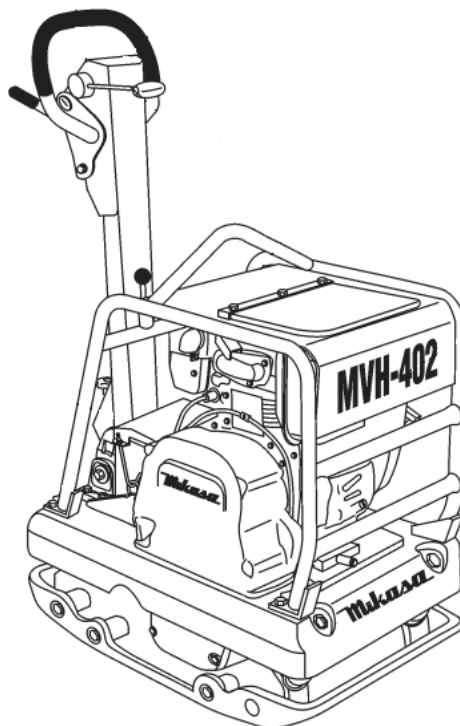




ENGINE REPLACEMENT GUIDE

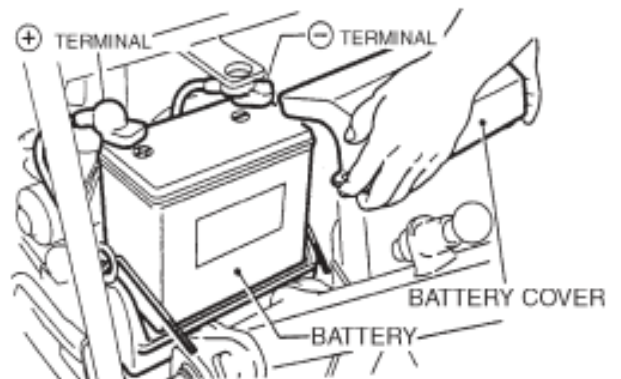
This documentation can be used as a guide to replace the YANMAR L100 diesel engine with a HATZ 1B40U-2 diesel engine.



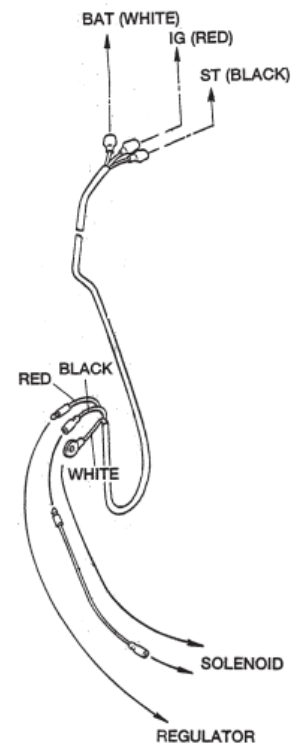


TOOLS		
17mm	Wrench	
14mm	Wrench	
Metric Allen (set)	Wrench	
Screwdriver	Flat	Phillips
Pliers	Standard	
3/8"	Drill Bit	
11/32"	Drill Bit	
13/32"	Drill Bit	
10mm x 1.50	Coarse Tap	
1/4"	Drill	
1/4" Drive	Impact Gun	
Puller		
Cut Off Wheel		
Torch		
PARTS	PART NO.	QTY
Hatz Engine	1B40XU29929	1
Complete Kit	ENGRETR0402	1
Bolts (clutch cover)	0105091025	4
Bolts (engine mounts)	401010250	4
Bolts (clutch mounting)	3/8-24x1-1/2	1
V-Belts	070200423	2
Throttle Cable	956100028	1
Cable Clamp	50483100	1
Clutch (machined)	45733599H	1
Throttle Cable	BRKTRETRO402	1
Spring	05179100	1
Bushing	05179000	1
Set Screw	50400600	1
Cable Clamps	50483100	2
Hex Screw	50025000	1
Guide Brush	05165000	1

1. Remove the battery: (a) Remove the battery cover. (b) When removing the cables, disconnect the ground side first.



2. Disconnect and remove the three wires from the starter that run up to the key switch, they are no longer used.

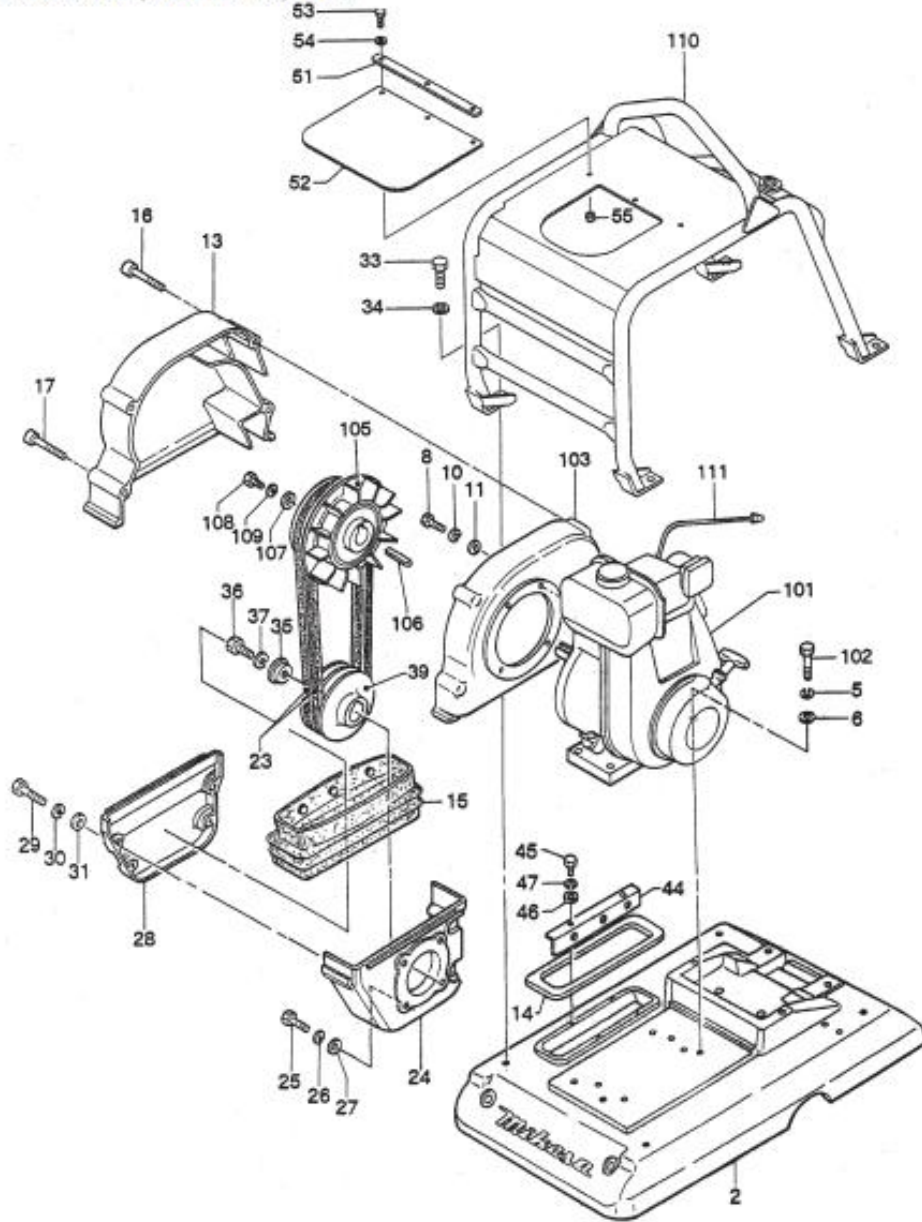


3. Remove: (a) frame guard, (b) outer belt cover, (c) belts, clutch and engine, (d) inner belt cover from the engine.

NOTE: (remove engine mount bolts and tilting engine makes easier for belt removal) (use puller to remove clutch)

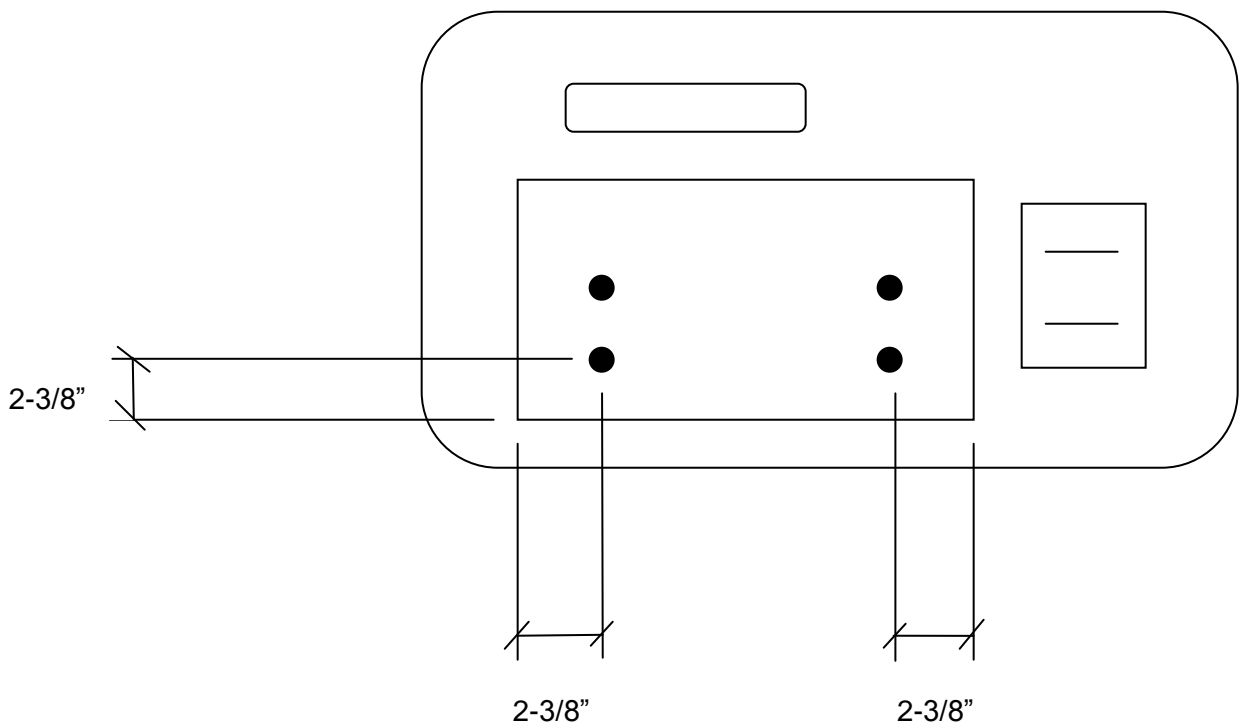
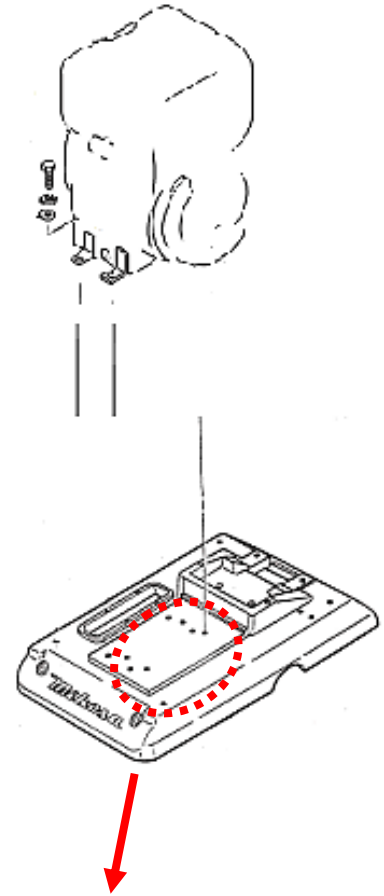
(See exploded view on page 4)

BASE AND ENGINE (YANMAR L100A) ASSY.

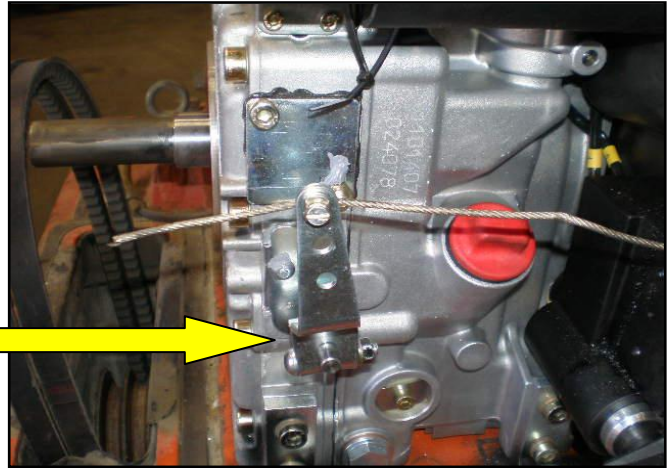


4. Preparing the base for the Hatz engine: use an 11/32" drill bit. Drill four 1-1/2" deep holes. Measuring on the flat surface where the engine mounts drill approximately 2-3/8" from the corners see example below.
(Before drilling complete steps 7 and 8 then use a straight edge to square up the upper and lower pulleys)

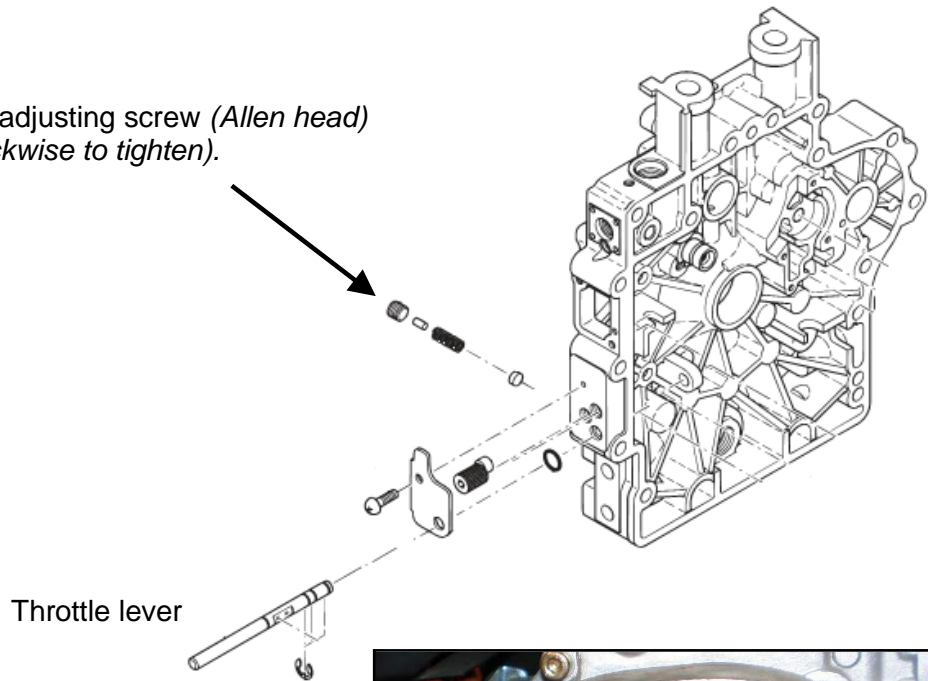
5. After drilling holes follow with a 10mm x 1.50 coarse tap through the drilled holes.



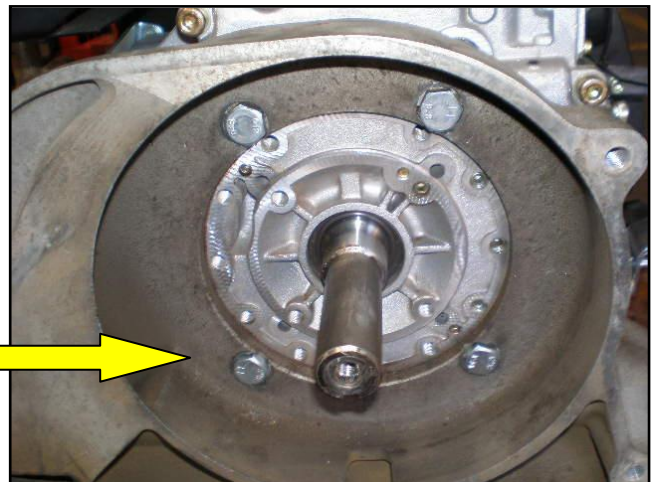
6. Before installing the Hatz engine, check the throttle lever for proper tension. Lever should have free movement with out need to apply force.



Throttle lever adjusting screw (*Allen head*)
direction (*clockwise to tighten*).



7. In order to mount the inner belt cover to the Hatz engine, enlarge the mounting holes using 13/32" drill bit. Then mount with 10mm bolts.



8. Install machined clutch (45733599H) with 3/8" x 1-1/2" bolt and lock washer.



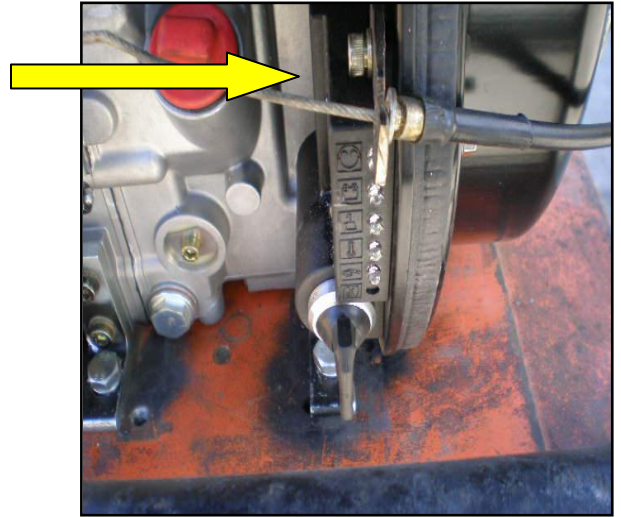
9. Mount and install: (a) engine and belts, (b) outer belt cover

NOTE: *(before bolting engine, tilting engine makes easier for belt installation)
(use a straight edge to square up upper and lower pulleys)*

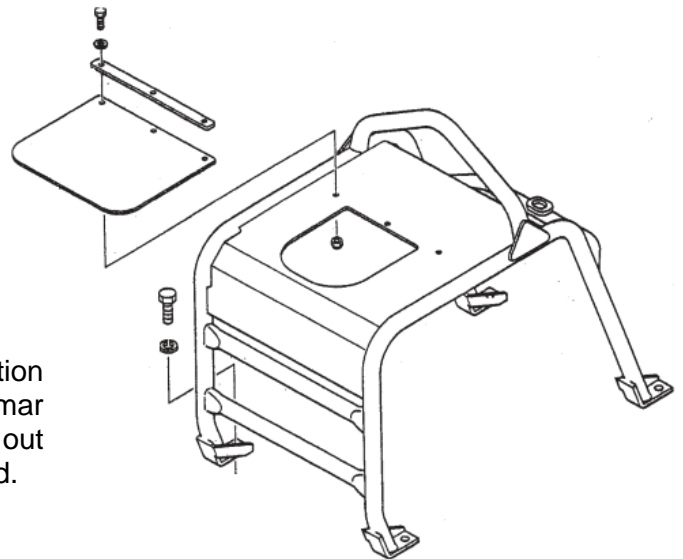
10. Mount engine with 10 x 1.50 x 30mm bolts, lock washers, and red Loctite.



11. R&R top Allen bolt that secures the switch assembly to the Hatz engine. Use the hole and bolt to mount the throttle cable bracket (*BRKTRETRO402*)



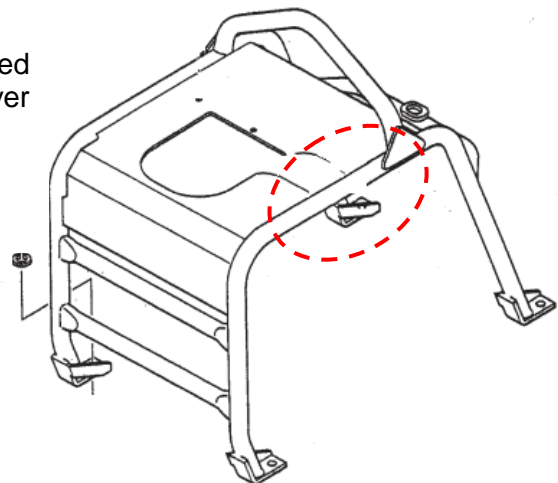
12. Install new throttle cable: (a) Attach cable to the throttle lever and secure other end through the new bracket. (b) Tighten lock nut on throttle cable where it runs through the bracket.



13. Before installing the frame guard, notice the location of the Hatz engine fuel cap differs from the Yanmar L100. Place the frame guard on the base and mark out the area above the fuel cap. Remove the frame guard.

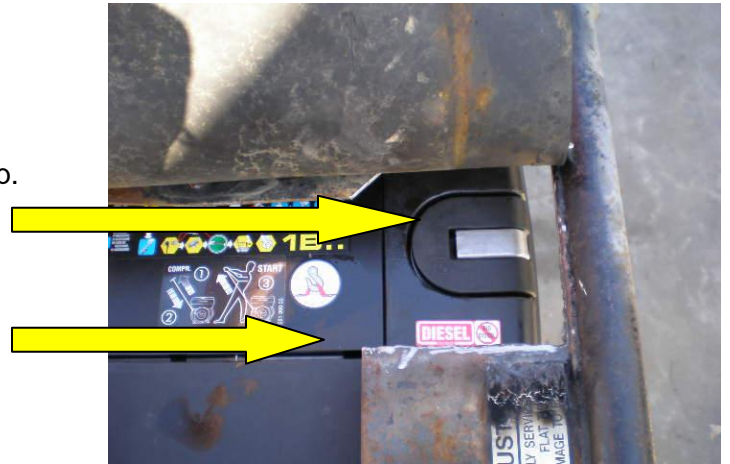
14. Using a cut-off wheel or torch cut away the marked area. Then relocate and mount the rubber cover over the new open space.

(see sample pictures on page 9)



Hatz engine fuel cap.

Cut open space.



Rubber cover.

