

TECH TIPS

SERVICE CALL: DC Hertz Tachometer Diagnosis

TOOLS NEEDED: Multimeter with DC Hertz capability

MODELS: Z45/S60/S65/S80/S85/S45/S100/S120



Tech Tips Safety Rules



Danger

Failure to obey the instructions and safety rules in the appropriate Operator's Manual and Service Manual for your machine will result in death or serious injury. Many of the hazards identified in the operator's manual are also safety hazards when maintenance and repair procedures are performed.

Do Not Perform Maintenance Unless:

- You are trained and qualified to perform maintenance on this machine.
- You read, understand and obey:
 - manufacturer's instructions and safety rules
 - employer's safety rules and worksite regulations
 - applicable governmental regulations
- You have the appropriate tools, lifting equipment and a suitable workshop.

The information contained in this tech tip is a supplement to the service manual. Consult the appropriate service manual of your machine for safety rules and hazards.

Step 1

Locate lower key switch and position in off position. Locate E-stop and push in to the off position

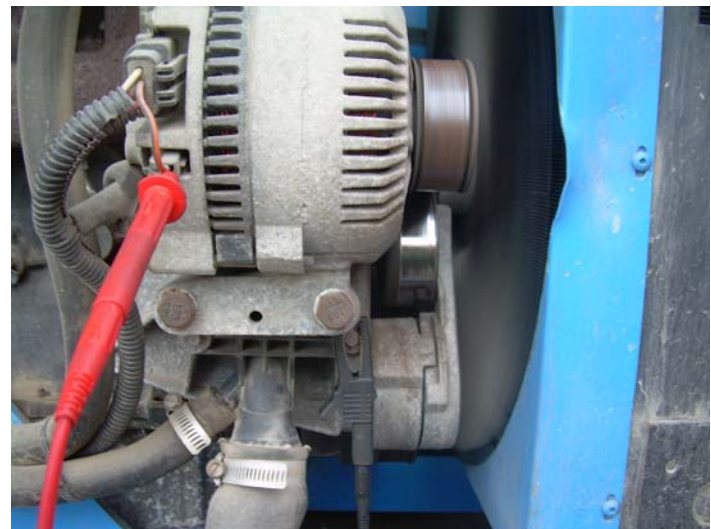


STEP 2

Locate unit alternator and identify orange with black stripe wire connected to alternator.

Connect multimeter leads as directed and shown

Red positive (+) to orange/black wire and
Black negative (-) to ground.



TECH TIPS

Step 3

Locate lower key switch and position to base position and pull lower e-stop to on position And start engine.



Step 4

Check DC Hertz signal at multimeter
In low throttle position note Reading, position lower enable switch
To rabbit position (high throttle) and
Note reading



Step 5

Below is a reference spreadsheet of model and engine type HZ specifications.

Formula to calculate HZ signal

$$\text{Rpm} \div 60 = \text{___} \times \text{pulses per rev} = \text{___}$$

Function	Parameter	Range	Z45			S60/65		
			Deutz F3L1011F	Perkins 104-22	Ford EFI, 75	Deutz F4L1011F	Perkins 404-22	GM 3.0L
Configuration	Pulses per Rev	0-10000	12.52	9.25	14.88	12.52	9.25	14.04
Idle					900			
low			1300	1300	1600	1500	1300	1650
high			2300	2600	2500	2500	2500	2500

Z	Parameter	Range	Z45		S80/85		
			Deutz F3L1011F	Deutz F4L913	Ford EFI, 75	Perkins 704-22	GM 3.0L
Configuration	Pulses per Rev	0-10000		17.8	14.88	9.25	14.04
Idle							
low				1300	1600	1600	1650
high				2300	2500	2500	2300

Function	Parameter	Range	Z45	S40/45	S100/120				
			Deutz F3L1011F	Deutz F3L2011F	Ford EFI, 75	Perkins 704-22	Deutz F4L913	Perkins 1004-42	Cummins 4B3.9
Configuration	Pulses per Rev	0-10000		12.52	14.88	9.25	17.8	14	17
Idle									
low				1500	1600	1600	1300	1300	1300
high				2500	2500	2300	2350	2350	2350

Please contact Terex AWP Service @ 1-800-536- 1800 if further assistance is needed