

SERVICE/PARTS MANUALMODELS: RP850G and RP850D



REVERSIBLE PLATE

A 100% employee-owned American manufacturer

REVISION: A 3/2002 P/N 56515

RP850G/RP850D

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FOREWORD

These instructions include:

Safety regulations Operating instructions Maintenance instructions

These instructions have been prepared for operation on the construction site and for the maintenance engineer.

These instructions are intended to simplify operation of the machine and to avoid malfunctions through improper operation.

Observing the maintenance instructions will increase the reliability and service life of the machine when used on the construction site and reduce repair costs and downtimes.

Always keep these instructions at the place of use of the machine.

Only operate the machine as instructed and follow these instructions.

Observe the safety regulations as well as the guidelines of the civil engineering trade association. Observe the safety rules for the operation of road rollers and compactors and the pertinent regulations for the prevention of accidents.

Stone Construction Equipment, Inc. is not liable for the function of the machine when used in an improper manner and for other than the intended purpose.

Operating errors, improper maintenance and the use of incorrect operating materials are not covered by the warranty.

The above information does not extend the warranty and liability conditions of business of Stone Construction Equipment, Inc.

Warranty Information

Please enter the following data. This will help expedite any service or warranty work.

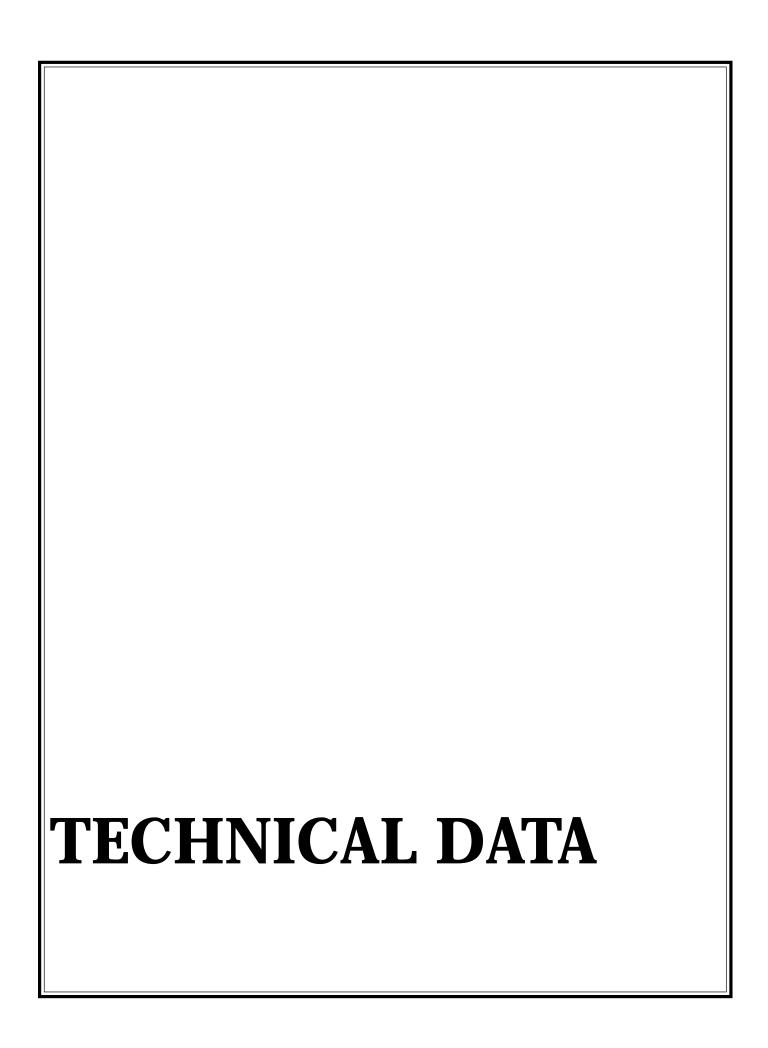
| ١. | Machine Type: |
|------------|---------------------------------|
| | Machine S/N: |
| 2. | Engine Type: |
| | Engine S/N: |
| 3. | VIN: |
| 1 . | Purchase Date: |
| 5. | Dealer/Distributor Information: |
| | Name: |
| | Address: |
| | |
| | Phone #: |
| | Fax #: |

Location of above information:

- 1. Information on S/N tag.
- 2. Information on engine tag.
- 3. Information on S/N tag if applicable.
- 4. Date you purchased machine.
- 5. Dealer machine was purchased from.

Stone Construction Equipment, Inc. P.O. Box 150, Honeoye, New York 14471 Phone: (800) 888-9926

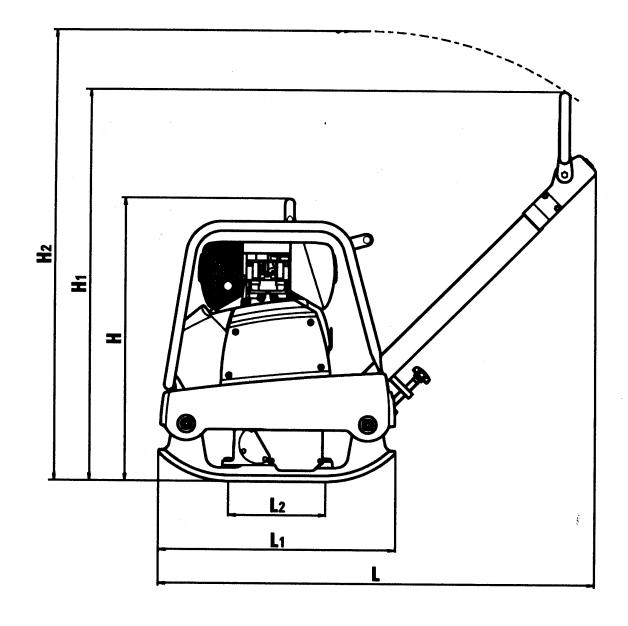
Fax: (585) 229-2363



TECHNICAL DATA

RP850G/RP850D

MACHINE SPECIFICATIONS



RP850G/RP850D

TECHNICAL DATA

MACHINE SPECIFICATIONS

| RP850G / RP850D SPEC | IFICATIONS | |
|--------------------------|--|--|
| MODEL | RP850G | RP850D |
| Dimensions | | |
| Length L | 53.7 in (1365 mm) | 53.7 in (1365 mm) |
| Length L1 | 33.9 in (860 mm) | 33.9 in (860 mm) |
| Length L2 | 16.1 in (410 mm) | 16.1 in (410 mm) |
| Height H | 29.5 in (750 mm) | 30.7 in (780 mm) |
| Height H1 | 40.2 in (1,020 mm) | 40.2 in (1,020 mm) |
| Height H2 | 46.5 in (1,180 mm) | 46.5 in (1,180 mm) |
| Width Basic Unit I | 17.7 in (450 mm) | 17.7 in (450 mm) |
| Width Basic Unit II | 23.6 in (600 mm) | 23.6 in (600 mm) |
| Weights | , | |
| Basic Unit I | 529.1 lbs (240 kg) | 584.2 lbs (265 kg) |
| Basic Unit II | 562.2 lbs (255 kg) | 617.3 lbs (280 kg) |
| Drive | \ | <u> </u> |
| Motor Type | Honda GX 270 Gasoline | Hatz 1 B 30 Diesel |
| Type of Construction | 1 Cylinder, 4-Stroke | 1 Cylinder, 4-Stroke |
| Power | 9.0 HP (6.6 kW) | 6.0 HP (4.6 kW) |
| by speed | 3,100 RPM (51.6 Hz) | 3,000 RPM (50 Hz) |
| Cooling System | Air | Air |
| Fuel Consumption | .5 gal/hr (2.1 liters/hr) | .3 gal/hr (1.3 liters/hr) |
| Maximum Sloping Position | 20° | 30° |
| Maximum Gradeability | 35% | 35% |
| Drive | Via Centrifugal Clutch and V-Belt | Via Centrifugal Clutch and V-Belt |
| Shift (forward/reverse) | Hydraulic | Hydraulic |
| Operating Speed | 11) 0100110 | 11) 02 00110 |
| Basic Unit I | 85 ft/min (0 - 26 m/min) | 85 ft/min (0 - 26 m/min) |
| Basic Unit II | 85 ft/min 0 - 26 m/min | 85 ft/min 0 - 26 m/min |
| Vibration | | 00 10 mm 0 2 0 mm |
| Centrifugal Force | 8,542.7 lbs (38 kN) | 8,542.7 lbs (38 kN) |
| Vibration Frequency | 3,900 VPM (65 Hz) | 3,900 VPM (65 Hz) |
| Maximum Performance | 2,5 0 0 1 (00) | 2,5 0 0 1 2 2 2 (00 2 2 2) |
| Basic Unit I | $7,535 \text{ ft}^2/\text{hr} (700 \text{ m}^2/\text{hr})$ | $7,535 \text{ ft}^2/\text{hr} (700 \text{ m}^2/\text{hr})$ |
| Basic Unit II | 10,075 ft ² /hr (936 m ² /hr) | 10,075 ft ² /hr (936 m ² /hr) |
| Filing Quantities | 10,0,0 10,111 (200 III /III) | 10,070 107m (500 m7m) |
| Fuel Tank | 1.6 gal (6.0 liters) | 1.3 gal (5.0 liters) |
| Optional Extras | 110 But (010 Interto) | 110 Bar (010 11010) |
| Vulkollan Plate | X | X |
| Protective Cover | X | X |
| Electric Starter | | X |
| Mounting Brackets 75 | X | X |

TECHNICAL DATA

NOISE AND VIBRATION DATA

The following listed noise and vibration data according to the EC machine directive in the version (91/368/EEC) was determined at the rated speed of the drive motor with vibration with the machine placed on a resilient base.

Values can deviate in normal use depending on the conditions prevailing at the place use.

NOISE DATA

The noise emission specified in appendix 1. subclause 1.7.4.f of the EC machine directive for

| | The sound pressure level at the operator workplace is L _{PA} | The sound power level $\mathcal{L}_{\text{\tiny WA}}$ |
|-------|---|---|
| Honda | 103.7 dB(A) | 114.8 dB(A) |
| Hatz | 104.7 dB(A) | 114.8 dB(A) |

These noise levels were measured according to ISO 3744 for the sound power level (L_{WA}) and ISO 6081 for the sound pressure level (L_{PA}) at the operator workplace.

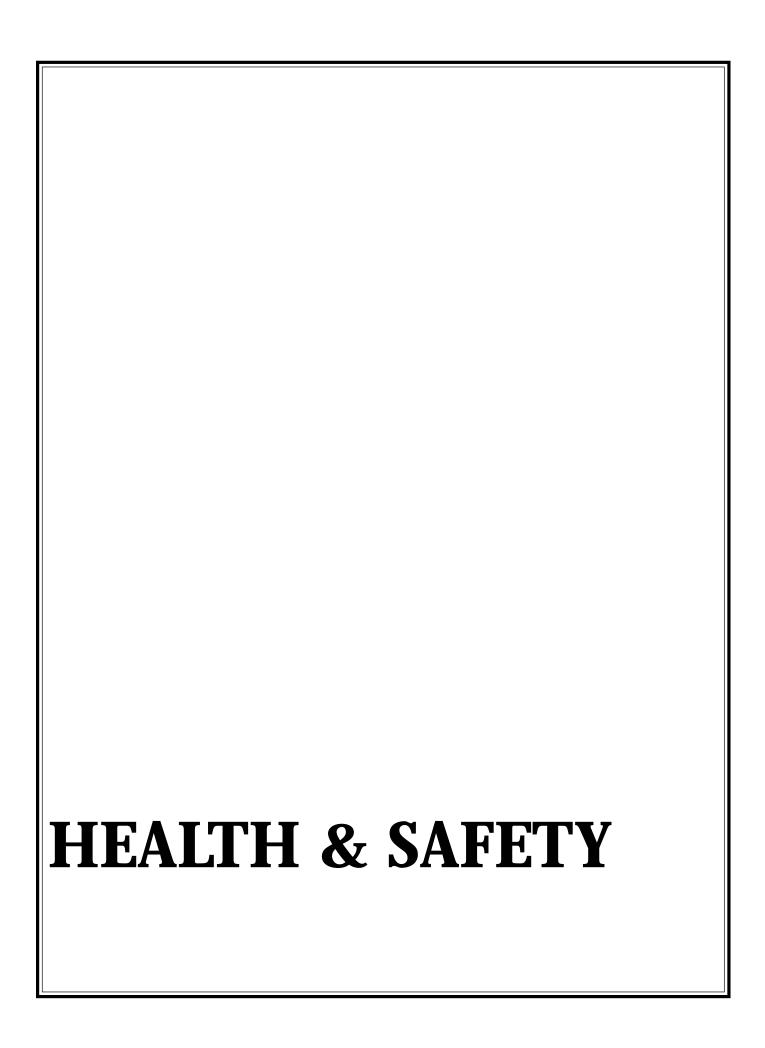


SINCE THE PERMISSIBLE NOISE RATING LEVEL OF 89 DB (A) CAN BE EXCEEDED WITH THIS MACHINE, THE OPERATOR MUST WEAR SUITABLE HEARING PROTECTION.

VIBRATION DATA

Hand-arm vibration values according to appendix 1, subclause 3.6.3.a of the EC machine directive:

The weighted effective value of acceleration, determined according to ISO 8662, part 1, is about 4.8 m/s² (Honda) and 3.9 m/s² (Hatz).



SAFETY USE

These machines are designed to carry out the function of compacting material of the non-cohesive, bituminous and granular varieties.

If used correctly they will provide an effective and safe means of compaction and meet the appropriate performance standards.

It is essential that the driver/operator of the machine is adequately trained in its safe operation, be authorized to drive it, and have sufficient knowledge of the machine to ensure that it is in full working order, before being put to use.

SAFETY PRECAUTIONS

Before using this equipment, study this entire manual to become familiar with its operation. Do not allow untrained or unauthorized personnel, especially children, to operate this equipment. Use only factory authorized parts for service.

When warning decals are destroyed or missing, contact the Manufacturer immediately at 1-800-888-9926 for replacement. For the safety of yourself and others, it is imperative that the following rules are observed. Failure to do so may result in serious injury or death.

FOLLOW SAFETY INSTRUCTIONS



- Carefully read all safety messages and decals in this manual and on your machine safety signs. Keep decals in good condition. Replace missing or damaged decals. Be sure new equipment components and repair parts include the current safety signs. Replacement safety signs and decals are available through your dealer.
- Learn how to operate the machine and how to use controls properly. Do not let anyone operate without instruction.
- Keep your machine in proper working condition.
 Unauthorized modifications to the machine may impair the function and/or safety and affect machine life.
- If you do not understand any part of this manual and need assistance, contact your dealer.

UNDERSTAND SIGNAL WORDS

A DANGER

AWARNING

A CAUTION

- A signal word DANGER, WARNING, or CAUTION is used with the safety-alert symbol. DANGER identifies the most serious hazards.
- DANGER or WARNING safety signs are located near specific hazards. General precautions are listed on CAUTION safety signs. CAUTION also calls attention to safety messages in this manual.



• This notation appears before warnings in the text. It means that the step which follows must be carried out to avoid the possibility of personal injury or death. These warnings are intended to help the technician avoid any potential hazards encountered in the normal service procedures. We strongly recommend that the reader takes advantage of the information provided to prevent personal injury or injury to others.





- Transport and handle fuel only when contained in approved safety container.
- Do not smoke when refueling or during any other fuel handling operation.
- Do not refuel while the engine is running or while it is still hot
- If fuel is spilled during refueling, wipe it off from the engine immediately and discard the rag in a safe place.
- Do not operate the equipment if fuel or oil leaks exist repair immediately.
- Never operate this equipment in an explosive atmosphere.



- Keep feet clear of all plates.
- Keep work area free of bystanders.
- For foot protection, wear steel toe shoes or toe pads.



• Ear protection required when operating this equipment.



HOT SURFACES

- Muffler, engine, and engine shroud may be hot.
- Allow all components in the engine compartment to cool before performing any service work.



- Never operate unit in a poorly ventilated or enclosed area.
- Avoid prolonged breathing of exhaust gases.
- Engine exhaust fumes can cause sickness or death.



- Qualified personnel only. No untrained operators. Serious injury may occur.
- Users must be trained to operate this machine. Read the Operator's Manual and Engine Owner's Manual. Learn to operate this roller safely.
- Do not operate across the sides of hills, machine may tip over.
- Do not operate at the edge of mats or roads, machine may tip over.
- Do not park the machine on hills.



• Hydraulic system produces high pressures--incorrect hose replacement can cause serious personal injury. When performing service, refer to Operator's Manual for hose identification and connections.



- Caution: Escaping hydraulic fluid under pressure can have sufficient force to penetrate the skin, causing serious personal injury.
- Hydraulic fluid escaping under pressure from a very small hole can be almost invisible. Use a piece of cardboard or wood to search for possible leaks.
- Never use your hands to detect pressure leaks.
- Hydraulic tank temperature can reach 180° F maximum.



 Pressurized release of fluids from hydraulic system can cause serious burns.





- Wear close fitting clothing and safety equipment appropriate to the job.
- Prolonged exposure to loud noise can cause impairment or loss of hearing.
- Wear a suitable hearing protective device such as earmuffs or earplugs to protect against objectionable or uncomfortable loud noises.
- Operating equipment safely requires the full attention of the operator. Do not wear radio or music headphones while operating machine.

PRACTICE SAFE MAINTENANCE



- Understand service procedure before doing work. Keep area clean and dry.
- Never lubricate, service or adjust machine while it is moving.
 Keep hands, feet, and clothing from power-driven parts. Disengage
 all power and operate controls to relieve pressure. Lower
 equipment to the ground. Stop the engine. Remove the key. Allow
 machine to cool.
- Securely support any machine elements that must be raised for service work.
- Keep all parts in good condition and properly installed. Fix damage immediately. Replace worn or broken parts. Remove any buildup of grease, oil, or debris.
- Disconnect battery ground cable (-) before making adjustments on electrical systems or welding on machine.

PREPARE FOR EMERGENCIES



- Be prepared if a fire starts.
- Keep a first aid kit and fire extinguisher handy.
- Keep emergency numbers for doctors, ambulance service, hospital, and fire department near your telephone.



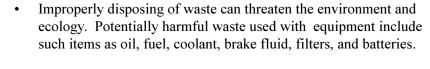
• Starting fluid (ether) is highly flammable, do not use or an explosion or fire may result.

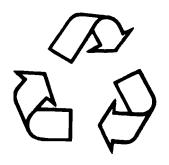


PREVENT BYPASS STARTING

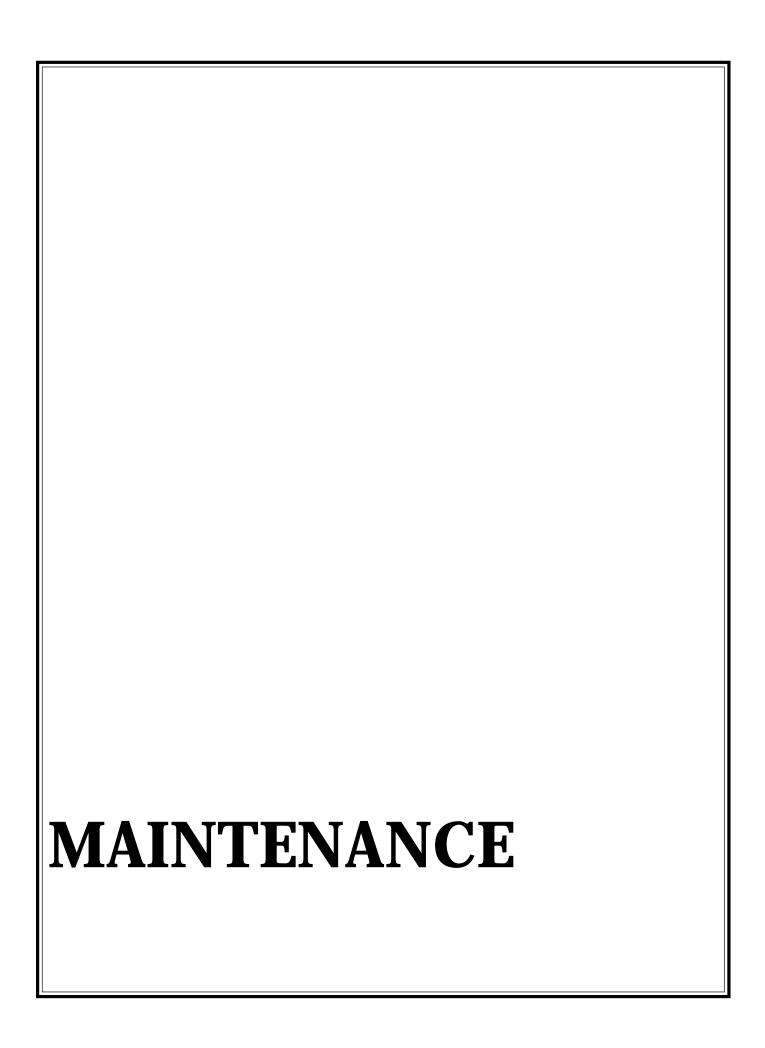
- Avoid possible injury or death from engine runaway.
- Do not start engine by shorting across starter terminal. Engine will start with PTO engaged if normal circuitry is bypassed.
- Start engine only from operator's station with PTO disengaged or in neutral.

DISPOSE OF WASTE PROPERLY





- Use leakproof containers when draining fluids. Do not use food or beverage containers that may mislead someone into drinking from them.
- Do not pour waste onto the ground, down a drain, or into any water source.
- Air conditioning refrigerants escaping into the air can damage the Earth's atmosphere. Government regulations may require a certified air conditioning service center to recover and recycle used air conditioning refrigerants.
- Inquire on the proper way to recycle or dispose of waste from your local environmental or recycling center.



MAINTENANCE

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GENERAL NOTES

Careful maintenance:

- increased service life
- increased function
- reduced downtimes
- increased reliability
- reduced repair costs
- Observe the safety regulations!
- Maintenance work should only be carried out when the engine is shut off.
- The engine and machine should be cleaned thoroughly before carrying out maintenance work.
- Park the machine on a flat surface and secure it.

- Ensure that operating materials and replaced parts are disposed of safely and in an environmentally-friendly way.
- Before commencing work on any electrical equipment, disconnect the battery and cover it with insulating materials.
- DO NOT confuse "PLUS" and "MINUS" poles on the battery.
- It is essential that short-circuits be prevented in cables carrying current.
- Burnt out light bulbs in indicator lamps should be replaced immediately.
- When cleaning the machine with a highpressure water jet, do not spray the electrical components directly.
- After washing the components, blow-dry them with compressed air in order to prevent surface leakage current and corrosion.

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MAINTENANCE

MAINTENANCE SCHEDULE (Hatz = \bullet / Honda = \bullet)

| Intervals Works | Daily | 20 Hours | 50 Hours | 100 Hours | 250 Hours | 500 Hours | As Required |
|---|-------|--------------|-------------|--------------|--------------|--------------|----------------|
| Clean machine | • • | | | | | | |
| Check engine oil level 1) | • • | | | | | | |
| Change engine oil 1) | | • • | | ♦ | • | | |
| | | (first time) | | | | | |
| Clean oil filter 1) | | • | | | • | | |
| | | (first time) | | | | | |
| Check air filter 1) | • • | | | | | | |
| Change air filter 1) | | | | | | | |
| (• XA 504 26 000) | | | | | | • | • |
| (♦ X 17210 ZE2 822) | | | | | | | · |
| Change fuel filter 1) | | | | | | • | |
| (• XA 504 40 500) | | | | | | | |
| Check exciter oil level | | | • • | | | | |
| Change exciter oil (or annually) | | | | | • • | | |
| Check hydraulic oil level | | | | | | | • • |
| Check v-belt | | | | • • | | | |
| Retighten screwed connections | | | | • • | | | |
| Check rubber buffers | | | | • • | | | |
| Check, adjust the valve clearance 1) Observe the engine manual | | | | | • • | | |

¹⁾ Observe the engine manual

MAINTENANCE

Lubrication Schedule

| Lubrication Point | Quantity | Change intervals (operating hours) | Lubrication | Order No. |
|-------------------|------------|------------------------------------|--------------------------------------|------------|
| Honda | 1.1 liters | 100 * | Engine Oil API SG-CE SAE 10W40 | 806 01 100 |
| Hatz | 1.1 liters | 250 * | Engine Oil API SG-CE SAE 10W40 | 806 01 100 |
| Exciter | 1.1 liters | 500 ** or annually | Engine Oil API SG-CE SAE 10W40 | 806 01 100 |
| Hydraulic | .65 liters | not necessary | Spec. Hydro-Oil ISO-VG32 | 806 01 030 |

^{*} first time after 20 op. hours

Alternative Lube Oil Table

| | Engine Oil API SG-CE SAE 10W40 | Gear Oil in Accordance With JDM J 20 A | Spec. Hydro-Oil ISO- VG32 | ATF Oil |
|-----------|--------------------------------------|--|---------------------------------------|----------------|
| DEUTZ OEL | HD-C 10W40 TLL 10W40 * | GO-SP | Spec. Hydro-OI W32, H-EP 32 BA ** | Dexron II D |
| ARAL | Multi Turboral | Fluid HGS | | Dexron II D |
| BP | Vanellus Multigr., Vanellus FE * | Hydromatic TF-SD | Energol EHPM 32 | Dexron II D |
| ESSO | XD 3+LDX, CDX | Torque Fluid 56 | Univis N 32 | Dexron II D |
| FINA | Kappa FE; Kappa Turbo DI | Transfluid AS | Hydran TSX 32; Biohydran TMP 32 ** | Finamatic II D |
| SHELL | Super 3 | Donax TD | Tellus W 32, Naturelle HFE 32 ** | Dexron II D |
| TOTAL | Rubia XT, Rubia FE * | | | Dexron II D |

^{*} semi-synthetic light-duty oils

^{**} first time after 100 op. hours

^{**} biological multi-purpose hydraulic oils

MAINTENANCE

MAINTENANCE WORK (Honda Engine)

Attention: Only the maintenance work that has to be performed daily is included in this operating manual. Please refer to the engine operating manual and to the maintenance instructions and intervals listed therein.

Filling up with fuel

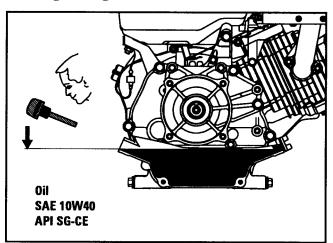
Danger:

- Fill fuel tank only when engine is switched OFF.
- No naked flames.
- No smoking.
- NEVER fill fuel tank in enclosed areas.

To check fuel level:

- 1. Clean the area around the fuel filling socket.
- 2. Open the cap.
- 3. Check the fuel level visually.
- 4. If necessary, fill up with fuel. (unleaded automotive gasoline)

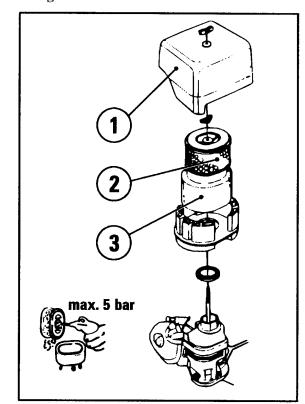
Checking the engine oil level



- 1. Park the machine horizontally.
- 2. Clean the area around the oil filler cap.
- 3. Open the oil filler cap.
- 4. Check the oil level.
- 5. Refill up to the edge of the oil filler cap if necessary.
- 6. Check the seal on the dipstick and replace if necessary.
- 7. Close the oil filler cap.

8. Allow the engine to run for approximately 1 minute and check oil level again with engine switched off.

Cleaning the air filter element



Attention:

- NEVER run the engine without the air cleaner. Rapid engine wear will result.
- DO NOT allow dust to enter the carburetor.
- 1. Remove the filter cover (1).
- 2. Take out the filter element (2 & 3).
- 3. Check the filter element, replace if damaged.

For slight clogging:

- 1. Clean the filter element (2) by tapping lightly.
- 2. Blow it from inside to outside with dry, compressed air.

For heavy clogging:

1. Wash the filter element (3) in a non-flammable cleaning solution and allow to dry thoroughly.

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MAINTENANCE

Danger:

- NEVER use fuel or cleaning solutions with a low flash point for cleaning the filter element!
- DO NOT smoke in the working area, avoid open fire and sparks - fire and explosion hazard!
- Hazard of eye injuries use safety goggles!
- 1. Soak the filter element (3) with clean motor oil, squeeze out excess oil.
- 2. Replace the filter element (2 & 3).
- 3. Fit the cover (1) and fasten.

MAINTENANCE WORK (Hatz Engine)

Attention: Only the maintenance work that has to be performed daily is included in this operating manual. Please refer to the engine operating manual and to the maintenance instructions and intervals listed therein.

Filling up with fuel

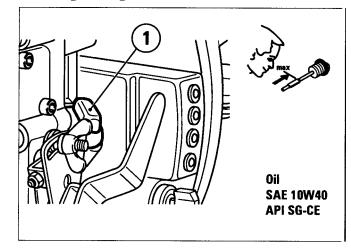
Danger:

- Fill fuel tank only when engine is switched OFF.
- No naked flames.
- No smoking.
- NEVER fill fuel tank in enclosed areas.

To check fuel level:

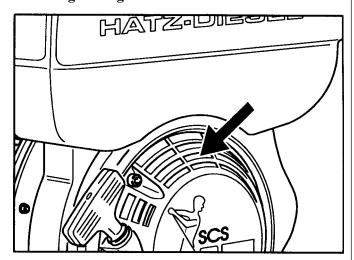
- 1. Clean the area around the fuel filling socket.
- 2. Open the cap.
- 3. Check the fuel level visually.
- 4. If necessary, fill up with fuel (diesel).

Checking the engine oil level



- 1. Position the vibration plate so that the motor is in a vertically upright position.
- 2. Clean around the dipstick area.
- 3. Pull out dipstick (1) and wipe clean.
- 4. Push dipstick back in with twisting movement by hand then pull out again with similar twisting movement.
- 5. Read off the oil level on the dipstick and, if necessary, top to the "maximum" mark.

Checking cooling air-/combustion air-intake

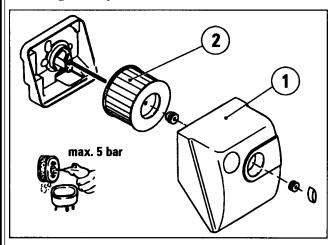


Check intake opening for combustion air and cooling air intakes. Remove coarse obstructions such as leaves, stones and earth.

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MAINTENANCE

Cleaning the dry air filter



The maintenance intervals for the filter cartridge depend on the amount of dust. A blocked filter is apparent from a lack of performance and/or black smoke.

- 1. Unscrew lid of air filter (1).
- 2. Remove filter cartridge (2).
- 3. Check the filter element for damage to the filter paper and check sealing surfaces. Change damaged filter elements.
- 4. Clean filter housing and lid.

Attention:

- NEVER run the engine without the air cleaner rapid engine wear will result
- Make sure that no dirt or foreign bodies get into the suction opening to the motor.

Replace filter element or clean appropriately.

If there is any dry fouling: Blow out the filter cartridge with dry air under pressure 75PSI (max. 5 bar) from the inside outwards, until no more dust comes out.

Danger:

- Hazard of eye injuries - use safety goggles!

If there is damp or oily fouling or if the cartridge is damaged in any way, replace it.

Cleaning

Clean the machine thoroughly daily.

Attention:

- After cleaning, check all cables, hoses, pipes and screwed fittings for leaks, loose connections, chafe marks and other damage.
- Any faults that are detected should be rectified immediately.
- DO NOT use any flammable or aggressive substances for cleaning purposes.

TORQUE INFORMATION

Property Class 8.8

ZINC-PLATED

| SIZE | |
|------|--|
| M4 | |
| M5 | |
| M6 | |
| M8 | |
| M10 | |
| M12 | |
| M14 | |
| M16 | |

Fine Thread

| Nm | ft. lbs. | |
|-----|----------|--|
| 3 | 2 | |
| 6 | 4 | |
| 10 | 7 | |
| 25 | 18 | |
| 49 | 36 | |
| 85 | 62 | |
| 135 | 99 | |
| 210 | 154 | |
| 300 | 221 | |
| 425 | 313 | |
| 580 | 427 | |
| 730 | 538 | |

Property Class 10.9

ZINC-PLATED

M18 M20

M22

M24

| SIZE |
|------|
| M4 |
| M5 |
| M6 |
| M8 |
| M10 |
| M12 |
| M14 |
| M16 |
| M18 |
| M20 |
| M22 |
| M24 |

Fine Thread

| rille Tilleau | | | | |
|---------------|----------|--|--|--|
| Nm | ft. lbs. | | | |
| 4,4 | 3 | | | |
| 8,7 | 6 | | | |
| 15 | 11 | | | |
| 36 | 26 | | | |
| 72 | 53 | | | |
| 125 | 92 | | | |
| 200 | 147 | | | |
| 310 | 228 | | | |
| 430 | 317 | | | |
| 610 | 449 | | | |
| 830 | 612 | | | |
| 1050 | 774 | | | |

Property Class 12.9

ZINC-PLATED

| ZINC-PLATEL |
|-------------|
| SIZE |
| M4 |
| M5 |
| M6 |
| M8 |
| M10 |
| M12 |
| M14 |
| M16 |
| M18 |
| M20 |
| M22 |
| M24 |

Fine Thread

| Nm | ft. lbs. | |
|------|----------|--|
| 5 | 4 | |
| 10 | 7 | |
| 18 | 13 | |
| 43 | 31 | |
| 84 | 61 | |
| 145 | 106 | |
| 235 | 173 | |
| 365 | 269 | |
| 500 | 368 | |
| 710 | 523 | |
| 970 | 715 | |
| 1220 | 899 | |

Conversion Factor: 1 ft. lb. = 1.3558 N

The tightness categories relate to bolts with untreated, unlubricated surface.

The figures result in 90% exploitation of the limit of elasticity for a friction coefficient $\mu = 0.14$.

Use a torque wrench to check that the tightening torques are observed.

The figures indicated do not apply if lubricant MoS2 is used.

Important: Self-tapping nuts have to be replaced after every disassembly.

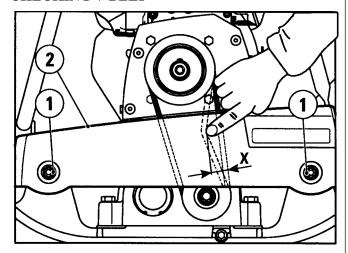
SCREW CONNECTIONS

With vibration equipment, it is important to check the screwed connections periodically to ensure that they are screwed tight. Observe tightening torques.

CHECKING RUBBER BUFFER

Check the rubber buffer for cracks and fractures and for a tight fit. Replace immediately if damaged.

CHECKING V-BELT



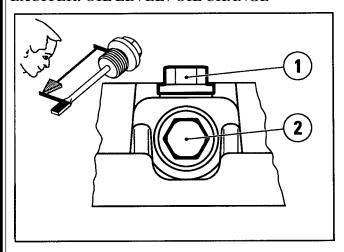
- 1. Remove v-belt guard.
- 2. Check v-belt for tension and condition.
- 3. Undo the nuts (1) of the rubber stops on the outside.
- 4. Push the upper tray (2) upwards on both sides.

MAINTENANCE

Important: It is important to ensure that the frame is also actually pushed on the rubber stop contact surfaces and not just the rubber elements are stretched and then spring back again. If necessary, apply light blows with a hammer to knock the rubber stops downwards.

- 1. Both buffers should be equally pre-tensioned.
- 2. Tighten nuts (1).
- 3. Crank the drive manually and re-check tension and correct if necessary.
- 4. Replace v-belt guard.

EXCITER: OIL LEVEL / OIL CHANGE



Important: Check/change exciter oil when it is warm.

Danger:

Take care when draining hot oil - danger of scalding.

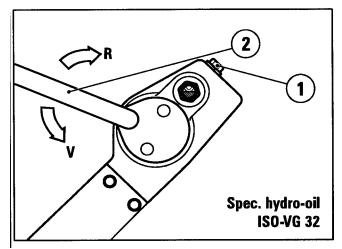
- 1. Unscrew oil filling plug (1) and oil drain plug (2).
- 2. Drain old oil.
- 3. Replace oil drain plug (2).
- 4. Fill new oil via filler hole (1). For oil quantity and quality, see lubrications specifications chart.
- 5. Replace oil filling plug (1).

Attention:

- Collect oil which flows out and dispose of oil without harm to environment.
- In order to ensure sufficient lubrication, the distance of the oil level must be at the upper

dip rod mark (see diagram below). If the oil level is too low, the gear unit can be damaged through overheating.

FILLING AND BLEEDING THE CIRCUIT



- 1. Release locking screw (1).
- 2. Set throttle lever (2) to "V".
- 3. Pour in hydraulic fluid while continually changing the throttle lever position.

Important: To ensure correct bleeding, from time to time place the shaft vertically.

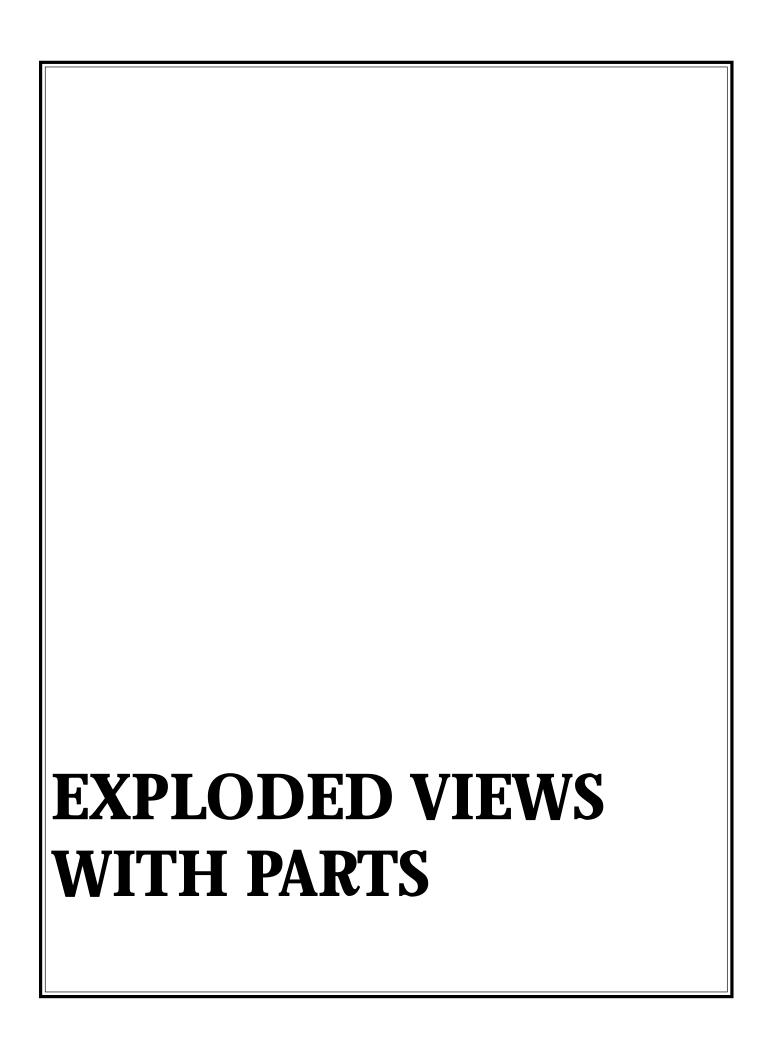
Stop filling when:

- A distinct "clicking" noise is heard in the exciter while shifting the lever.
- You no longer feel a cushion of air when moving the throttle lever.

Attention:

When filling, the circuit pat is shortened.

- 1. To check oil level, start engine and bring up to operating speed.
- 2. Move throttle lever several times backwards and forwards between "V" and "R".
- 3. The correct oil level should be somewhere in the area shown (see illustration). At this point, the throttle lever must be in the "V" position.
- 4. If the level is too low, top up with hydraulic fluid. If too high, drain off excess fluid.
- 5. With the machine running and the throttle lever in the "V" position, close locking screw (1).

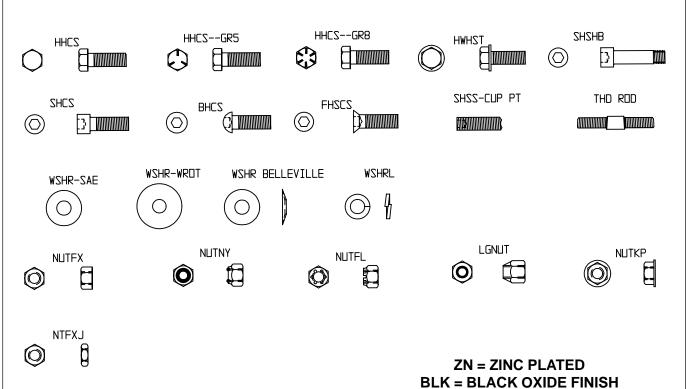


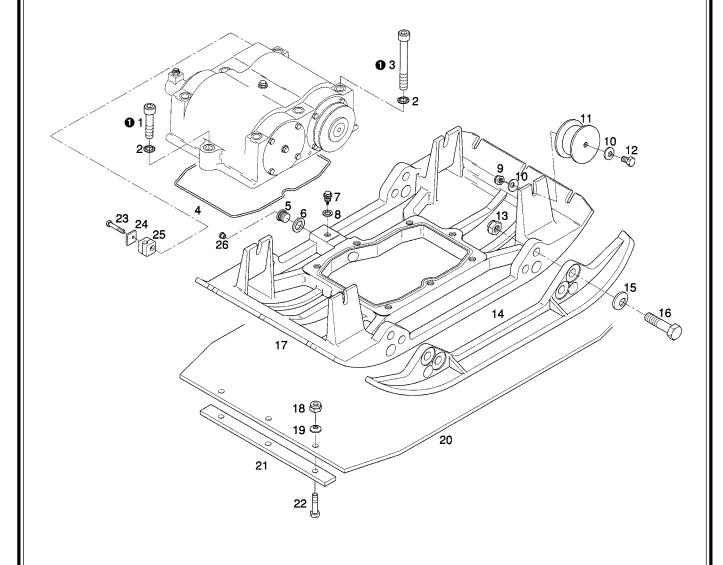
PARTS LIST

Exploded Views with Parts

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HARDWARE KEY





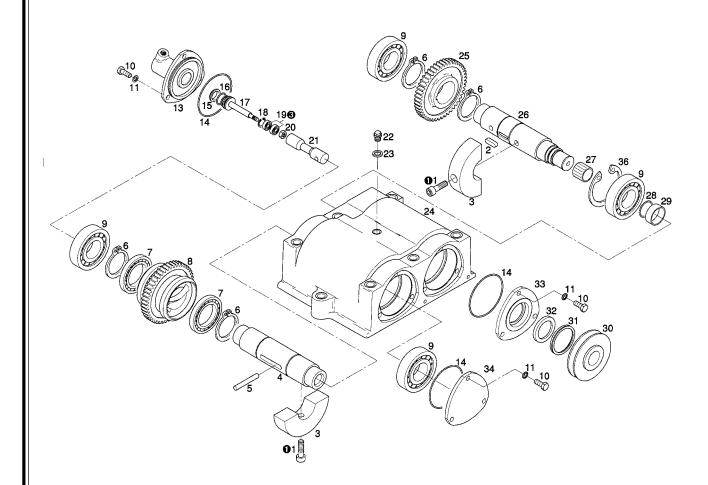
① Loctite 262

PARTS LIST

Lower Plate

| ITEM | PART NO. | DESCRIPTION | QUANTITY | DIN |
|------|----------|------------------------------|----------|------|
| 1 * | 63698 | SHCS M16 x 70 | 2 | 912 |
| 2 | 60507 | WSHRL Ribbed M16 Plated | 8 | 792 |
| 3* | 63699 | SHCS M16 x 140 | 6 | 912 |
| 4 | 63700 | O-Ring OR 305 x 5 | 1 | |
| 5 | 62049 | Screw Plug M22 x 1.5 5.8 | 1 | 908 |
| 6 | 61866 | WSHR Joint A22 x 29 | 1 | 7603 |
| 7 | 63297 | Oil Measuring Plug | 1 | |
| 8 | 60146 | Ring Sealing A14 x 18 Copper | 1 | 7603 |
| 9 | 60464 | NUTNY M12 ZN CL8 | 4 | 985 |
| 10 | 60189 | Spring Washer M12 ZN | 8 | 6796 |
| 11 | 63701 | Rubber Buffer | 4 | |
| 12 | 80808 | HHCS M12-1.75 x 20 8.8 ZN | 4 | 933 |
| 13 | 63702 | Hexagon Nut M20 | 8 | 985 |
| 14 | 62055 | Mounting Bracket | 2 | |
| 15 | 61702 | Spring Washer M20 | 8 | 6796 |
| 16 | 62056 | HHCS M20 x 80 8.8 | 8 | 931 |
| 17 | 63703 | Base Plate | 1 | |
| 18 | 60464 | NUTNY M12 ZN CL8 | 6 | 985 |
| 19 | 60189 | Spring Washer M12 ZN | 6 | 6796 |
| 20 | 62054 | Vulkollan Plate | 1 | |
| 21 | 63704 | Flat Steel | 2 | |
| 22 | 62053 | HHCS M12 x 50 8.8 | 6 | 931 |
| 23 | 62401 | HHCS M6 x 45 8.8 | 1 | 931 |
| 24 | 63705 | Plate | 1 | |
| 25 | 63706 | Clip | 1 | |
| 26 | 63707 | Plug | 1 | |

^{*} Loctite



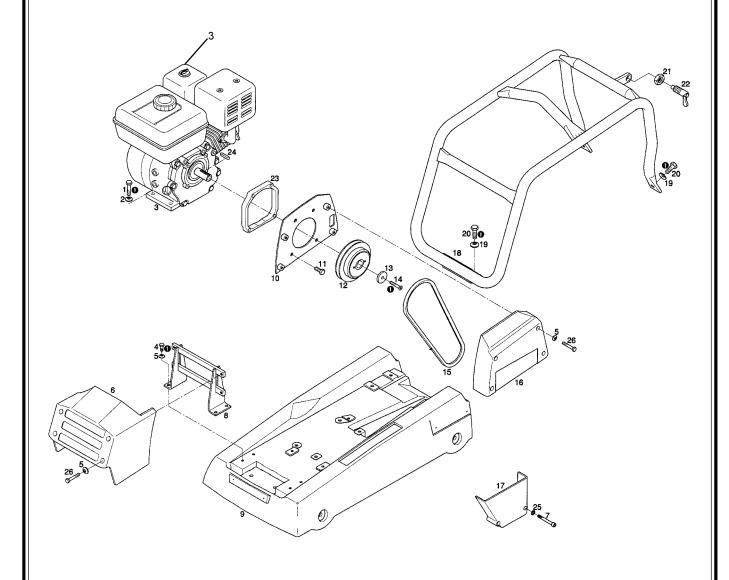
- 1 Loctite 262
- 3 Shell Alvania R3

PARTS LIST

Eccentric Assembly

| ITEM | PART NO. | DESCRIPTION | QUANTITY | DIN |
|------|----------|------------------------------|----------|------|
| 1* | 61303 | SHCS M12 x 40 10.9 | 4 | 912 |
| 2 | 61567 | Key M10 x 8 x 32 | 1 | 6885 |
| 3 | 63708 | Exciter Weight | 4 | |
| 4 | 63709 | Exciter Shaft | 1 | |
| 5 | 63710 | Cylindrical Pin | 1 | 6325 |
| 6 | 63711 | Safety Ring A55 x 2 | 4 | 471 |
| 7 | 63712 | Groove Ball Bearing | 2 | |
| 8 | 63713 | Gear Wheel | 1 | |
| 9 | 60398 | Cylindrical Roller Bearing | 4 | |
| 10 | 60329 | HHCS M10 x 25 | 9 | 933 |
| 11 | 60324 | WSHRL Ribbed M10 | 9 | |
| 13 | 63714 | Switch Cover | 1 | |
| 14 | 61696 | O-Ring OR 92 x 3 | 3 | |
| 15 | 63715 | Piston Cup | 1 | |
| 16 | 63716 | O-Ring OR24.2 x 3 | 1 | |
| 17 | 63717 | Piston | 1 | |
| 18 | 63718 | Safety Ring J22 x 1 | 1 | 472 |
| 19 | 63719 | Groove Ball Bearning | 2 | |
| 20 | 60462 | NUTNY M8 CL8 | 1 | 985 |
| 21 | 63720 | Guide Piston | 1 | |
| 22 | 61563 | Screw Plug M14 x 1.5 5.8 ZN | 1 | 910 |
| 23 | 60146 | Ring Sealing A14 x 18 Copper | 1 | 7603 |
| 24 | 63721 | Exciter Housing | 1 | |
| 25 | 63722 | Gear Wheel | 1 | |
| 26 | 63723 | Exciter Shaft | 1 | |
| 27 | 63724 | Tolerance Ring | 1 | |
| 28 | 61442 | O-Ring OR35 x 3 | 1 | |
| 29 | 63725 | Internal Ring | 1 | |
| 30 | 63726 | V-Belt Pulley | 1 | |
| 31 | 63727 | V-Ring | 1 | |
| 32 | 62062 | Rotary Shaft Seal | 1 | |
| 33 | 63728 | Bearing Cover | 1 | |
| 34 | 63729 | Bearing Cover | 1 | |

^{*} Loctite



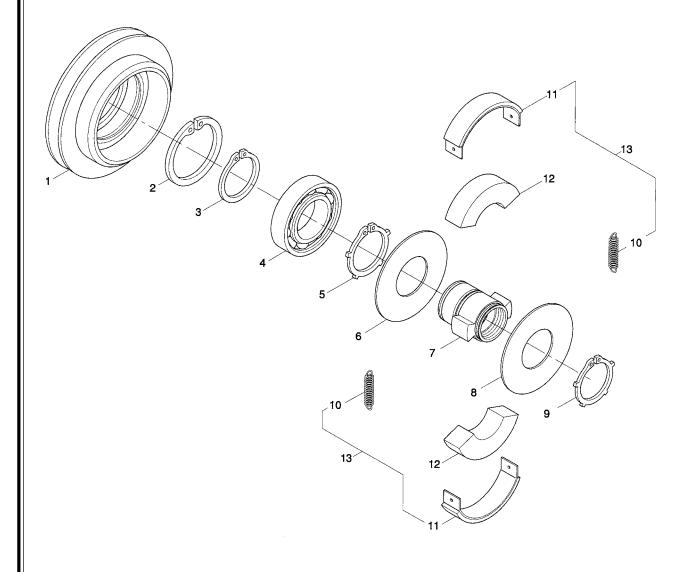
① Loctite 262

Upper Deck Assembly - Honda

| ITEM | PART NO. | DESCRIPTION | QUANTITY | DIN |
|------|----------|---------------------------------|----------|------|
| 1* | 62092 | HHCS M10 x 40 8.8 | 4 | 931 |
| 2 | 62197 | Spring Washer M10 | 4 | 6796 |
| 3 | 30306 | Engine Honda 9HP | 1 | |
| 4* | 60903 | HHCS M8 x 16 8.8 | 4 | 933 |
| 5 | 61086 | Spring Washer M8 ZN | 13 | 6796 |
| 6 | 63730 | Panel | 1 | |
| 7 | 63305 | SHCS M8 x 50 8.8 ZN | 2 | 912 |
| 8 | 63368 | Holder | 1 | |
| 9 | 63731 | Upper Part | 1 | |
| 10 | 63371 | V-Belt Guard | 1 | |
| 11 | 61846 | HHCS M10 x 35 8.8 ZN | 4 | 933 |
| 12 | 63732 | Centrifugal Clutch Assembly ZSB | 1 | |
| 13 | 63373 | Washer | 1 | |
| 14* | 62390 | Countersunk Screw M8 x 30 8.8 | 1 | 7991 |
| 15 | 63733 | V-Belt 12.5 x 968 LA | 1 | |
| 16 | 63374 | V-Belt Guard | 1 | |
| 17 | 63734 | V-Belt Guard | 1 | |
| 18 | 63735 | Hoop Guard | 1 | |
| 19 | 60189 | Spring Washer M12 ZN | 4 | 6796 |
| 20* | 80887 | HHCS M12-1.75 x 25 8.8 ZN | 4 | 933 |
| 21 | 60975 | NUTFX M20 x 1.5 | 1 | 936 |
| 22 | 61554 | Locking Bolt | 1 | |
| 23 | 63370 | Distance Plate | 1 | |
| 24 | 63736 | Key A 7 x 7 x 36 | 1 | 6885 |
| 25 | 60438 | Washer Ribbed M8 ZN | 2 | |
| 26 | 61213 | Screw M8 x 50 (8.8) | 8 | |

^{*} Loctite

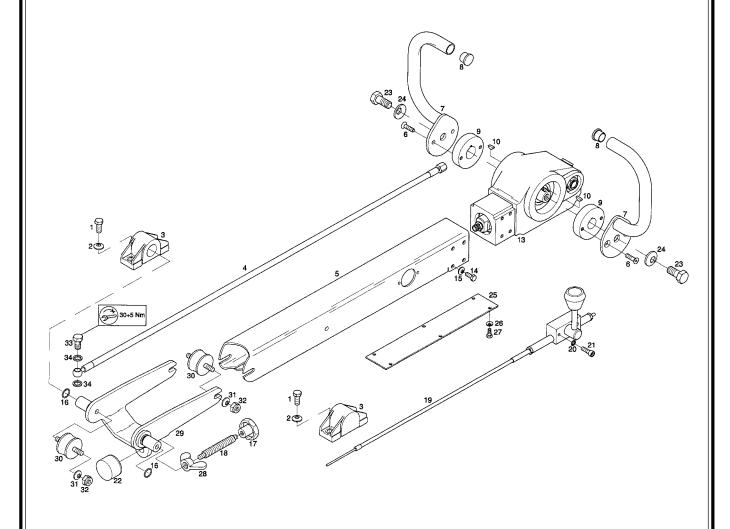
Clutch Assembly



Clutch Assembly

PARTS LIST

| ITEM | PART NO. | DESCRIPTION | QUANTITY | DIN |
|------|----------|---------------------|----------|-----|
| 1 | 63737 | Housing | 1 | |
| 2 | 60279 | Circle Clip J62 x 2 | 1 | |
| 3 | 60555 | Snap Ring | 1 | |
| 4 | 60293 | Bearing 6007 - 2RS | 1 | |
| 5 | 61579 | Ring A40 x 1.75 L | 1 | |
| 6 | 63352 | Disc | 1 | |
| 7 | 63738 | Hub | 1 | |
| 8 | 63739 | Disc | 1 | |
| 9 | 62251 | Retaining Ring | 1 | |
| 10 | 63740 | Tension Spring | 2 | |
| 11 | 63357 | Lining Strap | 2 | |
| 12 | 63356 | Centrifugal Weight | 2 | |
| 13 | 63741 | Reparation Kit | 1 | |
| | | | | |

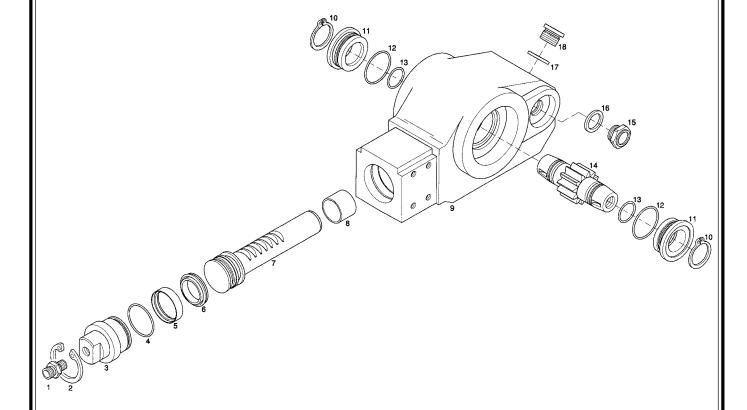


Tow-Bar Grip

PARTS LIST

| ITEM | PART NO. | DESCRIPTION | QUANTITY | DIN |
|------|----------|----------------------------------|----------|------|
| 1 | 60607 | HHCS M10 x 30 8.8 | 4 | 933 |
| 2 | 62197 | Spring Washer M10 | 4 | 6796 |
| 3 | 63742 | Tow Bar Bearing | 2 | |
| 4 | 63743 | Control Line Cpl. | 1 | |
| 5 | 63744 | Tow Bar | 1 | |
| 6 | 63745 | Countersunk Screw M8 x 25 A3B | 4 | 7991 |
| 7 | 63746 | Tow Bar Grip | 2 | |
| 8 | 63316 | Plug | 2 | |
| 9 | 63747 | Friction Clutch | 2 | |
| 10 | 63748 | Woodruf Key 5 x 6.5 | 2 | 6888 |
| 13 | 63749 | Control Valve | 1 | |
| 14 | 63750 | HHCS M8 x 20 A3B | 8 | 933 |
| 15 | 61086 | Spring Washer M8 ZN | 8 | 6796 |
| 16 | 61653 | O-Ring OR18 x 2.5 | 2 | |
| 17 | 63751 | Star Grip | 1 | |
| 18 | 63312 | Thread Rod | 1 | |
| 19 | 63752 | Speed Control Cable Assembly ZSB | 1 | |
| | 63753 | Transmitting Box | 1 | |
| | 63754 | Control Cable | 1 | |
| | 63755 | Cable | 1 | |
| 20 | 60402 | WSHRL Ribbed M6 ZN | 2 | |
| 21 | 62361 | SHCS M6 x 25 8.8 | 2 | 912 |
| 22 | 63756 | Rubber Buffer | 1 | |
| 23 | 81005 | HHCS M16-2 x 35 8.8 ZN | 2 | 933 |
| 24 | 60722 | Spring Washer M16 | 2 | 6796 |
| 25 | 63757 | Cover | 1 | |
| 26 | 60402 | WSHRL Ribbed M6 ZN | 6 | |
| 27 | 62467 | HHCS M6 x 10 BN 8.8 | 6 | 933 |
| 28 | 63758 | Wing Nut M16 | 1 | 315 |
| 29 | 63759 | Tow Bar Console | 1 | |
| 30 | 63760 | Rubber Buffer | 4 | |
| 31 | 62197 | Spring Washer M10 | 4 | 6796 |
| 32 | 63761 | Hexagon Nut M10 | 4 | 985 |
| 33 | 63762 | Hollow Screw | 1 | |
| 34 | 60146 | Ring Sealing A14 x 18 Copper | 2 | 7603 |

Directional Control Arm



Directional Control Arm

| ITEM | PART NO. | DESCRIPTION | QUANTITY | DIN |
|------|----------|--------------------------------|----------|-----|
| 1 | 61691 | Stud Standpipe Male | 1 | |
| 2 | 60304 | Retaining Ring J52 x 2 | 1 | 472 |
| 3 | 63763 | Valve Cover | 1 | |
| 4 | 63764 | O-Ring OR40 x 2.5 | 1 | |
| 5 | 76877 | Seal Ring | 1 | |
| 6 | 63765 | Piston Cup | 1 | |
| 7 | 63766 | Piston Rod | 1 | |
| 8 | 63767 | Bushing | 1 | |
| 9 | 63768 | Valve Housing | 1 | |
| 10 | 60185 | Ring Snap A230 x 1.5 | 2 | 471 |
| 11 | 63769 | Bush | 2 | |
| 12 | 63764 | O-Ring OR40 x 2.5 | 2 | |
| 13 | 61782 | O-Ring 25 x 2.5 | 2 | |
| 14 | 63770 | Pinion Shaft | 1 | |
| 15 | 60200 | Oil Site Plug | 1 | |
| 16 | 63771 | Joint Washer 21.5 x 28.7 x 2.5 | 1 | |
| 17 | 60148 | Copper Gasket | 1 | |
| 18 | 62049 | Screw Plug M22 x 1.5 5.8 | 1 | 908 |

Decal Identification



This engine has been tested with fuel treated with

STA-BIL®
to prevent gum and varnish residue in tank.

NOTICE

CONTACT THE MANUFACTURER IMMEDIATELY AT 1-800-888-9926 IF SAFETY OR HAZARD DECALS OR OWNER'S MANUAL ARE MISSING FROM THIS EQUIPMENT. P/N 55156

A CAUTION

When equipment is not in use turn the fuel valve to the OFF position

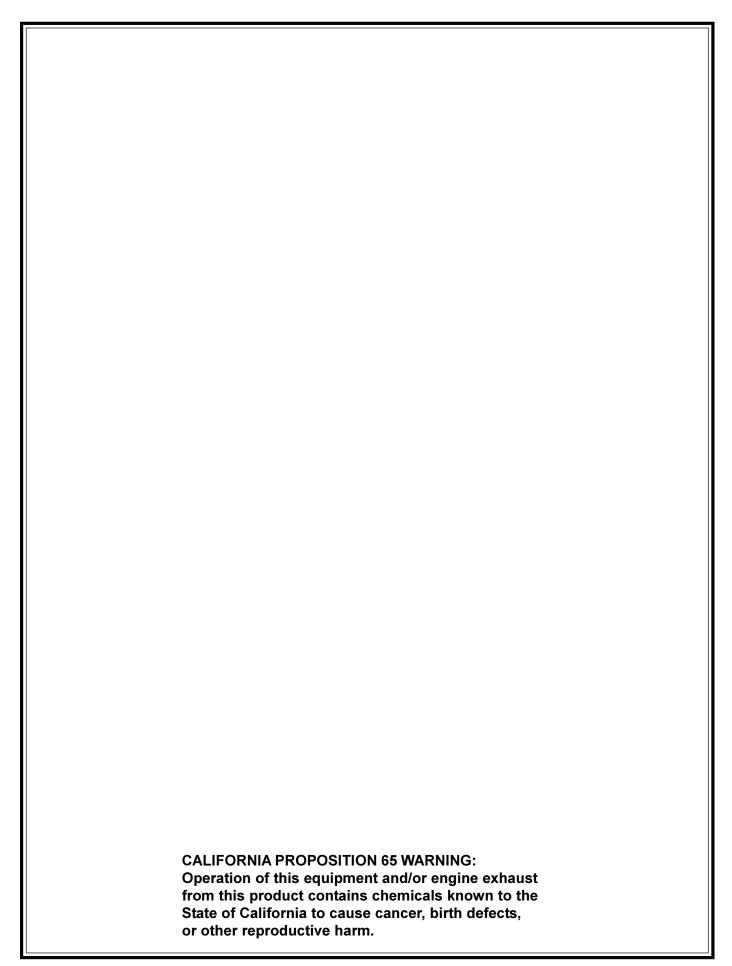
55269





Decal Identification

| ITEM | PART NO. | DESCRIPTION | QUANTITY |
|------|----------|-------------------------------------|----------|
| 1 | 55128 | Decal Danger Gasoline (Honda only) | 1 |
| 2 | 55214 | Decal Sta-Bil (Honda only) | 1 |
| 3 | 55156 | Decal Notice (Honda & Hatz) | 1 |
| 4 | 55269 | Fuel Shutoff (Honda only) | 1 |
| 5 | 55149 | Decal Ear Protection (Honda & Hatz) | 1 |
| 6 | 55148 | Decal Warning Diesel (Hatz only) | 1 |





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