OPERATION AND PARTS MANUAL



MODEL G-4.5R PORTABLE AC GENERATOR (GASOLINE ENGINE) S/N 5498030 AND BELOW S/N 5498031 AND ABOVE

Revision #3 (03/13/06)

THIS MANUAL <u>MUST</u> ACCOMPANY THE EQUIPMENT AT ALLTIMES.



CALIFORNIA — Proposition 65 Warning

Engine exhaust and some of its constituents are known to the State of California to cause cancer, birth defects and other reproductive harm.

HERE'S HOW TO GET HELP

PLEASE HAVE THE MODEL AND SERIAL NUMBER ON-HANDWHEN CALLING

STOW MAIN OFFICE

Post Office Box 6254 888-252-STOW Carson, Ca 90749 *FAX*:310-537-1986

Email: stow@multiquip.com Internet: www.stowmfg.com

PARTS DEPARTMENT

800-427-1244 FAX: 800-672-7877 310-537-3700 FAX: 310-637-3284

SERVICE DEPARTMENT

800-421-1244 FAX: 310-537-4259

310-537-3700

TECHNICAL ASSISTANCE

800-478-1244 FAX:310-631-5032

WARRANTY DEPARTMENT

800-421-1244, EXT.279 FAX: 310-537-1173

310-537-3700, EXT. 279

SALES DEPARTMENT

310-661-4242 FAX:310-604-9237

877-289-7869 (877-BUY-STOW)

© COPYRIGHT 2004, STOW CONSTRUCTION EQUIPMENT

STOW Construction Equipment and the STOW logo are registered trademarks of STOW and may not be used, reproduced, or altered without written permission. All other trademarks are the property of thier respective owners and used with permission.

This manual MUST accompany the equipment at all times. This manual is considered a permanent part of the equipment and should remain with the unit if resold.

The information and specifications included in this publication were in effect at the time of approval for printing. Illustrations are based on the *G-2.9R Portable AC Generator*. STOW Construction Equipment reserves the right to discontinue or change specifications, design or the information published in this publication at any time without notice and without incurring any obligations.

To find the latest revision of this publication, visit our website at: www.stowmfg.com



STOW G-4.5R — AC Portable Generator

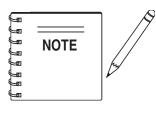
| Here's How To Get Help | 3 |
|---|-------|
| Table Of Contents | |
| Parts Ordering Procedures | 5 |
| Dimensions | |
| Specifications | 7 |
| Safety Alert Message Symbols | 8-9 |
| Rules for Safe Operation | 10-12 |
| Operation and Safety Decals (S/N 5498030 & Below) | 14 |
| Operation and Safety Decals (S/N 5498031 & Above) | 15 |
| General Information | 16 |
| Load Application | 17 |
| Controls and Indicators | 18-21 |
| Generator Refueling | 22 |
| Installation | 23-24 |
| Pre-Inspection | |
| Pre-Inspection (Engine) | |
| Initial Start-up (Engine) | 27 |
| Initial Start-up (Engine/Operation) | 28-29 |
| Preparation For Long Term Storage | |
| Maintenance | 32-33 |
| Wiring Diagram (S/N S/N 5498030 & Below) | 34 |
| Wiring Diagram (S/N 5498031 & Above) | |
| Troubleshooting (Engine) | |
| Troubleshooting (Generator) | |
| Explanation Of Codes In Remarks Column | 40 |
| Suggested Spare Parts | 41 |

Generator Component Drawings

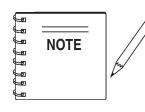
| Nameplate and Decals (S/N 5498030 & Below) 42-43 | 3 |
|--|---|
| Nameplate and Decals (S/N 5498031 & Above) 44-45 | 5 |
| Generator Assembly 46-47 | 7 |
| Control Box Assembly (S/N 5498030 & Below) 48-49 | 9 |
| Control Box Assembly (S/N 5498031 & Above) 50-5 | 1 |
| Pipe Frame Assembly (S/N 5498030 & Below) 52-53 | 3 |
| Pipe Frame Assembly (S/N 5498031 & Above) 54-55 | 5 |

ROBIN EX270D20110 Engine (EPA)

| Crankcase Assembly | 56-57 |
|--------------------------------------|-------|
| Crankshaft, Piston Assembly | 58-59 |
| Governor Assembly | 60-61 |
| Intake and Exhaust Assembly | 62-63 |
| Air Cleaner Assembly | 64-65 |
| Cooling Starting Assembly | 66-67 |
| Fuel Lubricant Assembly | 68-69 |
| Flywheel Assembly | 70-71 |
| Electric Device Assembly | 72-73 |
| Terms and Conditions Of Sale — Parts | 74 |



As a continuing effort to update our parts book, contact the STOW literature department for the latest revision of your "Operation and Parts Manual"



Specification and part number are subject to change without notice.

PARTS ORDERING PROCEDURES

When ordering parts, please supply the following information:

- □ Dealer account number
- Dealer name and address
- ☐ Shipping address (if different than billing address)
- □ Return fax number
- Applicable model number
- Quantity, part number and description of each part
- ☐ Specify preferred method of shipment:
 - ✓ FedEx or UPS Ground
 - ✓ FedEx or UPS Second Day or Third Day
 - ✓ FedEx or UPS Next Day
 - ✓ Federal Express Priority One
 - ✓ DHL
 - ✓ Truck

Note: Unless otherwise indicated by customer, all orders are treated as "Standard Orders", and will ship within 24 hours. We will make every effort to ship "Air Shipments" the same day that the order is received, if prior to 2PM west coast time. "Stock Orders" must be so noted on fax or web forms.



Here's how to get help...

Please have the model and serial number on hand when calling.

STOW MAIN OFFICE

18910 Wilmington Ave. 800-421-1244 Carson, CA 90746 *FAX:* 310-537-3927

Email: stow@stowmfg.com Internet: www.stowmfg.com

SALES DEPARTMENT

310-661-4242 Fax: 310-604-9237

877-289-7869 (877-BUY-STOW)

PARTS DEPARTMENT

SERVICE DEPARTMENT

TECHNICAL ASSISTANCE

800-478-1244 *FAX*: 310-631-5032

WARRANTY DEPARTMENT

800-421-1244, *EXT.* 279 *FAX:* 310-537-1173

310-537-3700, EXT. 279

Place Your Parts Order Via Web or Fax For Even More Savings!

(Domestic USA Dealers Only)

Extra Discounts!

All parts orders which include complete part numbers and are received by our automated web parts order system, or by fax qualify for the following extra discounts:

| Ordered via | | |
|----------------|----|-----|
| Fax | 3% | 10% |
| Web | 5% | 10% |

Special freight allowances when you order 10 or more line items via Web or Fax!**

FedEx Ground Service at no charge for freight

No other allowances on freight shipped by any other carrier.

**Common nuts, bolts and washers (all items under \$1.00 list price) do not count towards the 10+ line items.

NOTE: DISCOUNTS ARE SUBJECT TO CHANGE

STOW

STOW CONSTRUCTION EQUIPMENT

A DIVISION OF MULTIQUIP INC.
POST OFFICE BOX 6254 CARSON, CA 90749
888-252-STOW[888-252-7869] 310-537-3700
FAX: 310-537-1986 FAX: 800-556-1986

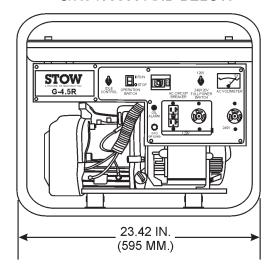
FAX: 310-537-1986 FAX: 800-556-1986 E-MAIL: stow@multiquip.com INTERNET: www.stowmfg.com

Direct TOLL-FREE access to our Parts Department:

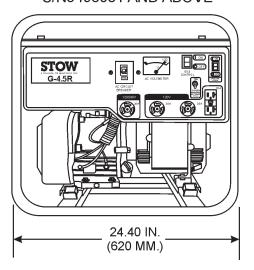
Toll-free nationwide — 800-427-1244
Toll-free FAX — 800-6-PARTS-7 (800/672-7877)

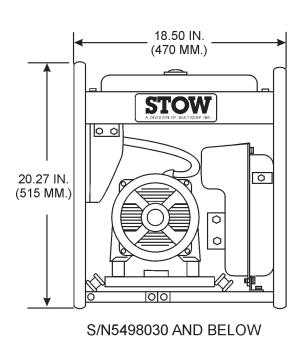
STOW G-4.5R — DIMENSIONS

S/N5498030 AND BELOW



S/N5498031 AND ABOVE





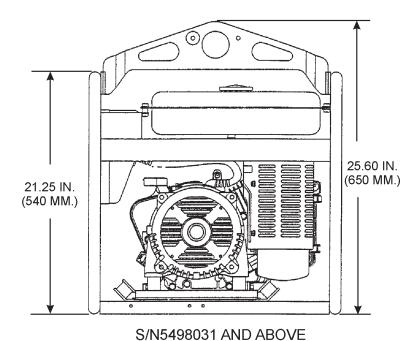


Figure 1. Dimensions

STOW G-4.5R — SPECIFICATIONS

| Table 1. Specifications | | | | |
|-------------------------|---|--|--|--|
| | MODEL | G-4.5R | | |
| | Туре | 2-Pole, Brushless Type Revolving Field | | |
| | Frequency (Hz) | 60 | | |
| | Continuous Output (kW) | 3.70 | | |
| | Maximum Output (kW) | 4.5 | | |
| | Voltages (VAC) | 120/240 | | |
| | Max/Continuous Amps 120 VAC | 37.5/30.8 | | |
| GENERATOR | Max/Continuous Amps 240 VAC | 18.75/15.4 | | |
| | Rated Speed (RPM) | 3600 | | |
| | Power Factor | 1.0 | | |
| | Dimension (L x W x H) in. (mm) | 23 X 18.5 X 20.25 (595 X 470 X 515) | | |
| | Dry Net Weight lbs. (kg) Includes Engine | 149 (68) | | |
| | Model | ROBIN EX270D20110 | | |
| | Туре | Air-cooled, 4-stroke, Single Cylinder, Overhead Camshaft, Gasoline Engine | | |
| | Displacement (cc) | 265 | | |
| | Continuous Output (kW/min) | 5.1 @3600 | | |
| | Maximum Output (kW/min) | 9.0 @4000 | | |
| ENGINE | Fuel Tank Capacity Gal. (L) | 4.2 (19) | | |
| ENGINE | Fuel | Non-leaded Automobile Gasoline | | |
| | Lube Oil Capacity Qts. (L) | 1.16 (1.1) | | |
| | Speed Control Method | Centrifugal Fly-weight Type | | |
| | Starting Method | Recoil Start | | |
| | Dimension (L x W x H) in. (mm) | 13.97 X 16.5 X 16.14 (355 X 420 X 410) | | |
| | Dry Net Weight lbs. (kg) | 46.3 (21) | | |

Effects of Altitude and Heat

The maximum output of the engine listed above is applicable to supplying electrical power for continuous service at ambient conditions in accordance with SAE Test cord J607. The above ambient conditions are at standard sea level, with a barometric reading of 29.92 inches and a temperature of 60 degrees fahrenheit.

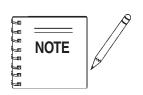
Generally, the engine output power will decrease 3 1/2% for each 1000 feet of altitude above sea level, and 1% for each 10° F fahrenheit above the standard temperature of 60° F

STOW G-4.5R — SAFETY MESSAGE ALERT SYMBOLS

FOR YOUR SAFETY AND THE SAFETY OF <u>OTHERS!</u>

Safety precautions should be followed at all times when operating this equipment. Failure to read and understand the Safety Messages and Operating Instructions could result in injury to yourself and others.





This Owner's Manual has been developed to provide complete instructions for the safe and efficient operation of the STOW Model G-4.5R *Portable Generator*. Refer to the engine manufacturers instructions for data relative to its safe operation.

Before using this generator, ensure that the operating individual has read and understands all instructions in this manual.

SAFETY MESSAGE ALERT SYMBOLS

The three (3) Safety Messages shown below will inform you about potential hazards that could injure you or others. The Safety Messages specifically address the level of exposure to the operator, and are preceded by one of three words: **DANGER**,



You **WILL** be **KILLED** or **SERIOUSLY INJURED** if you **DO NOT** follow these directions.

WARNING

You **CAN** be **KILLED** or **SERIOUSLY INJURED** if you **DO NOT** follow these directions.

CAUTION

You **CAN** be *INJURED* if you **DO NOT** follow these directions.

HAZARD SYMBOLS

Potential hazards associated with the operation of a **STOW G-4.5R Portable Generator** will be referenced with Hazard Symbols which appear throughout this manual, and will be referenced in conjunction with Safety Message Alert Symbols.

WARNING

Lethal Exhaust Gas Hazards

Engine exhaust gases contain poisonous carbon monoxide. This gas is colorless and odorless, and can cause death if inhaled. **NEVER** operate this equipment in a confined area or enclosed structure that does not provide ample free flow air.



WARNING

Explosive Fuel Hazards

Gasoline is extremely flammable, and its vapors can cause an explosion if ignited. **DO NOT** start the engine near spilled fuel or combustible fluids.



DO NOT fill the fuel tank while the engine is running or hot. **DO NOT** overfill tank, since spilled fuel could ignite if it comes into contact with hot engine parts or sparks from the ignition system. Store fuel in approved containers, in well-ventilated areas and away from sparks and flames.

WARNING

Burn Hazards

Engine components can generate extreme heat. To prevent burns, **DO NOT** touch these areas while the engine is running or immediately after operations. Never operate the engine with heat shields or heat guards removed.



WARNING

Respiratory Hazards

ALWAYS wear approved *respiratory* protection when required.



STOW G-4.5R — SAFETY MESSAGE ALERT SYMBOLS



Rotating Parts Hazards

NEVER operate equipment with covers, or guards removed. Keep fingers, hands, hair and clothing away from all moving parts to prevent injury.



A CAUTION

Equipment Damage Hazards

Other important messages are provided throughout this manual to help prevent damage to your portable generator, other property, or the surrounding environment.



Accidental Starting Hazards

ALWAYS place the power source, circuit breakers or **ON/OFF** switch in the **OFF** position, when the generator is not in use, unless connected to transfer switch.





Eye and Hearing Hazards



ALWAYS wear approved eye and hearing protection.

STOW G-4.5R — RULES FOR SAFE OPERATION

A DANGER

Read this manual!

Failure to follow instructions in this manual may lead to serious injury or even death! This equipment is to be operated by trained and qualified personnel only! This equipment is for industrial use only.

The following safety guidelines should always be used when operating the STOW G-4.5R Portable Generator:

GENERAL SAFETY

■ DO NOT operate or service this equipment before reading this entire manual.



- This equipment should not be operated by persons under 18 years of age.
- **NEVER** operate this equipment without proper protective clothing, shatterproof glasses, steel-toed boots and other protective devices required by the job.



■ NEVER operate this equipment when not feeling well due to fatigue, illness or taking medicine.



■ NEVER operate this equipment under the influence of drugs or alcohol.







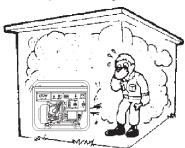
- ALWAYS wear proper respiratory (mask), hearing and eye protection equipment when operating the generator.
- Whenever necessary, replace nameplate, operation and safety decals when they become difficult read.
- Manufacturer does not assume responsibility for any accident due to equipment modifications.
- **NEVER** use accessories or attachments, which are not recommended by STOW for this equipment. Damage to the equipment and/or injury to user may result.

■ NEVER touch the hot exhaust manifold, muffler or cylinder. Allow these parts to cool before servicing engine or generator.



■ The engine section of this generator requires an adequate free flow of cooling air. **NEVER** operate the generator in

any enclosed or narrow area where free flow of the air is restricted. If the air flow is restricted it will cause serious damage to the generator or engine and may cause injury to people. Remember the generator's engine gives off **DEADLY** carbon monoxide gas.



- ALWAYS refuel in a well-ventilated area, away from sparks and open flames.
- working with **flammable** liquids. When refueling, **stop the** engine and allow it to cool. **DO NOT smoke** around or near the machine. Fire or explosion could result from fuel vapors, or if fuel is spilled on a hot engine.



■ NEVER operate the generator in an explosive atmosphere or near combustible materials. An explosion or fire could result causing severe **bodily** harm or even death.



■ NEVER disconnect any "emergency or safety devices".

These devices are intended for operator safety. Disconnection of these devices can cause severe injury, bodily harm or even death! Disconnection of any of these devices will void all warranties.

STOW G-4.5R — RULES FOR SAFE OPERATION

- **ALWAYS** be sure the operator is familiar with proper safety precautions and operation techniques before using generator.
- **NEVER** leave the generator unattended, turn off engine when unattended.
- Unauthorized equipment modifications will void all warranties.
- **ALWAYS** ensure generator is on level ground before use.
- **DO NOT** place hands or fingers inside generator engine compartment when engine is running.
- **NEVER** run engine without air cleaner. Severe engine damage may occur.
- NEVER change or adjust the engine speed which has been set at the factory prior to shipping.

Power Cord Safety

- **NEVER** let power cables or cords *lay in wate*r.
- **NEVER** *stand in water* while AC power from the generator is being transfer to a load.
- **NEVER** use a defective or frayed power cable. Check the cable for cuts in the insulation.
- **NEVER** use a extension cord that is frayed or damaged where the insulation has been cut.
- ALWAYS make certain that proper power or extension cord has been selected for the job See Table 4.

Grounding Safety

- **ALWAYS** make sure that electrical circuits are properly grounded per the National Electrical Code (NEC) and local codes before operating generator. Severe *injury* or death! by electrocution can result from operating an ungrounded generator.
- ALWAYS make sure generator is properly grounded to a suitable earth ground (GROUND ROD). See installation section in this manual.
- NEVER use *gas piping* as an electrical ground.

Maintenance Safety

- **NEVER** lubricate components or attempt service on a running machine.
- **High Temperatures** Always stop engine and allow the engine to cool before adding fuel, oil or performing service and maintenance functions. Contact with hot! components can cause serious burns.



- Keep the machinery in proper running condition.
- Fix damage to the machine immediately and replace any broken parts immediately.
- ALWAYS replace any worn or damaged warning decals.
- ALWAYS store equipment properly when it is not being used. Equipment should be stored in a clean, dry location out of the reach of children and un-authorized personnel.
- The electrical voltage required to operate the generator can cause severe injury or even death through physical contact with live circuits. Turn all circuit breakers **OFF** before performing maintenance on the generator.
- Dispose of hazardous waste properly. Examples of potentially hazardous waste are used motor oil, fuel and fuel filters.
- DO NOT use food or plastic containers to dispose of hazardous waste.
- **DO NOT** pour waste, oil or fuel directly onto the ground, down a drain or into any water source.
- Removing the engine oil drain plug while the engine is hot will result in hot oil to gush out of the oil drain plug, therefore causing severe scalding to any persons in the general area of the generator.



STOW G-4.5R — RULES FOR SAFE OPERATION



DANGER-ELECTROCUTION HAZARDS

During operation of this generation, there exists the possibility of *electrocution*, *electrical shock or burn*, which can cause *severe bodily harm* or even *DEATH!*



To avoid these hazards:

NEVER use *damaged* or *worn* cables when connecting equipment to the generator. Make sure power connecting cables are securely connected to the generator's output receptacles, incorrect connections may cause damage to the generator and electrical shock.

NEVER grab or touch a live power cord with wet hands, the possibility exist of electrical shock, electrocution, and even **death!**



NEVER insert any objects into the output receptacles during operation. This is extremely dangerous. **ALWAYS** turn-off



the generator and place all circuit breakers in the "OFF" position when contact with the output receptacles is required. There exist the possibility of *electrocution*, *electrical shock or burn*, *which can cause severe bodily harm or even death*!

Backfeed to a utility system can cause *electrocution* and or property damage. **NEVER** connect the generator to a building's electrical system without a transfer switch or other approved device. All installations should be performed by a *licensed electrician* in accordance with all applicable laws and electrical codes. Failure to do so could result in electrical shock or burn causing serious injury or even death!



Emergencies

■ ALWAYS know the location of the nearest *fire extinguisher*.



■ ALWAYS know the location of the nearest *first aid kit*.



In emergencies *always* know the location of the nearest phone or *keep a phone on the job site*. Also know the phone numbers of the nearest *ambulance*, *doctor* and *fire department*. This information will be invaluable in the case of an emergency.









| NOTE PAGE |
|-----------|
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| _ |
| |
| |

OPERATION AND SAFETY DECALS (S/N 5498030 AND BELOW)

Machine Safety Decals

The G-4.5R portable generator is equipped with a number of safety decals (Figures 2A and 2B). These decals are provided for operator safety and maintenance information. The illustration below shows these decals as they appear on the machine. Should any of these decals become unreadable, replacements can be obtained from your dealer.



P/N A3562000003



P/N 8700611804



P/N 8700611904



P/N 7900636004



FUEL COCK ON

P/N 1980680004



P/N 0800628504







P/N 0820610304

OPERATING INSTRUCTIONS

- Before starting check the oil and fuel level.
 Switch the circuit breaker to the "OFF" position.
 Open the fuel valve.
- 3. Open the fuel valve.
 4. Pull the choke knob.
 5. Turn the operation so
- Turn the operation switch to the "RUN" position and push. Pull the recoil starter.
- After the engine starts, gradually push in the choke valve. Run the generator for 3-5 minutes without load.
- Check for any abnormal noise or smell.
- 10. Switch the circuit breaker to the "ON" position.

 11. When stopping, remove the load and allow it to continue to
- run for 2-3 minutes before stopping engine.

 12. Turn the operation switch to the "STOP" position
- 13. After the engine completely stops. Close the fuel valve

P/N 7900638204

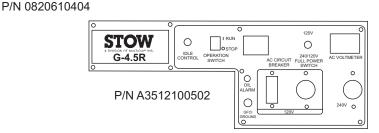


Figure 2A. Operation and Safety Decals (S/N 5498030 and Below)

OPERATION AND SAFETY DECALS (S/N 5498031 AND ABOVE)



P/N A4561000203



P/N 8700611804



P/N 8700611904



P/N 7900636004

WARNING!

Before connecting this generator to any building's electrical system, a licensed electrician must install an isolation (transfer) switch.

Serious injury or death may result without this transfer switch.

P/N 0820610404



P/N 1980680004



P/N 0800628504



CONTACT STOW PARTS DEPT.



P/N 35137

OPERATING INSTRUCTIONS

- Before starting check the oil and fuel level
- 2. Switch the circuit breaker to the "OFF" position
- Open the fuel valve
- 4. Close the choke with the choke lever Turn the operation switch to the "ON" position
- 6 Pull the recoil starter
- 7. After the engine starts, gradually push in the choke valve.
- 8. Run the generator for 3-5 minutes without load. Check for any abnormal noise or smell.
- 10.Switch the circuit breaker to the "ON" position.
- 11. When stopping, remove the load for 2-3 minutes before stopping engine.
- 12. Turn the operation switch to the "OFF" position.
- 13. After the engine completely stops. Close the fuel valve.

P/N A92120000

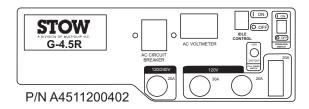


Figure 2B. Operation and Safety Decals (S/N 5498031 and Above)

STOW G-4.5R — GENERAL INFORMATION

STOW G-4.5R Familarization

General Inspection Prior to Operation

This generator has been thoroughly inspected and accepted prior to shipment from the factory. However, be sure to check for damaged parts or components, or loose nuts and bolts, which could have become disloged in transit.

The **STOW Model G-4.5R** generator has been designed as a portable lightweight power source for 60 Hz (single-phase) vibrators, lighting facilities, power tools, submersible pumps and other industrial and construction machinery.

This generator is powered by a 9.0 HP **ROBIN** air-cooled gasoline engine. The alternator, a brushless revolving-field type, is permanently aligned to the engine through rigid coupling.

The generator is mounted on rubber vibration isolators that have a steel base backplate which is attached to the protective steel pipe carrying frame. The protective carrying frame is made of steel tubing and fully wraps around the generator to protect against damage.

This portable generator is supplied with a electrical *control panel*. The control panel includes items as listed below.

Control Panel

The generator control panel has the following componets:

- NEMA 5-20R, GFCI duplex receptacle, (120V, 20 amps)
- NEMA L5-20R, twist-lock receptacle (125V, 20 amps)
- NEMA L5-30R, twist-lock receptacle (125V, 30 amps)
- NEMA L6-20R, twist-lock receptacle (250V, 20 amps), (S/N 5498030 and below)
- NEMA L14-20R, twist-lock receptacle (125/250V, 20 Amps), S/N 5498031 and above.
- Circuit breaker, 2-pole, 15 amps
- AC Voltmeter
- Operation Switch
- Idle Control Switch
- Full Power Switch
- Oil Alarm Lamp (S/N 5498030 and below)
- Ground Terminal (S/N 5498030 and below)

Circuit Breaker

To protect the generator from an overload, a 2-pole, 15 amp circuit breaker is provided on the control panel. Make sure to switch this circuit breaker to the "**OFF**" position prior to starting the engine.

Excitation System

The STOW G-4.5R generator uses a magnet attached to a flywheel to produce AC voltage from a lamp coil beneath the flywheel. As the magnet passes the coil it produces approximately 19-22 AC volts.

This voltage (19-22 VAC) is then sent to the control box that contains three rectifying diodes:

- Excitation (diode 1)
- Battery (diode 2)
- Slow Down (diode 3)

The AC voltage will pass through the excitation diode that converts the voltage to DC power.

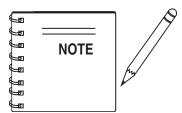
This DC power is then sent to the excitation windings housed within the main windings commonly called the "stator".

This voltage is then transferred into the rotor through induction. The rotor contains two diodes within it which rectify the DC voltage and send it out through the main windings, as AC voltage.

Engine

The four-cycle air-cooled *ROBIN* gasoline engine is designed to meet every performance requirement of this generator. Reference Table 1, for engine specifications.

Figures 3A through 3D shows the basic controls and indicators for the G-4.5R generator.



In keeping with **STOW's** policy of constantly improving its products, the specifications quoted herein are subject to change without prior notice.

STOW G-4.5R — LOAD APPLICATION

Single Phase Load

Always be sure to check the nameplate on the generator and equipment to insure the wattage, amperage and frequency requirements are satisfactorily supplied by the generator for operating the equipment.

Generally, the wattage listed on the nameplate of the equipment is its rated output. Equipment may require 130—150% more wattage than the rating on the nameplate, as the wattage is influenced by the efficiency, power factor and starting system of the equipment.



If wattage is not given on the equipment's name plate, approximate wattage may be determined by multiplying nameplate voltage by the nameplate amperage.

WATTS = VOLTAGE x AMPERAGE

The power factor of this generator is 1.0 See Table 2 below when connecting loads.

| Table 2. Power Factor By Load | | | | | |
|---|--------------|--|--|--|--|
| Type Of Load | Power Factor | | | | |
| Single-phase induction motors | 0.4 - 0.75 | | | | |
| Electric heaters, incandescent lamps | 1.0 | | | | |
| Fluorescent lamps, mecury lamps | 0.4 - 0.9 | | | | |
| Electronic devices, communication equipment | 1.0 | | | | |
| Common power tools | 0.8 | | | | |

To determine the running wattage for your load, multiply the running wattage as indicated by steps 1, 2, and 3 below:

INCANDESCENT LOADS

Lights, heaters and similar appliances.

Total the running wattage and multiply by 1.

Example:

29 light bulbs @ 100W each = 2.9 KW use a 3 KW generator.

2. SMALL MOTORS

Drills and other small power tools.

Total the running wattage and multiply by 2.

Example:

A 1 inch drill runs at 1 KW use a 2 KW generator.

3. LARGE MOTORS

Submersible pumps, table saws etc. Total the running wattage and multiply by 3. Example:

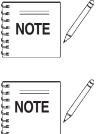
A conveyor belt runs at 8 KW use a 24 KW generator.

CAUTION

Motors and motor-driven equipment draw much greater current for starting than during operation. *Always* use an adequate size *extension cable* which can carry the required load.

Extension Cables

When electric power is to be provided to various tools or loads at some *distance* from the generator, extension cords are normally used. *Cables should be sized to allow for distance in length and amperage so that the voltage drop between the generator and point of use (load) is held to a minimum.* Use the cable selection chart (Table 2) as a guide for selecting proper cable size.



The idle control device is operated at a minimum load capacity of 100W. If the load capacity is less than 100W, place the idle control switch in the **OFF** position.

When using a combination of dual receptacles, total load **should not exceed** the rated capacity of the generator.

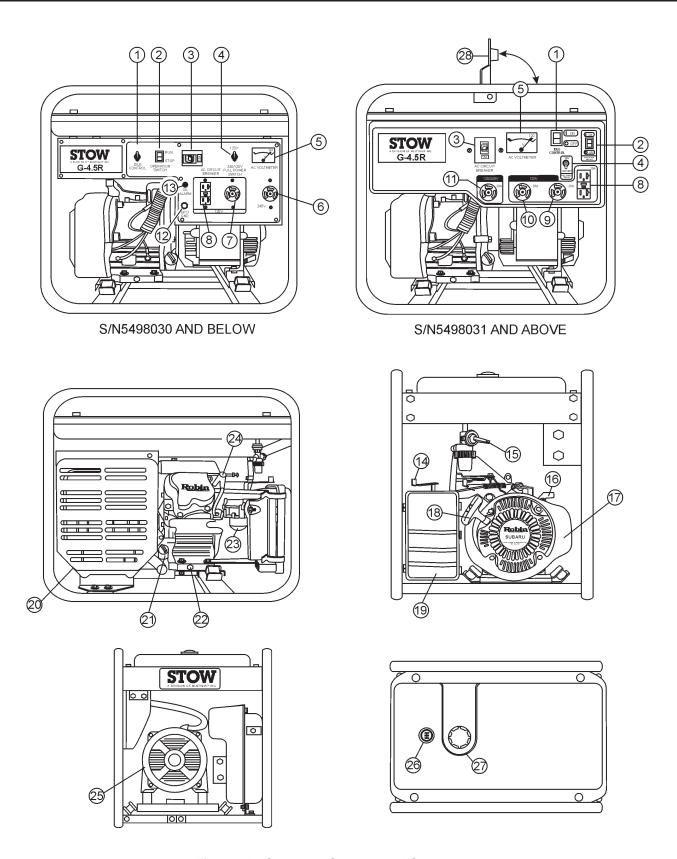


Figure 3A. Generator Controls and Components

- Idle Control Switch This unit is provided with an automatic idle control for noise suppression and reduced fuel consumption. The automatic idle control automatically engages under a no-load condition. With the automatic idle control switched "ON", the engine revolutions will automatically drop to about 2600 rpm (low-speed operation) within 3 seconds after the load stops. When the operation is resumed, the engine speed is automatically increased to about 3600 rpm (high-speed operation) as soon as the load is connected.
- 2. **Operation Switch** Place this *rocker* switch in the "**RUN**" position (up) for normal operation. To turn-off the generator place this switch in the "**STOP**" position (down).
- 3. **Main Circuit Breaker** This 2-pole 15 amp breaker protects the generator from short circuiting or overloading. When starting the generator *always* have the circuit breaker placed in the "**OFF**" position.
- 4. Full Power Switch This generator is provided with a full power switch. Figures 3B and 3C show simplified wiring diagrams of the dual voltage system. When the full power switch is in the 120 volt (up) position, you can take up full rated power of the generator at 120 volts from the GFCI duplex receptacle, 120 volts at the 120 volt twist-lock receptacle, or a combination of both receptacles as long as the total load does not exceed the generator's capacity.

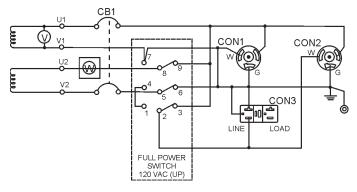


Figure 3B. Full Power Switch 120VAC (Up) Simplified Wiring Diagram

When the full power switch is in the 240 volt (down) position, you can take up to half of the rated power of the generator at 120 volts from the GFCI receptacle and up to half of the rated power of the generator at 120 volts from the twist-lock 120 volt receptacle; or full rated power of the generator at 240 volts from the twist-lock 240 volt receptacle.

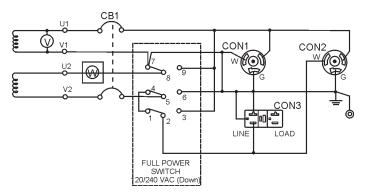


Figure 3C. Full Power Switch 120/240 VAC (Down) Simplified Wiring Diagram



When the full *power switch* is in the 120 volt position, the 240V receptacle cannot be used.

- 5. AC-Voltmeter This voltmeter indicates (with a mark) the rated 60 Hz, single phase output voltage. In addition the voltmeter can also be used as a diagnostic tool. If the voltmeter indicator (needle) is below the rated voltage, engine problems may exist (low/high RPM's). To prevent damage to the generator or power tools turn the generator OFF and consult your authorized STOW service dealer.
- 240 VAC Receptacle, 20 Amps This receptacle will provide 240V when the full power switch is placed in the 240/120 volt position (down). Applies to units with S/N 5498030 and below.
- 7. **120 VAC Receptacle, 30 Amps** This receptacle will provide 120V when the full power switch is placed in either the 120 or 240 volt position. Applies to units with S/N 5498030 and below.
- GFCI Receptacle, 20 Amps This receptacle will provide 120V at all times no matter the position of the full power switch. Applies to all units.
- 120 VAC Receptacle, 30 Amps This receptacle will provide 120V when the full power switch is placed in either the 120 or 240 volt position. Applies to units with S/N 5498031 and above.
- 120 VAC Receptacle, 20 Amps This receptacle will provide 120V when the full power switch is placed in either the 120 or 240 volt position. Applies to units with S/N 5498031 and above.
- 240 VAC Receptacle, 20 Amps This receptacle will provide 240V when the full power switch is placed in the 240/120 volt position (down). Applies to units with S/N 5498031 and above

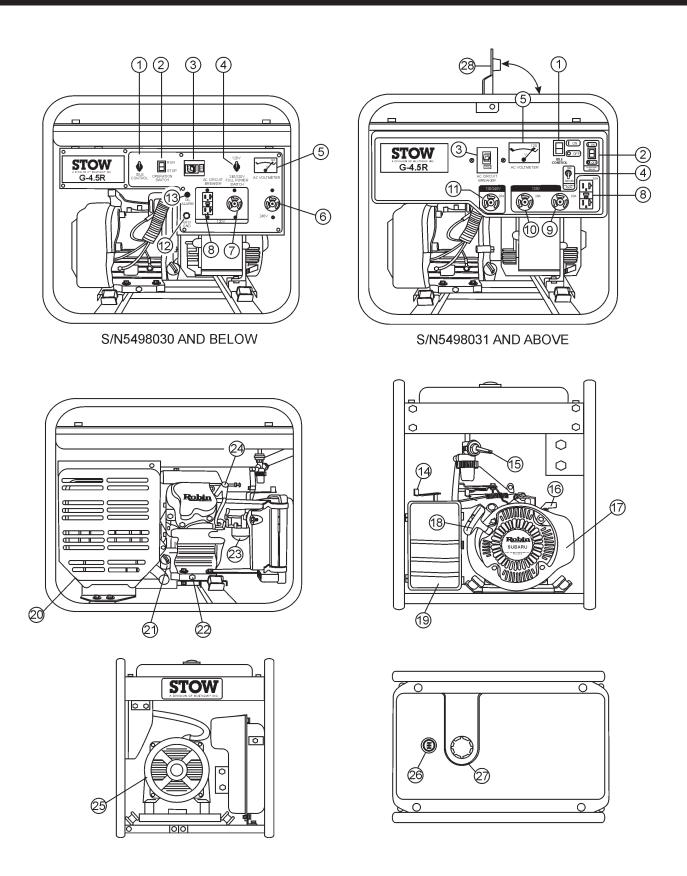
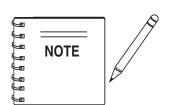


Figure 3D. Generator Controls and Components (continued)

- 12. **GFCI Ground** This ground connection point should be connect to a good earth ground (ground rod).
- 13. Oil Alarm Indicator This indicator will light in the event of low oil. Applies to units with S/N 5498030 and below.



This *ROBIN* engine is equipped with a low oil shutdown capability. A built in sensor will automatically turn off the engine should the oil level fall below a safe operating condition. Make sure the generator is placed on level

ground. Placing the generator on level ground will ensure that the low oil sensor will function properly.

- 14. Choke Lever Used for starting the engine. Close the choke lever when starting a cold engine or in cold weather conditions. The choke enriches the fuel mixture. Open the choke lever if starting a warm engine or in warm weather conditions.
- 15. Fuel Cock Lever Turn this lever downward to start (down)the flow of fuel to the carburetor. Turn upward to stop (up) the flow of fuel.
- 16. **Throttle Lever** Used to adjust engine RPM speed. This unit is set at the factory and is not adjustable.
- 17. **Engine** This generator uses a 9.0 HP **ROBIN** aircooled, 4-stroke, single cylinder, overhead camshaft gasoline engine. Engine uses unleaded fuel.
- 18. **Recoil Starter (Pull Rope)** Used for manual-starting of the engine. Pull the starter grip until resistance is felt, then pull briskly and smoothly.
- 19. Air Cleaner Prevents dirt and other debris from entering the fuel system. Remove wing-nut on top of air filter cannister to gain access to filter element. NEVER run the engine without an air cleaner.
- 20. Muffler/Heat Shield Used to reduce noise and emissions. NEVER touch this heat shield when the generator is in use. Always allow time for the generator to cool down before performing maintenance.

- Oil Dipstick/ Filler Cap

 Remove the filler cap dipstick
 when checking the engine oil level. Add engine oil through
 this filler port. See Table 4 for recommended type engine
 oil.
- 22. **Oil Drain Plug** Remove this plug to drain engine oil from the crankcase.
- 23. **Spark Plug** Provides spark to the ignition system. Set spark plug gap to 0.6 0.7 mm (0.024 0.028 inch). Clean spark plug once a week
- Carburetor Fuel Cup Inspect the fuel cup weekly for water and dirt. Clean as referenced in the maintenance section of this manual.
- 25. **Generator Housing** Contains the rotor, rectifer field coil assembly, aramature, bearings and other components that make up generator asembly.
- 26. **Fuel Gauge** Read this gauge to determine when fuel is *low*.
- 27. Fuel Gauge/Tank Remove this cap to add unleaded gasoline to the fuel tank. Replenish with clean unleaded gasoline. Make sure cap is tightened securely. DO NOT over fill. Fuel tank capacity is 5 gallons (19 liters).
- 28. **Lifting Bail Eye** Attach a rope or chain to this lifting eye when lifting of the generator is required. Never stand underneath the generator while it is being lifted. Place lifting eye in down position when not in use. Applies to units with S/N 5498031 and above.

STOW G-4.5R — GENERATOR REFUELING

⚠ DANGER

Adding fuel to the tank should be done only when the engine is stopped and has had an opportunity to cool down. In the event of a fuel spill, **DO NOT** attempt to start the engine until the fuel residue has been completely wiped up, and the area surrounding the engine is dry. If generator is placed in a truck bed with a plastic liner, **REMOVE** generator from truck bed and place on ground (Figure 4) to refuel. This possibility exist of *fire* or *explosion* due to static electricity.

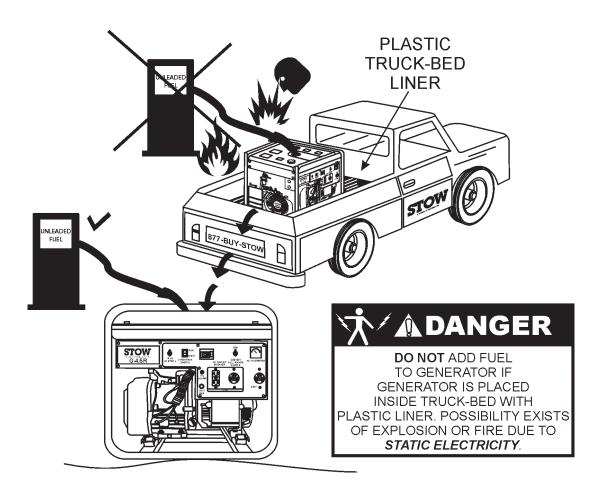


Figure 4. Generator Refueling

STOW G-4.5R — INSTALLATION

Outdoor Installation

Install the generator in a area that is free of *debris*, *bystanders*, and *overhead obstructions*. Make sure the generator is on secure level ground so that it cannot slide or shift around. Also install the generator in a manner so that the exhaust will not be discharged in the direction of nearby homes.

The installation site must be relatively free from moisture and dust. All electrical equipment should be protected from excessive moisture. Failure to do will result in deterioration of the insulation and will result in short circuits and grounding.

Foreign materials such as dust, sand, lint and abrasive materials have a tendency to cause excessive wear to engine and alternator parts.



Pay close attention to ventilation when operating the generator inside tunnels and caves. The engine exhaust contains noxious elements.



Mounting

The generator should always be mounted on a flat level surface to isolate vibration of the generator when it is running. **DO NOT** place the generator on slopes, the possibility exists that the generator could slide.

Indoor Installation

Exhaust gases from gasoline engines are extremely poisonous. Whenever an engine is installed indoors the exhaust fumes must be vented to the outside. The engine should be installed at least two feet from any outside wall. Using an exhaust pipe which is too long or too small can cause excessive back pressure which will cause the engine to heat excessively and possibly burn the valves.

Eliminate the danger of deadly carbon monoxide gas. Remember that exhaust fumes from any gasoline engine are very poisonous if discharged in a closed room, but harmless if allowed to mix with the outside air. If the generator is installed indoors, you must make provisions for venting the engine exhaust to the outside of the building.

Generator Grounding

To guard against electrical shock and possible damage to the equipment, it is important to provide a good **EARTH** ground. Always use the ground terminal on the generator to ground the generator.

Article 250 (Grounding) of the National Electrical Code (NEC) provides guide lines for proper grounding and specifies that the cable ground shall be connected to the grounding system of the building as close to the point of cable entry as practical.

NEC articles 250-64(b) and 250-66 set the following grounding requirements:

- 1. Use one of the following wire types to connect the generator to earth ground.
 - a. Copper 10 AWG (5.3 mm²) or larger.
 - b. Aluminum 8 AWG (8.4 mm²) or larger.
- When grounding the generator (Figure 3) connect the ground cable between the lock washer and the nut on the generator and tighten the nut fully. Connect the other end of the ground cable to earth ground.
- 3. NEC article 250-52(c) specifies that the earth ground rod should be buried a minimum of 8 ft. into the ground.

STOW G-4.5R — INSTALLATION

Connecting the Ground

The nut and ground terminal on the generator should always be used to connect the generator to a suitable ground. The ground cable should be #8 size wire minimum.

At the generator, connect the terminal of the ground cable between the lock washer and the nut (Figure 5) and tighten the nut fully. Connect the other end of the ground cable to a suitable earth ground (ground rod).

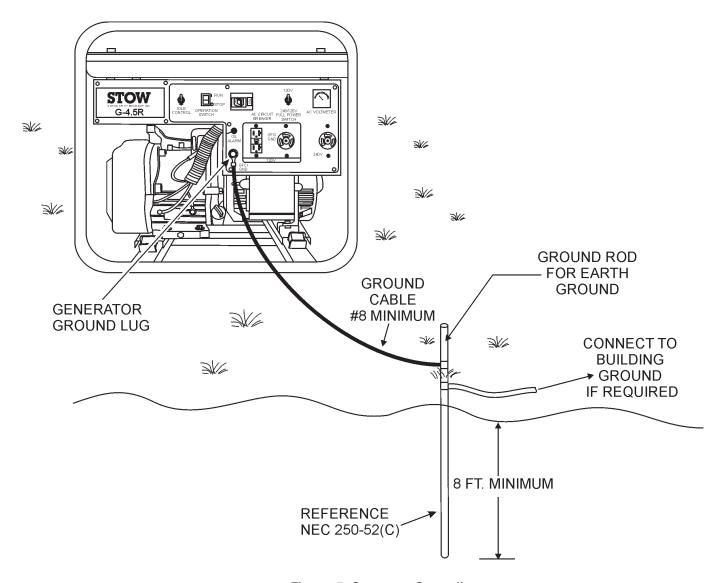


Figure 5. Generator Grounding

STOW G-4.5R — PRE-INSPECTION

General Inspection Prior to Operation

Ground Power Tools

When using power tools or electrical equipment requireing AC power from the generator, make sure connecting (power tool) cable (Figure 6) has a ground as shown in Figure.

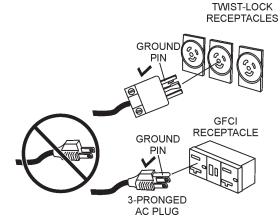
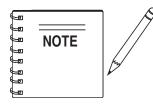


Figure 6. Ground Cables/Plugs

Extension Cable

When electric power is to be provided to various tools or loads at some distance from the generator, extension cords are normally used. Cables should be sized to allow for distance in length and amperage so that the voltage drop between the generator and point of use (load) is held to a minimum. Use the cable selection chart (Table 3) as a guide for selecting proper cable size.



Never! use power tools or equipment that do not have a ground capability, the possibility exists **of electrocution**, **electrical shock or burn**, which can cause **severe bodily harm** or even **DEATH!**

Main Circuit Breaker

To protect the generator from an overload always place the main circuit breaker in the "**OFF**" position prior to starting the engine.

| Table 3. Cable Selection (60 Hz, Single Phase Operation) | | | | | |
|--|---------------|--------------------------------|----------|----------|----------|
| Current in | Load In Watts | Maximum Allowable Cable Length | | | |
| Amperes | At 120 Volts | #10 Wire | #12 Wire | #14 Wire | #16 Wire |
| 2.5 | 300 | 1000 ft. | 600 ft. | 375 ft. | 250 ft. |
| 5 | 600 | 500 ft. | 300 ft. | 200 ft. | 125 ft. |
| 7.5 | 900 | 350 ft. | 200 ft. | 125 ft. | 100 ft. |
| 10 | 1200 | 250 ft. | 150 ft. | 100 ft. | |
| 15 | 1800 | 150 ft. | 100 ft. | 65 ft. | |
| 20 | 2400 | 125 ft. | 75 ft. | 50 ft. | |
| CAUTION: Equipment damage can result from low voltage. | | | | | |

STOW G-4.5R — PRE-INSPECTION (ENGINE)



NEVER operate the generator in a confined area or enclosed area structure that does not provide ample *free flow of air*.



ALWAYS wear approved eye and hearing protection before operating the generator.



Before Starting

- Read safety instructions at the beginning of manual.
- Clean the generator, removing dirt and dust, particularly the engine cooling air inlet, carburetor and air cleaner.



- 3. Check the air filter for dirt and dust. If air filter is dirty, replace air filter with a new one as required.
- 4. Check carburetor for external dirt and dust. Clean with dry compressed air.
- 5. Check fastening nuts and bolts for tightness.

Engine Oil Check

- 1. To check the engine oil level, place the generator on secure level ground with the engine stopped.
- 2. Remove the filler dipstick from the engine oil filler hole (Figure 7) and wipe clean.

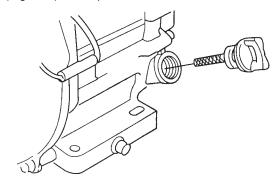


Figure 7. Engine Oil Dipstick (Removal)

- Insert and remove the dipstick without screwing it into the filler neck. Check the oil level shown on the dipstick.
- If the oil level is low (Figure 8), fill to the edge of the oil filler hole with the recommended oil type (Table 4). Maximum oil capacity is 1.16 quarts (1.1 liters)

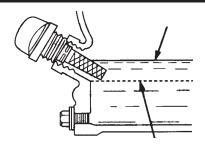


Figure 8. Engine Oil Dipstick (Oil Level)

| Table 4. Oil Type | | | | | |
|---------------------------|----------------|---------------|--|--|--|
| Season Temperature Oil Ty | | | | | |
| Summer | 25°C or Higher | SAE 10W-30 | | | |
| Spring/Fall | 25°C~10°C | SAE 10W-30/20 | | | |
| Winter | 0°C or Lower | SAE 10W-10 | | | |

DANGER EXPLOSIVE FUEL

Motor fuels are highly flammable and can be dangerous if mishandled. **DO NOT** smoke while refueling. **DO NOT** attempt to refuel the generator if the engine is *hot!*, *running or in the dark*.



Fuel Check

- 1. Close the fuel cock before filling the fuel tank.
- 2. Remove the fuel cap located on top of fuel tank.
- 3. Read the fuel gauge located on top of the fuel tank (Figure 9) to determin if the fuel level is low. If fuel is low, replenish with *clean unleaded fuel*.

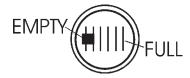


Figure 9. Fuel Gauge

When refueling, be sure to use a strainer for filtration. DO NOT top-off fuel. DO NOT fill the tank beyond capacity. Wipe up any spilled fuel immediately!

STOW G-4.5R — INITIAL START-UP (ENGINE)

A CAUTION

DO NOT attempt to operate this generator until the Safety, General Information and Inspection sections of this manual have been *read and thoroughly understood*.



DO NOT attempt to operate this generator until the Safety, General Information and Inspection sections of this manual have been *read and thoroughly understood*.

This section is intended to assist the operator with the *initial start-up* of the trash generator. It is extremely important that this section be read carefully before attempting to use the generator in the field.

Before Starting the Engine

- 1. Be sure to *disconnect all electrical loads* from the generator prior to starting the engine.
- NEVER start the engine with the main circuit breaker in the "ON" position. Place the main circuit breaker (Figure 10) in the OFF position.

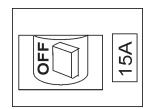


Figure 10. Main Breaker (OFF Position)

Starting the Engine

Place the engine *fuel valve lever* (Figure 11) to the "ON" position."

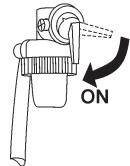


Figure 11. Engine Fuel Valve Lever (ON Position)

2. Place the *choke lever* (Figure 12) in the "*CLOSED*" position if starting a *cold* engine.

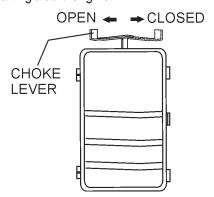
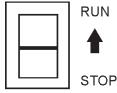


Figure 12. Choke Lever

- 3. Place the *choke lever* (Figure 12) in the "*OPEN*" position if starting a *warm engine* or the *temperature is warm.*
- 4. Place the *operation switch* (Figure 13) in the "*RUN*" position.



OPERATION SWITCH

Figure 13. Operation Switch (RUN)

5. Grasp the starter grip (Figure 14) and slowly pull it out. The resistance becomes the hardest at a certain position, corresponding to the compression point. Pull the starter grip briskly and smoothly for starting.

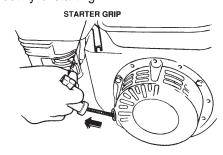


Figure 14. Starter Grip

A CAUTION

DO NOT pull the starter rope all the way to the end.

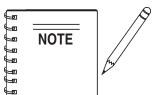
DO NOT release the starter knob after pulling. Allow it to rewind as soon as possible.

STOW G-4.5R — INITIAL START-UP ENGINE/OPERATION

- 6. If the engine has started, slowly return the choke lever (Figure 12) to the "*OPEN*" position. If the engine has not started repeat steps 1 through 6.
- 7. Before the generator is placed into operation, run the engine for 3-5 minutes. Check for abnormal smells, fuel leaks, and noises that would associate with lose components.
- Place the idle control switch (Figure 15) in the "OFF" (down) position. This will allow the engine run at speed about 3600 RPM's



Figure 15. Idle Control Switch (Down)



Placing the *idle control switch* in the down position allows the engine to operate at a maximum speed of about 3600 RPM's. When the idle control switch is place in the up position (**ON**), the generator

will run at idle speed (2200 RPM's) until a load is applied, at that time the engine speed will increase to 3600 RPM's as long as the load is being applied. When the load is not in use, the engine speed will drop back to the idle mode after about 3 seconds.

9. **Place** the **full power switch** (Figure 16) in the "120V" (Up) position.

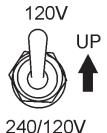


Figure 16. Full Power Switch (Up)

 Refer to the AC voltmeter (Figure 17) on the control box. The voltage indicated on the voltmeter should be 120 VAC with no load applied.

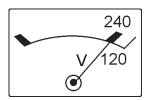


Figure 17. AC Voltmeter (120VAC)

11. If desired, verify with a voltmeter (Figure 18) that 120 VAC is present at the GFCI receptacle and the twislock receptacles as shown below.

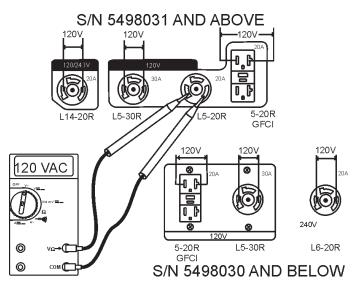
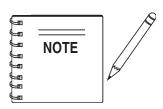


Figure 18. 120 VAC Receptacles



The **240V** receptacle on either unit is not operational (no voltage) when the full power switch is in the 120V position. This receptacle is active (voltage) only when the full power switch is in the 240V position.

12. *Place* the *full power switch (*Figure 19) in the "240/ 120V" (Down) position.



Figure 19. Full Power Switch (Down)

STOW G-4.5R — INITIAL START-UP ENGINE/OPERATION

13. Refer to the AC voltmeter (Figure 20) on the control box. The voltage indicated on the voltmeter should be 240 VAC with no load applied. If desired, verify with a voltmeter that 240V is present at the NEMA L6-20R (S/N 5498030 and below) and the NEMA L14-20R (S/N 5498031 and above) twist-lock receptacles. In addition verify that 120 VAC is present at all other twist-lock receptacles on either unit.

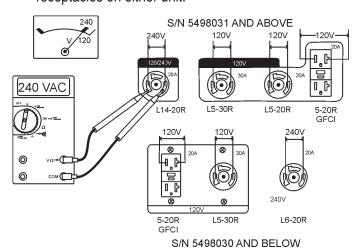


Figure 20. 240/120 VAC Receptacles

NOTE W in to ge

When the *full power switch* is in the 240V (down) position, up to half of the rated power of the generator is available at the 120V duplex receptacle or any twist-lock receptacle on either

unit; or full rated power can be obtained at the 240V receptacle. Rembmber, when using a combination of dual receptacles, *total load should not exceed the rated capacity of the generator.*

Connecting the Load

- 1. Connect the load to the desired voltage output receptacle.
- 2. Place the idle control switch (Figure 21) in the **ON** position (Up).



Figure 21. Idle Control Switch (Up)

3. Place the main circuit breaker (Figure 22) in the **ON** position.

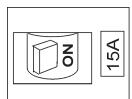
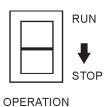


Figure 22. Main Circuit Breaker (ON)

Stopping The Engine

Normal Shutdown

- 1. Place the *main circuit breaker* (Figure 11) in the **OFF** position.
- 2. Remove the load from the generator, and let the engine run at idle for 3-5 minutes with the idle control switch in the **ON** position (Up)
- 3. Place the *operation switch* (Figure 23) in the **STOP** position.



SWITCH Figure 23. Operation Switch (Stop)

4. Place the engine *fuel valve lever* (Figure 24) to the "OFF" position."

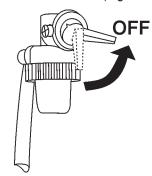


Figure 24. Engine Fuel Valve Lever (OFF Position)

Emergency Showdown

Place the *operation switch* (Figure 23) in the STOP position.

STOW G-4.5R — PREPARATION FOR LONG -TERM STORAGE

Generator Storage

For storage of the generating set for over 30 days, the following is required:

- Drain the fuel tank completely, or add STA-BIL to the fuel.
- Run the engine until the gasoline in the carburetor is completely consumed.
- Completely drain the oil from the crankcase and refill with fresh oil.
- Remove the spark plug, pour 2 or 3 cc of SAE 30 oil into the cylinder and crank slowly to distribute the oil.
- Slowly rotate the engine a few times with the starter Rope and install a new plug.
- Pull out the starter rope slowly and stop at the compression point.
- Clean all external parts of the generating set with a cloth.
- Cover the generating set and store in a clean, dry place.

| NOTE PAGE |
|-----------|
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |

STOW G-4.5R — MAINTENANCE (ENGINE)

Use Table 5 as a general maintenance guideline when servicing your engine. For more detail engine maintenance information, refer to the engine owner's manual supplied with your engine.

| Table 5. Engine Maintenance Schedule | | | | | | | |
|--------------------------------------|----------------------------|--------|---------------------------------|------------------------------------|------------------------------------|---------------------------------|------------------------------------|
| DESCRIPTION (3) | OPERATION | BEFORE | FIRST MONTH OR 10 HRS. | EVERY 3 MONTHS OR 25 HRS. | EVERY 6 MONTHS OR 50 HRS. | EVERY YEAR OR 100 HRS. | EVERY 2 YEARS OR 200 HRS. |
| Engine Oil | CHECK | Х | | | | | |
| Engine Oil | CHANGE | | Х | | | | |
| Air Cleaner | CHECK | Х | | | | | |
| All Cleaner | CHANGE | | | X (1) | | | |
| All Nuts & Bolts | Re-tighten If Necessary | Х | | | | | |
| Charle Dlug | CHECK-CLEAN | | | | Х | | |
| Spark Plug | REPLACE | | | | | | Х |
| Cooling Fins | CHECK | | | | Х | | |
| Spark Arrester | CLEAN | | | | | Х | |
| Fuel Tank | CLEAN | | | | | Х | |
| Fuel Filter | CHECK | | | | | Х | |
| Idle Speed | CHECK-ADJUST | | | | | X (2) | |
| Valve Clearance | CHECK-ADJUST | | | | | | X (2) |
| Fuel lines | CHECK | | E | Every 2 years | (replace if nece | ssary) (2) | |

⁽¹⁾ Service more frequently when used in **DUSTY** areas.

⁽²⁾ These items should be serviced by your service dealer, unless you have the proper tools and are mechanically proficient. Refer to the ROBIN Shop Manual for service procedures.

⁽³⁾ For commercial use, log hours of operation to determine proper maintenance intervals.

STOW G-4.5R — MAINTENANCE (ENGINE)

Maintenance

Perform the scheduled maintenance procedures as defined by Table 6 and below:

DAILY

Thoroughly remove dirt and oil from the engine and control area. Clean or replace the air cleaner elements as necessary. Check and retighten all fasteners as necessary. Check the gearbox for oil leaks. Repair or replace as needed.

WEEKLY

- Remove the fuel filter cap and clean the inside of the fuel tank.
- Remove or clean the filter at the bottom of the tank.
- Remove and clean the spark plug (Figure 25), then adjust the spark gap to 0.024 ~0.028 inch (0.6~0.7 mm). This unit has electronic ignition, which requires no adjustments.

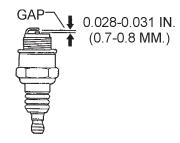


Figure 25. Spark Plug Gap

ENGINE OIL

- 1. Drain the engine oil when the oil is *warm* as shown in Figure 26.
- 2. Remove the oil drain bolt and sealing washer and allow the oil to drain into a suitable container.
- Replace engine oil with recommended type oil as listed in Table 4. For engine oil capacity, see Table 1 (engine specifications). DO NOT overfill.
- 4. Install drain bolt with sealing washer and tighten securely.

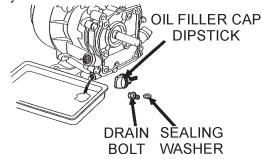


Figure 26. Engine Oil (Draining)

Cleaning the Fuel Strainer

Clean the fuel strainer if it contains dust or water. Remove dust or water in the strainer cap and wash it in gasoline. Securely fasten the fuel strainer cap so that fuel will not leak. Check the fuel strainer every 200 hours of operation or once a month.

A DANGER

DO NOT use gasoline as a cleaning solvent, because that would create a risk of fire or explosion.



ENGINE AIR CLEANER

- 1. Remove the air cleaner cover and foam filter element as shown in Figure 27.
- Tap the paper filter element (Figure 27) several times on a hard surface to remove dirt, or blow compressed air [not exceeding 30 psi (207 kPa, 2.1 kgf/cm²)] through the filter element from the air cleaner case side. *NEVER* brush off dirt. Brushing will force dirt into the fibers. Replace the paper filter element if it is excessively dirty.

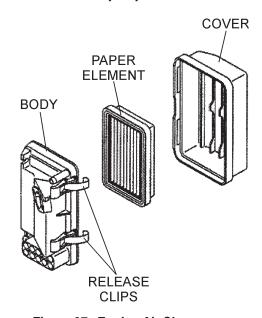


Figure 27. Engine Air Cleaner

STOW G-4.5R — WIRING DIAGRAM (S/N 5498030 AND BELOW)

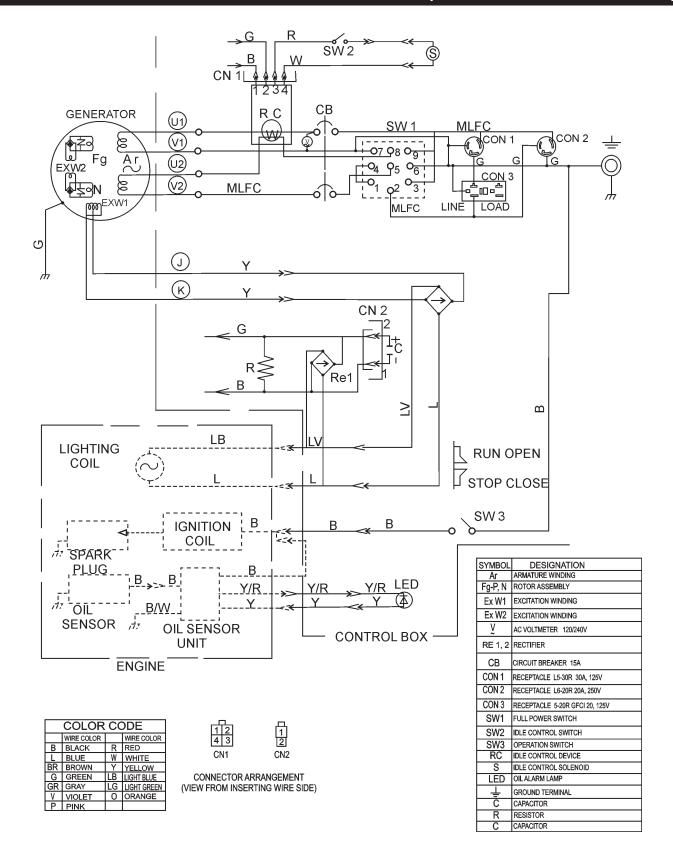


Figure 28. Generator/Engine Wiring Diagram (S/N 5498030 and Below)

STOW G-4.5R — WIRING DIAGRAM (S/N 5498031 AND ABOVE)

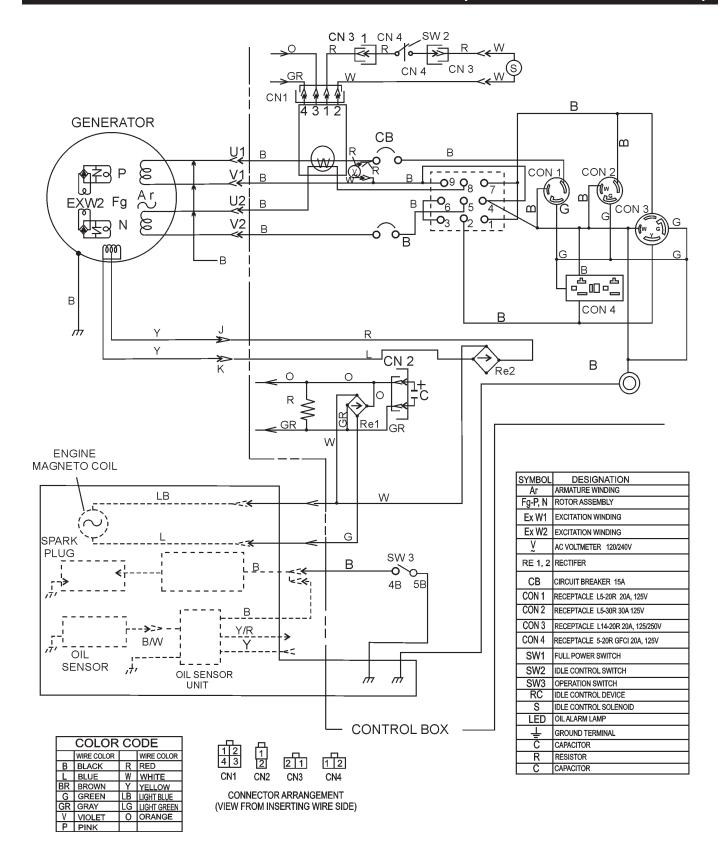


Figure 29. Generator/Engine Wiring Diagram (S/N 5498031 and Above)

STOW G-4.5R — TROUBLESHOOTING (ENGINE)

Practically all breakdowns can be prevented by proper handling and maintenance inspections, but in the event of a breakdown, please take a remedial action following the diagnosis based on the Engine Troubleshooting (Table 6) information shown below and on the proceeding page. If the problem cannot be remedied, please leave the unit just as it is and consult our company's business office or service plant.

| TABLE 6. ENGINE TROUBLESHOOTING | | | | | |
|---|---|--|--|--|--|
| SYMPTOM POSSIBLE PROBLEM | | SOLUTION | | | |
| | Inspect carburetor to see if fuel is reaching it? | Check fuel line | | | |
| | No Fuel? | Add Fuel | | | |
| | Water in fuel tank? | Flush or replace fuel tank. | | | |
| | Fuel filter clogged? | Replace fuel filter | | | |
| | Stuck carburetor? | Check float mechanism. | | | |
| Poor starting | Spark plug is red? | Spark plug is fouled. Check tranistor ignition unit. | | | |
| | Spark plug is blue-white? | Insufficient compression, injected air leaking. Carburetor jets are clogged (overflow). | | | |
| | No spark present at tip of spark plug? | Tranistor ignition unit broken, high voltage cord cracked or broken. Start/Stop switch broken. Replace spark plug if fouled. | | | |
| | No oil? | Add oil as required. | | | |
| | Oil pressure alarm lamp blinks upon starting? | Check Automatic shutdown circuit "oil sensor". | | | |
| | Engine will not turn over? | Replace cylinder and piston and if necessary axel joint. | | | |
| | Cylinder head connecting bolts loose? | Tighten cylinder head connecting bolts. | | | |
| Insufficient power output "no | Cylinder head gasket damaged? | Replace cylinder head gasket. | | | |
| compression" | Malfunction of valve seat? | Re-seat valves. | | | |
| | Spark plug is loose? | Replace spark plug. | | | |
| | Worn piston rings? | Replace piston rings. | | | |
| | Malfunction in air-cleaner system, air filter clogged? | Clean or replace air filter. | | | |
| Insufficient power output "compression" | Air leaking in from interface between carburetor and cylinder head? | Tighten bolts between carburetor and cylinder head. Replace cylinder head gasket. | | | |
| | Malfunction in fuel system? | Clean or replace fuel filter. Clean or replace carburetor. Check carburetor float. | | | |

STOW G-4.5R — TROUBLESHOOTING (ENGINE)

| TABLE 6. ENGINE TROUBLESHOOTING (CONTINUED) | | | | |
|---|---|---|--|--|
| SYMPTOM | POSSIBLE PROBLEM | SOLUTION | | |
| Insufficient power output | Malfunction in blower? | Check or replace blower. | | |
| "compression" and overheats | Air in-take filter clogged? | Clean or replace air in-take filter. | | |
| Burns to much fuel | Over accumulation of exhaust products? | Clean and check valves. Check muffler, replace if necessary. | | |
| | Wrong spark plug? | Replace spark plug with manufactures suggested type spark plug. | | |
| Exhaust color is continiously | Lubricating oil is wrong viscosity? | Replace lubricating oil with correct viscosity. | | |
| "WHITE" | Worn rings? | Replace rings | | |
| | Air cleanner clogged? | Clean or replace air cleaner. | | |
| Exhaust color is continiously | Choke valve has not been set to the correct position? | Adjust choke valve to the correct position. | | |
| Exhaust color is continiously "BLACK" | Carburetor defective, seal on carburetor broken? | Replace carburetor or seal. | | |
| | Poor carburetor adjustment "engine runs too rich? | Adjust carburetor. | | |

STOW G-4.5R — TROUBLESHOOTING (GENERATOR)

Practically all generator breakdowns can be prevented by proper handling and maintenance inspections, but in the event of a breakdown, please take a remedial action following the diagnosis based on the Generator Troubleshooting (Table 7) information shown below and on the preceding page. If the problem cannot be remedied, please leave the unit just as it is and consult our company's business office or service plant.

| TABLE 7. GENERATOR TROUBLESHOOTING | | | | |
|---|--|--|--|--|
| SYMPTOM | POSSIBLE PROBLEM | SOLUTION | | |
| Low voltage | Engine speed too low? | Raise engine speed to rated RPM. | | |
| | AC voltmeter not working? | Replace AC voltmeter. | | |
| | Control box internal wiring malfunction? | Check control box wiring. | | |
| Low voltage. Engine speed normal 3650 RPM (unloaded), | Defective ignition coil? | Check red and green ignition wires. Replace ignition wires if necessary. | | |
| 2500 RPM (idle) | Rotor winding malfunction? | Check or replace rotor. | | |
| | Stator winding malfunction? | Check or replace stator. | | |
| | Breaker malfunction? | Check or replace CB1. | | |
| Voltage output too high. | Engine speed too high? | Lower engine speed to rated RPM. | | |
| Voltage output too high. Engine speed normal 3650 RPM (unloaded), 2500 RPM (idle) | mal 3650 RPM malfunction | | | |
| Circuit breaker will not turn on "NO LOAD" | Defective circuit breaker? | Replace circuit breaker. | | |
| Circuit breaker will turn on | Overload? | Reduce load or replace breaker. | | |
| "LOADED" but trips immediately. | Load circuit is shorted? | Check load circuit for short. | | |
| Does not accelerate from low to high "NO LOAD" | Stuck solenoid? | Check solenoid. | | |
| Does not accelerate from low to high "LOAD ACTIVE | Control box interal wiring defective? | Check control box wiring. | | |
| | Defective rotor windings? | Check or replace rotor. | | |
| Does not decelerate no | Defective solenoid? | Check or replace solenoid. | | |
| "VOLTAGE OUTPUT". | Defective idle control device? | Check or replace idle control device. | | |
| | Defective solenoid? | Check or replace idle control device. | | |
| | Control box wiring malfunction? | Check control box wiring, replace any defective components. | | |
| Does not decelerate but has "VOLTAGE OUTPUT". | Defective solenoid? | Check or replace solenoid. | | |
| | Idle control device malfunction? | Check or replace idle control device. | | |

| NOTE PAGE |
|-----------|
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |

STOW G-4.5R — EXPLANATION OF CODE IN REMARKS COLUMN

How to read the marks and remarks used in this parts book.

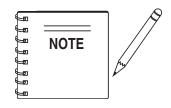
Items Found In the "Remarks" Column

Serial Numbers-Where indicated, this indicates a serial number range (inclusive) where a particular part is used.

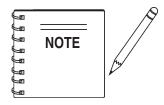
Model Number-Where indicated, this shows that the corresponding part is utilized only with this specific model number or model number variant.

Items Found In the "Items Number" Column

All parts with same symbol in the number column, \star , #, +, %, or <, belong to the same assembly or kit.



The contents of this catalog are subject to change without notice.



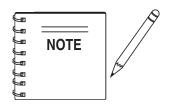
If more than one of the same reference number is listed, the last one listed indicates newest (or latest) part available.

STOW G-4.5R — SUGGESTED SPARE PARTS

G-4.5R 1 TO 3 UNITS WITH ROBIN EX270D20110 ENGINE

1 to 3 Units

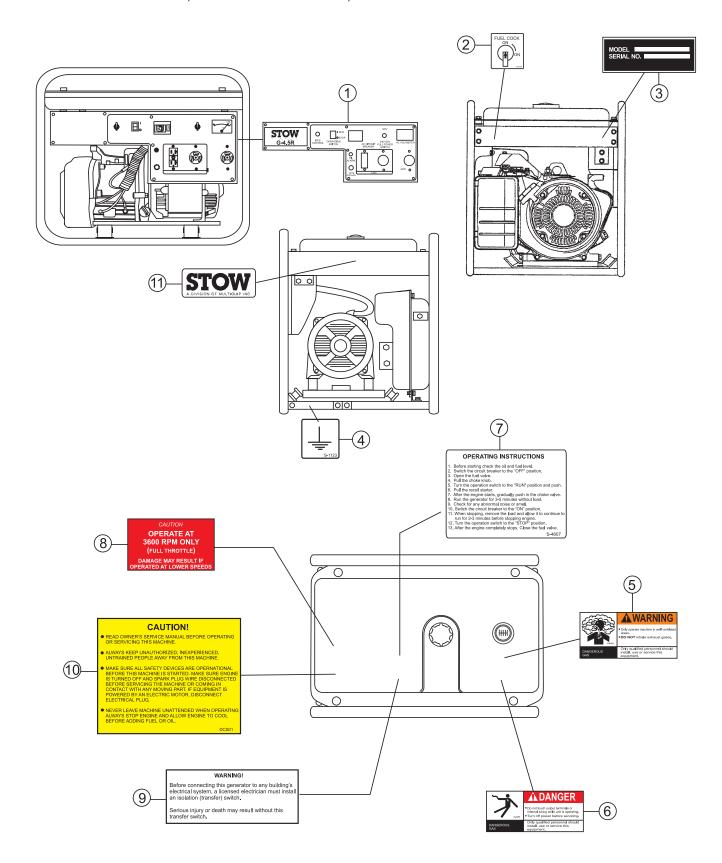
| Qty. | P/N | Description |
|------|---------------|---|
| 1 | | . CAP, FUEL TANK, S/N 5498030 AND BELOW |
| 1 | . A9924800014 | . CAP, FUEL TANK, S/N 5498031 AND ABOVE |
| 1 | . 0810107103 | FUEL FILTER, TANK, S/N 5498030 AND BELOW |
| 1 | . A9924800004 | FUEL FILTER, FUEL TANK, S/N 5498031 AND ABOVE |
| 3 | . 0650140150 | . SPARK PLUG |
| 3 | . 2793260907 | . ELEMENT, AIR CLEANER |
| 1 | . 2795011008 | ROPE RECOIL STARTER |



Part numbers on this Suggested Spare Parts List may supercede/ replace the P/N shown in the text pages of this book.

STOW G-4.5R — NAME PLATE AND DECALS (S/N 5498030 AND BELOW)

NAMEPLATE AND DECALS (S/N 5498030 AND BELOW)



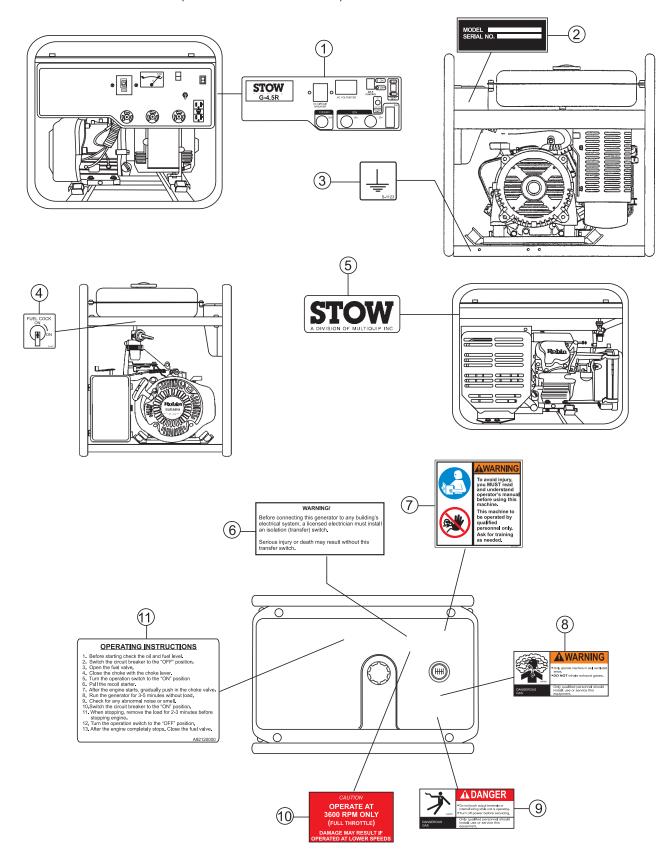
STOW G-4.5R — NAME PLATE AND DECALS (S/N 5498030 AND BELOW)

NAMEPLATE AND DECALS (S/N 5498030 AND BELOW)

| NO. | PART NO. | PART NAME | QTY. | <u>REMARKS</u> |
|-----|-------------|---------------------------------------|------|--------------------------|
| 1 | A3512100502 | DECAL; CONTROL PANEL | 1 | A21220080 |
| 2 | 1630680104 | DECAL; FUEL COCK | 1 | S-1407 |
| 3 | | NAMEPLATE | 1 | CONTACT STOW PARTS DEPT. |
| 4 | 0800628504 | DECAL; GROUND | 1 | S-1123 |
| 5 | 8700611804 | DECAL; WARNING DANGEROUS GAS | 1 | S-4984 |
| 6 | 8700611904 | DECAL; DANGER ELECTRICAL SHOCK HAZ. | 1 | S-4985 |
| 7 | 7900638204 | DECAL; OPERATING INSTRUCTIONS | 1 | S-4607 |
| 8 | 7900636004 | DECAL; CAUTION OPER. AT 3600 RPM ONLY | 1 | S-4461 |
| 9 | 0820610404 | DECAL; WARNING | 1 | S-3627 |
| 10 | 0820610304 | DECAL; CAUTION | 1 | 3311 |
| 11 | A3562000003 | DECAL; STOW | 1 | A36200000 |

STOW G-4.5R — NAME PLATE AND DECALS (S/N 5498030 AND ABOVE)

NAMEPLATE AND DECALS (S/N 5498031 AND ABOVE)

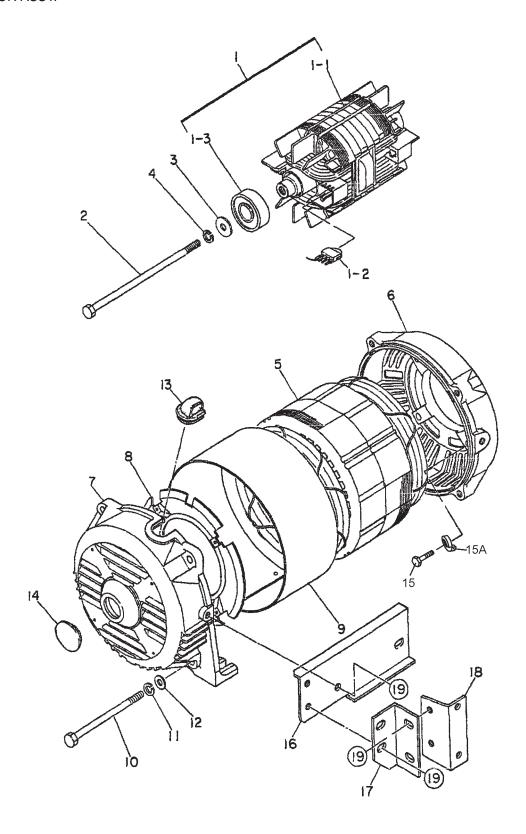


STOW G-4.5R — NAME PLATE AND DECALS (S/N 5498030 AND ABOVE)

NAMEPLATE AND DECALS (S/N 5498031 AND ABOVE)

| NO. | PART NO. | PART NAME | QTY. | <u>REMARKS</u> |
|-----|-------------|---------------------------------------|------|--------------------------|
| 1 | A4511200402 | DECAL; CONTROL PANEL | 1 | A41120040 |
| 2 | | NAMEPLATE | 1 | CONTACT STOW PARTS DEPT. |
| 3 | 0800628504 | DECAL; GROUND | 1 | S-1123 |
| 4 | 1630680104 | DECAL; FUEL COCK | 1 | S-1407 |
| 5 | A4561000203 | DECAL; STOW | 1 | |
| 6 | 0820610404 | DECAL; WARNING | 1 | S-3627 |
| 7 | 35137 | DECAL; WARNING READ MANUAL | 1 | |
| 8 | 8700611804 | DECAL; WARNING DANGEROUS GAS | 1 | S-4984 |
| 9 | 8700611904 | DECAL; DANGER ELECTRICAL SHOCK HAZ. | 1 | S-4985 |
| 10 | 7900636004 | DECAL; CAUTION OPER. AT 3600 RPM ONLY | 1 | S-4461 |
| 11 | A92120000 | DECAL; OPERATING INSTRUCTIONS | 1 | |

GENERATOR ASSY.



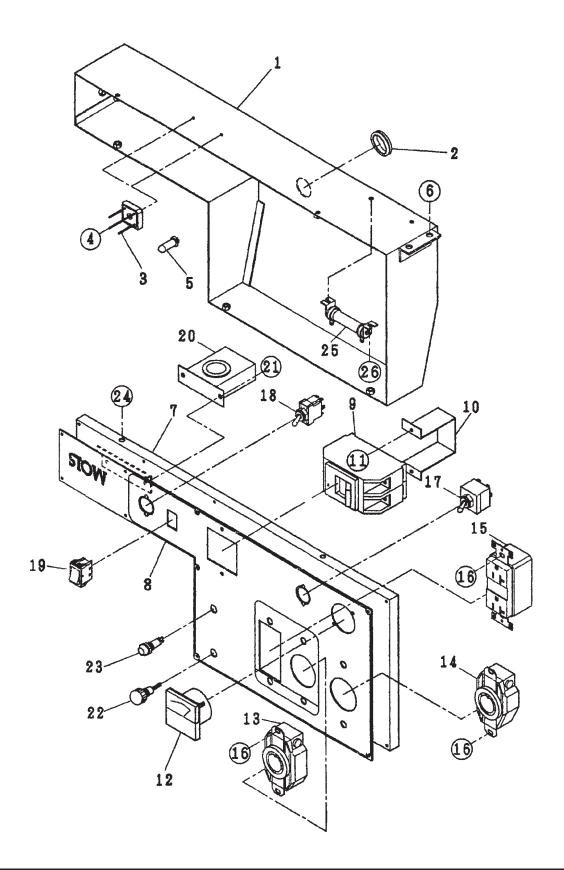
STOW G-4.5R — GENERATOR ASSY.

GENERATOR ASSY.

| NO | PART NO | PART NAME | QTY. | REMARKS |
|------|-------------|----------------------------|------|-------------------------|
| 1 | A3110200003 | ROTOR ASSY | 1 | INCLUDES ITEMS W/* |
| 1-1* | 7661080003 | | | |
| 1-2 | 0601823213 | FIELD COIL ASSY. RECTIFIER | 2 | . D3SB 80 |
| 1-2 | 0601822638 | SURGE ABSORBER | 2 | TNR 15G431K |
| 1-3* | 0071706304 | BEARING | 1 | . 6304 2RU NYCM |
| 2 | 7661017104 | SET BOLT, ROTOR | 1 | |
| 3 | 0801086104 | SET WASHER, BEARING | 1 | |
| 4 | 0040010000 | SPRING WASHER | 1 | |
| 5 | A3136001203 | ARMATURE ASSY. | 1 | |
| 6 | A3155100002 | END BRACKET (C SIDE) | 1 | |
| 7 | A3155000002 | END BRACKET (B SIDE) | 1 | |
| 8 | 7875021523 | GUIDE PANEL, AIR | 1 | |
| 9 | 7661331003 | COVER | 1 | |
| 10 | 7661344204 | SET BOLT, STATOR | 4 | |
| 11 | 0040008000 | SPRING WASHER | 4 | |
| 12 | 0041208000 | PLAIN WASHER | 4 | |
| 13 | 7871329514 | GROMMET | 1 | |
| 14 | 0601851760 | CAP | 1 | |
| 15 | 0013608025 | HEX. HEAD BOLT | 4 | . S/N 5498030 AND BELOW |
| 15 | 0013608025 | HEX. HEAD BOLT | 4 | . S/N 5498031 AND ABOVE |
| 15A | 0040008025 | SPRING WASHER | 4 | . S/N 5498030 AND BELOW |
| 15A | 0040008000 | SPRING WASHER | 4 | . S/N 5498031 AND ABOVE |
| 16 | A3332400304 | MUFFLER BRACKET | 1 | . S/N 5498030 AND BELOW |
| 17 | A3332400204 | MUFFLER BRACKET | | |
| 18 | A3332400104 | MUFFLER BRACKET | 1 | . S/N 5498030 AND BELOW |
| 19 | 0017108020 | HEX. HEAD BOLT | 6 | . S/N 5498030 AND BELOW |

STOW G-4.5R — CONTROL BOX ASSY. (S/N 549830 AND BELOW)

CONTROL BOX ASSY. (S/N 549830 AND BELOW)



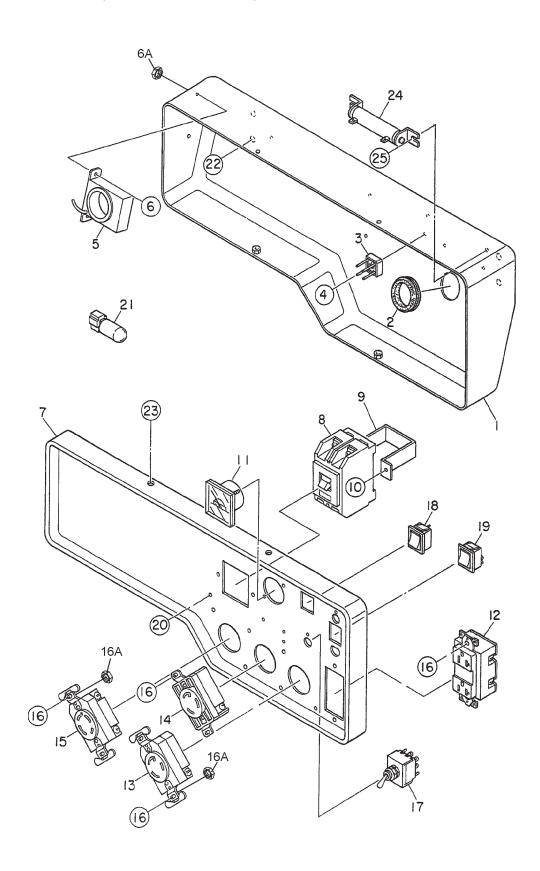
STOW G-4.5R — CONTROL BOX ASSY. (S/N 549830 AND BELOW)

CONTROL BOX ASSY. (S/N 549830 AND BELOW)

| NO | PART NO | PART NAME | QTY. | REMARKS |
|----|-------------|--|------|----------------------------|
| 1 | A3215000303 | CONTROL BOX | 1 | |
| 2 | 0601850215 | GROMMET | 1 | |
| 3 | 0601823204 | GROMMET RECTIFIER | 2 | . S5VB60 |
| 4 | 0027103012 | | 2 | |
| 5 | A3262800004 | | 1 | |
| 6 | 0017106016 | HEX. HEAD BOLT | 4 | |
| 7 | A3225000603 | CONTROL PANEL | 1 | |
| 8 | A3512100502 | NAME PLATE | 1 | . A31210050 |
| 9 | 0601802651 | CIRCUIT BREAKER | 1 | . KM-2 :15A |
| 10 | 4341817004 | BRACKET, CIRCUIT BREAKER | 1 | |
| 11 | 0021004010 | MACHINE SCREW AC VOLTMETER | 2 | |
| 12 | 0601806819 | AC VOLTMETER | 1 | . DE450-011 : 0 ~ 120/240V |
| 13 | 0601811035 | RECEPTACLE | 1 | . L5-30R : 125V, 30A |
| 14 | 0601811032 | RECEPTACLE | 1 | . L6-20R : 250V, 20A |
| 15 | 0601812598 | RECEPTACLE | 1 | . 5-20R : 125V, 20A |
| 16 | 0021004010 | MACHINE SCREW | 6 | |
| 17 | 0601830737 | SWITCH, FULL POWERSWITCH, IDLE CONTROL | 1 | . ET330D12 |
| 18 | 0601830727 | SWITCH, IDLE CONTROL | 1 | . ET115A12 |
| 19 | 0601831600 | SWITCH, OPERATION | 1 | . JW-M11RKK |
| 20 | 0601823853 | SLOW DOWN UNIT | 1 | . ND80B |
| 21 | 0027104010 | MACHINE SCREW | 2 | |
| 22 | 0601815109 | GROUND TERMINAL | 1 | |
| 23 | 0601810553 | ALARM LAMP, OIL | 1 | . D121091SR:12V |
| 24 | 0017105010 | HEX HEAD BOLT | 5 | |
| 25 | 0601842426 | RESISTOR | 1 | . 40W, 400 |
| 26 | 0027104012 | MACHINE SCREW | 2 | |
| 26 | 0207004000 | HEX.NUT | 2 | |

STOW G-4.5R — CONTROL BOX ASSY. (S/N 549831 AND ABOVE)

CONTROL BOX ASSY. (S/N 549831 AND ABOVE)



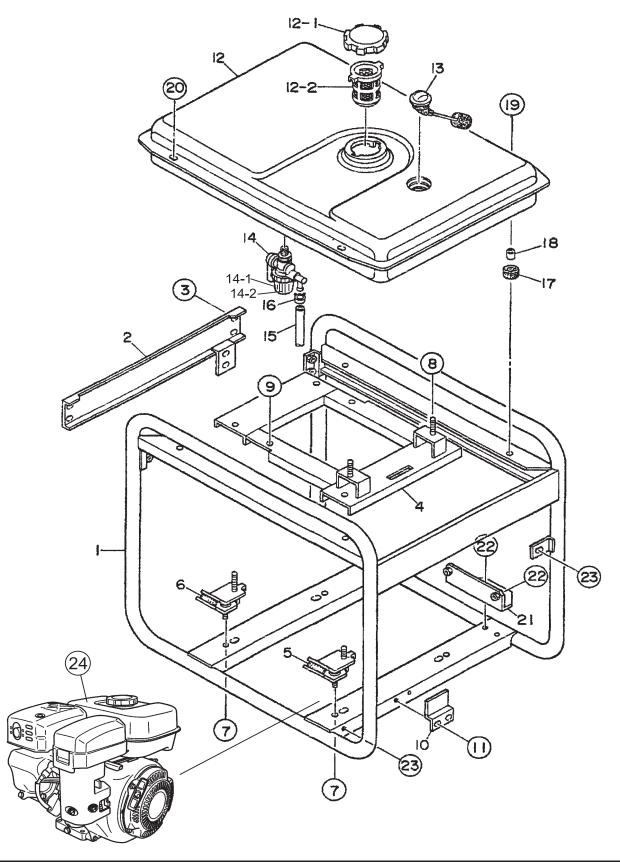
STOW G-4.5R — CONTROL BOX ASSY. (S/N 549831 AND ABOVE)

CONTROL BOX ASSY. (S/N 549831 AND ABOVE)

| NO | PART NO | PART NAME | QTY. | <u>REMARKS</u> |
|-----|-------------|--|------|--------------------------|
| 1 | A3214000003 | CONTROL BOX | 1 | |
| 2 | 0601850102 | GROMMET | 1 | |
| 3 | 0601823204 | | 2 | S5VB60 |
| 4 | 0027103012 | MACHINE SCREW SLOW-DOWN UNIT | 2 | |
| 5 | 0601823853 | SLOW-DOWN UNIT | 1 | ND-80 |
| 6 | 0027104010 | MACHINE SCREW | 2 | |
| 6A | 0207004000 | HEX NUT | 2 | |
| 7 | A3224000003 | CONTROL PANEL | 1 | |
| 8 | 0601802651 | HEX NUT CONTROL PANEL CIRCUIT BREAKER | 1 | KM-2 :15A |
| 9 | 4341817004 | BRACKET CIRCUIT BREAKER | 1 | |
| 10 | 0021004010 | MACHINE SCREW AC VOLTMETER | 2 | |
| 11 | 0601806819 | AC VOLTMETER | 1 | DE450-011 : 0 ~ 120/240V |
| 12 | 0601812598 | RECEPTACLE | 1 | 5-20R : 125V, 20A |
| 13 | 0601812592 | RECEPTACLE | 1 | L5-20R : 125V, 20A |
| 14 | 0601811035 | RECEPTACLE | 1 | L5-30R : 125V, 30A |
| 15 | 0601814010 | RECEPTACLE | 1 | L14-20R :125/250V, 30A |
| 16 | 0021004010 | MACHINE SCREW | 8 | |
| 16A | 0207004000 | HEX NUT | 8 | |
| 17 | 0601830737 | | 1 | ET330D12 |
| 18 | 0601831620 | SWITCH, IDLE CONTROLSWITCH, OPERATION | 1 | C1550WA |
| 19 | 0601831620 | SWITCH, OPERATION | 1 | C1550WA |
| 20 | 0021004015 | MACHINE SCREW | 1 | |
| 20A | 0207004000 | HEX NUT | 1 | |
| 21 | A3262800004 | CONDENSER ASSY. 50V @ 1000 µF | 1 | VR1H102MHA |
| 22 | 0017106016 | | | |
| 23 | 0017105010 | HEX. HEAD BOLT | 4 | |
| 24 | 0601842426 | HEX. HEAD BOLT HEX. HEAD BOLT RESISTOR | 1 | 40W, 400 OHMS |
| 25 | 0027104010 | | 2 | |

STOW G-4.5R — PIPE FRAME ASSY. (S/N 549830 AND BELOW)

PIPE FRAME ASSY. (S/N 549830 AND BELOW)



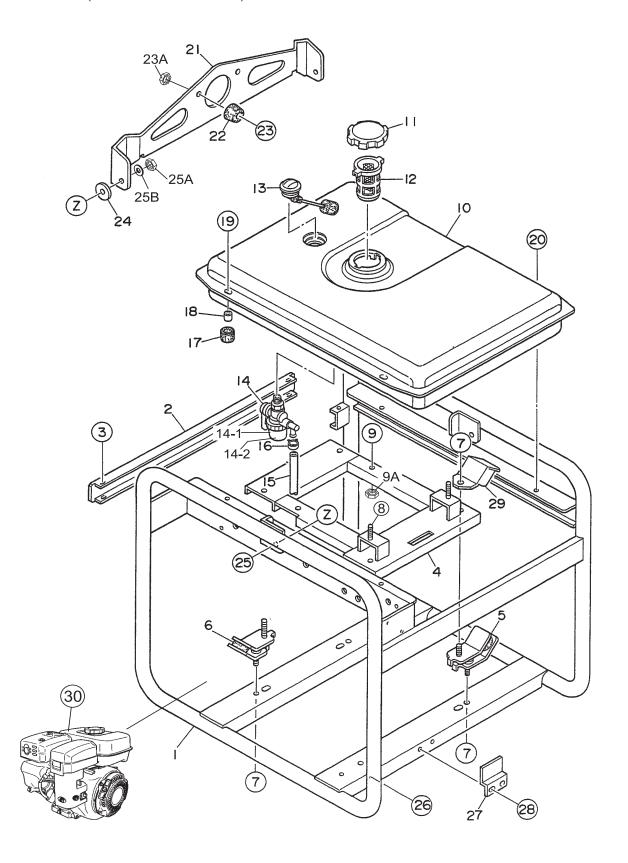
STOW G-4.5R — PIPE FRAME ASSY. (S/N 549830 AND BELOW)

PIPE FRAME ASSY. (S/N 549830 AND BELOW)

| NO | PART NO | PART NAME | QTY. | REMARKS |
|------|-------------------|----------------------------|------|----------------|
| 1 | A3418000112 | PIPE FRAME | 1 | |
| 2 | A3485500004 | SUPPORT, PIPE FRAME | 1 | |
| 3 | 0017106016 | HEX. HEAD BOLT | 4 | |
| 4 | A3305100103 | ENGINE BASE | 1 | |
| 5 | A9312601704 | RUBBER SUSPENSION | 2 | |
| 6 | 7935416004 | RUBBER SUSPENSION | 2 | |
| 7 | 0207008000 | HEX. NUT | 8 | |
| 8 | 0207008000 | HEX. NUT | 2 | |
| 9 | 0017108040 | HEX. HEAD BOLT | 2 | |
| 9A | 0207008000 | HEX. NUT | 2 | |
| 10 | A3305200104 | STOPPER | 1 | |
| 11 | 0017106016 | HEX. HEAD BOLT | 2 | |
| 12 | A3365000102 | FUELTANK | 1 | |
| 12-1 | 0810106004 | CAP, FUEL TANK | 1 | |
| 12-2 | 0810107103 | FUEL FILTER | 1 | |
| 13 | 0602125034 | FUEL GUAGE | 1 | CJ-58A |
| 14 | 0605510026 | FUEL STRAINER | 1 | |
| 14-1 | 0642007810 | CUP, FILTER FUEL STRAINER | | |
| 14-2 | 0642006410 | PACKING, FUEL STRAINER CUP | 1 | |
| 15 | 0605513169 | HOSE | 1 | |
| 16 | 0605515105 | HOSE BAND | 2 | |
| 17 | 7855525514 | RUBBER CUSION | 2 | |
| 18 | 7855525604 | COLLAR | 2 | |
| 19 | 0017108030 | HEX. HEAD BOLT | 2 | |
| 20 | 0017108020 | HEX. HEAD BOLT | 2 | |
| 21 | A3332400004 | BRACKET | 1 | |
| 22 | 0017106016 | HEX. HEAD BOLT | 4 | |
| 23 | 0019206016 | HEX. HEAD BOLT | 2 | |
| 24 | A4924200004 EX27D | ROBIN ENGINE | 1 | |

STOW G-4.5R — PIPE FRAME ASSY. (S/N 549831 AND ABOVE)

PIPE FRAME ASSY. (S/N 549830 AND ABOVE)



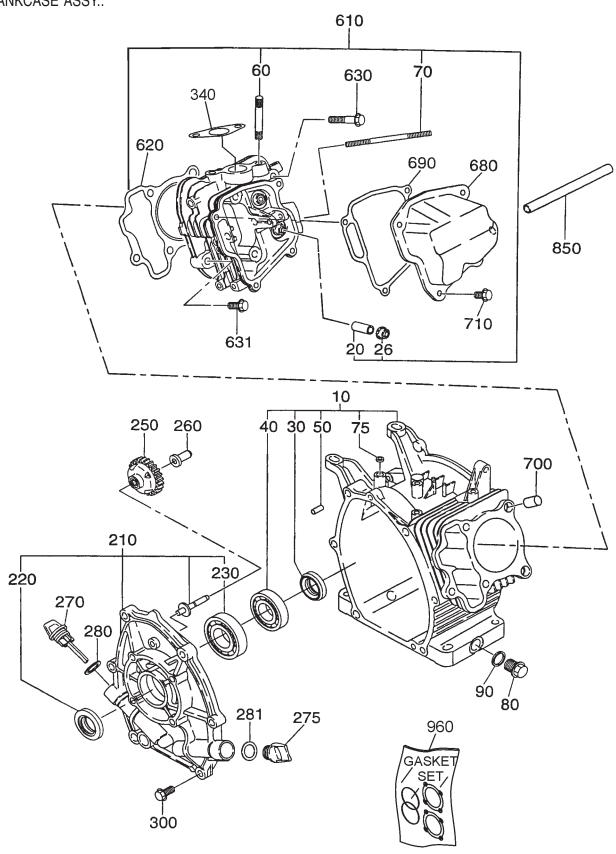
STOW G-4.5R — PIPE FRAME ASSY. (S/N 549831 AND ABOVE)

PIPE FRAME ASSY. (S/N 549830 AND ABOVE)

| NO | PART NO | PART NAME | QTY. | REMARKS |
|------|-------------------|----------------------------|--------|---------|
| 1 | A4417000002 | PIPE FRAME | 1 | |
| 2 | A3417100004 | BRACKET | 1 | |
| 3 | 0017106016 | HEX. HEAD BOLT | 4 | |
| 4 | A3304100003 | ENGINE BASE | 1 | |
| 5 | A9312601704 | RUBBER SUSPENSION | 2 | |
| 6 | 7935416004 | RUBBER SUSPENSION | 2 | |
| 7 | 0207008000 | HEX. NUT | 8 | |
| 8 | 0207008000 | HEX. NUT | 2 | |
| 9 | 0017108040 | HEX. HEAD BOLT | 2 | |
| 9A | 0207008000 | HEX. NUT | 2 | |
| 10 | A4364000002 | FUELTANK | 1 | |
| 11 | A9924800014 | CAP, FUEL TANK | 1 | |
| 12 | 0810107103 | FUEL FILTER | 1 | |
| 13 | 0602125034 | FUEL GUAGE | 1 | CJ-58A |
| 14 | 0605510026 | FUEL STRAINER | 1 | |
| 14-1 | 0642007810 | CUP, FILTER FUEL STRAINER | | |
| 14-2 | 0642006410 | PACKING, FUEL STRAINER CUP | | |
| 15 | 0605513194 | HOSE | 1 | |
| 16 | 0605515062 | HOSE BAND | 2 | |
| 17 | 7855525514 | RUBBER CUSION | 2 | |
| 18 | 7855525604 | COLLAR | 2 2 | |
| 19 | 0017108030 | HEX. HEAD BOLT | 2 | |
| 20 | 0017108020 | HEX. HEAD BOLT | 2 | |
| 21 | A9117200103 | HANGER | 1 | |
| 22 | 0601850097 | STOPPER | 1 | |
| 23 | 0021008025 | MACHINE SCREW | 1 | |
| 23A | 0207008000 | HEX NUT | 1 | |
| 24 | A9311100004 | PLASTIC WASHER | 2 | |
| 25 | 0011308025 | HEX HEAD BOLT | 2 | |
| 25A | 0037908000 | HEX NUT | 2 | |
| 25B | 0042108000 | WASHER, FLAT | 2 | |
| 26 | 0019206016 | HEX HEAD BOLT | 1 | |
| 27 | A3305200104 | STOPPER | 1 | |
| 28 | 0017106016 | HEX HEAD BOLT | 2 | |
| 29 | A3414500004 | COVER | 1 | |
| 30 | A4924200004 EX27D | ROBIN ENGINE | 1 | |
| | | | | |

ROBIN EX270D20110— CRANKCASE ASSY.

CRANKCASE ASSY...



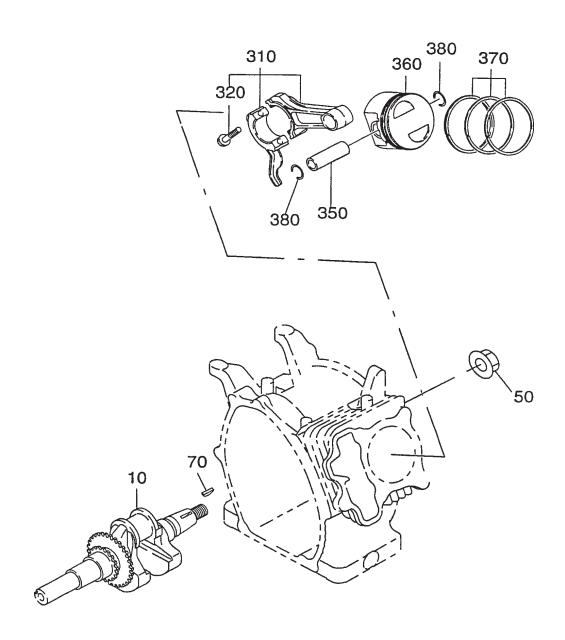
ROBIN EX270D20110— CRANKCASE ASSY.

CRANKCASE ASSY.

| NO | PART NO | PART NAME | | REMARKS | |
|-------|------------|---|-----------|---------|---------------------|
| 10 | 2791010251 | CRANKCASE ASSY | | 1 . | INCLUDES ITEMS W/* |
| 20% | 2371420203 | VALVE GUIDE | | 2 | |
| 26% | 2771601001 | STEM SEAL | | 1 | |
| 30* | 0440300110 | OIL SEAL | | 1 | |
| 46* | 0600300341 | BALL BEARING | | 1 | |
| 50* | 2771501103 | PIPE KNOCK | | 2 | |
| 60% | 0105080250 | STUD | | 2 | |
| 70% | 0105060410 | STUD | | 2 | |
| 75 | 0440060020 | OIL SEAL | | 1 | |
| 80 | 0401140020 | PLUG | | 2 | |
| 90 | 0211140020 | GASKET | | 2 | |
| 210 | 2791100121 | MAIN BEARING COVER | | 1 . | INCLUDES ITEMS W/+ |
| 220+ | 0440300160 | OIL SEAL | | 1 | |
| 230+ | 0600300370 | BALL BEARING | | 1 | |
| 250 | 2774500421 | GOVERNOR GEAR | | 1 | |
| 260 | 2774190103 | GOVERNOR SLEEVE | | 1 | |
| 275 | 2796500103 | FILLER PLUG | | 1 | |
| 280\$ | 0213200050 | GASKET | | 1 | |
| 281 | 0213200050 | GASKET | | 1 | |
| 300 | 0010408350 | FLANGE BOLT | | 7 | |
| 340\$ | 2773520103 | GASKET, MUFFLER 26D 9D | K58P 0.2T | 1 | |
| 610 | 2791300111 | GASKET, MUFFLER 26D 9DX CYLINDER HEAD ASSY | | 1 . | INCLUDES ITEMS W/% |
| 620\$ | 2791500123 | GASKET HEAD | | 1 | |
| 630 | 0110080240 | FLANGE BOLT | | 4 | |
| 631 | 0010408350 | FLANGE BOLT | | 1 | |
| 680 | 2771550101 | ROCKER COVER | | 1 | |
| 690\$ | 2771600103 | GASKET, ROCKET COVER | | 1 | |
| 700 | 2771501103 | PIPE KNOCK | | 2 | |
| 710 | 0110060020 | FLANGE BOLT | | 4 | |
| 850 | 0851080000 | RUBBER PIPE GASKET SET | | 1 | |
| 960 | 2799900107 | GASKET SET | | 1 . | INCLUDES ITEMS W/\$ |

ROBIN EX270D20110 — CRANKSHAFT AND PISTON ASSY.

CRANKSHAFT AND PISTON ASSY.

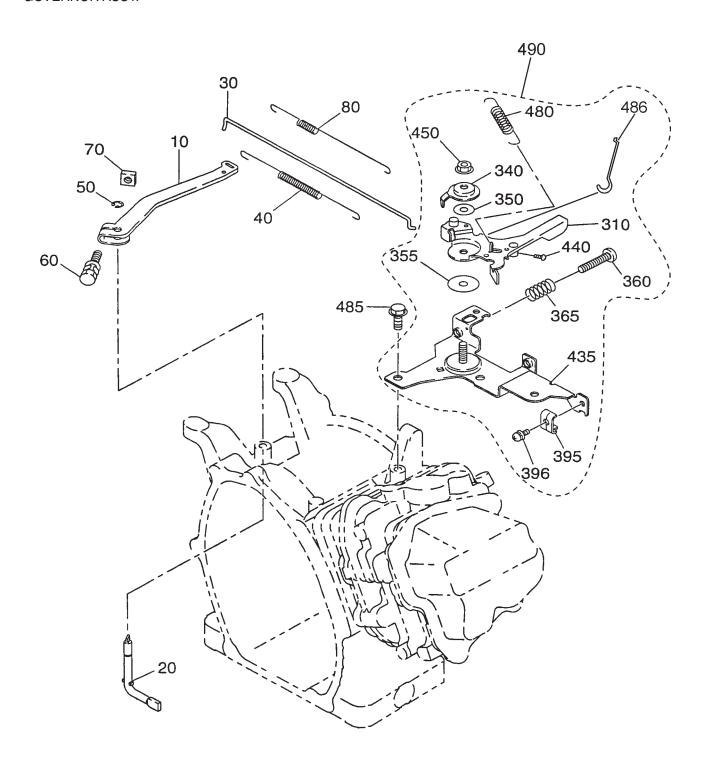


ROBIN EX270D20110 — CRANKSHAFT AND PISTON ASSY.

CRANKSHAFT AND PISTON ASSY.

| NO | PART NO | PART NAME | QTY. | <u>REMARKS</u> |
|------|------------|---------------------------|------|-------------------|
| 10 | 2792120131 | CRANKSHAFT CP | 1 | |
| 50 | 0180180010 | FLANGE NUT | 1 | |
| 70 | 0323030010 | WOODRUFF KEY | 1 | |
| 310 | 2792250120 | CONNECTING ROD ASSY | 1 | INCLUDES ITEM W/* |
| 320* | 2792300103 | CONNECTING ROD BOLT | 2 | |
| 350 | 2792330103 | PISTON PIN | 1 | |
| 360 | 2792340103 | PISTON, STANDARD | 1 | |
| 360 | 2792340303 | PISTON OVERSIZE 0.25 MM | 1 | |
| 360 | 2792340403 | PISTON OVERSIZE 0.50 MM | 1 | |
| 370 | 2792351107 | PISTON RING SET, STANDARD | 1 | |
| 370 | 2792351207 | PISTON RING SET, O.25 MM | 1 | |
| 370 | 2792351307 | PISTON RING SET, STANDARD | 1 | |
| 380 | 0565180010 | CLIP | 2 | |

GOVERNOR ASSY.



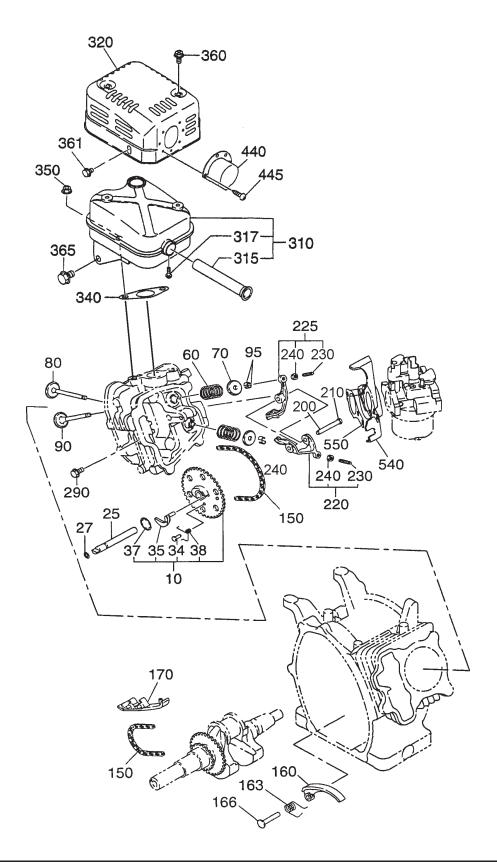
ROBIN EX270D20110 — GOVERNOR ASSY.

GOVERNOR OPERATION ASSY.

| NO | PART NO | PART NAME | QTY. | REMARKS |
|------|------------|------------------------|------|----------------------------------|
| 10 | 2794230113 | GOVERNOR LEVER | 1 | |
| 20 | 2774220133 | GOVERNOR SHAFT | 1 | |
| 30 | 2794270101 | GOVERNOR ROD CP | 1 | |
| 40 | 2774280113 | ROD SPRING | 1 | |
| 50 | 0031305000 | CLIP | 1 | |
| 60 | 0130060240 | BOLT & WASHER ASSY. | 1 | |
| 70 | 0186060020 | NUT | 1 | |
| 80 | 2794250223 | GOVERNOR SPRING | 1 | |
| 310* | 2774330301 | SPEED CONTROL LEVER | 1 | |
| 340* | 2774350103 | STOP PLATE | 1 | |
| 350* | 0200060170 | WASHER | 1 | |
| 355* | 0217060070 | FRICTION WASHER | 1 | |
| 360* | 0140060180 | SCREW | 1 | |
| 365* | 2374500423 | SPRING, ADJUST | 1 | |
| 370 | 0021706000 | NUT | 1 | |
| 435* | 2774600101 | SPEED CONT. BRKT CP | 1 | CAN ONLY BE PURCHASED W/ITEM 490 |
| 395* | 2774390203 | CLAMP | 1 | |
| 396* | 0131050030 | SCREW AND WASHER ASSY. | 1 | |
| 440* | 0043104080 | SCREW | 1 | |
| 450* | 0023506000 | SELF LOCK NUT | 1 | |
| 480* | 2774510103 | RETURN SPRING | 1 | |
| 485 | 0110060020 | FLANGE BOLT | 2 | |
| 486 | 2774370103 | LINK ROD | 1 | |
| 490 | 2774600303 | SPEED CONTROL ASSY | 1 | INCLUDES ITEMS W/* |

ROBIN EX270D20110 — INTAKE AND EXHAUST ASSY.

INTAKE AND EXHAUST ASSY.

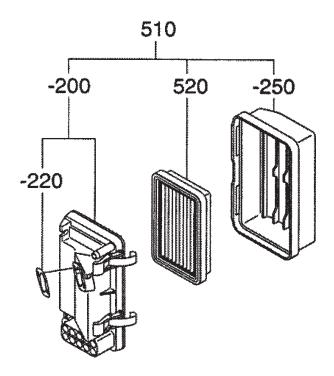


ROBIN EX270D20110 — INTAKE AND EXHAUST ASSY.

INTAKE AND EXHAUST ASSY.

| NO. | PART NO. | PART NAME CAMSHAFT CP | QTY. | REMARKS |
|------|------------|----------------------------------|------|----------------------|
| 10 | 2793160101 | CAMSHAFT CP | | . INCLUDES ITEMS W/* |
| 25 | 2773510103 | PIN, CAMSHAFT, 9DX78.5L | 1 | |
| 27 | 0240060010 | O RING, 5.8DX9.6DX1.9T | 1 | |
| 34* | 2773860103 | SPRING PIN, 4DX7.5DX11L | 1 | |
| 35* | 2793640103 | RELEASE LEVER | 1 | |
| 37* | 2773650103 | CLIP, 13.8DX20.3DX0.4T | 1 | |
| 38* | 2773870103 | RETURN SPRING | 1 | |
| 60 | 2793360103 | VALVE SPRING, 17DX2.3DX27L N=5.8 | 2 | |
| 70 | 2693370103 | SPRING RETAINER | 2 | |
| 80 | 2793340113 | INTAKE VALVE, 28.5DX5.5DX67.8L | 1 | |
| 90 | 2793350113 | EXHAUST VALVE, 26.5DX5.5DX67.8L | 1 | |
| 95 | 13210KA031 | COLLET VALVE | 4 | |
| 150 | 2793560111 | TIMING CHAIN CP, 100 LINK | 1 | |
| 160 | 2773691103 | TENTIONER | 1 | |
| 163 | 2773710103 | SPRING, TENTIONER | 1 | |
| 166 | 2773690203 | PIN, TENTIONER, 6DX13DX34L | 1 | |
| 170 | 2773691313 | CHAIN GUIDE | 1 | |
| 200 | 2773500123 | PIN, ROCKER, 6DX9DX41L | 1 | |
| 210 | 0031305000 | CLIP | 1 | |
| 220 | 2773620100 | ROCKER ARM ASSY. IN | | |
| 225 | 2773620200 | ROCKER ARM ASSY. EX | | . INCLUDES ITEMS W/# |
| 230# | 0149050020 | ADJUST SCREW, M5X0.5X23L | 1 | |
| 240# | 0170050030 | NUT, M5X0.5X4.1H | 1 | |
| 290 | 0110060020 | FLANGE BOLT, M6X1.0X12L | 1 | |
| 310 | 2793020111 | MUFFLER, CP | 1 | |
| 315 | 2793760101 | SPARK ARRESTOR | 1 | |
| 317 | 0150040060 | TAPPING SCREW | 1 | |
| 320 | 2793420111 | MUFFLER COVER CP | 1 | |
| 340 | 2773520103 | GASKET, MUFFLER 26D 9DX58P 0.2T | | |
| 350 | 9802008280 | FLANGE NUT | 2 | |
| 360 | 0152060090 | TAPPING BOLT, M6X1.0X10L | 2 | |
| 361 | 0110060010 | FLANGE BOLT, M6X1.0X8L | 1 | |
| 365 | 0110080150 | FLANGE BOLT, M8X1.25X12L | 1 | |
| 440 | 2773700103 | DEFLECTOR | 1 | |
| 445 | 0150040060 | TAPPING SCREW | 2 | |
| 540 | 2793290113 | INSULATOR | 1 | |
| 550 | 2793590123 | GASKET, INSULATOR | 1 | |

AIR CLEANER ASSY.



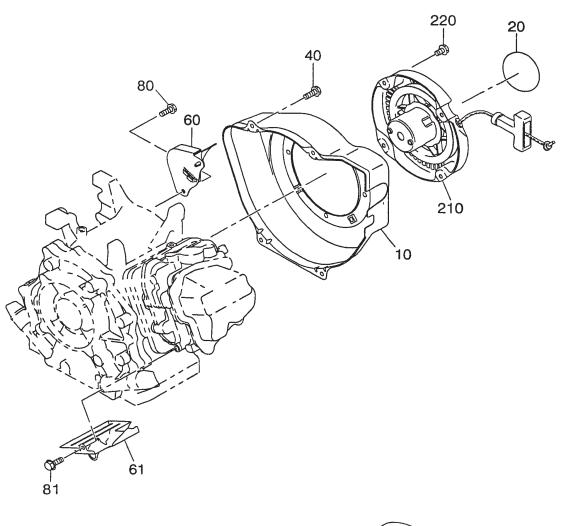
ROBIN EX270D20110 — AIR CLEANER ASSY.

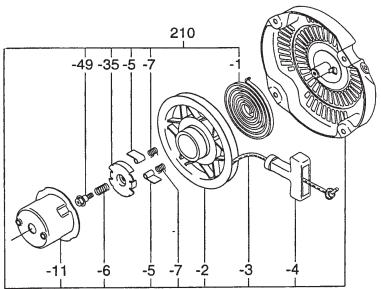
AIR CLEANER ASSY.

| NO. | PART NO. | PART NAME | QTY. | REMARKS |
|----------|------------|-------------------------------|------|----------------------|
| 510 | 2793262030 | AIR CLEANER ASSY. LOW PROFILE | 1 | . INCLUDES ITEMS W/* |
| 510-200* | 2793263308 | BODY CP | 1 | |
| 510-220* | 2793265008 | GASKET | 1 | |
| 510-250* | 2793264508 | COVER, LOW PROFILE | 1 | |
| 520* | 2793260907 | ELEMENT ASSY. | 1 | |

ROBIN EX270D20110 — COOLING STARTING ASSY.

COOLING STARTING ASSY.



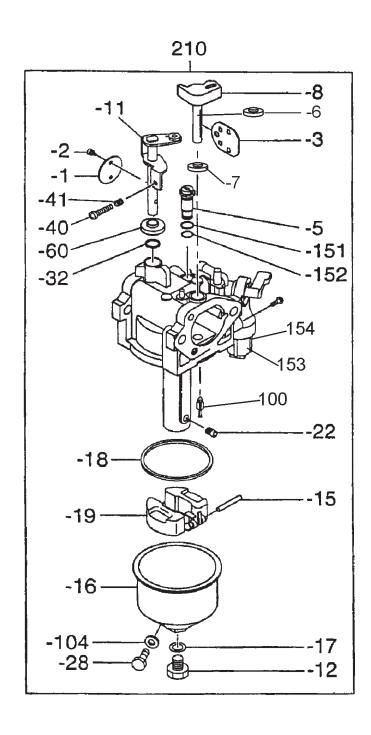


ROBIN EX270D20110 — COOLING STARTING ASSY.

COOLING STARTING ASSY.

| NO | PART NO | PART NAME | QTY. | REMARKS |
|---------|------------|---------------------------|------|-------------------|
| 10 | 2795120111 | BLOWER HOUSING CP, YELLOW | 1 | |
| 20 | 0732005140 | LABEL, TRADEMARK 64D | 1 | |
| 40 | 0110060030 | FLANGE BOLT | 4 | |
| 60 | 2795271111 | BAFFLE 1, CASE CP | 1 | |
| 61 | 2795270213 | BAFFLE 2, HEAD | 1 | |
| 80 | 0016508120 | BOLT | 1 | |
| 81 | 0110060020 | FLANGE BOLT | 1 | |
| 210 | 2795020200 | RECOIL STARTER ASSY | 1 | INCLUDES ITEM W/* |
| 210-1* | 2265071608 | SPIRAL SPRING | 1 | |
| 210-2* | 2795012008 | REEL | 1 | |
| 210-3* | 2795011008 | STARTER ROPE | 1 | |
| 210-4* | 2265070108 | STARTER KNOB | 1 | |
| 210-5* | 2795012508 | RATCHET | 2 | |
| 210-6* | 2265073108 | FRICTION SPRING | 1 | |
| 210-7* | 2265075208 | RATCHET SPRING | 2 | |
| 210-11* | 2795014508 | STARTER PULLEY | 1 | |
| 210-35* | 2265074108 | FRICTION PLATE | 1 | |
| 210-49* | 2265075308 | CENTER SCREW | 1 | |
| 220 | 0110060010 | FLANGE BOLT | 4 | |

FUEL LUBRICANT ASSY.

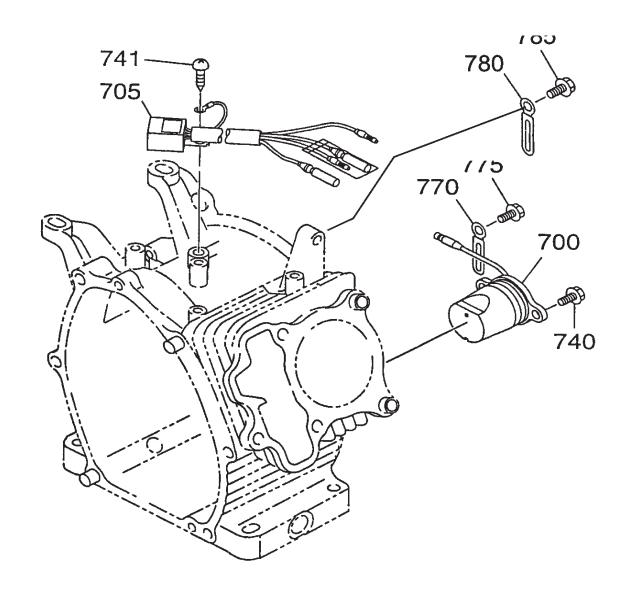


ROBIN EX270D20110 — CARBURETOR ASSY.

FUEL LUBRICANT ASSY.

| NO | PART NO | PART NAME | QTY. | REMARKS |
|----------|------------|----------------------------|------|-------------------|
| 210 | 2796230100 | CARBURETOR ASSY | 1 | INCLUDES ITEM W/* |
| 210-1* | 2796253508 | VALVE THROTTLE | 1 | |
| 210-2* | 2516245008 | SCREW | 2 | |
| 210-3* | 2796252508 | VALVE CHOKE | 1 | |
| 210-5* | 2796242008 | JET SLOW | 1 | |
| 210-6* | 2796256308 | COLLAR, UPPER, LOW PROFILE | 1 | |
| 210-7* | 2796256408 | COLLAR, LOWER, LOW PROFILE | 1 | |
| 210-8* | 2796252008 | SHAFT CHOKE | 1 | |
| 210-11* | 2796253008 | SHAFT SUB ASSY., THROTTLE | 1 | |
| 210-12* | 2516245308 | SCREW | 1 | |
| 210-15* | 2796251508 | PIN FLOAT LEVER | 1 | |
| 210-16* | 2796255008 | CHAMBER FLOAT | 1 | |
| 210-17* | 2796235008 | GASKET | 1 | |
| 210-18* | 2796254008 | GASKET CHAMBER | 1 | |
| 210-19* | 2796250508 | FLOAT SUB ASSY. | 1 | |
| 210-22* | 2796240008 | JET MAIN | 1 | |
| 210-22* | 2796240108 | JET MAIN | 1 | |
| 210-28* | 2796235508 | SCREW DRAIN | 1 | |
| 210-32* | 2796256108 | BUSH | 1 | |
| 210-40* | 2796235308 | SCREW ADJUSTING | 1 | |
| 210-41* | 2796244508 | SPRING | 1 | |
| 210-60* | 2796256208 | COLLAR | 1 | |
| 210-100 | 2796250008 | VALVE, ASSY. | 1 | |
| 210-104* | 2796255208 | GASKET | 1 | |
| 210-121* | 2516248008 | CAP | 1 | |
| 210-151* | 2796245208 | O-RING | 1 | |
| 210-152* | 2796245108 | O-RING | 1 | |
| 210-153* | 0652007810 | FILTER CUP | 1 | |
| 210-154* | 0642006410 | PACKING, FILTER CUP | 1 | |

FLYWHEEL ASSY.



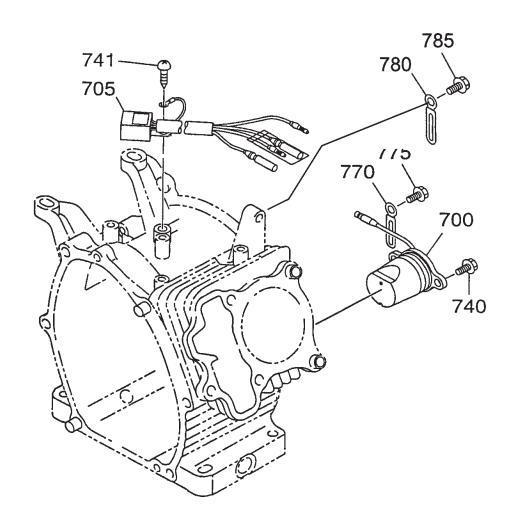
ROBIN EX270D20110 — FLYWHEEL ASSY.

FLYWHEEL ASSY.

| NO | PART NO | PART NAME | QTY. | REMARKS |
|-----|------------|-------------------------|------|----------------|
| 10 | 2797923001 | FLYWHEEL CP | 1 | |
| 11 | 2797943001 | IGNITION COIL CP | 1 | |
| 30 | 0011406250 | BOLT & WASHER ASSY. | 2 | |
| 50 | 27773102H1 | WIRE 2 CP, W/OIL SENSOR | 1 | |
| 60 | 0660000371 | SWITCH ASSY. | 1 | |
| 70 | 0150040090 | TAPPING SCREW | 2 | |
| 100 | 0650140150 | SPARK PLUG | 1 | NGK BR6HS |
| 110 | 0655000270 | SPARK PLUG CAP | 1 | |

ROBIN EX270D20110 — ELECTRIC DEVICE ASSY.

ELECTRIC DEVICE ASSY.



ROBIN EX270D20110 — ELECTRIC DEVICE ASSY.

ELECTRIC DEVICE ASSY.

| NO | PART NO | PART NAME | QTY. | REMARKS |
|-----|------------|---------------------|------|----------------|
| 700 | 2797630131 | OIL SENSOR CP | 1 | |
| 705 | KU31107001 | FLOAT, C/U CP3 | 1 | |
| 740 | 0011406160 | BOLT & WASHER ASSY. | 2 | |
| 740 | 0011406160 | BOLT & WASHER ASSY. | 2 | |
| 741 | 0150040090 | TAPPING BOLT | 1 | |
| 770 | 2147900601 | CLAMP CP | 1 | |
| 775 | 0110060020 | FLANGE BOLT | 1 | |
| 780 | 2797550103 | CLAMP | 1 | |
| 785 | 0152060050 | TAPPING BOLT | 1 | |

PAYMENT TERMS

Terms of payment for unit sales are 2% 15 days net 30 days from date of invoice unless otherwise specifically stated on our invoice. Parts invoices have terms of net 10 days. Minimum parts billing is \$15.00 net.

Applicable discounts will be computed on merchandise value only. Late charges will be assessed at prevailing rates. Cash discounts cannot be taken on current billings if any previously billed amounts are past due.

FREIGHT POLICY

Freight policy is established to offer customers every advantage possible. Due to bulk freight ratings on some equipment and other shipping considerations, freight policies differ by equipment type. Actual back freight may be charged for shipments originating from other than specified FOB warehouses. See Freight Policy for details.

All STOW domestic sales are FOB nearest available designated MQ/STOW warehouse. Export orders are ex-works factory located in Carson, CA or Boise, ID.

Additions to orders already shipped cannot be accepted for freight minimums.

Should STOW elect to make partial shipments of an order originally complying with the "freight allowed" requirements, transportation charges will be absorbed by STOW on any subsequent shipment applying to that order.

All other orders will be shipped collect or prepaid with charges added to the invoice. STOW's responsibility ceases when a signed manifest has been obtained from the carrier, and any claim for shortage or damage must be settled between the consignee and the carrier.

Parts: FOB Carson, California or Boise, Idaho. See Freight Policy for details and additional discounts.

Terms and Conditions of Sale STOW Construction Equipment

DROP SHIPMENTS

STOW reserves the right to refuse Drop Shipments outside the normal service area of the purchasing dealer.

FIELD WAREHOUSES

Field Warehouses are currently located in California, Georgia, Idaho, Iowa, and New Jersey

SPECIAL EXPEDITING SERVICE

The higher of a \$35.00 surcharge or actual costs will be added to the invoice for special handling, including bus shipments, or in cases where STOW personnel must personally deliver the equipment or parts to the carrier.

RETURNED GOODS POLICY

Return shipments may be accepted and credit allowed, subject to the following provisions.

- 1. A Returned Material Authorization (RMA) must be approved by STOW prior to shipment. Approvals for returned goods must be with just cause and are at the sole discretion of STOW. A copy of the Authorization must accompany the shipment to the designated Warehouse.
- 2. Parts being returned must be listed as currently supplied on the current parts list.
- 3. Parts must be in new and resalable condition in the original package, with part numbers clearly marked.
- 4. Units and accessories must be current models in the latest price list and in new and resalable condition.
- 5. Special order items are not returnable for credit.
- 6. Credit on returned parts and units will be issued at actual dealer net price at time of purchase less 15% restocking charge.
- 7. All returned shipments are to be made to the STOW designated receiving point, freight prepaid at the sender's expense.

The sender will be notified of any material received that does not meet the above provisions. Such material will be held for 30 days from notification pending instructions. If a reply is not received within 30 days, the material will be returned to the sender at his expense with no credit issued.

PRICING, REBATES AND **SPECIFICATIONS**

Every effort will be made to provide adequate notice of changes; however, prices and equipment specifications are subject to change without notice.

Price changes are effective on a specific date and all orders received on or after that date will be billed at the revised price.

Rebates for price reductions and added charges for price increases will not be made for stock in dealer inventory at the time of a price change. STOW reserves the right to quote and sell direct to Government agencies and to Original Equipment Manufacturer accounts who use our products as integral parts of their own products.

LIMITATION OF SELLER'S LIABILITY

STOW shall not be liable hereunder for damages in excess of the purchase price of the item with respect to which damages are claimed and in no event shall STOW be liable for loss of profit or good will or for any other special, consequential or incidental damages.

LIMITATION OF WARRANTIES

There are no warranties, express or implied, made by STOW. hereunder on Products manufactured or distributed by it except the warranty against defects in material and workmanship on new Products to the original purchaser, as set forth in the STOW New Product Limited Warranty.

A DIVISION OF MULTIQUIP INC.

Atlanta • Boise • Newark • Quebec, Canada Manchester, UK . Rio de Janeiro, BR . Puebla, MX

STOW CONSTRUCTION EQUIPMENT

POST OFFICE BOX 6254 CARSON, CALIFORNIA 90749 310-661-4242 • 877-BUY-STOW FAX:310-604-9237

E-MAIL: stow@stowmfg.com

www.stowmfg.com

| NOTE PAGE |
|-----------|
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |

OPERATION AND PARTS MANUAL

HERE'S HOW TO GET HELP

PLEASE HAVE THE MODEL AND SERIAL NUMBER *ON-HAND* WHEN CALLING

PARTS DEPARTMENT

800-427-1244 FAX: 800-672-7877 310-537-3700 FAX: 310-637-3284

SERVICE DEPARTMENT

800-478-1244 FAX: 310-537-4259

310-537-3700

TECHNICAL ASSISTANCE

800-478-1244 FAX: 310-631-5032

WARRANTY DEPARTMENT

800-421-1244, EXT. 279 FAX: 310-537-1173

310-537-3700, EXT. 279

SALES DEPARTMENT

310-661-4242 FAX: 310-604-9237

877-289-7869 (877-BUY-STOW)

Manufactured for MULTIQUIP INC. by DENYO MANUFACTURING CO., JAPAN



STOW CONSTRUCTION EQUIPMENT

A DIVISION OF MULTIQUIP INC.
POST OFFICE BOX 6254
CARSON, CA 90749
310-537-3700 • 888-252-STOW [888-252-7869]
FAX: 310-537-1986 • FAX: 800-556-1986
E-MAIL: stow@multiquip.com • WWW: stowmfg.com

PARTS DEPARTMENT:

800-427-1244 FAX: 800-672-7877

SERVICE DEPARTMENT/TECHNICAL ASSISTANCE:

800-478-1244 FAX:310-631-5032