**Baseline Empty**

Train\_Speed Irregularity

40 1

40 2

40 3

40 4

40 5

40 6

40 7

40 8

40 9

40 10

50 1

50 2

50 3

50 4

50 6

50 7

50 8

50 9

50 10

60 1

60 2

60 3

60 4

60 6

60 7

60 8

60 9

60 10

70 1

70 2

70 3

70 4

70 5

70 6

70 7

70 8

70 9

70 10

75 1

75 2

75 3

75 4

75 5

75 6

75 7

75 8

75 9

75 10

80 1

80 2

80 3

80 4

80 5

80 6

80 7

80 8

80 9

80 10

90 1

90 2

90 3

90 4

90 5

90 6

90 7

90 8

90 9

90 10

100 1

100 2

100 3

100 4

100 5

100 6

100 7

100 8

100 9

100 10

110 1

110 2

110 3

110 4

110 5

110 6

110 7

110 8

110 9

110 10

120 1

120 2

120 3

120 4

120 5

120 6

120 7

120 8

120 9

120 10

**Baseline Full**

Train\_Speed Irregularity

1 40

2 40

3 40

4 40

5 40

6 40

7 40

8 40

9 40

10 40

1 50

2 50

3 50

4 50

6 50

7 50

8 50

9 50

10 50

1 60

2 60

3 60

4 60

6 60

7 60

8 60

9 60

10 60

1 70

2 70

3 70

4 70

5 70

6 70

7 70

8 70

9 70

10 70

1 75

2 75

3 75

4 75

5 75

6 75

7 75

8 75

9 75

10 75

1 80

2 80

3 80

4 80

5 80

6 80

7 80

8 80

9 80

10 80

1 90

2 90

3 90

4 90

5 90

6 90

7 90

8 90

9 90

10 90

1 100

2 100

3 100

4 100

5 100

6 100

7 100

8 100

9 100

10 100

1 110

2 110

3 110

4 110

5 110

6 110

7 110

8 110

9 110

10 110

1 120

2 120

3 120

4 120

5 120

6 120

7 120

8 120

9 120

10 120

**Damage Scenario P5**

Train\_Speed Irregularity Defect\_Type Defect\_Amplitude Defect\_Length

'0.35' -17 5 1 75

'0.47' -17 5 1 75

'0.30' -10 5 1 75

'0.35' -10 5 1 75

'0.47' -10 5 1 75

'0.30' -8 5 1 75

'0.35' -8 5 1 75

'0.47' -8 5 1 75

'0.30' -6 5 1 75

'0.35' -6 5 1 75

'0.47' -6 5 1 75

'0.30' 6 5 1 75

'0.35' 6 5 1 75

'0.47' 6 5 1 75

'0.30' 8 5 1 75

'0.35' 8 5 1 75

'0.47' 8 5 1 75

'0.30' 10 5 1 75

'0.35' 10 5 1 75

'0.47' 10 5 1 75

'0.30' 17 5 1 75

'0.35' 17 5 1 75

'0.47' 17 5 1 75

**Damage Scenario P1**

Train\_Speed Irregularity Defect\_Type Defect\_Amplitude Defect\_Length

75 1 1 -17 '0.30'

75 1 1 -17 '0.35'

75 1 1 -17 '0.47'

75 1 1 -17 '0.65'

75 1 1 -17 '1'

75 1 1 -10 '0.30'

75 1 1 -10 '0.35'

75 1 1 -10 '0.47'

75 1 1 -10 '0.65'

75 1 1 -10 '1'

75 1 1 -8 '0.30'

75 1 1 -8 '0.35'

75 1 1 -8 '0.47'

75 1 1 -8 '0.65'

75 1 1 -8 '1'

75 1 1 -6 '0.30'

75 1 1 -6 '0.35'

75 1 1 -6 '0.47'

75 1 1 -6 '0.65'

75 1 1 -6 '1'

75 1 1 6 '0.30'

75 1 1 6 '0.35'

75 1 1 6 '0.47'

75 1 1 6 '0.65'

75 1 1 6 '1'

75 1 1 8 '0.30'

75 1 1 8 '0.35'

75 1 1 8 '0.47'

75 1 1 8 '0.65'

75 1 1 8 '1'

75 1 1 10 '0.30'

75 1 1 10 '0.35'

75 1 1 10 '0.47'

75 1 1 10 '0.65'

75 1 1 10 '1'

75 1 1 17 '0.30'

75 1 1 17 '0.35'

75 1 1 17 '0.47'

75 1 1 17 '0.65'

75 1 1 17 '1'