20 May 1972

# PERFORMANCE DATA FOR

# JOHNSON, MERCURY AND CHRYSLER

# OUTBOARD MOTORS

# 40 THROUGH 100 H. P.

Approved For Release 1999/09/01 : CIA-RDP78-06815A000100120001-8

COMPARISON OF JOHNSON, MERCURY AND CHRYSLER OUTBOARD MOTOR SPECIFICATIONS.

| Manufacture | H. P. | Number of Cylinders | Weight | Bore X Stroke | Displacement | Starting |
|---|---|---|---|---|---|---|
| Johnson | 40 | 2 | 156 | 3.1875 x 2.750 | 43.9 | Electric |
| Johnson | 55 | 3 | 197 | 3.000 x 2.406 | 49.7 | Electric |
| Johnson | 100 | V-4 | 265 | 3.375 x 2.50 | 89.5 | Electric |
| Mercury | 65 | 4 | 255 | 2.9375 x 2.300 | 62.35 | Electric |
| Chrysler | 55 | 2 | 140 | 3.187 x 2.800 | 44.70 | Electric |

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PERFORMANCE COMPARISON OF JOHNSON, MERCURY AND CHRYSLER OUTBOARD MOTORS AT VARIOUS LOADING CONDITIONS.

NO LOAD COMPARISON

| Model | Prop Size | Pin Position | Speed At | | Range At | |
|---|---|---|---|---|---|---|
| | | | Economy Cruise | Full Throttle | Economy Cruise | Full Throttle |
| Twin 40 H. P. Johnson | 10-3/8 x 14 | 4 | 18.00 | 25.00 | 113.9 | 96.8 |
| Twin 55 H. P. Johnson | 13 x 19 | 2 | 17.31 | 31.03 | 109.5 | 49.2 |
| Single 100 H. P. Johnson | 12-1/2 x 18 | 4 | 22.64 | 35.64 | 103.5 | 74.5 |
| Twin 65 H. P. Mercury | 12 x 17 | 3 | 21.56 | 30.77 | 94.1 | 54.9 |
| Twin 55 H. P. Chrysler | 10-3/8 x 13-1/2 | 3 | 29.51 | 31.86 | 91.0 | 76.3 |

500 POUND ADDED LOAD COMPARISON

| | | | | | | |
|---|---|---|---|---|---|---|
| Twin 40 H. P. Johnson | 10-3/8 x 14 | 4 | 16.22 | 22.50 | 105.5 | 90.0 |
| Twin 55 H. P. Johnson | 13 x 19 | 2 | 22.36 | 29.03 | 68.8 | 48.1 |
| Single 100 H. P. Johnson | 12-1/2 x 18 | 3 | 26.09 | 30.77 | 89.3 | 67.1 |
| Twin 65 H. P. Mercury | 12-1/2 x 15 | 3 | 25.18 | 31.58 | 75.5 | 47.4 |
| Twin 55 H. P. Chrysler | 10-3/8 x 12-1/2 | 3 | 26.67 | 29.51 | 85.2 | 67.8 |

1,000 POUND ADDED LOAD COMPARISON

| | | | | | | |
|---|---|---|---|---|---|---|
| Twin 40 H. P. Johnson | 10-3/8 x 14 | 4 | 19.05 | 19.05 | 79.1 | 79.1 |
| Twin 55 H. P. Johnson | 13 x 19 | 2 | 21.82 | 29.27 | 57.6 | 46.25 |
| Single 100 H. P. Johnson | 12-1/2 x 16 | 3 | 22.36 | 29.51 | 76.7 | 64.3 |
| Twin 65 H. P. Mercury | 12-1/2 x 15 | 4 | 20.0 | 26.67 | 56.4 | 42.6 |
| Twin 55 H. P. Chrysler | 10-3/8 x 11-1/2 | 3 | 24.32 | 28.35 | 77.8 | 71.2 |

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1,500 POUND ADDED LOAD COMPARISON

| Model | Prop Size | Pin Position | Speed At | | Range At | |
|---|---|---|---|---|---|---|
| | | | Economy Cruise | Full Throttle | Economy Cruise | Full Throttle |
| Twin 40 H. P. Johnson * | 10-3/8 x 14 | 4 | 17.91 | 17.91 | 74.0 | 74.0 |
| Twin 55 H. P. Johnson | 13 x 19 | 2 | 20.34 | 27.91 | 51.9 | 44.6 |
| Single 100 H. P. Johnson | 12-1/2 x 16 | 3 | 25.71 | 27.27 | 61.8 | 59.6 |
| Twin 65 H. P. Mercury | 12-1/2 x 15 | 4 | 18.56 | 24.49 | 53.60 | 42.0 |
| Twin 55 H. P. Chrysler | 10-3/8 x 11-1/2 | 3 | 22.5 | 25.7 | 71.0 | 58.8 |

* Maximum Load Boston Whaler was able to carry with Twin 40 H. P. Johnson's installed was 1200 lbs. Therefore, above results are based on the 1,200 lb. payload carrying capability.

2,000 POUND ADDED LOAD COMPARISON

| | | | | | | |
|---|---|---|---|---|---|---|
| Twin 55 H. P. Johnson | 13-1/4 x 17 | 2 | 21.18 | 26.47 | 45.2 | 40.6 |
| Single 100 H. P. Johnson | 13 x 14 | 3 | 22.22 | 25.35 | 57.1 | 51.8 |
| Twin 55 H. P. Chrysler | 10-3/8 x 11-1/2 | 3 | 23.84 | 23.84 | 57.5 | 57.5 |

SUMMARY OF RESULTS --- ACOUSTIC EVALUATION.

| Noise Band | 2,000 RPM | | | | | 3,500 RPM | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Merc 500 | Merc 650 | 55 hp John | 40 hp John | 55 hp Chrys | Merc 500 | Merc 650 | 55 Hp John | 40 hp John | 55 hp Chrys |
| All Pass | 86 | 92 | 88 | 84 | 95 | 92 | 95 | 93 | 90 | 94 |
| 31.5 | 70 | 72 | 74 | 72 | 76 | 73 | 83 | 73 | 75 | 75 |
| 63 | 81 | 94 | 81 | 82 | 96 | 87 | 93 | 86 | 89 | 85 |
| 125 | 83 | 84 | 83 | 79 | 84 | 91 | 90 | 90 | 85 | 94 |
| 250 | 77 | 79 | 80 | 77 | 77 | 82 | 85 | 83 | 80 | 83 |
| 500 | 71 | 73 | 69 | 71 | 70 | 73 | 77 | 76 | 74 | 76 |
| 1000 | 68 | 71 | 72 | 66 | 70 | 73 | 79 | 78 | 73 | 75 |
| 2000 | 65 | 70 | 73 | 60 | 66 | 71 | 78 | 80 | 68 | 72 |
| 4000 | 61 | 67 | 67 | 56 | 60 | 68 | 75 | 74 | 64 | 68 |
| 8000 | 54 | 59 | 54 | 52 | 54 | 60 | 70 | 66 | 58 | 61 |
| 16000 | 45 | 49 | 44 | 84 | 45 | 49 | 55 | 52 | 46 | 50 |

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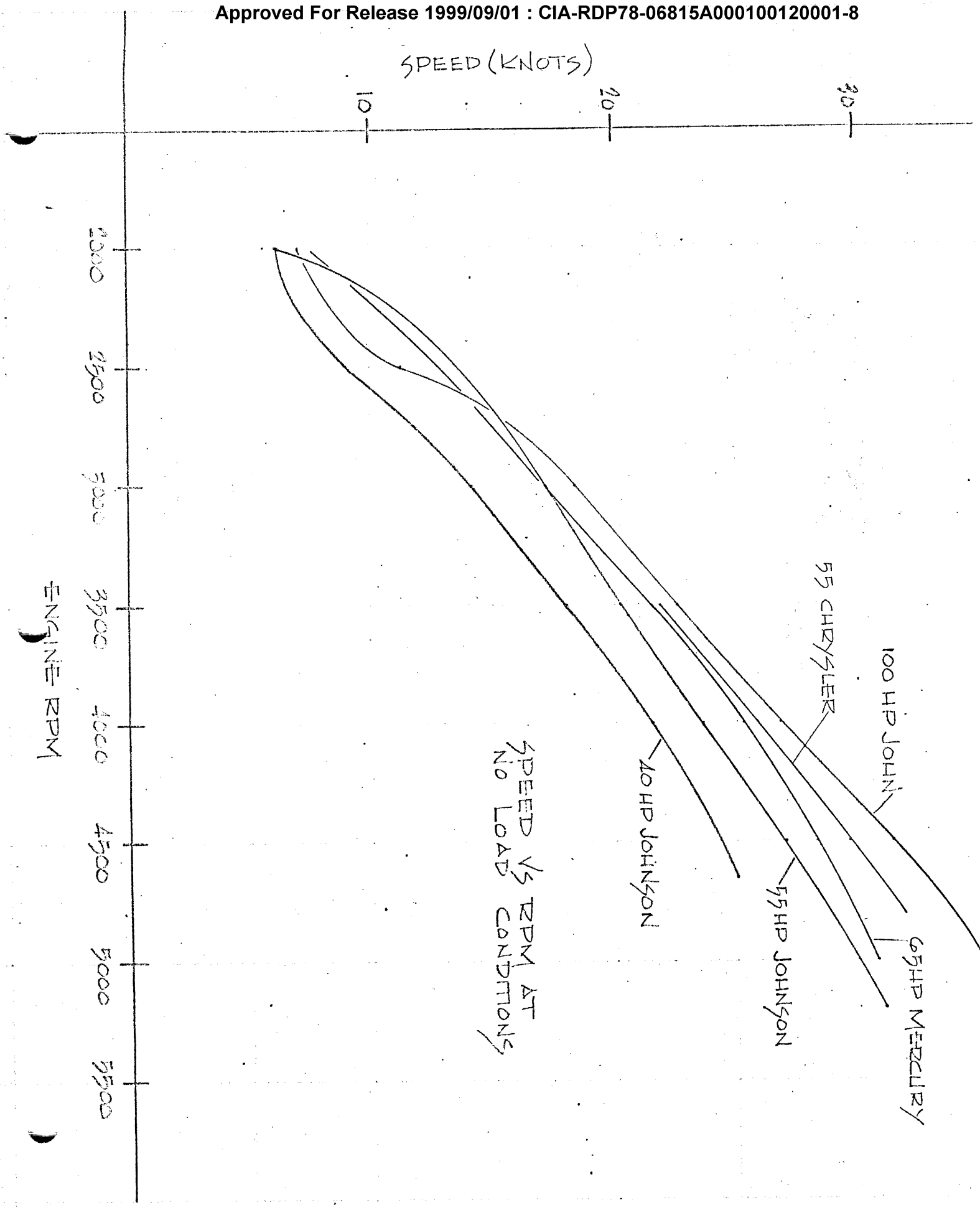
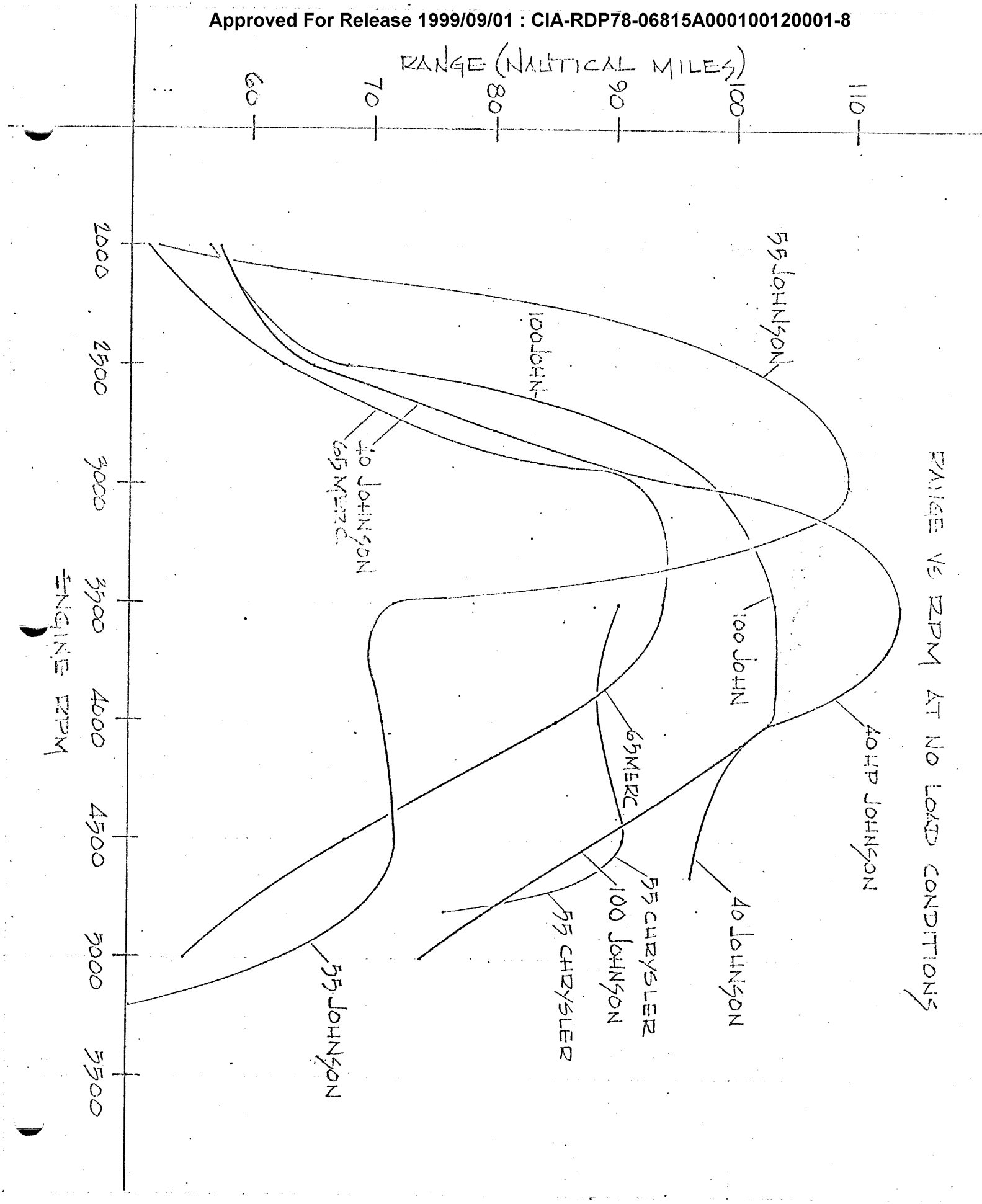
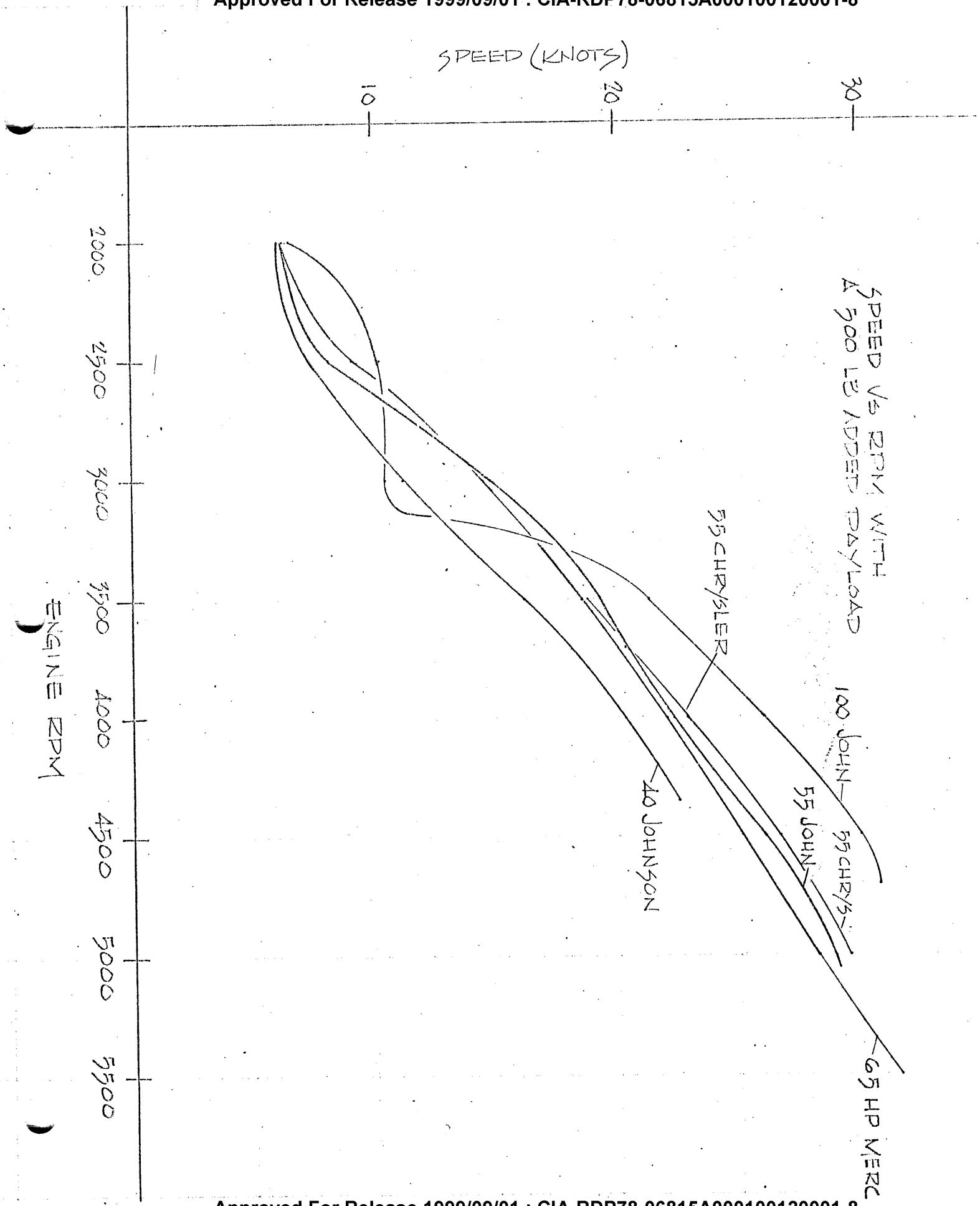
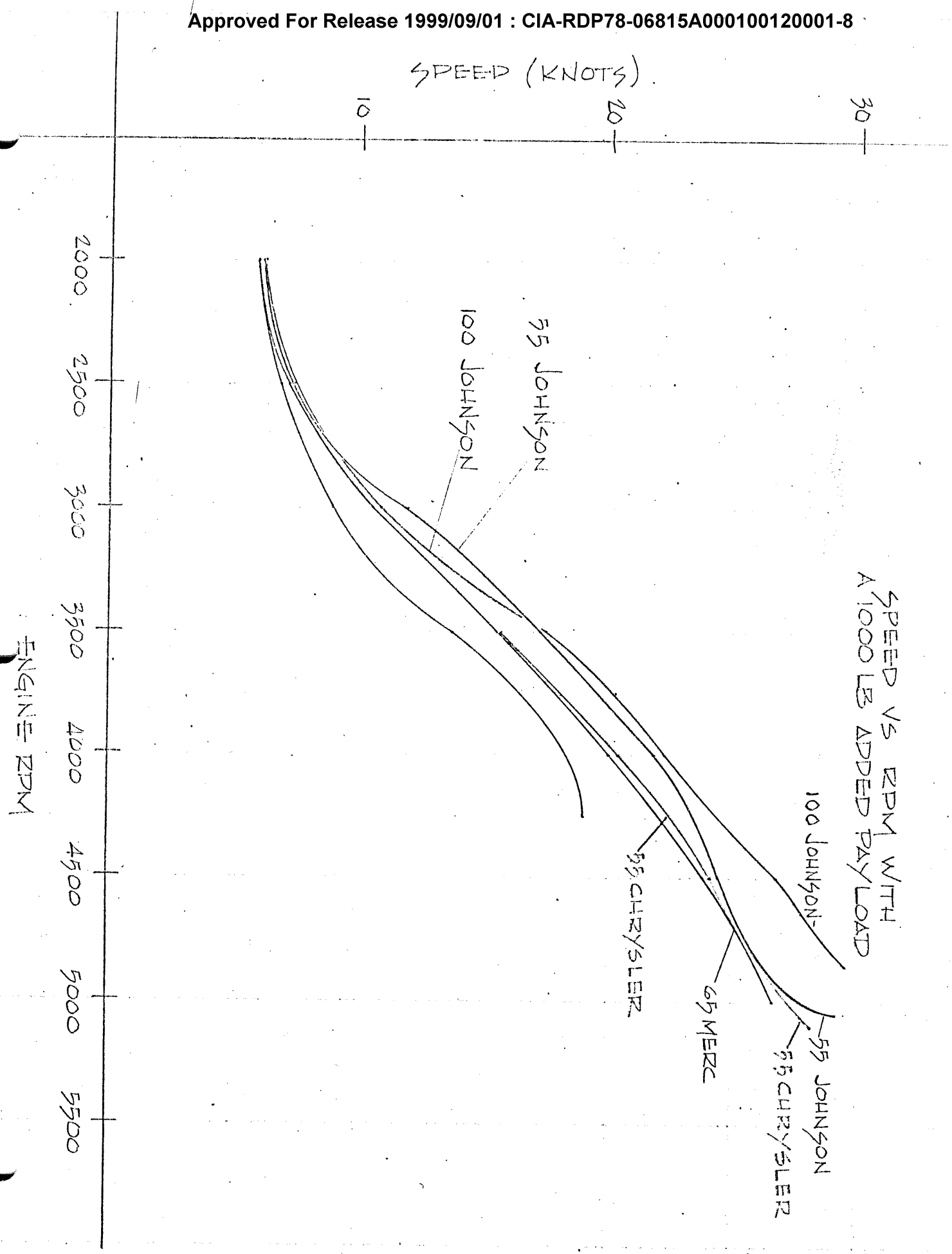


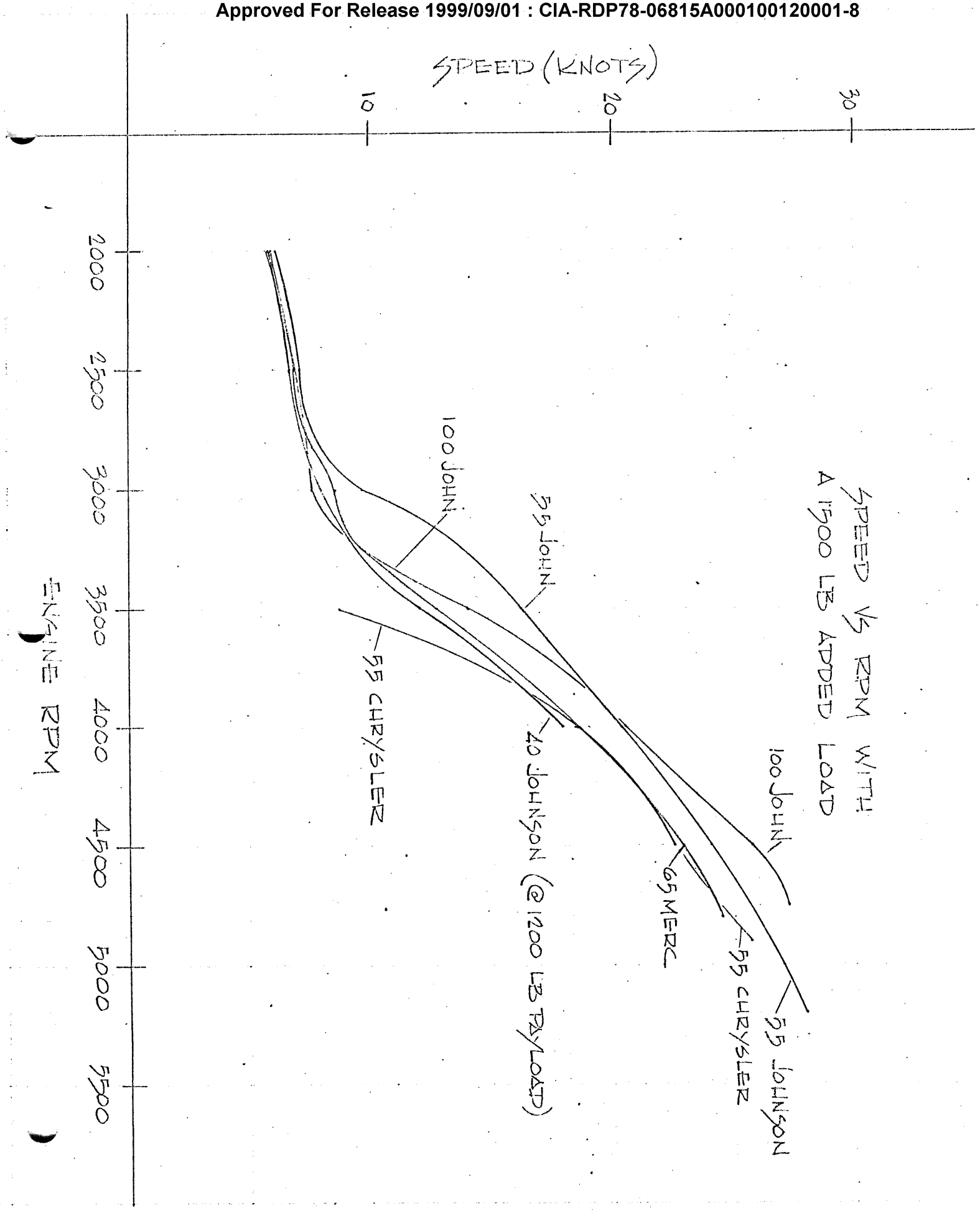


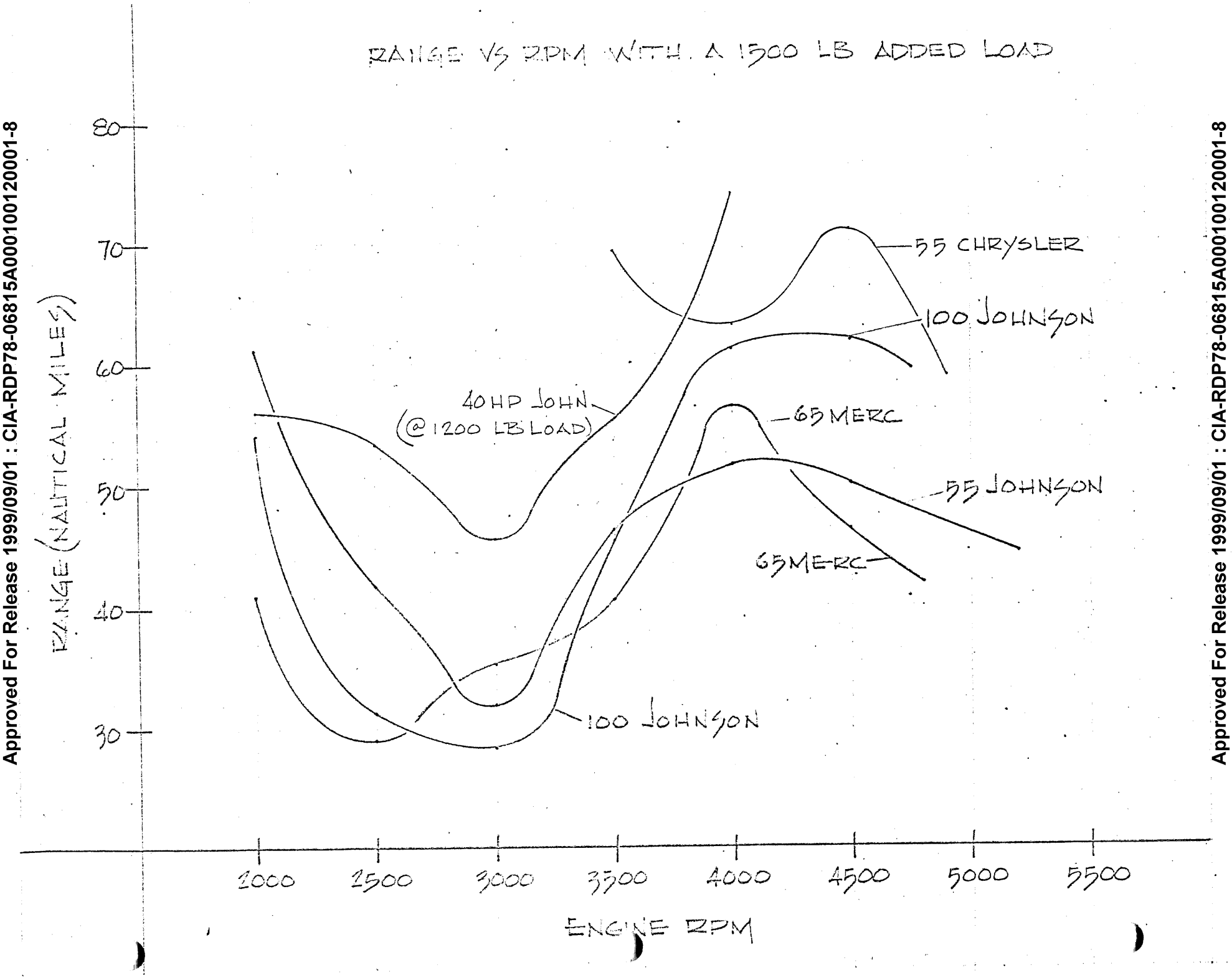





SPEED VS RPM WITH A 1000 LB ADDED PAY LOAD

RANGE VS RPM WITH A 1000 LB ADDED LOAD



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SPEED VS RPM
WITH A 200 LB
ADDED LOAD

NOTE: 65 HP MERCURY'S NOT TESTED WITH A 200 LB ADDED LOAD

RANGE VS RPM WITH A 2000 LB ADDED LOAD