[CONFIDENTIAL MATERIAL REDACTED]

10. Provide a description of each of the following conditions as it applies to the alleged defect in the subject vehicle and a chronological summary of the actions Honeywell has taken to rectify this condition in the subject component:

   a. A misformed condition in the actuator die which can lead to a rebound of the lock bolt causing a potential for failure of the ECL to unlock during the vehicle start up;

   b. A bowing condition on the ECL hardware cover which can lead to binding of the ECL gears;

   c. Improper heat treatment of the casting, crimp nest resulting in a potential for improper seating, which lead to either the binding of the ECL gears or the rebound of the ECL lock bolt; and

   d. Any other condition in the subject component that relates to the alleged defect in the subject vehicle.

SAGINAW TESTER SEQUENCE OF OPERATION

SCAN TIME 3.1ms.

1. Extend Guard Rung 10
2. Retract Nest Rung 27
3. Check for shorted wire for 500 ms. Rung 37
   3A) if good, continue test
   3B) if bad, stop test & reject part
4. Clamp part & check resistance at the same time. Rung 62
   4A) if good, continue test
   4B) if bad, stop test & reject
5. Check for no crimp, missing screw, & try to retract part to start position. Rung 92
   5A) if good, continue test
   5B) if bad, stop test & reject part
6. Extend Linear Encoder & close relay G [G transfers contact signal to PLC] Rung 101 && Relay F (shorted)
7. Delay 500 ms.
8. Turn on "6 volts" & check part for 11.25mm Rung 118
   8A) if over 11.25mm, reject
   8B) if under 11.25mm, continue test
9. Delay 1.0 second & do a shorted test
10. Delay 900ms
11. Check part to see if contacts are closed.
    10A) if open, reject part
    10B) if closed, extend plunger
12. Delay 500 ms. Run 353
13. Retract plunger (turn on read retract) Rung 361
    During movement :
14. Part must "open at high set point",
    "close before Schaevitz reaches low set point".
    14A) If part is bad, stop test & reject
    14B) if good, continue test
15. Retract Linear Encoder
16. Delay 200 ms. Rung 410 Tim 9
17. "Turn on 9v"
18. Delay 500ms Rung 419 Tim 10
19. Extend plunger for 500 ms.
20. Check part. contacts must be open.
    (if not reject)
21. Extend Electric side load cycle.

Rung 478
484

Change 1714 to
2015
(3 Places)

22. Start 3.0 sec timer, Lebow set point has to be made before 3.0 sec. Timer times out.
    22A) if not, reject part Timer 22 Rung 446

NOTE: Lebow is force gage.

23. Delay 500 ms after Lebow set point is made. Timer 21 Rung 444

24 Retract plunger, 2.0 sec. with side load

25. after 1.2 sec., pulse to check part. Retract Timer Rung 166
    24A) If part is closed, continue test
    24B) If part is open, stop test & reject part

26. Retract side load Rung 446

27 Delay 200 ms. Timer 11 Rung 446

NOTE: All tests for shorts test are 500 ms. long

28. Check for shorted part for 500 ms. Rung 505
    28A) If shorted, stop test & reject

29. "Turn on 14.2v" Rung 507

30. Delay 500 ms. Timer 12 Rung 517

31 Extend plunger for 500 ms. Rung 532

32. Check part
    32A) If part is not open, stop test & reject part
    32B) If part is good, continue test

33 Check for shorted part for 500 ms. Rung 538
    33A) If part is bad, stop test & reject part
    33B) If part is good, continue test

34 "Turn on 8.5v" Rung 551

35 Delay 500 ms. Timer 13 Rung 561

36 Retract plunger for 1.2 sec. Rung 567

37 Check part Rung 572
    37A) If open, stop test & reject part
    37B) If closed, continue test

38 Delay 500 ms. Timer 14 Rung 580

39 Extend Plunger for 500 ms. Rung 584

40 Check part Rung 592
    40A) If closed, stop test & reject part
    40B) If open, continue test

41 Check for shorted part for 500 ms. Rung 598
    41A) If shorted, stop test & reject
    41B) If good, continue test

42 "Turn on 14.2v" Rung 605

43 Delay 500 ms. Rung 615

44 Retract plunger Rung 649 & 655
- 14.2 v test, once the contacts close, we look for any open longer that 3.1 ms., if so we reject as intermittent.

45. Check part Rung 626
  - 45A) If open, stop test & reject part
  - 45B) If good, continue test

46. Do a shorted test Rung 622
47. "Turn on 8.5v" Rung 639

48. Delay 500 ms. Rung 662

49. Extend plunger Rung 668

50 Check part Rung 674
  - 50A) If part is closed, stop test & reject
  - 50B) If open, continue test

51 Delay 500 ms. Rung 691

52 Retract plunger for 1.2 sec. Rung 687

53. Check part Rung 692
  - 53A) If open, stop test & reject part
  - 53B) If closed, continue test

54 Turn off 8.5V Rung 704

55 Turn on 14.2V & extend plunger Rung 707

56 Delay 1.5 sec Rung 714

57 Retract plunger Rung 721

58 Open relay H while under power Rung 725

Reverse Test — 59 Delay 1 sec. Rung 725

60 Check part. Rung 733
  - 60A) If closed, part passed
  - 60B) If open, Reject part

61 If all conditions have been met for a good part, turn on good light & add 1 to counter Rung 750

62 Extend stamp pad for 300 ms. Rung 810

63 Unclamp part Rung 825

64 Extend nest Rung 829

65 Retract gate Rung 845

(NOTE*) On a reject part.
1) test is stopped
2) a red light will come on
3) 1 of 5 counters will count the reject
4) part is not given back to the operator until a red button is pushed

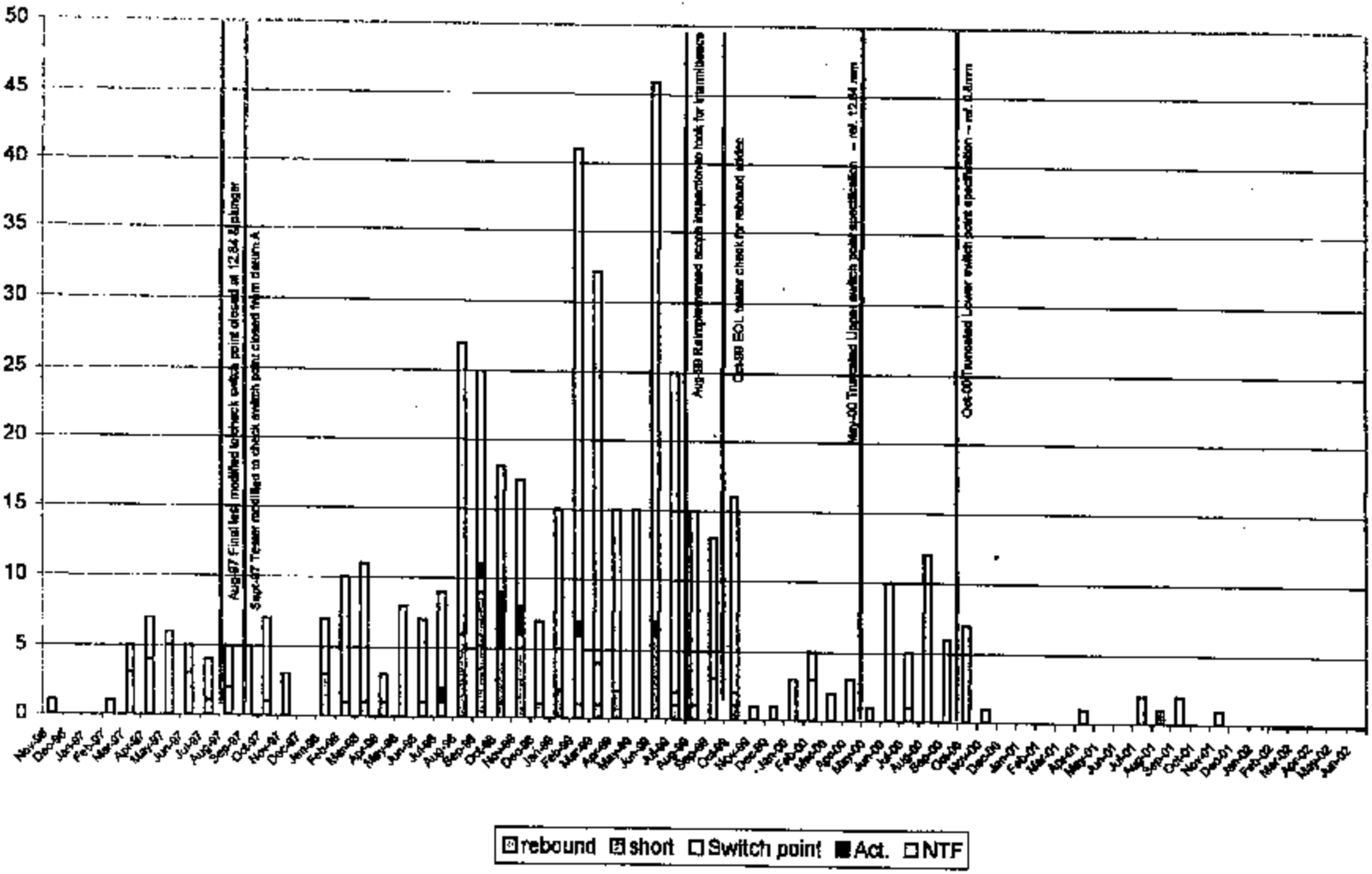
(NOTE) On all extend plungers the timer is set for 500ms.

REJECT CODES

1. 1mm reject (Inactive)
2. Intermittent (Inactive)
3. Reject 6V ↓
4. Reject not open 9V ↑
5. 9V side load
6. 14.2V ↑
7. 8.5 V ↓
8. 8.5 V ↑
9. 14.2 V ↓
10. 8.5V ↑
11. 8.5V ↓
12. Not close initially
13. 6mm
14. No screw or bad crimp
15. Intermittent.
16. Intermittent.
17. Shorted Reject

Column Lock Warranty Returns

with Switch Point Initiatives



11. Produce each of the following:

a. One exemplar sample of each design version of the subject component; and,

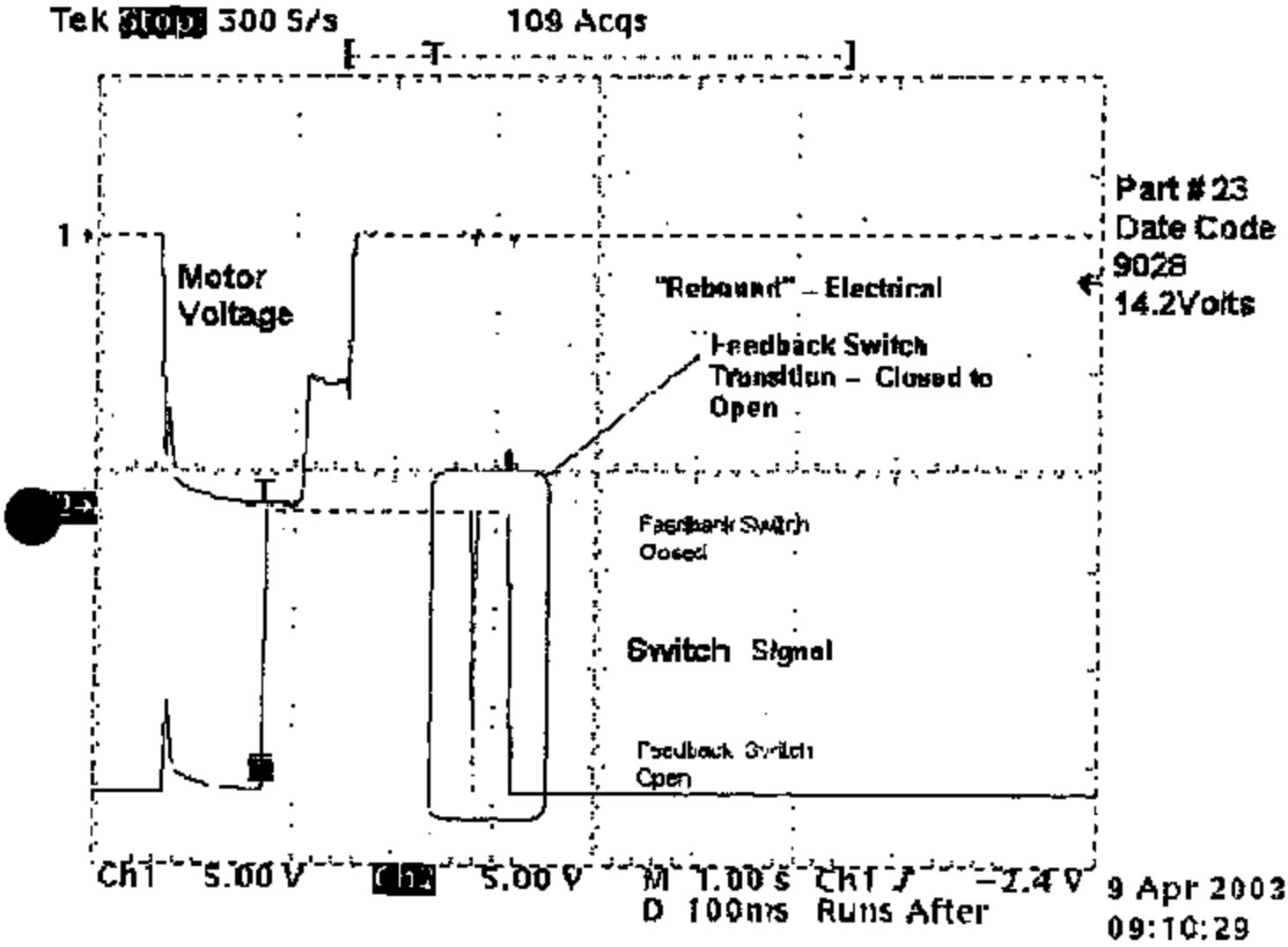
b. Field return samples of the subject component exhibiting each of the following conditions:

i. A misformed condition in the actuator die, which can lead to a rebound of the lock bolt causing a potential for failure of the ECL to unlock during the vehicle start-up;

ii. A bowing condition on the ECL hardware cover, which can lead to binding of the ECL gears;

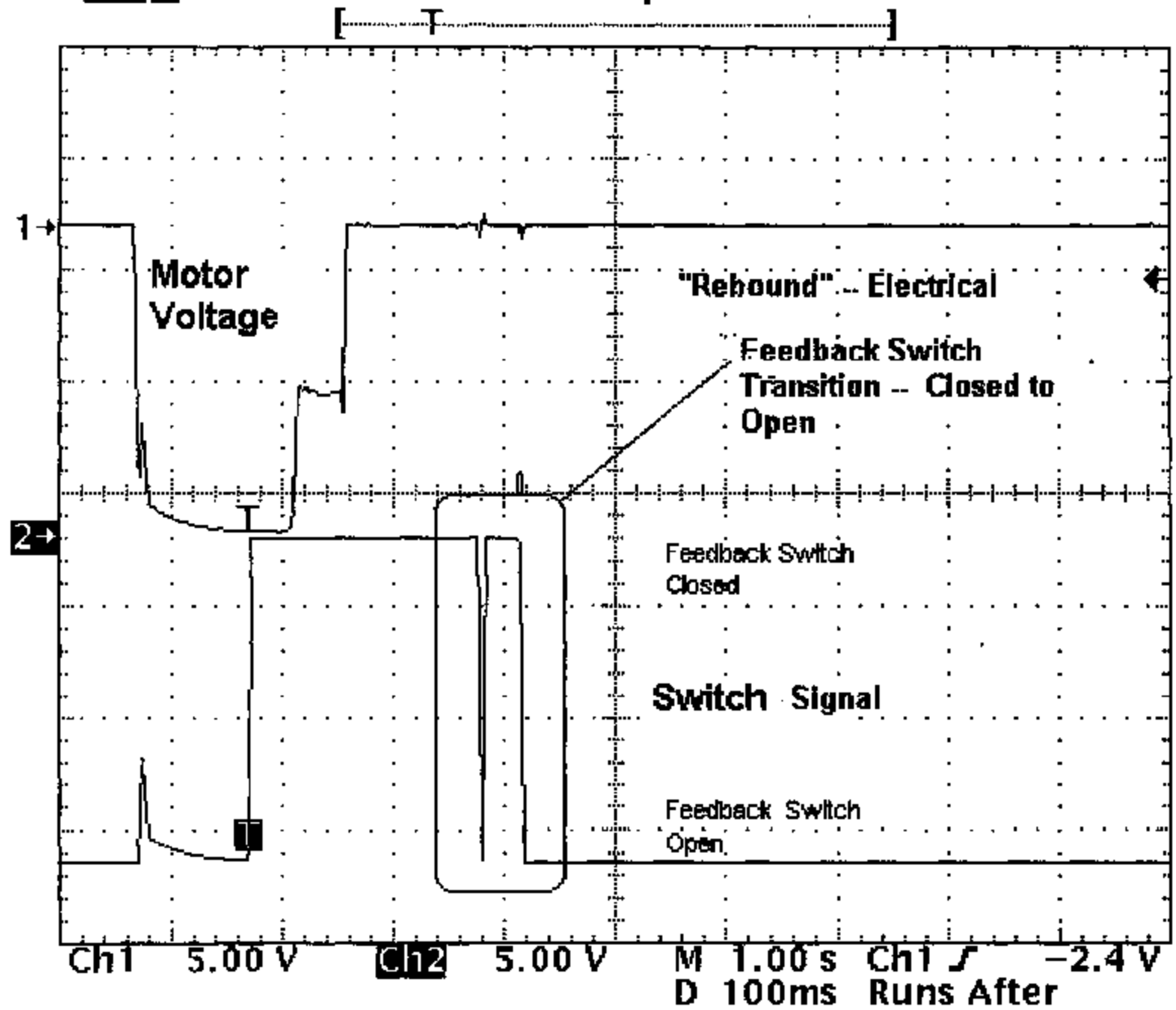
iii. Improper heat treatment of the casting crimp nest resulting in a potential for improper seating, which can lead to either the binding of the ECL gears or the rebound of the ECL lock bolt; and

iv. Any other condition in the subject component that relates to the alleged defect in the subject vehicle.


Tek Stop 300 S/s 109 Acqs
Part # 23
Date Code
9028
14.2Volts
Motor
Voltage
"Rebound" – Electrical
Feedback Switch
Transition – Closed to
Open
Feedback Switch
Closed
Switch Signal
Feedback Switch
Open
Ch1 5.00 V Ch2 5.00 V M 1.00 s Ch1 ƒ -2.4 V
D 100ms Runs After
9 Apr 2003
09:10:29

Attachment 11A

(Oscilloscope Graph of Returned Unit)



Part # 23
Date Code
9028
14.2Volts

9 Apr 2003
09:10:29

12. Furnish Honeywell's assessment of the alleged defect in the subject vehicle, including:

    a. The causal or contributory factor(s);

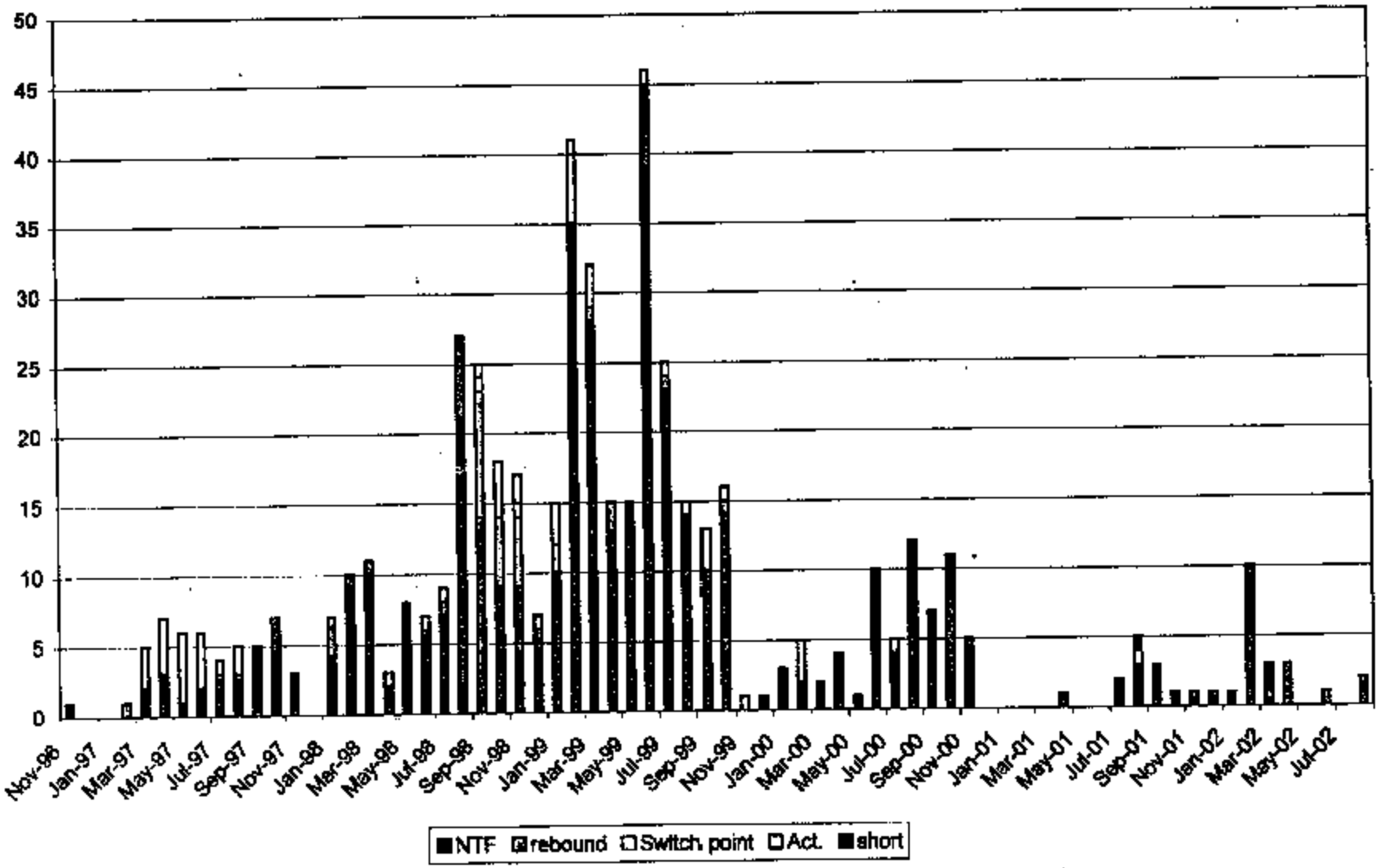
    b. The failure mechanism(s);

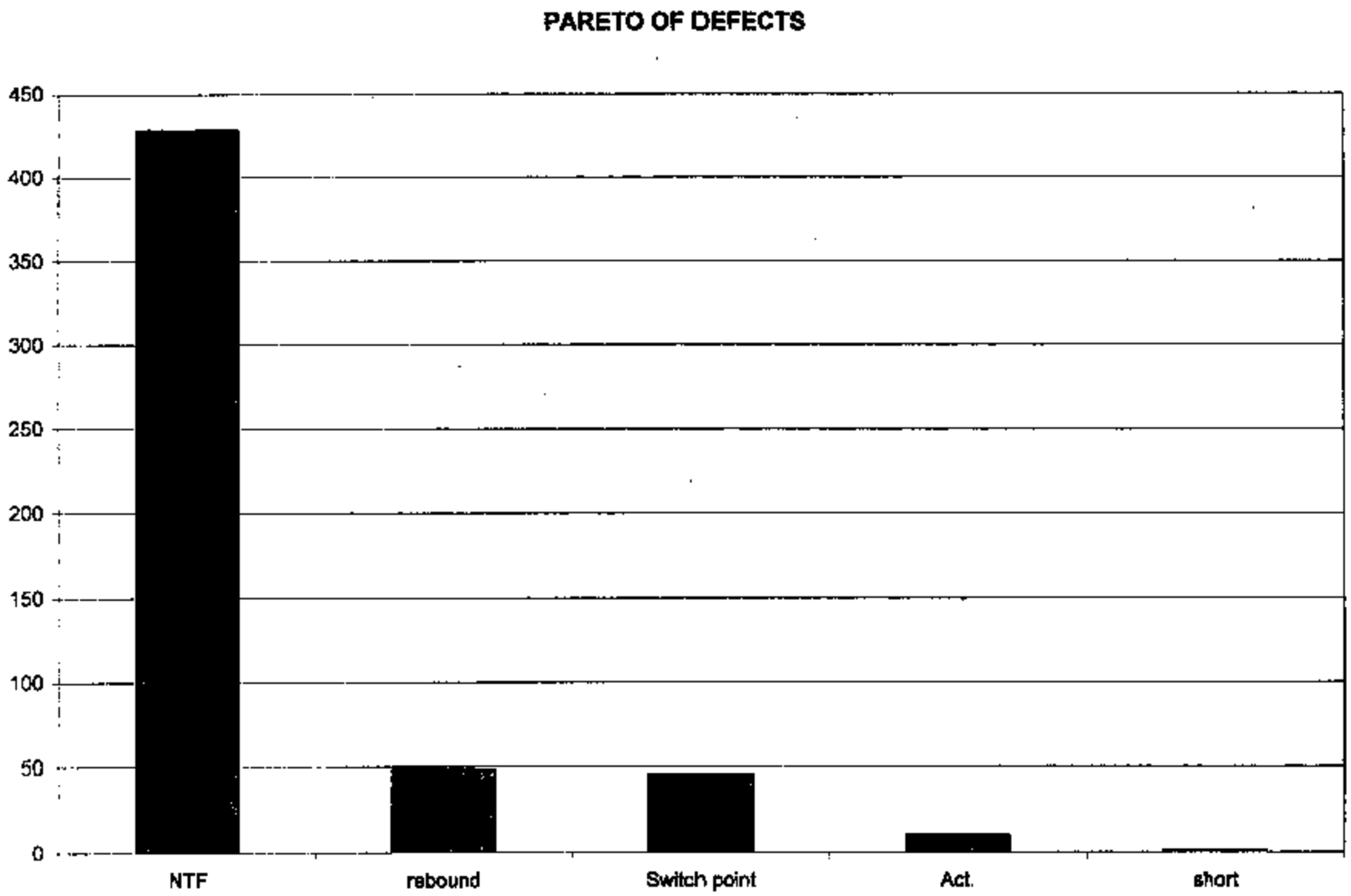
    c. The failure mode(s);

    d. The risk to motor vehicle safety that it poses; and

    e. What warnings, of any, the operator and the other person both inside and outside the vehicle would have that the alleged defect was occurring or subject component was malfunctioning.

Column Lock Warranty Returns




PARETO OF DEFECTS
450
400
350
300
250
200
150
100
50
0
NTF
rebound
Switch point
Act.
short