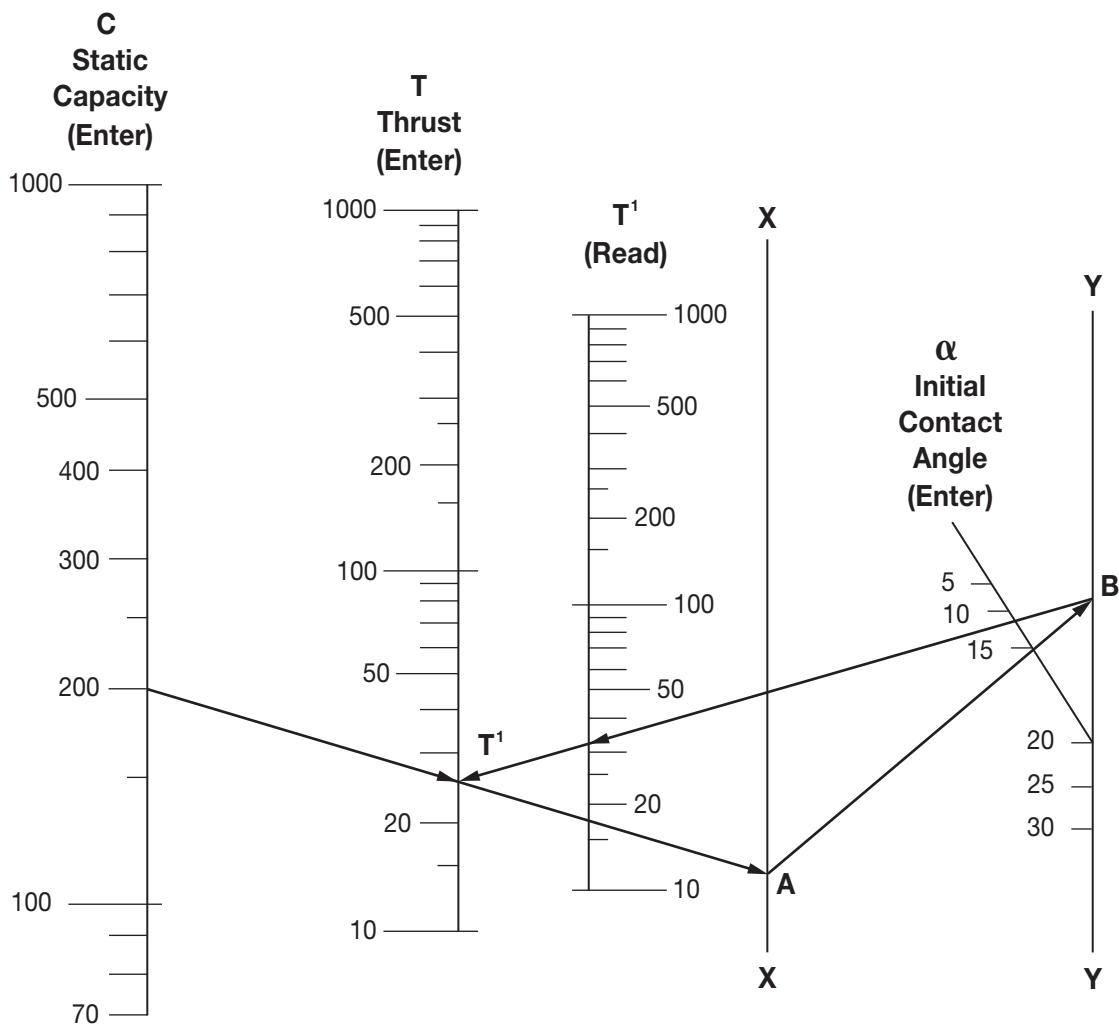






## T1 Nomograph (Lbs or Kg) for Ball Size 1/8" and Larger



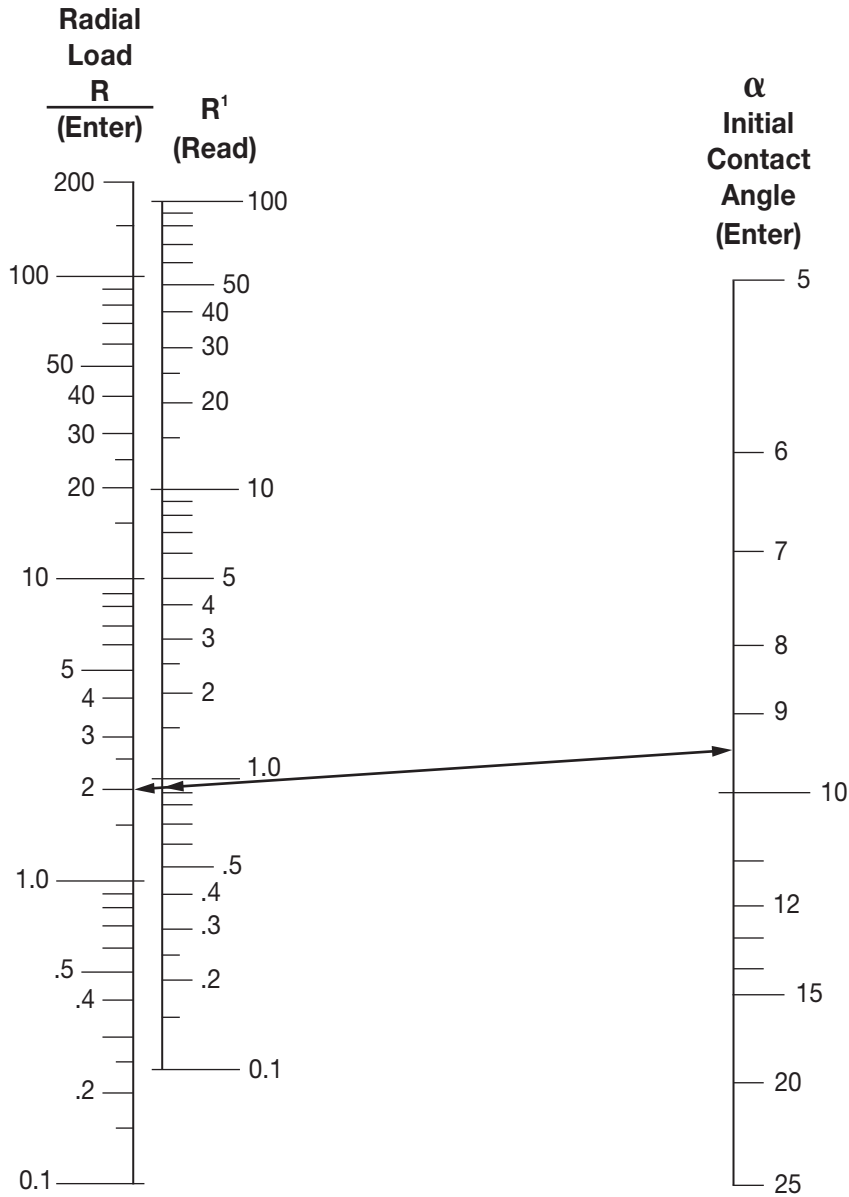
Example: Given  $C_o = 200$  Lbs.  
 $T = 25$  Lbs.  
 $\alpha_o = 15^\circ$   
 Answer:  $T^1 = 32$  Lbs.

To Find  $T^1$ :

1. Strike a line from  $C_o$  (200) thru  $T$  (25) to the line X-X (Pt. A).
2. Strike a line from Pt. A thru the  $\alpha_o$  ( $15^\circ$ ) to the Y-Y (Pt. B).
3. Strike a line from Pt. B to  $T$  (25).
4. Read  $T^1 = 32$  Lbs.



## R1 Nomograph (Lbs or Kg)



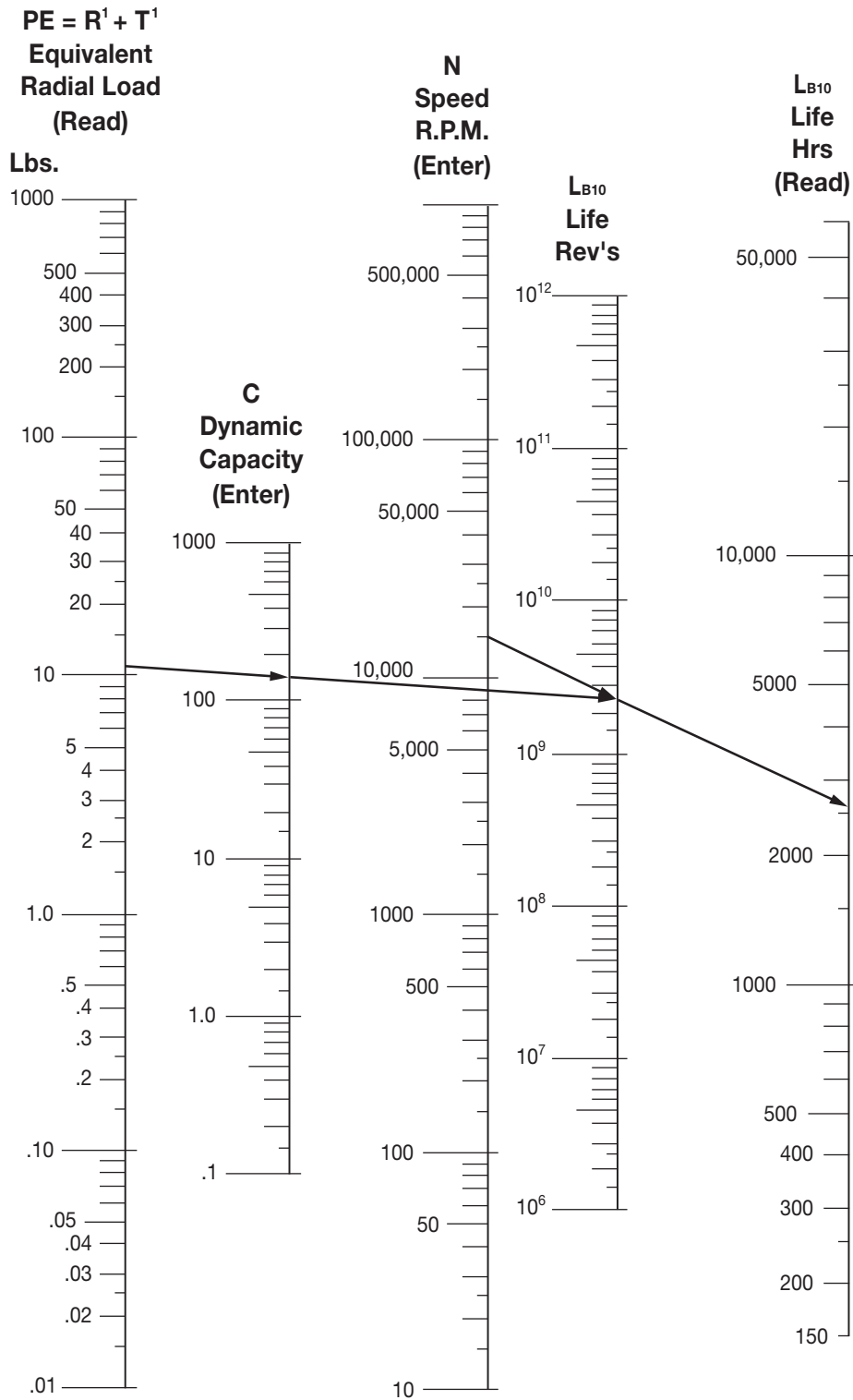
Example: Given Radial Load 2 Lbs.  
 Contact Angle 9.5°  
 Read  $R^1 = .95$  Lbs.

To Find  $R^1$ :

1. Strike a line from R (2) to  $\alpha_0$  (9.5°).
2. Read  $R^1 = .95$  Lbs.



## B10 Life Nomograph



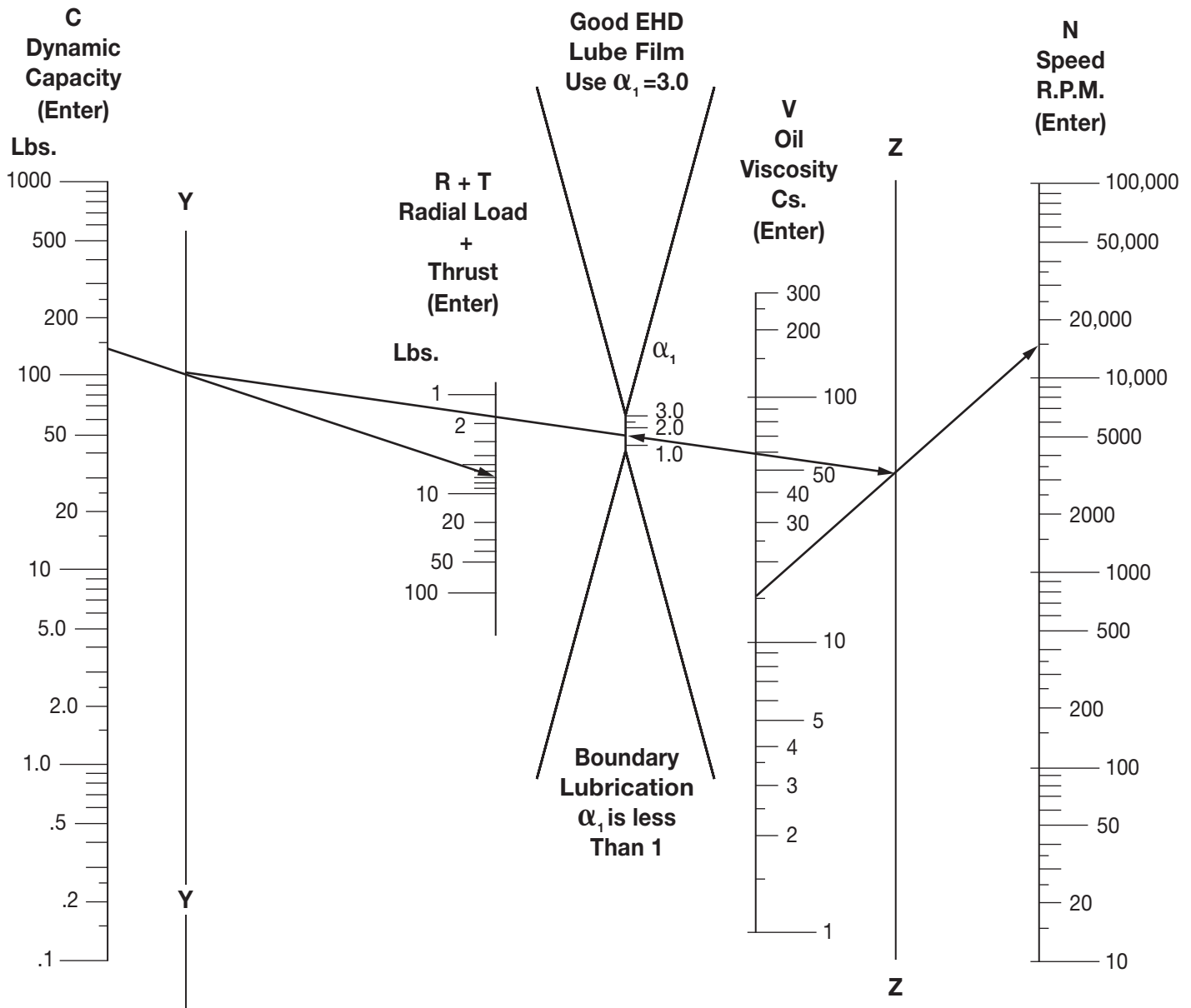
Example: Given PE = 10.45 Lbs.  
C = 140 Lbs.  
Read L<sub>B10</sub> = 2.4 X 10<sup>9</sup> Revs  
Given N = 15,000 R.P.M.  
Read L<sub>B10</sub> = 2700 Hrs.

To Find L<sub>B10</sub>:

1. Strike a line from PE (10.45) thru C (140) to L<sub>B10</sub> Life Revolutions.
2. Read L<sub>B10</sub> Life Revolutions (2.4 X 10<sup>9</sup>).
3. Strike a line from Speed – R.P.M. (15,000) thru L<sub>B10</sub> Life Revolutions (2.4 X 10<sup>9</sup>) to L<sub>B10</sub> Life Hours.
4. Read L<sub>B10</sub> Life Hours (2700 Hours).



## Lubricant Effect Nomograph to Obtain a1 Factor (for Petroleum Oils)



Example: Given C = 140 Lbs.  
 R+T = 7 Lbs.  
 V = 15 CS  
 N = 15,000 R.P.M.  
 Read  $\alpha_1 = 1.5$

To Find  $\alpha_1$ :

1. Add R+T (5+2 = 7). Strike line from R+T (7) to C (140).
2. Strike line from R.P.M. (15,000) to Lubricant Viscosity (15).
3. Strike line from intersection of Step 2 with line Z-Z to intersection of Step 1 with Y-Y.
4. Read  $\alpha_1 = 1.5$ .