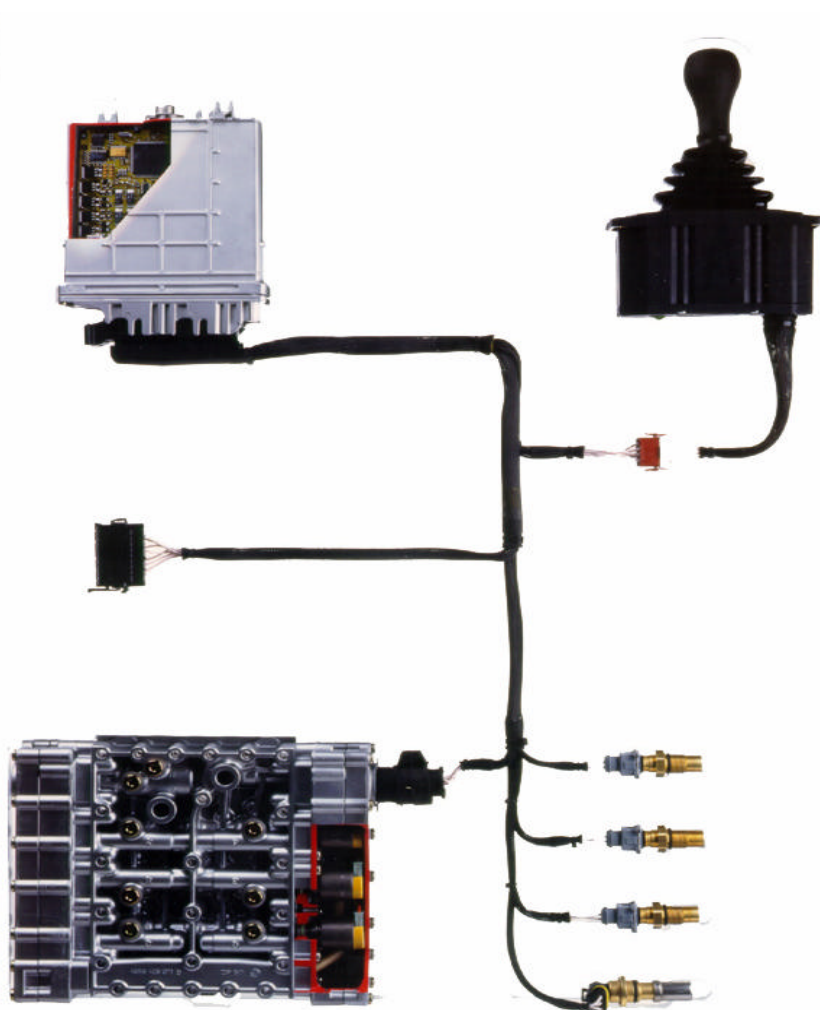


SERVICE

Error code list



Ergopower- EST37/A



Z F P a s s a u G m b h
D o n a u s t r a ß e 2 5 - 7 1
D - 9 4 0 3 4 P a s s a u



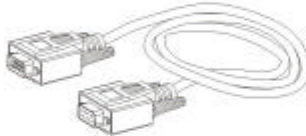
**DIAGNOSE - UND PROGRAMMIERUNG
EST 37 ERGOPOWER mit LAPTOP und DPA-05**



Pentium Laptop min. 900 MHz
Zulässiges Betriebssystem
Windows 95 / 98 / Me oder NT
Windows 2000 / Win XP



Basic - Software
Testman Pro auf CD
6008 208 900



Adapterkabel
6008 308 601 = RS 232
6008 207 026 = USB



Programmieradapter
DPA - 05
6008 208 017



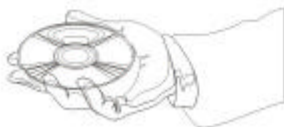
Adapterkabel
6008 207 023
6008 207 024
6008 207 025
6029 017 005 ZFP

*Einzelplatz
Kundenversion*

**Diagnose - Set
5870 220 010**

Diagnose Software auf CD-ROM für ERGOPOWER

EST - 37	EST - 37	EST - 37	EST - 37
WG 110	WG 130/131	WG 190	WG 260
	WG 160/161	WG 210	WG 310



Bestell-Nr.: 6008 208 804

Enthaltene Sprachversionen :
DEUTSCH / ENGLISCH / FRANZÖSISCH

1 Introduction

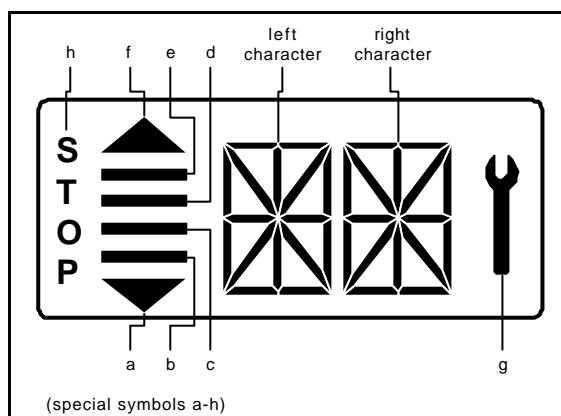
1.1 Abbreviations

o.c.	open circuit
s.c.	short circuit
OP-Mode	operating mode
TCU	transmission control unit
EEC	electronic engine controller
PTO	power take off

1.2 ZF - Display:

If a fault is detected, the display shows a spanner symbol (g) for a fault. The display shows the fault code, if the gear selector is on neutral position.

If more than one fault is detected, each fault code is shown for about 1 second.



1.3 Display during operation

Symbol	meaning	remarks
1F, 1R	actual gear and direction	
2F, 2R	left digit shows actual gear	
3F, 3R	right digit shows actual direction	
4F		
5F		
6F		
LF, LR	limp home gear	
F or R, no gear	Clutch Cutoff	
F or R flashing	direction F or R selected while turbine speed is too high	CAUTION gear will engage if turbine speed drops
NN	not neutral, waiting for neutral after power up or a severe fault	to engage a gear, first move shift selector to neutral position and again to F or R position
**	oil temperature too low, no gear available	warm up engine / transmission
*N	oil temperature low, only one gear available	warm up engine / transmission

1 bar (special symbol)	manual mode 1 st gear	
2 bars	manual mode 2 nd gear	
3 bars	manual mode 3 rd gear	
4 bars	manual mode 4 th gear and also 5 th and 6 th gear in 6WG	
4 bars and 2 arrows	automatic mode	
Bars flashing	6 WG: converter lockup clutch open 4 WG: Downshift mode activ	difference of engine and turbine speed above a certain limit and lockup clutch not activated
Spanner	at least one fault activ	select neutral to get fault code displayed
Fault code	see faultcode list	
WS	warning sump temperature	changes between actual gear/direction while driving, in neutral only displayed if no fault is detected (spanner)
WR	warning retarder temperature	changes between actual gear/direction while driving, in neutral only displayed if no fault is detected (spanner)
WT	warning torque converter temperature	changes between actual gear/direction while driving, in neutral only displayed if no fault is detected (spanner)
WE	warning high engine speed	changes between actual gear/direction while driving, in neutral only displayed if no fault is detected (spanner)
PN	direction F or R selected while parking brake engaged	transmission in neutral until parking brake is released CAUTION: vehicle starts to move after release of parking brake
EE flashing	no communication with display	checked wiring from TCU to display

ZF Friedrichshafen AG Faultcodes ERGO-Control EST37A	03-05-13
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1.4 Display during AEB-Mode

symbol	meaning	remarks
PL	AEB - Starter is plugged at the diagnostic plug	
ST	AEB-Starter-button is pressed	
K1..K4,KV,KR	calibrating clutch K1..K4, KV or KR resp.	
_ and Kx	wait for start, initialization of clutch Kx, x: 1, 2, 3, 4, V, R	
≡ and Kx	fast fill time determination of clutch Kx	
= and Kx	compensating pressure determination of clutch Kx	
OK	calibration for all clutches finished	Transmissions stays in neutral, you have to restart the TCU (ignition off/on) after removing AEB-Starter
STOP	AEB canceled (activation stopped)	Transmissions stays in neutral, you have to restart the TCU (ignition off/on)
STOP and Kx	AEB stopped, clutch Kx can't be calibrated	Transmissions stays in neutral, you have to restart the TCU (ignition off/on)
Spanner and Kx	Kx couldn't be calibrated, AEB finished	Transmissions stays in neutral, you have to restart the TCU (ignition off/on)
Δ E	engine speed too low, ⇒ raise engine speed	
∇ E	engine speed too high, ⇒ lower engine speed	
Δ T	transmission oil temperature too low, ⇒ heat up transmission	
∇ T	transmission oil temperature too high ⇒ cool down transmission	
FT	transmission temperature not in defined range during calibration	Transmissions stays in neutral, you have to restart the TCU (ignition off/on)
FB	operating mode not NORMAL or transmission temperature sensor defective or storing of Calibrated values to EEPROM-has failed.	Transmissions stays in neutral, you have to restart the TCU (ignition off/on)
FO	Outputspeed_not_zero	Transmissions stays in neutral, you have to restart the TCU (ignition off/on)
FN	Shift lever not in Neutral position	Transmissions stays in neutral, you have to restart the TCU (ignition off/on)
FP	Parkbrake_not_applied	Transmissions stays in neutral, you have to restart the TCU (ignition off/on)
STOP	AEB - Starter was used incorrect or is defective. Wrong device or wrong cable used	Transmissions stays in neutral, you have to restart the TCU (ignition off/on)