up and become sufficiently fluid.

Break-in new engine per instructions on the inside front cover of this manual.

#### TO STOP ENGINE

Magneto ignition (open engines) have a lever type ground switch on the side of the magneto. **DEPRESS AND HOLD DOWN UNTIL ENGINE STOPS.** See Fig. 1.

Power units and battery ignition, Fig. 4, are furnished with an ignition switch, "TO STOP PUSH IN".

If engine has been running hard and is hot, do not stop it abruptly from full load. Remove the load and allow the engine to run idle (1000 to 1200 R.P.M.), for 3 to 5 minutes. Air circulation from the flywheel will reduce the temperature of the engine much faster and minimize valve warping.

### MAINTENANCE

#### AIR CLEANER - OIL BATH TYPE, Fig. 5

Once each week; the filtering element should be thoroughly washed in a solvent. Remove oil and clean out air cleaner bowl. Add fresh oil to the level line indicated on the bowl, using the same grade oil as is used in the crankcase.

**SERVICE DAILY**, if engine is operating in very dusty conditions. Detailed instructions are printed on the air cleaner.

Operating the engine under dusty conditions without oil in the air cleaner or with dirty oil, may wear out cylinder, piston, rings and bearings in a few days time, and result in costly repairs.

#### AIR CLEANER - DRY TYPE, Fig. 6

**Service daily**; squeeze rubber dust unloader once or twice a day to check for possible obstruction. If engine is operating in very dusty conditions, remove cartridge and shake out the accumulated dirt (do not tap or strike element - it may become damaged). Wipe out dirt from inside cover and bowl.

**ONCE EACH WEEK**; the filtering cartridge should be taken out and rinsed under a faucet with cold water, then wash by repeated dippings for several minutes in a solution of lukewarm water and a mild, **NON-SUDSING** detergent. Rinse in cold water from the inside out, and allow to dry overnight before re-installing. In cold weather, protect element from freezing until dry.

**DO NOT USE GASOLINE, KEROSENE OR SOLVENT - DO NOT OIL ELEMENT.**

After ten washings or one year of service, replace cartridge. New cartridges are available at your **TELEDYNE WISCONSIN MOTOR** dealer.

Excessive smoke or loss of power are good indications that the element requires cleaning.

#### CRANKCASE BREATHER, Fig. 5

Model THD engines have a check valve

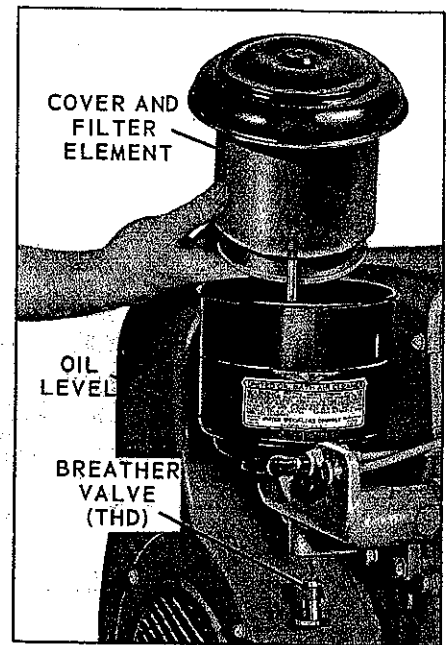


Fig. 5, OIL BATH AIR CLEANER

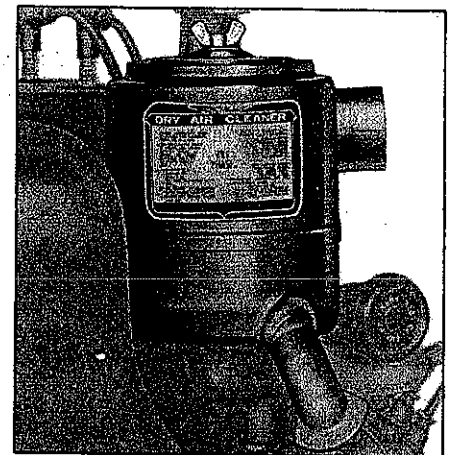


Fig. 6, DRY TYPE AIR CLEANER

breather mounted to the bottom of the air cleaner bracket and channeled thru the gear cover to the crankcase. The breather valve, removed as illustrated in Fig. 5, should be kept free of dirt by periodic cleaning.

**MODEL TJD:** The characteristics of this engine are such that a ball check valve is not required in the breather system.

A restricted or plugged breather system is indicated when oil seeps from gasket surfaces, oil seals, screws and studs.

#### FUEL FILTER, Fig. 7

It is very important that the fuel be filtered to prevent sediment, dirt and water from entering the carburetor and causing trouble or even complete stoppage of the engine. The glass filter bowl should be inspected frequently, and cleaned if dirt or water are present.

To remove sediment bowl, loosen nut below bowl, swing bail to one side and twist bowl as it is being removed. Clean screen and bowl thoroughly - replace gasket if it is damaged or hardened.

#### SPARK PLUG, Fig. 8

Incorrect gap, fouled or worn spark plug electrodes, will have an adverse affect on engine operation. Remove spark plugs periodically - clean, regap or replace if necessary.



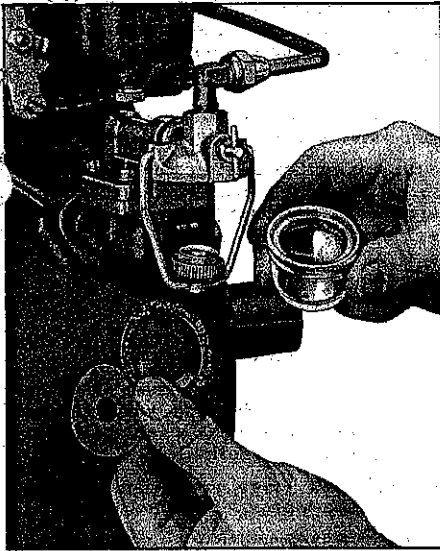


Fig. 7

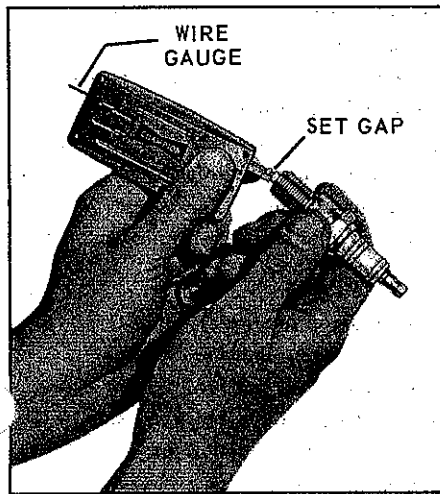


Fig. 8

Spark plug gap - 0.030 of an inch.

Use a new spark plug at the beginning of a new season. Replacement plug must be of the correct heat range, like Champion No. D-16J, AC No. C86 commercial or equal. Thread size is 18mm.

Use a new gasket when mounting either old or new plug and thoroughly clean threads in cylinder head. Tighten spark plug 24 to 26 FOOT POUNDS TORQUE. If torque wrench is not available, tighten plug until it begins to seat on the gasket, then turn 1/2 to 3/4 of a turn more.

#### DISTRIBUTOR

If engine is equipped with battery ignition distributor:

Every 50 hours of operation; add 3 to 5 drops of medium engine oil to the oiler on side of distributor base.

Every 100 hours, apply 3 to 5 drops of light engine oil (10W), to the felt in the top of the cam sleeve, and 1 or 2 drops to the breaker arm pivot.

Every 200 hours, add a small amount of high melting point grease to the breaker arm rubbing block.

Avoid excessive lubrication. Oil on the contact points will cause them to burn.

### ADJUSTMENTS

#### CARBURETOR

The carburetor MAIN METERING JET is

of the fixed type and therefore no adjustment is necessary.

The correct amount of throttle plate opening for the proper low speed is obtained by means of the THROTTLE STOP SCREW. However, this is set at the factory so that no further adjustment is necessary. The IDLE ADJUSTMENT is for smooth low speed operation and this adjustment, if necessary, must be made with the carburetor throttle lever closed. Initial setting is approximately 1 1/2 turns.

#### MAGNETO BREAKER POINTS, Fig. 9

At least once each season or when ignition spark becomes weak, remove magneto end cover, inspect points and check gap opening. If there is evidence of pitting or pyramiding and it becomes necessary to resurface or replace points, it will be necessary to readjust gap to its proper clearance. The BREAKER POINT GAP should be:

0.015 inch at full separation.

Remove rotor and turn engine crankshaft over until breaker points are at their maximum opening. Loosen the two lockscrews on breaker plate just enough so that plate can be moved. Place a 0.015 inch feeler gauge between points. Insert end of small screw driver into adjusting slot at bottom of breaker plate and open or close the contacts by moving plate until proper point gap is obtained. After tightening lockscrews, recheck breaker point gap.

Place rotor on shaft before mounting end cover. NOTE: Rotor is so constructed that it can only be put on in the correct position relative to timing.

Before placing end cover on frame, clean contact surfaces. Coat with gasket cement and mount new gasket. Assemble cover and securely tighten screws.

Mount spark plug wires correctly. The No. 1 terminal on magneto end cap is toward the engine. See Fig. 1.

#### DISTRIBUTOR (Battery Ignition)

The breaker point gap should be:

0.020 inch at full separation.

To readjust point gap, turn engine over by means of the hand crank until the distributor breaker arm rubbing block is on a high point of the cam. Loosen the stationary contact locknut and screw fixed contact in or out until correct gap is obtained. Tighten locknut and recheck gap.

#### TIMING

The running spark advance is 20° for both Magneto and Distributor ignition. Use a suitable Timing Light and run the engine at 2000 r.p.m. minimum. The leading edge of the 'X' marked flywheel vane should align with the 1/8" dia. hole on the front of the flywheel shroud, 1-7/8" to the left of the vertical centerline mark. For detailed information on timing, refer to the engine Instruction and Parts Manual.

#### CLUTCH, Fig. 10

If the clutch begins to slip, it should be readjusted to prevent it from becoming overheated and damaged. First, remove inspection plate to expose the adjusting ring. Release clutch by pushing shifter lever forward (toward engine).

Turn engine over by means of the starting crank until clutch adjustment lock is visible thru the inspection opening. Loosen adjustment lock screw, thru pipe plug hole behind inspection opening, one full turn. Keep clutch from turning by securing the crankshaft at cranking end. Then, by means of a screw driver, turn adjusting ring one notch at a time in a clockwise

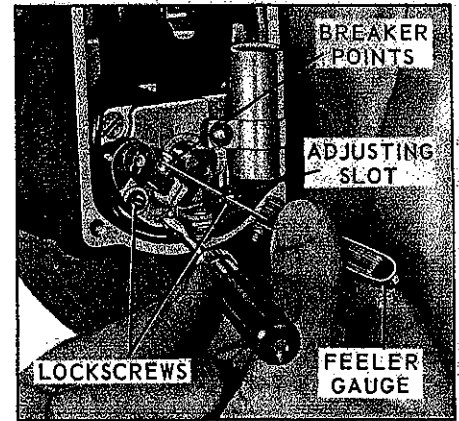


Fig. 9

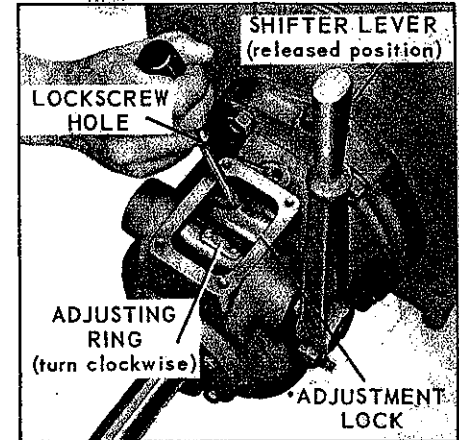


Fig. 10, CLUTCH ADJUSTMENT

direction, until a very firm pressure is felt when engaging the clutch with shifter lever, as the clutch snaps into engaged position. Securely tighten adjustment lock screw.

#### CLUTCH REDUCTION UNITS, Fig. 11

The clutch in the clutch reduction unit is the same as used in the power take-off unit and is adjusted thru two pipe tap openings; one for the adjustment lock screw and the other for turning the adjusting ring. If one of the taps is inaccessible, adjustment can be made thru just one opening by rotating clutch slightly after adjustment lock screw is loosened.

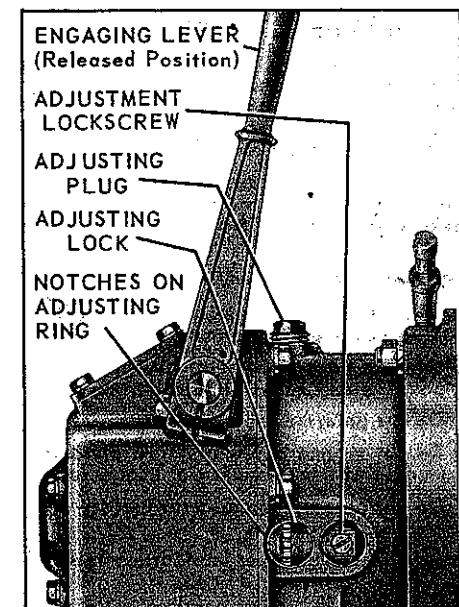


Fig. 11, CLUTCH RED. ADJUSTMENT

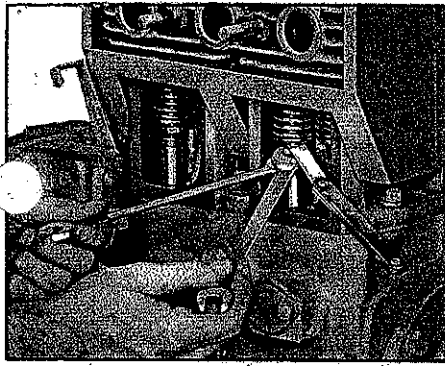


Fig. 12, VALVE TAPPET ADJUSTMENT

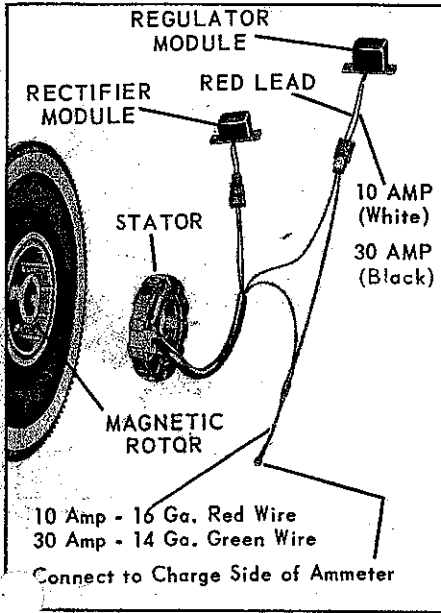


Fig. 13

### VALVE TAPPETS, Fig. 12

With the tappets in their lowest position (valves completely closed) and engine cold, the clearance between valve stem and tappet adjusting screw should be:

Inlet - .008" Exhaust - .016"

Adjust as shown by means of two 1/2 inch tappet wrenches.

### FLYWHEEL ALTERNATOR

12 Volt - 10 Amp or 30 Amp Flywheel Alternator, consisting of a flywheel with Magnetic Rotor, Stator and Rectifier-Regulator modules, Fig. 13 and Fig. 14 - furnished when specified.

The flywheel alternator is of the permanent magnet type and has no brushes, commutator or belts and requires no adjustments.

### PRECAUTIONS

1. Do not reverse battery connections. This is a negative ground system only.
2. Connect booster batteries - positive to positive and negative to negative.
3. Do not polarize the alternator.
4. Do not ground any wires from stator or module which terminate at connector.
5. Do not operate engine with battery disconnected from system.
6. Disconnect at least one battery lead if a battery charger is used.
7. Never use a fast battery charger to boost battery output.

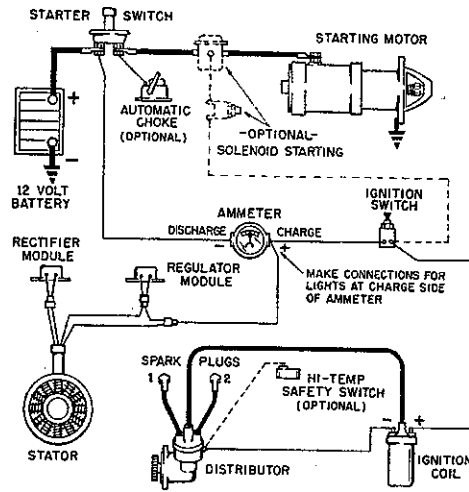


Fig. 14, WIRING DIAGRAM  
Battery Ignition with Flywheel Alternator

## TROUBLE SHOOTING

The three prime requisites essential to starting and maintaining satisfactory operation of gasoline engines are:

1. A proper fuel mixture in the cylinder.
2. Good compression in the cylinder.
3. Good spark, properly timed, to ignite the mixture.

If all three of these conditions do not exist the engine cannot be started.

As a guide to locating some of the difficulties which might arise, the following causes are listed under the three headings: Fuel Mixture, Compression, and Ignition. If it appears that the troubles are mechanical and replacement parts are required, contact your nearest 'Wisconsin' authorized service center. Factory trained mechanics will save you time and money, by repairing your engine in the shortest way possible.

### FUEL MIXTURE

No fuel in tank or fuel valve closed.

Plugged vent hole in fuel tank cap.

Fuel line clogged.

Carburetor not choked sufficiently, especially if engine is cold.

Water, dirt, or gum in gasoline interfering with free flow of fuel to carburetor.

Poor grade, stale or out-of-season gasoline.

Carburetor flooded, caused by too much choking especially if engine is hot.

Dirt or gum holding float needle valve in carburetor open. This condition would be indicated if fuel continues to drip from carburetor with engine standing idle.

Excessive flooding will require the spark plugs be removed, dried off, and the engine turned over several times, with the choke open, to blow excess fuel out through the plug holes.

- Carburetor out of adjustment. Restricted (dirty) air cleaner.

### COMPRESSION

Cylinders dry due to engine having been out of use. Pour one fluid ounce of crankcase oil through spark plug holes.

Loose or broken spark plug. A hissing noise will be heard in cranking due to escaping gas mixture on compression stroke.

Damaged cylinder head gasket or loose cylinder head. This will likewise cause hissing noise on compression stroke.

Valve stuck open.

Valves adjusted with insufficient clearance under valve stems.

Piston rings stuck due to carbon accumulation. If rings are stuck very tight, remove piston and connecting rod assembly and clean parts.

### IGNITION

Test for spark by removing sparkplugs and observe spark at plug gap while turning engine over. No spark or weak spark may be attributed to the following:

Ignition wires loose or disconnected at magneto, spark plug, distributor or coil.

Broken or frayed ignition wires.

Spark plug insulator broken.

Spark plug wet or dirty.

Spark plug point gap incorrect.

Condensation on spark plug electrodes.

Breaker points pitted or fused.

Breaker arm sticking.

Condenser leaking or grounded.

Spark timing wrong.

Weak battery. Faulty ignition coil.

### ENGINE MISSES

Spark plug gap incorrect.

Worn and leaking ignition cables.

Weak spark. See 'Ignition' test for spark.

Loose connections at ignition cable.

Breaker points pitted or worn.

Water in gasoline.

Poor compression. See 'Compression'.

Sticky valves.

### ENGINE SURGES OR GALLOPS

Carburetor flooded.

Governor spring hooked into wrong hole in lever.

Governor rod incorrectly adjusted.

### ENGINE STOPS

Fuel tank empty.

Water, dirt or gum in gasoline.

Gasoline vaporized in fuel lines, due to excessive heat around engine (Vapor Lock). See 'Stopping Engine'.

Vapor lock in fuel lines or carburetor due to using winter gas (too volatile) in hot weather.

Air vent hole in fuel tank cap plugged. Engine scored or stuck due to lack of oil.

Ignition troubles. See 'Ignition'.

### OVERHEATING

Crankcase oil supply low.

Ignition timing wrong.

Low grade of gasoline.

Engine overloaded.

Restricted cooling air circulation.

Part of air shroud removed from engine.

Dirt between cooling fins of cylinder block and head.

Air intake screen clogged with dirt.

# FLYWHEEL ALTERNATOR



## with solid state regulation

12 Volt - 10 amp and 25 amp Systems For  
WISCONSIN Single, Two and Four Cylinder Engine Models

### DESCRIPTION of Change

Beginning with engine serial No. 5188288, a new *two module* flywheel alternator system replaces the previously furnished three module system, that included an isolation diode module, and the two unit system without the isolation diode.

The *isolation diode* module was incorporated into the old system to eliminate battery discharge problems during shut down, cranking and idling.

### INTERCHANGEABILITY

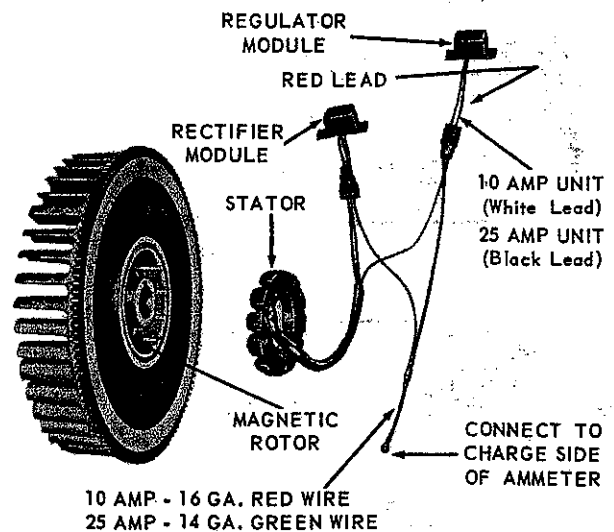
The *Regulator module* was not changed and is completely interchangeable between the new and old systems. The *Rectifier module* and *Stator assembly* have been modified to incorporate the advantages of an isolation diode without adding a third module. These new parts are *not* interchangeable with the old unless both rectifier and stator are replaced simultaneously. The new system has a *three prong* plug connector between the rectifier and stator - the old system has a two prong connector.

### DESCRIPTION and OPERATION

This flywheel alternator is of the permanent magnet type and has *no brushes, commutator, belts or adjustments*. A series of coils (stator) is mounted to the engine gear cover, and the magnetic flux is provided by a permanent magnet in the flywheel which rotates around these stationary coils. Only four components make up this light weight space saving system; a *flywheel* with magnetic rotor, *stator*, *rectifier* module and *regulator* module.

The *center-tap* rectifier arrangement prevents damage to the alternator system when arc welding, because the winding acts as a choke and its inductance prevents the transient voltage from damaging the diodes.

Since the physical appearance of both 10 amp and 25 amp alternator systems are very similar, the *25 amp unit* can be distinguished from the *10 amp* unit by the



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ammeter calibrations, and by a *14 gage green wire* in place of a *16 gage red wire*, from the ammeter to the stator-regulator connector. Also, by the contrasting colors of the two lead wires emanating from the regulator module. The *10 amp* regulator has *white* and *red* leads, the *25 amp* regulator *black* and *red* leads.

**PRECAUTIONS** to be exercised in the use of this flywheel alternator:

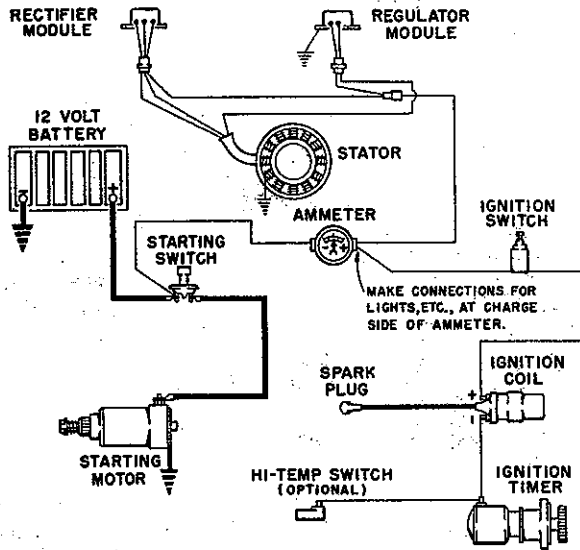
1. **Do Not** reverse battery connections. This is for a *negative ground* system only.
2. Connect booster batteries properly - positive to positive and negative to negative.
3. **Do Not** polarize the alternator.
4. **Do Not** ground any wires from stator or modules which terminate at connectors.
5. **Do Not** operate engine with battery disconnected from system.
6. Disconnect at least one battery lead if a battery charger is used.

 **TELEDYNE WISCONSIN MOTOR** MILWAUKEE, WISCONSIN 53246

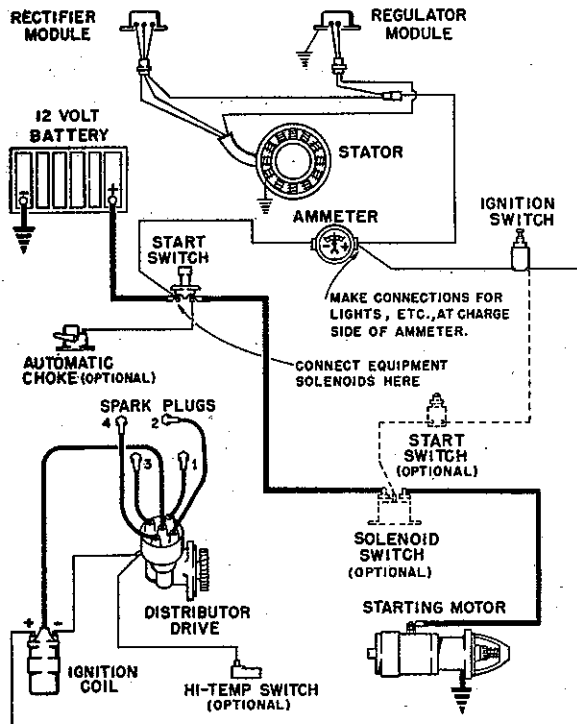
## WIRING CIRCUIT

The fool-proof type connectors used prevent incorrect wiring from the stator to the rectifier and regulator modules. To disconnect plugs, squeeze outer ends of receptacle and pull apart.

The rectifier is insulated from ground, but the stator and regulator module are grounded to the engine thru their mounting surface. The regulator module therefore should not be removed and mounted at some remote location. This is a negative ground circuit. Connect ground strap from negative post of battery to starting motor flange, or good clean grounding surface on engine.



WIRING DIAGRAM  
For Single Cylinder Models



WIRING DIAGRAM  
For Two and Four Cylinder Models

## SERVICE PROCEDURE:

Prior to electrical testing, a thorough visual inspection should be made to eliminate conditions that may be interpreted as a defected alternator. Examine leads for broken or loose connections, and make sure modules are securely mounted. The regulator module must be mounted to a metal surface for grounding purposes, while the rectifier module, although insulated from ground, should be securely mounted for heat dissipation. The mounting surfaces must be clean and free of contaminants, oil, grease, etc. When assured that the problem is with the alternator, follow the tests outlined in 'Trouble Shooting'.

## TROUBLE SHOOTING

### 10 and 25 amp Flywheel Alternator

Problem: Battery Overcharge	Possible Cause & Remedy
Test 1.0 With engine running at full RPM, check battery voltage w/ DC Voltmeter.	
1.1 If voltage is over 15.0	1.1 Regulator not functioning properly. Replace module.
1.2 If voltage is under 15	1.2 Alternator functioning properly. Check battery condition.

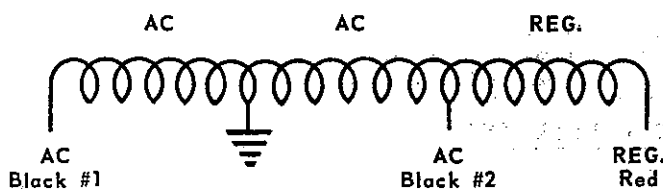
Problem: Low/No Charge	Possible Cause & Remedy
Test 1.0 With engine running at full RPM, check battery voltage w/ DC meter. If voltage is greater than 14 volts, place * load on battery to reduce voltage below 14 volts.	
1.1 If the charge rate increases -	1.1 Alternator functioning properly. Battery was fully charged.
1.2 If the charge rate does not increase--	1.2 Proceed with Test 2.0.
* Place as many 12 volt light bulbs across battery as required to reduce voltage below 14 volts. A carbon pile resistor may be used in place of bulbs.	

Problem: Low/No Charge	Possible Cause & Remedy
<p>Test 2.0 Conditions and procedure the same as Test 1.0 except the regulator module is disconnected.</p> <p>2.1 If the charge rate increases —</p> <p>2.2 If the charge rate does not increase—</p> <p>Test 3.0 Test conditions and procedure the same as 1.0 except with new rectifier module plugged in.</p> <p>3.1 If the charge rate increases —</p> <p>3.2 If the charge rate does not increase—</p> <p>Test 4.0 With engine stopped, unplug all connectors between modules and stator. Start engine and run at 2400 RPM. With AC voltmeter check voltage between each of the black stator leads and ground.</p> <p>4.1 If one of the two voltages is zero or they are over 10% apart —</p>	<p>2.1 Regulator was at fault. Replace regulator module.</p> <p>2.2 Regulator is not at fault. Continue with Test 3.0.</p> <p>3.1 Rectifier module at fault. Permanently install new rectifier module.</p> <p>3.2 Continue with Test 4.0.</p> <p>4.1 The stator is faulty and should be replaced.</p>

Further testing can be done on the component level with the engine stopped, and the stator and module connections including output lead uncoupled.

### TO CHECK STATOR

Use an ohmmeter and check continuity as follows:



**NOTE:** Wire numbers indicated for probe connections are for convenience only and are not indicated on the connectors.

### For 10 amp unit STATOR

METER PROBE CONNECTIONS	METER VALUE	REPLACE STATOR	
			+
Black #1 to Black #2	APPROX.	0 Indicates Short Circuit. ∞ Indicates Open Circuit.	
Black #1 to Eng. Gnd.			2.0 ohms
Black #2 to Eng. Gnd.			1.0 ohm
Black #1 to Red			1.0 ohm
Black #2 to Red			3.0 ohms
		1.0 ohm	

### For 25 amp unit STATOR

METER PROBE CONNECTIONS	METER VALUE	REPLACE STATOR	
			+
Black #1 to Black #2	APPROX.	∞ Indicates Open Circuit.	
Black #1 to Eng. Gnd.			0.40 ohm
Black #2 to Eng. Gnd.			0.20 ohm
Black #1 to Red			0.20 ohm
Black #2 to Red			3.20 ohms
		2.80 ohms	

### STATOR IDENTIFICATION:

10 amp — 3/8" wide flange      25 amp — 5/8" wide flange

### TO CHECK RECTIFIER MODULE, Part No. YJ-68

The same module is used for both the 10 amp and 25 amp systems. It can be distinguished from the regulator by the three lead wires instead of two and the identification decal. Use an ohmmeter and static check continuity as follows:

METER PROBE CONNECTIONS	METER INDICATION
White lead to Black #1	No Continuity
Black #1 to White lead	Continuity
White lead to Black #2	No Continuity
Black #2 to White lead	Continuity

**Note:** Continuity shall be in one direction only. If readings are not as indicated, replace module.

### TO CHECK REGULATOR MODULE

Part No. YJ-59 for 10 amp system, YJ-60 for 25 amp.

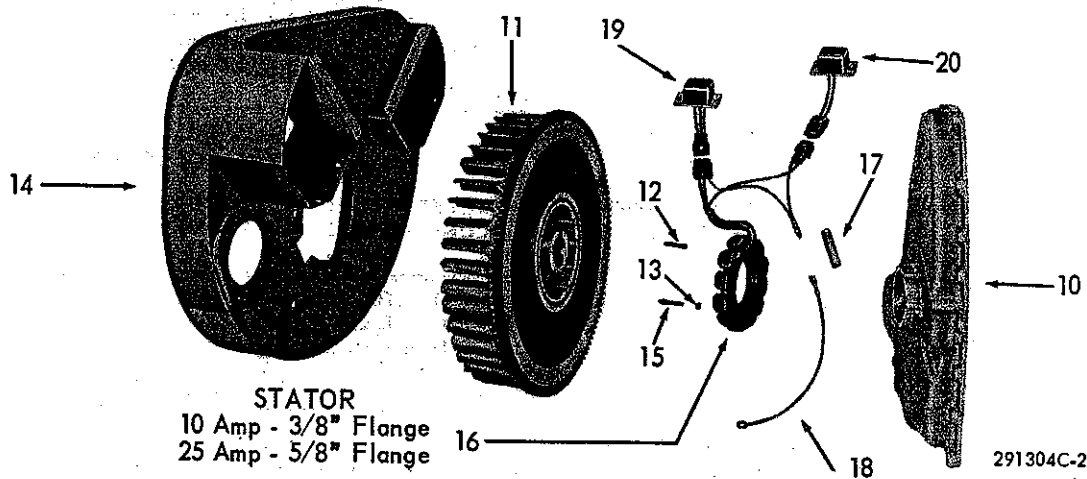
The regulator module can be distinguished from the rectifier module by the number and color of lead wires, and identification decal. The 10 amp unit has a WHITE WIRE and a RED WIRE leading to the socket connector, whereas the 25 amp regulator has BLACK and RED lead wires. Use an ohmmeter and static check continuity as follows:

METER PROBE CONNECTIONS	METER INDICATION		REPLACE MODULE	
	10 amp	25 amp		
Red to Eng. Gnd.	X	X	No Continuity	Continuity
Eng. Gnd. to Red	X	X		
Red to White	X	X	Continuity	No Continuity
White to Red	X	X		
White to Eng. Gnd.	X	X		
Eng. Gnd. to White	X		No Continuity	Continuity
Red to Black	X	X		
Black to Red	X	X	Continuity	No Continuity
Black to Eng. Gnd.	X	X		
Eng. Gnd. to Black	X	X		

# FLYWHEEL ALTERNATOR 12 VOLT - 10 AMP and 25 AMP Systems

For Engines beginning with Serial Number 5188288

**SERVICE PARTS LIST:** The following items are in addition to, or replace similar parts found in the parts manual of each specific engine model. The parts illustration is for the VG4D engine, but can be applied to all models.



REF. NO.	DESCRIPTION	NO. REQ.	PART NUMBER PER ENGINE MODEL					
			AENL	AGND	S-10D, S-12D, S-14D	THD, TJD	VF4D, VH4D	VG4D
10	GEAR COVER ASSEMBLY BEARING RETAINER PLATE - flywheel end	1	BG-344-S1	BG-343-S1	BG-350A-S1	BD-103J-S1	BD-100K-4-S1	BD-101B-S1
11	FLYWHEEL with rotor and ring gear For 10 amp alternator circuit For 25 amp. alternator circuit	1 1	N-104-5 N-104-9	N-103-5 N-103-9	N-105-2 N-105A-3	N-102-5 N-102-9	N-101-6 N-101-10	N-100-5 N-100-9
12	ROLL PIN - For 10 amp stator For 25 amp stator	2 2	PA-336 PA-362	PA-340 PA-340		PA-368 PA-340	PA-368 PA-340	PA-368 PA-340
13	LOCKWASHER, No. 10, for stator mt'g.	4	PE-14	PE-14	PE-14	PE-14	PE-14	PE-14
14	FLYWHEEL SHROUD	1	SE-154-A	SE-217-H	SE-289-A w/ SE-301B-1 PI.	SE-135-AT	SE-74-YA	SE-124-AM
15	SCREW - For 10 amp stator mt'g. For 25 amp stator mt'g.	4 4	XB-114 XB-110	XB-113 XB-106	XB-113 XB-106	XB-113 XB-106	XB-113 XB-106	XB-113 XB-106
16	STATOR ASSEMBLY - For 10 amp circuit For 25 amp circuit	1 1	YB-81 YB-82	YB-81 YB-82	YB-81 YB-82	YB-81 YB-82	YB-81 YB-82	YB-81 YB-82
17	INSULATOR - ammeter wire connector	1	YD-350	YD-350	YD-350	YD-350	YD-350	YD-350
18	WIRE ASSEMBLY - stator plug to ammeter For 10 amp stator For 25 amp stator	1 1	YL-381-6 YL-380-6	YL-381-6 YL-380-6	YL-381-18 YL-380-18	YL-381-14 YL-380-14	YL-381-18 YL-380-18	YL-381-22 YL-380-22
19	RECTIFIER MODULE - For 10 and 25 amp	1	YJ-68	YJ-68	YJ-68	YJ-68	YJ-68	YJ-68
20	REGULATOR MODULE - For 10 amp circuit For 25 amp circuit	1 1	YJ-59 YJ-60	YJ-59 YJ-60	YJ-59 YJ-60	YJ-59 YJ-60	YJ-59 YJ-60	YJ-59 YJ-60

Note: For service replacement, YJ-60 can be used in place of YJ-59.

## PARTS REQUIRED - NOT ILLUSTRATED

CRANKCASE	1	AA-91B-10	BA-54-20				
ENGINE BASE	1	BB-128A-5					
CLIP for stator wires	1	PG-630-1	PG-430				
GROMMET for stator wires	1			PH-198B-1			
BASKET for bearing retainer plate	1	QD-833					
BUSH, #10-32, for mounting modules	4	PD-115	PD-115	PD-115	PD-115	PD-115	PD-115
LOCKWASHER, #10 I.E.T., for mounting modules	4	PE-78-A	PE-78-A	PE-78-A	PE-78-A	PE-78-A	PE-78-A
SCREW, #10-32, for mounting modules	4	XA-7	XA-7	XA-7	XA-8	XA-8	XA-8

\* NOTE: Because of the available variations in Flywheels, Flywheel Shrouds and Crankcases - give Engine Model, Specification and Serial Numbers when ordering.

## Safety Precautions

- Never fill fuel tank while engine is running or hot; avoid the possibility of spilled fuel causing a fire.
- Always refuel slowly to avoid spillage.
- When starting engine, maintain a safe distance from moving parts of equipment.
- Do not start engine with clutch engaged.
- Do not spin hand crank when starting. Keep cranking components clean and free from conditions which might cause the crank jaw to bind and not release properly. Oil periodically to prevent rust.
- Never run engine with governor disconnected, or operate at speeds in excess of 3600 R.P.M. load, (3200 maximum R.P.M. for Model AGND.)
- Do not operate engine in a closed building unless the exhaust is piped outside. This exhaust contains carbon monoxide, a poisonous, odorless and invisible gas, which if breathed causes serious illness and possible death.
- Never make adjustments on machinery while it is connected to the engine, without first removing the ignition cable from the spark plug. Turning the machinery over by hand during adjusting or cleaning might start the engine and machinery with it, causing serious injury to the operator.
- Precaution is the best insurance against accidents.

## Engine Storage

To protect the cylinder, piston, rings and valves, and keep them from rusting and sticking, a half and half mixture of kerosene and good gas engine oil, (the same grade as used in the engine crankcase) should be injected into the carburetor air intake while the engine is warm and running at moderate speed. About an eighth of a pint is necessary, or enough so that a heavy bluish smoke will appear at the exhaust. This fogging operation will leave a coating of oil on the above mentioned parts, protecting them from the atmosphere. After the engine has stopped, turn engine over slowly by means of the rope starter sheave, until flywheel key or take off shaft key way is up, or in the 12 o'clock position and on compression stroke. Both valves will then be closed and the piston will be on top in the cylinder bore. This will minimize rusting of the cylinder bore and help in retaining the oil fog previously injected into the engine.

Drain crankcase oil while engine is warm.

Drain fuel lines, carburetor, fuel pump and tank, to prevent lead and gum sediment from interfering with future operation. Gasoline fumes from gradual evaporation is a dangerous fire hazard.

The air cleaner should be thoroughly cleaned (remove oil from oil bath type). Air cleaner and exhaust openings should be taped or otherwise sealed off for the duration of the storage period.

The outside of the engine, including the cooling fins on the cylinder and head, should be thoroughly cleaned of all dirt and other deposits. All exposed unpainted metal parts should be coated with grease or heavy oil.

*Before starting the engine*, after the storage period, remove crankcase drain plug so that any condensation which may have collected may be drained, before new crankcase oil is added. It is highly recommended to remove the crankcase oil base and scrub off all sediment which may have collected there. Use a new gasket when reassembling the engine base.

It is advisable to use a new spark plug at the beginning of the operation interval, especially if the engine has given considerable service.

*It is highly recommended that machines be stored inside a building through the winter. If this is not possible, the engine should be protected from snow and ice by a proper covering.*

 **TELEDYNE**  
**WISCONSIN MOTOR**

MILWAUKEE, WISCONSIN 53246

Made in U.S.A.

