

NO. 33 HART UNI-FLOW GRAIN SEPARATOR.

STYLE CHANGES:

Style PE1:

Style PE1 represents the No. 33 Hart Uni-Flow Grain Separator designed to use the Uni-Flow cylinders with a scalper and aspirator.

Style PE2:

Style PE2 is identical to Style PE1, except for improvements including ball bearing feed end covers, and new style gear guard.

Style C-PE4:

Style C-PE4 is identical to style PE2, except for the following improvements.

1. Multi-vein fan used for aspirating.
2. Mechanically-sealed ball bearings on all rotating shafts of the scalper.
3. New clean-out door under the feed roll.
4. New pinions and racks for feed gates.
5. Remote controls for air-check door and upper feed gate.
6. Changed to alemite hydraulic grease fittings.
7. Changed to 4" fan drive belt with 4½" dia. fan pulley.
8. Fan belt guard added.
9. Changed to wire scalper roll screens.

SPECIFICATIONS (Style C-PE4.)

Capacity - 800 to 900 bushels per hour (wheat)

Height to Deck - 6'-6"

Height to Feed Hopper - 9'-11"

Width on Floor - 7'-6"

Length - 11'-1-1/2"

Drive Shaft Speed - 150 r.p.m.

# PRINTED MATERIAL LIST

HART CARTER CO.  
NORTHERN DIVISION

FEB 14 1936

MACHINE NO. 33 HART UNI-FLOW GRAIN SEPARATOR  
UNIT MACHINE PROPER

STYLE NO. PE2

SHEET NO. 1

TOTAL SHEETS 11

DATE 7-24-35

## \* IN SUB ASSEMBLY

| * IN | PART NO. | NAME OF PART                            | PATT. NO. | DRG NO. | FILE WGT. | COST RAW MAT. | TOTAL COST | SALE PRICE |
|------|----------|-----------------------------------------|-----------|---------|-----------|---------------|------------|------------|
|      |          | Section 1                               |           |         |           |               |            |            |
| 1    | 11804    | 9 Agitator, Feed L.H.                   | 2255      | 23902   |           |               |            |            |
| 2    | 11445    | 2 Base, End Plate                       | 2192      | 32985   |           |               |            |            |
| 3    | 11446    | 2 Base, End Plate                       | 2193      | 32986   |           |               |            |            |
| 4    | 11447    | 2 Base, End Plate                       | 2194      | 32987   |           |               |            |            |
| 5    | 11478    | 2 Bracket, Bearing 5/8" Shaft           | 2214      | 32997   |           |               |            |            |
| 6    | 11479    | 1 Bracket, Bearing 5/8" Shaft           | 2215      | 32998   |           |               |            |            |
| 7    | 10708    | 9 Bracket, #1-71217 S.K.F. Bearing      | 1959      | 32876   |           |               |            |            |
| 8    | 10710    | 9 Bracket, #1-71217 S.K.F. Bearing      | 1961      | 32877   |           |               |            |            |
| 9    | 11450    | 5 Bracket, #1-71231 S.K.F. Bearing      | 2197      | 40836   |           |               |            |            |
| 10   | 12233    | 1 Bracket, #1-71231 S.K.F. Bearing      | 2197      | 41035   |           |               |            |            |
| 11   | 11452    | 9 Bracket, Worm                         | 2199      | 32988   |           |               |            |            |
| 12   | 4898     | 3 Collar, Set 5/8"x1-1/4"x1"            | C-14      | 21482   |           |               |            |            |
| 13   | 11581    | 3 Cover, Discharge End                  | 2230      | 40872   |           |               |            |            |
| 14   | 11582    | 3 Cover, Discharge End                  | 2231      | 40873   |           |               |            |            |
| 15   | 11725    | 3 Cover, Discharge End                  | 2285      | 40965   |           |               |            |            |
| 16   | 11726    | 3 Cover, Feed End                       |           |         |           |               |            |            |
| 17   |          | 4-Rivet, Copper Belt #9x3/8"            |           |         |           |               |            |            |
| 18   |          | 1-Sheepskin 1-1/4"x20-13/16"            | 2248      | 40910   |           |               |            |            |
| 19   | 11727    | 3 Cover, Feed End                       |           |         |           |               |            |            |
| 20   |          | 4-Rivet, Copper Belt #9x3/8"            |           |         |           |               |            |            |
| 21   |          | 1-Sheepskin 1-1/4"x20-13/16"            | 2288      | 40977   |           |               |            |            |
| 22   | 11728    | 3 Cover, Feed End                       |           |         |           |               |            |            |
| 23   |          | 4-Rivet, Copper Belt #9x3/8"            |           |         |           |               |            |            |
| 24   |          | 1-Sheepskin 1-1/4"x20-13/16"            | 2252      | 40912   |           |               |            |            |
| 25   | 4463     | 36 Dog, Flighting, L.H.                 | 1521      | 21378   |           |               |            |            |
| 26   | 4305     | 9 Dog, Flighting, R.H.                  | 1524      | 31174   |           |               |            |            |
| 27   | 4653     | 36 Dog, Flighting, R.H.                 | 1526      | 21413   |           |               |            |            |
| 28   | 3105     | 3 Drum, Brake                           | 1476      | 21030   |           |               |            |            |
| 29   | 10709    | 9 End, Cylinder Conveyor                | 1960      | 40760   |           |               |            |            |
| 30   | 11474    | 6 Frame, Inspection                     | 2210      | 32995   |           |               |            |            |
| 31   | 10692    | 9 Gear, 16 T., 6 P., 1-1/16" B.         | 1945      | 23735   |           |               |            |            |
| 32   | 11430    | 9 Gear, Bevel 43 T., 4 P., 1-3/16" B.   | 2190      | 40832   |           |               |            |            |
| 33   | 1700     | 2 Gear, Mitre, 16 T., 8 P., 5/8" B.     | 942       | 2972    |           |               |            |            |
| 34   | 11652    | 9 Gear, Worm (Replaces old Sector worm) | 2236      | 33061   |           |               |            |            |
| 35   | 4899     | 3 Handwheel, 6" Dia.                    | N-75      | 31275   |           |               |            |            |
| 36   | 10681    | 9 Head, Discharge                       | 1934      | 32863   |           |               |            |            |
| 37   | 10693    | 9 Head, Receiving                       | 1946      | 40763   |           |               |            |            |
| 38   | 11518    | 9 Housing, #1-71219 S.K.F. Bearing      | 2228      | 33012   |           |               |            |            |
| 39   | 10684    | 6 Housing, #1-71224 S.K.F. Bearing      | 1937      | 32865   |           |               |            |            |
| 40   | 11431    | 9 Pinion, Bevel 16 T., 4 P., 1-15/16"   |           |         |           |               |            |            |
| 41   |          | Bore                                    | 2191      | 32974   |           |               |            |            |
| 42   |          |                                         |           |         |           |               |            |            |
| 43   |          |                                         |           |         |           |               |            |            |
| 44   |          |                                         |           |         |           |               |            |            |
| 45   |          |                                         |           |         |           |               |            |            |
| 46   |          |                                         |           |         |           |               |            |            |

NOTE: WHEN ORDERING PARTS SPECIFY PART NUMBER, NAME OF PART AND STYLE OF MACHINE.

PRINTED

## MATERIAL LIST

HART CARTER CO.  
NORTHERN DIVISION

FEB 14 1936

MACHINE NO. 33 HART UNI-FLOW GRAIN SEPARATOR  
UNIT MACHINE PROPER

STYLE NO. PE2

SHEET NO. 2

TOTAL SHEETS 11

DATE 7-24-35

## \* IN SUB ASSEMBLY

| * IN | PART NO. | NAME OF PART                                    | PATY. NO. | DRG NO. | FIN. WTGT. | COST RAW MAT. | TOTAL COST | SALE PRICE |
|------|----------|-------------------------------------------------|-----------|---------|------------|---------------|------------|------------|
| 1    |          | Section 1 Cont.                                 |           |         |            |               |            |            |
| 2    | 10695    | 27 Plate, Filler                                | 1948      | 32868   |            |               |            |            |
| 3    | 11583    | 2 Pulley, 8"x3-1/4"x1-1/2"                      | 2232      | 33039   |            |               |            |            |
| 4    | 11584    | 1 Pulley, 8"x3-1/4"x1-15/16"                    | 2233      | 33040   |            |               |            |            |
| 5    | 11585    | 2 Pulley, 10"x3-1/4"x1-1/2"                     | 1322      | 30438   |            |               |            |            |
| 6    | 11408    | 2 Pulley, 10"x3-1/4"x1-15/16"                   | 2182      | 32968   |            |               |            |            |
| 7    | 11458    | 1 Pulley, 25"x3-1/2"x1-15/16"                   | 2204      | 40839   |            |               |            |            |
| 8    | 10696    | 3 Ring, Retarder                                | 1949      | 32869   |            |               |            |            |
| 9    | 10682    | 9 Sleeve, Discharge                             | 1935      | 32875   |            |               |            |            |
| 10   | 11448    | 4 Sprocket, 40 T., #433 Diam.Chain, 1-15/16" B. | 2195      | 40834   |            |               |            |            |
| 11   | 4903     | 9 Worm, 2-3/16" Dia.                            | N-73      | 21485   |            |               |            |            |
| 12   |          |                                                 |           |         |            |               |            |            |
| 13   |          |                                                 |           |         |            |               |            |            |
| 14   |          |                                                 |           |         |            |               |            |            |
| 15   |          |                                                 |           |         |            |               |            |            |
| 16   |          |                                                 |           |         |            |               |            |            |
| 17   |          | Section 2                                       |           |         |            |               |            |            |
| 18   | 11555    | 1 Shaft, Conveyor                               | 33025     |         |            |               |            |            |
| 19   | 11556    | 1 Shaft, Conveyor                               | 33026     |         |            |               |            |            |
| 20   | 11557    | 1 Shaft, Conveyor                               | 33027     |         |            |               |            |            |
| 21   | 11535    | 1 Shaft, Counter                                | 33013     |         |            |               |            |            |
| 22   | 11536    | 1 Shaft, Counter                                | 33014     |         |            |               |            |            |
| 23   | 11537    | 1 Shaft, Counter                                | 33015     |         |            |               |            |            |
| 24   | 10769    | 3 Shaft, Cylinder Conveyor                      | 23760     |         |            |               |            |            |
| 25   | 10770    | 6 Shaft, Cylinder Conveyor                      | 23760     |         |            |               |            |            |
| 26   | 11562    | 1 Shaft, Mitre Gear                             | 23842     |         |            |               |            |            |
| 27   | 10729    | 3 Shaft, Recleaning Cylinder                    | 23752     |         |            |               |            |            |
| 28   | 10728    | 3 Shaft, Screenings Cylinder                    | 23736     |         |            |               |            |            |
| 29   | 10725    | 3 Shaft, Separating Cylinder                    | 23750     |         |            |               |            |            |
| 30   | 11563    | 2 Shaft, Worm                                   | 33032     |         |            |               |            |            |
| 31   | 11564    | 1 Shaft, Worm                                   | 33033     |         |            |               |            |            |
| 32   |          |                                                 |           |         |            |               |            |            |
| 33   |          |                                                 |           |         |            |               |            |            |
| 34   |          | Section 3                                       |           |         |            |               |            |            |
| 35   | 11782    | 2 Angle, 1"x1"x1/8"x9-3/8"                      | 23897     |         |            |               |            |            |
| 36   | 12192    | 2 Angle, 1"x1"x1/8"x10-3/8"                     | 23973     |         |            |               |            |            |
| 37   | 12362    | 1 Angle, Reinforcement                          |           |         |            |               |            |            |
| 38   |          | 6-Bolt, Mach.Hex.Hd. 3/8"-16x1-1/2"             | 33270     |         |            |               |            |            |
| 39   | 12363    | 1 Angle, Reinforcement                          |           |         |            |               |            |            |
| 40   |          | 6-Bolt, Mach.Hex.Hd. 3/8"-16x1-1/2"             | 33270     |         |            |               |            |            |
| 41   |          |                                                 |           |         |            |               |            |            |
| 42   |          |                                                 |           |         |            |               |            |            |
| 43   |          |                                                 |           |         |            |               |            |            |
| 44   |          |                                                 |           |         |            |               |            |            |
| 45   |          |                                                 |           |         |            |               |            |            |
| 46   |          |                                                 |           |         |            |               |            |            |

## MATERIAL LIST

HART CARTER CO.  
NORTHERN DIVISION

PRINTED

MAY 9 1948  
STYLE NO. 242MACHINE NO. 33 HART UNI-FLOW GRAIN SEPARATOR  
UNIT MACHINE PROPERSHEET NO. 3  
TOTAL SHEETS 11  
DATE 7-24-35

\* IN SUB ASSEMBLY

| * IN | PART NO. | QTY | NAME OF PART                                            | PART NO. | QTY | FIN. WGT. | COST RAW MAT. | TOTAL COST | SALE PRICE |
|------|----------|-----|---------------------------------------------------------|----------|-----|-----------|---------------|------------|------------|
|      |          |     | Section 1 Cont.                                         |          |     |           |               |            |            |
| 1    | 10730    | 1   | Flighting, L.H., 6" O.D., 1-1/4" O.D., 75-3/4" Long     |          |     |           | 32892         |            |            |
| 2    | 10731    | 6   | Flighting, L.H., 6" O.D., 1-1/4" O.D., 80-3/4" Long     |          |     |           | 32892         |            |            |
| 3    | 10732    | 3   | Flighting, R.H., 1-1/4" O.D., 1-1/8" O.D., 72-3/4" Long |          |     |           | 32891         |            |            |
| 4    | 10733    | 6   | Flighting, R.H., 1-1/4" O.D., 1-1/8" O.D., 76-1/4" Long |          |     |           | 32891         |            |            |
| 5    | 11572    | 1   | Flighting, R.H., 6" O.D., 1-3/16" O.D., 51-13/16" Long  |          |     |           | 33816         |            |            |
| 6    | 11554    | 1   | Flighting, R.H., 7" O.D., 1-3/16" O.D., 53-1/2" Long    |          |     |           | 33834         |            |            |
| 7    | 11576    | 1   | Flighting, R.H., 8" O.D., 1-3/16" O.D., 59" Long        |          |     |           | 33845         |            |            |
| 8    | 3944     | 3   | Key, 1/4" x 1/2" x 1-1/2"                               |          |     |           | 21223         |            |            |
| 9    | 3133     | 2   | Key, 1/2" x 3/4" x 1-1/2"                               |          |     |           | 21251         |            |            |
| 10   | 11616    | 2   | Key, 1/2" x 3/4" x 1-1/2"                               |          |     |           | 20952         |            |            |
| 11   | 3944     | 3   | Key, 1/4" x 1/2" x 1-1/2"                               |          |     |           | 20952         |            |            |
| 12   | 3944     | 3   | Key, 1/4" x 1/2" x 1-1/2"                               |          |     |           | 20952         |            |            |
| 13   | 11609    | 1   | Key, 1/2" x 3/4" x 1-1/2"                               |          |     |           | 20952         |            |            |
| 14   | 11611    | 1   | Key, 1/2" x 3/4" x 1-1/2"                               |          |     |           | 20952         |            |            |
| 15   |          |     |                                                         |          |     |           |               |            |            |
| 16   |          |     |                                                         |          |     |           |               |            |            |
| 17   |          |     |                                                         |          |     |           |               |            |            |
| 18   |          |     |                                                         |          |     |           |               |            |            |
| 19   |          |     |                                                         |          |     |           |               |            |            |
| 20   |          |     |                                                         |          |     |           |               |            |            |
| 21   |          |     |                                                         |          |     |           |               |            |            |
| 22   |          |     |                                                         |          |     |           |               |            |            |
| 23   |          |     |                                                         |          |     |           |               |            |            |
| 24   |          |     |                                                         |          |     |           |               |            |            |
| 25   |          |     |                                                         |          |     |           |               |            |            |
| 26   |          |     |                                                         |          |     |           |               |            |            |
| 27   |          |     |                                                         |          |     |           |               |            |            |
| 28   | 11743    | 6   | Angle                                                   |          |     |           | 33084         |            |            |
| 29   | 12047    | 1   | Box, Oak Conveyor                                       |          |     |           | 10976         |            |            |
| 30   | 12365    | 1   | Box, Seed Conveyor                                      |          |     |           | 11676         |            |            |
| 31   | 12373    | 1   | Box, Wheat Conveyor                                     |          |     |           | 10879         |            |            |
| 32   | 11740    | 1   | Channel, Side                                           |          |     |           | 33085         |            |            |
| 33   | 11741    | 1   | Channel, Side                                           |          |     |           | 33085         |            |            |
| 34   | 12087    | 1   | Channel, Side                                           |          |     |           | 33192         |            |            |
| 35   | 12088    | 1   | Channel, Side                                           |          |     |           | 33191         |            |            |
| 36   | 12087    | 1   | Cover, Conveyor Box                                     |          |     |           | 23942         |            |            |
| 37   | 12078    | 1   | Cover, Conveyor Box                                     |          |     |           | 23949         |            |            |
| 38   | 12380    | 1   | Cover, Conveyor Box                                     |          |     |           | 23925         |            |            |
| 39   | 11754    | 6   | Cover, Inspection Frame                                 |          |     |           | 23892         |            |            |
| 40   | 12366    | 1   | Cover, Top Conveyor Box                                 |          |     |           | 33871         |            |            |
| 41   | 11778    | 1   | Door, Inspection                                        |          |     |           | 23896         |            |            |
| 42   |          |     |                                                         |          |     |           |               |            |            |
| 43   |          |     |                                                         |          |     |           |               |            |            |
| 44   |          |     |                                                         |          |     |           |               |            |            |
| 45   |          |     |                                                         |          |     |           |               |            |            |
| 46   |          |     |                                                         |          |     |           |               |            |            |

NOTE: WHEN ORDERING PARTS SPECIFY PART NUMBER, NAME OF PART AND STYLE OF MACHINE

# MATERIAL LIST

HART CARTER CO.  
NORTHERN DIVISION

PRINTED

MAY 8 1948

STYLE NO. FB2

MACHINE NO. 33 HART UNI-FLOW GRAIN SEPARATOR  
UNIT MACHINE PROPER

SHEET NO. 4

TOTAL SHEETS 11

DATE 7-24-35

\* IN SUB ASSEMBLY

| * IN | Part No. | QTY. END REQ. | NAME OF PART                   | PATT. NO. | PRO. NO. | FIN. WGT. | COST RAW MAT. | TOTAL COST | SALE PRICE |
|------|----------|---------------|--------------------------------|-----------|----------|-----------|---------------|------------|------------|
|      | 1        |               | Section 4 Cont.                |           |          |           |               |            |            |
|      | 2        | 12048         | 1 End, Conveyor Box            |           | 23910    |           |               |            |            |
|      | 3        | 12049         | 1 End, Conveyor Box            |           | 23910    |           |               |            |            |
|      | 4        | 12364         | 2 End, Conveyor Box            |           | 24021    |           |               |            |            |
|      | 5        | 12374         | 1 End, Conveyor Box            |           | 24022    |           |               |            |            |
|      | 6        | 12375         | 1 End, Conveyor Box            |           | 24022    |           |               |            |            |
|      | 7        | 11779         | 1 Guard, Chain                 |           | 33095    |           |               |            |            |
|      | 8        | 11786         | 1 Guard, Fan Drive             |           | 40939    |           |               |            |            |
|      | 9        | 13194         | 1 Guard, Gear                  |           | 41293    |           |               |            |            |
|      | 10       | 13196         | 1 Guard, Gear                  |           | 41294    |           |               |            |            |
|      | 11       | 13198         | 1 Guard, Gear                  |           | 41312    |           |               |            |            |
|      | 12       | 11784         | 3 Hopper, Tailings             |           | 40937    |           |               |            |            |
|      | 13       | 11785         | 6 Hopper, Tailings             |           | 40938    |           |               |            |            |
|      | 14       | 11780         | 1 Plate, Back Chain Guard      |           | 33096    |           |               |            |            |
|      | 15       | 12219         | 1 Plate, Cover                 |           | 33289    |           |               |            |            |
|      | 16       | 12356         | 1 Plate, End Center (Feed End) |           | 5575     |           |               |            |            |
|      | 17       | 12353         | 1 Plate, End Center (Gear End) |           | 5572     |           |               |            |            |
|      | 18       | 12355         | 1 Plate, End L.H. (Feed End)   |           | 5574     |           |               |            |            |
|      | 19       | 12352         | 1 Plate, End L.H. (Gear End)   |           | 5573     |           |               |            |            |
|      | 20       | 12354         | 1 Plate, End R.H. (Feed End)   |           | 5573     |           |               |            |            |
|      | 21       | 12351         | 1 Plate, End R.H. (Gear End)   |           | 5570     |           |               |            |            |
|      | 22       | 12361         | 1 Plate, Lower Side, L.H.      |           | 41076    |           |               |            |            |
|      | 23       | 12360         | 1 Plate, Lower Side, R.H.      |           | 41075    |           |               |            |            |
|      | 24       | 12189         | 1 Plate, Top, Center           |           | 41015    |           |               |            |            |
|      | 25       | 12357         | 1 Plate, Top, R.H.             |           | 41073    |           |               |            |            |
|      | 26       | 12358         | 1 Plate, Top, L.H.             |           | 41074    |           |               |            |            |
|      | 27       |               |                                |           |          |           |               |            |            |
|      | 28       |               |                                |           |          |           |               |            |            |
|      | 29       |               |                                |           |          |           |               |            |            |
|      | 30       |               |                                |           |          |           |               |            |            |
|      | 31       |               |                                |           |          |           |               |            |            |
|      | 32       |               |                                |           |          |           |               |            |            |
|      | 33       |               |                                |           |          |           |               |            |            |
|      | 34       |               |                                |           |          |           |               |            |            |
|      | 35       |               |                                |           |          |           |               |            |            |
|      | 36       |               |                                |           |          |           |               |            |            |
|      | 37       |               |                                |           |          |           |               |            |            |
|      | 38       |               |                                |           |          |           |               |            |            |
|      | 39       |               |                                |           |          |           |               |            |            |
|      | 40       |               |                                |           |          |           |               |            |            |
|      | 41       |               |                                |           |          |           |               |            |            |
|      | 42       |               |                                |           |          |           |               |            |            |
|      | 43       |               |                                |           |          |           |               |            |            |
|      | 44       |               |                                |           |          |           |               |            |            |
|      | 45       |               |                                |           |          |           |               |            |            |
|      | 46       |               |                                |           |          |           |               |            |            |

NOTE: WHEN ORDERING PARTS SPECIFY PART NUMBER, NAME OF PART AND STYLE OF MACHINE.

# MATERIAL LIST

HART CARTER CO.  
NORTHERN DIVISION

**PRINTED**  
MAY 8 1935  
STYLE NO. PE2

MACHINE NO. 33 HART UNI-FLOW GRAIN SEPARATOR  
UNIT MACHINE PROPER

SHEET NO. 5  
TOTAL SHEETS 11  
DATE 7-24-35

\* IN SUB ASSEMBLY

| * Item No. | PART NO. | QTY. Each Mach. | NAME OF PART                         | PATT. NO. | DRG. NO. | FIN. WGT. | COST RAW MAT. | TOTAL COST | SALE PRICE |
|------------|----------|-----------------|--------------------------------------|-----------|----------|-----------|---------------|------------|------------|
| 1          |          |                 | Section 4 Cont.                      |           |          |           |               |            |            |
| 2          | 11770    | 1               | Plate, Upper Side                    |           | 40934    |           |               |            |            |
| 3          | 11771    | 1               | Plate, Upper Side                    |           | 40935    |           |               |            |            |
| 4          |          | 3               | Shell, Cylinder 85" Long             |           | 40774    |           |               |            |            |
| 5          |          | 3               | Shell, Cylinder 90" Long             |           | 40773    |           |               |            |            |
| 6          |          | 3               | Shell, Cylinder 90" Long             |           | 40773    |           |               |            |            |
| 7          | 12056    | 1               | Spout, Conveyor Discharge            |           | 40971    |           |               |            |            |
| 8          | 12199    | 3               | Spout, Discharge                     |           | 41022    |           |               |            |            |
| 9          | 12221    | 3               | Spout, Discharge                     |           | 41031    |           |               |            |            |
| 10         | 11786    | 1               | Spout, Liftings, Separating Cylinder |           | 5522     |           |               |            |            |
| 11         | 11787    | 2               | Spout, Liftings, Separating Cylinder |           | 5522     |           |               |            |            |
| 12         | 12377    | 3               | Spout, Seed Discharge                |           | 24023    |           |               |            |            |
| 13         | 11634    | 3               | Strip, Cylinder Discharge            |           | 33054    |           |               |            |            |
| 14         | 11636    | 6               | Strip, Cylinder Discharge            |           | 33055    |           |               |            |            |
| 15         | 10742    | 3               | T rough, Cylinder Conveyor           |           | 40772    |           |               |            |            |
| 16         | 10743    | 6               | T rough, Cylinder Conveyor           |           | 40772    |           |               |            |            |
| 17         |          |                 |                                      |           |          |           |               |            |            |
| 18         |          |                 |                                      |           |          |           |               |            |            |
| 19         |          |                 |                                      |           |          |           |               |            |            |
| 20         |          |                 | Section 5                            |           |          |           |               |            |            |
| 21         | 1118     | 3               | Brake, Handwheel                     |           | 2907     |           |               |            |            |
| 22         | 11521    | 18              | Bushing, Bronze                      |           | 23841    |           |               |            |            |
| 23         | 11666    | 4               | Olip, Angle                          |           | 23868    |           |               |            |            |
| 24         | 11686    | 4               | Olip, Bolt 5/16"                     |           | 23878    |           |               |            |            |
| 25         | 11603    | 96              | Olip, Bolt 3/8"                      |           | 23853    |           |               |            |            |
| 26         | 1568     | 2               | Olip, Hinge                          |           | 20124    |           |               |            |            |
| 27         | 1677     | 126             | Olip, Joint                          |           | 25052    |           |               |            |            |
| 28         | 280      | 9               | Collar, Set 1-1/16"x1-11/16"x3/4"    |           | 2768     |           |               |            |            |
| 29         | 1585     | 9               | Collar, Set 1-3/16"x1-15/16"x5/8"    |           | 20158    |           |               |            |            |
| 30         | 7582     | 1               | Latch                                |           | 22263    |           |               |            |            |
| 31         | 10752    | 9               | Lining, Bearing                      |           | 23779    |           |               |            |            |
| 32         | 204      | 33              | Ring, Lock 2-9/64"x10 W&M Ga.        |           | 2735     |           |               |            |            |
| 33         | 11465    | 6               | Ring, Lock 2-5/8"x10 W&M Ga.         |           | 23825    |           |               |            |            |
| 34         |          |                 |                                      |           |          |           |               |            |            |
| 35         |          |                 |                                      |           |          |           |               |            |            |
| 36         |          |                 |                                      |           |          |           |               |            |            |
| 37         |          |                 |                                      |           |          |           |               |            |            |
| 38         |          |                 |                                      |           |          |           |               |            |            |
| 39         |          |                 |                                      |           |          |           |               |            |            |
| 40         |          |                 |                                      |           |          |           |               |            |            |
| 41         |          |                 |                                      |           |          |           |               |            |            |
| 42         |          |                 |                                      |           |          |           |               |            |            |
| 43         |          |                 |                                      |           |          |           |               |            |            |
| 44         |          |                 |                                      |           |          |           |               |            |            |
| 45         |          |                 |                                      |           |          |           |               |            |            |
| 46         |          |                 |                                      |           |          |           |               |            |            |

NOTE: WHEN ORDERING PARTS SPECIFY PART NUMBER, NAME OF PART AND STYLE OF MACHINE.

PRINTED

# MATERIAL LIST

HART CARTER CO.  
NORTHERN DIVISION

FEB 14 1936

MACHINE NO. 33 HART UNI-FLOW GRAIN SEPARATOR  
UNIT MACHINE PROPER

STYLE NO. PE2

SHEET NO. 6

TOTAL SHEETS 11

DATE 7-24-35

\* IN SUB ASSEMBLY

| * PART NO.      | QTY | NAME OF PART                                                                           | PATT. NO. | DRG NO. | FIN. WGT. | COST RAW MAT. | TOTAL COST | SALV. PRICE |
|-----------------|-----|----------------------------------------------------------------------------------------|-----------|---------|-----------|---------------|------------|-------------|
| Section 5 Cont. |     |                                                                                        |           |         |           |               |            |             |
| 265             | 36  | Ring, Lock 2-3/4"x#10 W&M Ga.                                                          |           |         |           |               | 2737       |             |
| 10716           | 6   | Ring, Lock 3-1/2"x#10 W&M Ga.                                                          |           |         |           |               | 23745      |             |
| 11466           | 6   | Ring, Lock 3-29/32"x#10 W&M Ga.                                                        |           |         |           |               | 23826      |             |
| 3773            | 18  | Washer, Felt 2"x1-1/16"x1/4"                                                           |           |         |           |               | 2804       |             |
| 10822           | 27  | Washer, Felt 2"x1-3/16"x1/4"                                                           |           |         |           |               | 23777      |             |
| 212             | 18  | Washer, Felt 2"x1-3/8"x1/4"                                                            |           |         |           |               | 2154       |             |
| 213             | 12  | Washer, Felt 2-9/16"x1-13/16"x1/4"                                                     |           |         |           |               | 2127       |             |
| 10823           | 36  | Washer, Felt 2-5/8"x1-9/16"x1/4"                                                       |           |         |           |               | 23778      |             |
| 11359           | 6   | Washer, Felt 3-1/4"x2-1/8"x1/4"                                                        |           |         |           |               | 23613      |             |
| 11472           | 6   | Washer, Felt 3-7/8"x2-3/8"x1/4"                                                        |           |         |           |               | 23830      |             |
| 10820           | 18  | Washer, Packing 1-63/64"x1-1/8"x1/16"                                                  |           |         |           |               | 23775      |             |
| 10821           | 27  | Washer, Packing 1-63/64"x1-1/4"x1/16"                                                  |           |         |           |               | 23776      |             |
| 214             | 18  | Washer, Packing 2"x1-9/16"x1/16"                                                       |           |         |           |               | 2738       |             |
| 11463           | 18  | Washer, Packing 2-1/2"x2"x1/16"                                                        |           |         |           |               | 23823      |             |
| 270             | 72  | Washer, Packing 2-19/32"x1-5/8"x1/16"                                                  |           |         |           |               | 2739       |             |
| 10707           | 12  | Washer, Packing 3-9/32"x2-3/16"x1/16"                                                  |           |         |           |               | 23740      |             |
| 11464           | 12  | Washer, Packing 3-3/4"x2-9/16"x1/16"                                                   |           |         |           |               | 23824      |             |
| Section 6       |     |                                                                                        |           |         |           |               |            |             |
| 10785           | 18  | Bearing, #I-71217 S.K.F.                                                               |           |         |           |               |            |             |
| 10786           | 18  | Bearing, #I-71219 S.K.F.                                                               |           |         |           |               |            |             |
| 10787           | 6   | Bearing, #I-71224 S.K.F.                                                               |           |         |           |               |            |             |
| 10862           | 6   | Bearing, #I-71231 S.K.F.                                                               |           |         |           |               |            |             |
| 12452           | 1   | Belt, Single Leather, 16 Oz.Center<br>Stock, 3" W., 7'-7" Long (Tape<br>Measure)       |           |         |           |               |            |             |
| 11941           | 1   | Belt, Single Leather, 16 Oz.Center<br>Stock, 3" W., 18'-7-5/8" Long (Tape<br>Measure)  |           |         |           |               |            |             |
| 11940           | 1   | Belt, Single Leather, 16 Oz.Center<br>Stock, 3" W., 19'-10-1/4" Long<br>(Tape Measure) |           |         |           |               |            |             |
| 9125            | 126 | Bolt, Spec.Conn.Rod 5/16"-18x1-31/32"                                                  |           |         |           |               | 25051      |             |
| 11798           | 1   | Chain, Diamond #433, 3/4" P., 1/2"<br>W., 92 Pitches (69") Long                        |           |         |           |               |            |             |
| 11799           | 1   | Chain, Diamond #433, 3/4" P., 1/2"<br>W., 110 Pitches (82-1/2") Long                   |           |         |           |               |            |             |

NOTE: WHEN ORDERING PARTS SPECIFY PART NUMBER, NAME OF PART AND STYLE OF MACHINE.

## MATERIAL LIST

HART CARTER CO.  
NORTHERN DIVISION

PRINTED

MAY 8 1945  
STYLE NO. PE2MACHINE  
UNITNO. 33 HART UNI-FLOW GRAIN SEPARATOR  
MACHINE PROPERSHEET NO. 7  
TOTAL SHEETS 11  
DATE 7-24-35

\* IN SUB ASSEMBLY

| * Item No. | PART NO. | QTY. Each | NAME OF PART                                   | PATT. NO. | DRG. NO.                 | FIN. WGT. | COST RAW MAT. | TOTAL COST | SALE PRICE |
|------------|----------|-----------|------------------------------------------------|-----------|--------------------------|-----------|---------------|------------|------------|
| 1          |          |           | Section 6 Cont.                                |           |                          |           |               |            |            |
| 2          | 9069     | 1         | Filler, Alemite-Dot #5109, 4 Oz.               |           |                          |           |               |            |            |
| * 3        | 3532     | 9         | Fitting, Alemite-Dot #1461 Straight, 1/8" P.T. |           |                          |           |               |            |            |
| 4          |          |           |                                                |           |                          |           |               |            |            |
| * 5        | 3533     | 9         | Fitting, Alemite-Dot #1463, 90°, 1/8" P.T.     |           |                          |           |               |            |            |
| 6          |          |           |                                                |           |                          |           |               |            |            |
| 7          |          | 1         | Grease, Alemite No. 33, 1# Can                 |           |                          |           |               |            |            |
| 8          | 9068     | 1         | Gun, Alemite-Dot #5052, 4 oz.                  |           |                          |           |               |            |            |
| 9          | 13069    | 9         | Label                                          |           | 24228                    |           |               |            |            |
| 10         | 10876    | 9         | Plate, Indicator                               |           | 23791                    |           |               |            |            |
| 11         |          | 1         | Plate, Name Etched                             |           | See note at End of List. |           |               |            |            |
| 12         |          | 2         | Transfer, Trade-Mark                           |           | See note at End of List. |           |               |            |            |
| 13         |          |           |                                                |           |                          |           |               |            |            |
| 14         |          |           |                                                |           |                          |           |               |            |            |
| 15         |          |           |                                                |           |                          |           |               |            |            |
| 16         |          |           | Section 7                                      |           |                          |           |               |            |            |
| * 17       | 10757    | 3         | Assy., Conveyor Flighting, L.H.                |           |                          |           |               |            |            |
| 18         |          |           | Composed of Parts 4463, 10750.                 |           |                          |           |               |            |            |
| 19         |          |           | 4-Rivet, R.H., 1/4"x7/8"                       |           |                          |           |               |            |            |
| 20         |          |           | 4-Screw, Set, Sq. Hd. 1/2"-13x3/4"             |           | 32894                    |           |               |            |            |
| * 21       | 10758    | 6         | Assy., Conveyor Flighting, L.H.                |           |                          |           |               |            |            |
| 22         |          |           | Composed of Parts 4463, 10751                  |           |                          |           |               |            |            |
| 23         |          |           | 4-Rivet, R.H., 1/4"x7/8"                       |           |                          |           |               |            |            |
| 24         |          |           | 4-Screw, Set, Sq. Hd. 1/2"-13x3/4"             |           | 32894                    |           |               |            |            |
| * 25       | 10754    | 3         | Assy., Conveyor Flighting, R.H.                |           |                          |           |               |            |            |
| 26         |          |           | Composed of Parts 4653, 10747                  |           |                          |           |               |            |            |
| 27         |          |           | 4-Rivet, R.H., 1/4"x7/8"                       |           |                          |           |               |            |            |
| 28         |          |           | 4-Screw, Set, Hol. Hd. 1/2"-13x1/2"            |           | 32893                    |           |               |            |            |
| * 29       | 10755    | 6         | Assy., Conveyor Flighting, R.H.                |           |                          |           |               |            |            |
| 30         |          |           | Composed of Parts 4653, 10748                  |           |                          |           |               |            |            |
| 31         |          |           | 4-Rivet, R.H., 1/4"x7/8"                       |           |                          |           |               |            |            |
| 32         |          |           | 4-Screw, Set, Hol. Hd. 1/2"-13x1/2"            |           | 32893                    |           |               |            |            |
| 33         | 11731    | 1         | Assy., Conveyor Flighting, R.H.                |           |                          |           |               |            |            |
| 34         |          |           | Composed of Parts 4305, 11568                  |           |                          |           |               |            |            |
| 35         |          |           | 3-Rivet, R.H., 1/4"x7/8"                       |           |                          |           |               |            |            |
| 36         |          |           | 3-Screw, Set, Sq. Hd. 1/2"-13x3/4"             |           | 33081                    |           |               |            |            |
| 37         | 11735    | 1         | Assy., Conveyor Flighting, R.H.                |           |                          |           |               |            |            |
| 38         |          |           | Composed of Parts 4305, 11572                  |           |                          |           |               |            |            |
| 39         |          |           | 3-Rivet, R.H., 1/4"x7/8"                       |           |                          |           |               |            |            |
| 40         |          |           | 3-Screw, Set, Sq. Hd. 1/2"-13x3/4"             |           | 33083                    |           |               |            |            |
| 41         |          |           |                                                |           |                          |           |               |            |            |
| 42         |          |           |                                                |           |                          |           |               |            |            |
| 43         |          |           |                                                |           |                          |           |               |            |            |
| 44         |          |           |                                                |           |                          |           |               |            |            |
| 45         |          |           |                                                |           |                          |           |               |            |            |
| 46         |          |           |                                                |           |                          |           |               |            |            |

NOTE: WHEN ORDERING PARTS SPECIFY PART NUMBER, NAME OF PART AND STYLE OF MACHINE.

## MATERIAL LIST

PRINTED

HART CARTER CO.  
NORTHERN DIVISION

FEB 14 1936

MACHINE NO. 33 HART UNI-FLOW GRAIN SEPARATOR  
UNIT MACHINE PROPER

STYLE NO. PE2

SHEET NO. 8

TOTAL SHEETS 11

DATE 7-24-35

## \* IN SUB ASSEMBLY

| * NO | PART NO | NAME OF PART                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | PART NO | ORG NO | FIG. WGT. | COST RAW MAT | TOTAL COST | SALE PRICE |
|------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|--------|-----------|--------------|------------|------------|
|      |         | Section 7 Cont.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |         |        |           |              |            |            |
| 1    | 11733   | 1 Assy., Conveyor Flighting, R.H.<br>Composed of Parts 4305, 11570<br>3-Rivet, R.H. 1/4"x7/8"<br>3-Screw, Set Sq.Hd. 1/2"-13x3/4"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |         |        |           |              | 33082      |            |
| 2    | 10837   | 9 Assy., Discharge Head Composed of<br>Parts 10681, 10752<br>5-Rivet, Copper Ctsk.Hd. 1/8"x3/4"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |         |        |           |              | 32919      |            |
| 3    | 11586   | 9 Assy., Discharge Sleeve Composed of<br>Parts 10682, 11521                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |         |        |           |              | 33041      |            |
| 4    | 12371   | 1 Assy., End Plate L.H. (Gear End)<br>Composed of Parts 12352, 12362<br>6-Rivet, R.H. 1/4"x3/4"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |         |        |           |              | 33276      |            |
| 5    | 12372   | 1 Assy., End Plate R.H. (Gear End)<br>Composed of Parts 12351, 12363<br>6-Rivet, R.H. 1/4"x3/4"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |         |        |           |              | 33277      |            |
| 6    | 11801   | 3 Assy., Recleaning Cylinder Composed<br>of Parts 204, 265, 270, 280, 1585,<br>3532, 3533, 3773, 10692, 10693,<br>10695, 10696, 10708, 10709, 10710,<br>10729, 10742, 10754, 10757, 10769,<br>10785, 10786, 10820, 10821, 10822,<br>10823, 10837, 11586, 11804<br>1-Shell, Cylinder 85" Long<br>8-Bolt, Stove R.H. 1/4"-20x3/4"<br>3-Bolt, Stove R.H. 1/4"-20x1"<br>5-Bolt, Stove R.H. 5/16"-18x3/4"<br>1-Coupling, 1/8" Pipe<br>1-Key, Woodruff #13<br>1-Key, Woodruff #15<br>1-Nipple, Close 1/8" Pipe<br>9-Screw, Mach. R.H. 1/4"-20x1/2"<br>6-Screw, Mach. R.H. 1/4"-20x5/8"<br>6-Screw, Mach. R.H. 1/4"-20x3/4"<br>3-Screw, Set Rol.Hd. 3/8"-16x3/8"<br>1-Screw, Set Rol.Hd. 1/2"-13x1/2"<br>1-Screw, Set Sq. Hd. 1/2"-13x1"<br>17-Washer, Lock 1/4"<br>5-Washer, Lock 5/16" |         |        |           |              | 5524       |            |

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NORTHERN DIVISION

FEB 14 1936

MACHINE NO. 33 HART UNI-FLOW GRAIN SEPARATOR  
UNIT MACHINE PROPER

STYLE NO. PE2

SHEET NO. 9

TOTAL SHEETS 11

DATE 7-24-35

## \* IN SUB ASSEMBLY

| * REF | PART NO. | QTY | NAME OF PART                        | PAYT. NO. | ORG. NO. | FIN. WGT. | COST RAW MAT. | TOTAL COST | SALE PRICE |
|-------|----------|-----|-------------------------------------|-----------|----------|-----------|---------------|------------|------------|
| 1     |          |     | Section 7 Cont.                     |           |          |           |               |            |            |
| 2     | 11802    | 3   | Assy., Screenings Cylinder Composed |           |          |           |               |            |            |
| 3     |          |     | of Parts 204, 265, 270, 280, 1585,  |           |          |           |               |            |            |
| 4     |          |     | 3532, 3533, 3773, 10692, 10693,     |           |          |           |               |            |            |
| 5     |          |     | 10695, 10708, 10709, 10710, 10728,  |           |          |           |               |            |            |
| 6     |          |     | 10743, 10755, 10758, 10770, 10785,  |           |          |           |               |            |            |
| 7     |          |     | 10786, 10820, 10821, 10822, 10823,  |           |          |           |               |            |            |
| 8     |          |     | 10837, 11586, 11804                 |           |          |           |               |            |            |
| 9     |          |     | 1-Shell, Cylinder 90" Long          |           |          |           |               |            |            |
| 10    |          |     | 8-Bolt, Stove R.H. 1/4"-20x3/4"     |           |          |           |               |            |            |
| 11    |          |     | 3-Bolt, Stove R.H. 1/4"-20x1"       |           |          |           |               |            |            |
| 12    |          |     | 5-Bolt, Stove R.H. 5/16"-18x3/4"    |           |          |           |               |            |            |
| 13    |          |     | 1-Coupling, 1/8" Pipe               |           |          |           |               |            |            |
| 14    |          |     | 1-Key, Woodruff #13                 |           |          |           |               |            |            |
| 15    |          |     | 1-Key, Woodruff #15                 |           |          |           |               |            |            |
| 16    |          |     | 1-Nipple, Close 1/8" Pipe           |           |          |           |               |            |            |
| 17    |          |     | 6-Screw, Mach. R.H. 1/4"-20x1/2"    |           |          |           |               |            |            |
| 18    |          |     | 6-Screw, Mach. R.H. 1/4"-20x5/8"    |           |          |           |               |            |            |
| 19    |          |     | 6-Screw, Mach. R.H. 1/4"-20x3/4"    |           |          |           |               |            |            |
| 20    |          |     | 3-Screw, Set Hol.Hd. 3/8"-16x3/8"   |           |          |           |               |            |            |
| 21    |          |     | 1-Screw, Set Hol.Hd. 1/2"-13x1/2"   |           |          |           |               |            |            |
| 22    |          |     | 1-Screw, Set Sq. Hd. 1/2"-13x1"     |           |          |           |               |            |            |
| 23    |          |     | 17-Washer, Lock 1/4"                |           |          |           |               |            |            |
| 24    |          |     | 5-Washer, Lock 5/16"                |           |          |           |               |            | 5525       |
| 25    | 11800    | 3   | Assy., Separating Cylinder Composed |           |          |           |               |            |            |
| 26    |          |     | of Parts 204, 265, 270, 280, 1585,  |           |          |           |               |            |            |
| 27    |          |     | 3532, 3533, 3773, 10692, 10693,     |           |          |           |               |            |            |
| 28    |          |     | 10695, 10708, 10709, 10710, 10725,  |           |          |           |               |            |            |
| 29    |          |     | 10743, 10755, 10758, 10770, 10785,  |           |          |           |               |            |            |
| 30    |          |     | 10786, 10820, 10821, 10822, 10823,  |           |          |           |               |            |            |
| 31    |          |     | 10837, 11586, 11804                 |           |          |           |               |            |            |
| 32    |          |     | 1-Shell, Cylinder 90" Long          |           |          |           |               |            |            |
| 33    |          |     | 8-Bolt, Stove R.H. 1/4"-20x3/4"     |           |          |           |               |            |            |
| 34    |          |     | 3-Bolt, Stove R.H. 1/4"-20x1"       |           |          |           |               |            |            |
| 35    |          |     | 5-Bolt, Stove R.H. 5/16"-18x3/4"    |           |          |           |               |            |            |
| 36    |          |     | 1-Coupling, 1/8" Pipe               |           |          |           |               |            |            |
| 37    |          |     | 1-Key, Woodruff #13                 |           |          |           |               |            |            |
| 38    |          |     | 1-Key, Woodruff #15                 |           |          |           |               |            |            |
| 39    |          |     | 1-Nipple, Close 1/8" Pipe           |           |          |           |               |            |            |
| 40    |          |     | 6-Screw, Mach. R.H. 1/4"-20x1/2"    |           |          |           |               |            |            |
| 41    |          |     | 6-Screw, Mach. R.H. 1/4"-20x5/8"    |           |          |           |               |            |            |
| 42    |          |     | 6-Screw, Mach. R.H. 1/4"-20x3/4"    |           |          |           |               |            |            |
| 43    |          |     | 3-Screw, Set Hol.Hd. 3/8"-16x3/8"   |           |          |           |               |            |            |
| 44    |          |     |                                     |           |          |           |               |            |            |
| 45    |          |     |                                     |           |          |           |               |            |            |
| 46    |          |     |                                     |           |          |           |               |            |            |

NOTE: WHEN ORDERING PARTS SPECIFY PART NUMBER, NAME OF PART AND STYLE OF MACHINE.

PRINTED

## MATERIAL LIST

HART CARTER CO  
NORTHERN DIVISION

FEB 14 1936

MACHINE NO. 33 HART UNI-FLOW GRAIN SEPARATOR  
UNIT MACHINE PROPER

STYLE NO. PE2

SHEET NO. 10

TOTAL SHEETS 11

DATE 7-24-35

## \* IN SUB ASSEMBLY

| PART<br>NO      | NAME OF PART                       | PATT<br>NO | QTY<br>NO | LINE<br>WEIGHT | COST<br>RAW<br>MAT | TOTAL<br>COST | SALE PRICE |
|-----------------|------------------------------------|------------|-----------|----------------|--------------------|---------------|------------|
| Section 7 Cont. |                                    |            |           |                |                    |               |            |
|                 | 1-Screw, Set Hol.Hd. 1/2"-13x1/2"  |            |           |                |                    |               |            |
|                 | 1-Screw, Set Sq. Hd. 1/2"-13x1"    |            |           |                |                    |               |            |
|                 | 17-Washer, Lock 1/4"               |            |           |                |                    |               |            |
|                 | 5-Washer, Lock 5/16"               |            |           |                |                    |               |            |
|                 |                                    |            |           |                |                    | 5523          |            |
| Section 8       |                                    |            |           |                |                    |               |            |
| 48              | Bolt, Mach.Hex.Hd. 5/16"-18x5/8"   |            |           |                |                    |               |            |
| 36              | Bolt, Mach.Hex.Hd. 3/8"-16x3/4"    |            |           |                |                    |               |            |
| 60              | Bolt, Mach.Hex.Hd. 3/8"-16x1"      |            |           |                |                    |               |            |
| 6               | Bolt, Mach.Hex.Hd. 3/8"-16x1-1/4"  |            |           |                |                    |               |            |
| 58              | Bolt, Stove R.H. 1/4"-20x3/8"      |            |           |                |                    |               |            |
| 76              | Bolt, Stove R.H. 1/4"-20x1/2"      |            |           |                |                    |               |            |
| 51              | Bolt, Stove R.H. 1/4"-20x5/8"      |            |           |                |                    |               |            |
| 96              | Nut, Hex. 3/8"-16                  |            |           |                |                    |               |            |
| 130             | Nut, Hex. Jam 5/16"-18             |            |           |                |                    |               |            |
| 9               | Pin, Cotter 5/32"x1-1/2"           |            |           |                |                    |               |            |
| 54              | Screw, Cap Hex.Hd. 5/16"-18x3/4"   |            |           |                |                    |               |            |
| 4               | Screw, Drive #4x5/16"              |            |           |                |                    |               |            |
| 27              | Screw, Mach. R.H. #8-32x3/8" Brass |            |           |                |                    |               |            |
| 43              | Screw, Mach. R.H. 1/4"-20x3/8"     |            |           |                |                    |               |            |
| 7               | Screw, Mach. R.H. 5/16"-18x3/4"    |            |           |                |                    |               |            |
| 2               | Screw, Set Hol.Hd. 5/16"-18x3/8"   |            |           |                |                    |               |            |
| 8               | Screw, Set Sq.Hd. 5/16"-18x1/2"    |            |           |                |                    |               |            |
| 10              | Screw, Set Sq.Hd. 3/8"-16x5/8"     |            |           |                |                    |               |            |
| 18              | Screw, Set Sq.Hd. 3/8"-16x3/4"     |            |           |                |                    |               |            |
| 4               | Screw, Set Sq.Hd. 7/16"-14x3/4"    |            |           |                |                    |               |            |
| 9               | Screw, Set Sq.Hd. 1/2"-13x5/8"     |            |           |                |                    |               |            |
| 34              | Screw, Set Sq.Hd. 1/2"-13x3/4"     |            |           |                |                    |               |            |
| 4               | Washer, Cut 1/4"                   |            |           |                |                    |               |            |
| 18              | Washer, Cut 5/16"                  |            |           |                |                    |               |            |
| 24              | Washer, Cut 3/8"                   |            |           |                |                    |               |            |
| 4               | Washer, Lock 1/4"                  |            |           |                |                    |               |            |
| 22              | Washer, Lock 5/16"                 |            |           |                |                    |               |            |
| 1               | Wrench, Hol.Hd. Set Screw 1/4"     |            |           |                |                    |               |            |
| 1               | Wrench, Hol.Hd. Set Screw 5/16"    |            |           |                |                    |               |            |
| 1               | Wrench, Hol.Hd. Set Screw 3/8"     |            |           |                |                    |               |            |
| 1               | Wrench, Hol.Hd. Set Screw 1/2"     |            |           |                |                    |               |            |

NOTE: WHEN ORDERING PARTS SPECIFY PART NUMBER, NAME OF PART AND STYLE OF MACHINE.

PRINTED

## MATERIAL LIST

HART CARTER CO.  
NORTHERN DIVISION

FEB 14 1936

MACHINE NO. 33 HART UNI-FLOW GRAIN SEPARATOR  
UNIT MACHINE PROPER

STYLE NO. PE2

SHEET NO. 11

TOTAL SHEETS 11

DATE 7-24-35

## \* IN SUB ASSEMBLY

| * IN | PART NO. | QTY. PER UNIT | NAME OF PART                           | PATT. NO. | DRG NO. | FIN. WT. | COST RAW MAT. | TOTAL COST | SALE PRICE |
|------|----------|---------------|----------------------------------------|-----------|---------|----------|---------------|------------|------------|
| 1    |          |               | Section 9                              |           |         |          |               |            |            |
| 2    |          |               | Data, Installation                     |           |         |          | 5494          |            |            |
| 3    |          |               | Assembly, Countershafts                |           |         |          | 5576          |            |            |
| 4    |          |               | Assembly, Oat Conveyor                 |           |         |          | 5579          |            |            |
| 5    |          |               | Assembly, Seed Conveyor                |           |         |          | 5578          |            |            |
| 6    |          |               | Assembly, Wheat Conveyor               |           |         |          | 5580          |            |            |
| 7    |          |               |                                        |           |         |          |               |            |            |
| 8    |          |               |                                        |           |         |          |               |            |            |
| 9    |          |               | Weight: Net:                           |           |         |          |               |            |            |
| 10   |          |               | Shipping:                              |           |         |          |               |            |            |
| 11   |          |               |                                        |           |         |          |               |            |            |
| 12   |          |               | Note 1: Machinery Instruction No.      |           |         |          |               |            |            |
| 13   |          |               |                                        |           |         |          |               |            |            |
| 14   |          |               | Note 2: Suitable Cylinder Indent to be |           |         |          |               |            |            |
| 15   |          |               | specified on Shop Order                |           |         |          |               |            |            |
| 16   |          |               |                                        |           |         |          |               |            |            |
| 17   |          |               | Note 3: Suitable Drive Pulley to be    |           |         |          |               |            |            |
| 18   |          |               | specified on Shop Order.               |           |         |          |               |            |            |
| 19   |          |               |                                        |           |         |          |               |            |            |
| 20   |          |               | Note 4: Motor Drive Attachment to be   |           |         |          |               |            |            |
| 21   |          |               | specified under separate style         |           |         |          |               |            |            |
| 22   |          |               | number.                                |           |         |          |               |            |            |
| 23   |          |               |                                        |           |         |          |               |            |            |
| 24   |          |               |                                        |           |         |          |               |            |            |
| 25   |          |               |                                        |           |         |          |               |            |            |
| 26   |          |               |                                        |           |         |          |               |            |            |
| 27   |          |               |                                        |           |         |          |               |            |            |
| 28   |          |               |                                        |           |         |          |               |            |            |
| 29   |          |               |                                        |           |         |          |               |            |            |
| 30   |          |               |                                        |           |         |          |               |            |            |
| 31   |          |               |                                        |           |         |          |               |            |            |
| 32   |          |               |                                        |           |         |          |               |            |            |
| 33   |          |               |                                        |           |         |          |               |            |            |
| 34   |          |               |                                        |           |         |          |               |            |            |
| 35   |          |               |                                        |           |         |          |               |            |            |
| 36   |          |               |                                        |           |         |          |               |            |            |
| 37   |          |               |                                        |           |         |          |               |            |            |
| 38   |          |               |                                        |           |         |          |               |            |            |
| 39   |          |               |                                        |           |         |          |               |            |            |
| 40   |          |               |                                        |           |         |          |               |            |            |
| 41   |          |               |                                        |           |         |          |               |            |            |
| 42   |          |               |                                        |           |         |          |               |            |            |
| 43   |          |               |                                        |           |         |          |               |            |            |
| 44   |          |               |                                        |           |         |          |               |            |            |
| 45   |          |               |                                        |           |         |          |               |            |            |
| 46   |          |               |                                        |           |         |          |               |            |            |

NOTE: WHEN ORDERING PARTS SPECIFY PART NUMBER, NAME OF PART AND STYLE OF MACHINE.

## MATERIAL LIST

HART CARTER CO.  
NORTHERN DIVISIONPRINTED  
MAY 8 1946MACHINE NO. 33 HART UNI-FLOW GRAIN SEPARATOR  
UNIT SCALPER & ASPIRATOR

STYLE NO. PE2

SHEET NO. 1

TOTAL SHEETS 7

DATE 7-24-35

## \* IN SUB ASSEMBLY

| * QTY.<br>NO. | PART<br>NO. | QTY.<br>EACH<br>MACH. | NAME OF PART                                                                 | PATT.<br>NO. | DRG<br>NO. | FIN.<br>WGHT. | COST<br>RAW<br>MAT. | TOTAL<br>COST | SALE PRICE |
|---------------|-------------|-----------------------|------------------------------------------------------------------------------|--------------|------------|---------------|---------------------|---------------|------------|
| 1             |             |                       | Section 1                                                                    |              |            |               |                     |               |            |
| 2             | 10780       | 4                     | Arm, Connection                                                              | 1566         | 23763      |               |                     |               |            |
| 3             | 1478        | 1                     | Bearing, 5/8" Shaft                                                          | 1036         | 20097      |               |                     |               |            |
| 4             | 3101        | 2                     | Bearing, 5/8" Shaft                                                          | 1472         | 21029      |               |                     |               |            |
| 5             | 11496       | 1                     | Bracket, Bearing Support                                                     | 2217         | 23833      |               |                     |               |            |
| 6             | 3104        | 1                     | Clamp, Sheepskin, L.H.                                                       | 1475         | 30751      |               |                     |               |            |
| 7             | 3103        | 1                     | Clamp, Sheepskin, R.H.                                                       | 1474         | 30751      |               |                     |               |            |
| 8             | 4462        | 4                     | Dog, Flighting, R.H.                                                         | 1520         | 21377      |               |                     |               |            |
| 9             | 3105        | 1                     | Drum, Brake                                                                  | 1476         | 21030      |               |                     |               |            |
| 10            | 10784       | 2                     | End, Feed Roll                                                               | 1980         | 23767      |               |                     |               |            |
| 11            | 10760       | 2                     | End, Scalper Roll                                                            | 1938         | 32895      |               |                     |               |            |
| 12            | 12187       | 1                     | Frame, Fan Exhaust                                                           | 2292         | 33218      |               |                     |               |            |
| 13            | 12188       | 1                     | Frame, Square-to-Round                                                       | 2307         | 33219      |               |                     |               |            |
| 14            | 3106        | 1                     | Gear, Spur 34 T., 8 P., 5/8" Bore                                            | 1477         | 30752      |               |                     |               |            |
| 15            | 11471       | 1                     | Gear, Spur 57 T., 6 P., 1-1/16" Bore                                         | 2208         | 40843      |               |                     |               |            |
| 16            | 11457       | 1                     | Gland, Packing                                                               | 2203         | 23821      |               |                     |               |            |
| 17            | 11496       | 1                     | Handwheel, 5/8" Bore                                                         | 2021         | 35013      |               |                     |               |            |
| 18            | 11587       | 1                     | Handwheel, 5/8" Bore                                                         | 2234         | 40874      |               |                     |               |            |
| 19            | 11454       | 1                     | Housing, #1-71231 S.K.F. Bearing                                             | 2201         | 32990      |               |                     |               |            |
| 20            | 11493       | 1                     | Housing, #1-71231 S.K.F. Bearing                                             | 2216         | 33001      |               |                     |               |            |
| 21            | 11451       | 1                     | Hub, Impeller                                                                | 2198         | 40837      |               |                     |               |            |
| 22            | 1473        | 4                     | Pinion, Spur 18 T., 10 P., 5/8" Bore                                         | 1031         | 20092      |               |                     |               |            |
| 23            | 11588       | 1                     | Pulley, 8" x 3-1/4" x 1-3/16"                                                | 2251         | 33084      |               |                     |               |            |
| 24            | 1111        | 2                     | Quadrant, 3/8" Shaft                                                         | 829          | 2831       |               |                     |               |            |
| 25            | 1474        | 2                     | Rack, 18 T., 10 P.                                                           | 1032         | 20093      |               |                     |               |            |
| 26            | 1113        | 2                     | Rack, 20 T., 10 P.                                                           | 828          | 2830       |               |                     |               |            |
| 27            | 12024       | 1                     | Ring, Spacer                                                                 | 2202         | 40968      |               |                     |               |            |
| 28            | 11459       | 2                     | Saddle, Spout, Center                                                        | 2207         | 40841      |               |                     |               |            |
| 29            | 10814       | 1                     | Sprocket, 17 T., #65 Diam.Chain,<br>1-3/16" Bore                             | 1994         | 23774      |               |                     |               |            |
| 30            | 5240        | 1                     | Sprocket, 18 T., #449 Diam.Chain,<br>1-3/16" Bore                            | 1577         | 21583      |               |                     |               |            |
| 31            | 10796       | 1                     | Sprocket, 36 T., #65 Diam.Chain,<br>3/4" Bore                                | 1986         | 32907      |               |                     |               |            |
| 32            | 5224        | 1                     | Sprocket, Gear Comb., 45 T., #449<br>Diam.Chain, 18 T., 6 P., 1-1/4"<br>Bore | 1573         | 40158      |               |                     |               |            |
| 33            | 1475        | 2                     | Support, 3/4" Wood Bearing                                                   | 1033         | 20094      |               |                     |               |            |
| 34            | 3109        | 1                     | Support, Scalper Roll Bearing                                                | 1480         | 30754      |               |                     |               |            |
| 35            | 10773       | 1                     | Support, Scalper Roll Bearing, L.H.                                          | 1975         | 32900      |               |                     |               |            |
| 36            |             |                       |                                                                              |              |            |               |                     |               |            |
| 37            |             |                       |                                                                              |              |            |               |                     |               |            |
| 38            |             |                       |                                                                              |              |            |               |                     |               |            |
| 39            |             |                       |                                                                              |              |            |               |                     |               |            |
| 40            |             |                       |                                                                              |              |            |               |                     |               |            |
| 41            |             |                       |                                                                              |              |            |               |                     |               |            |
| 42            |             |                       |                                                                              |              |            |               |                     |               |            |
| 43            |             |                       |                                                                              |              |            |               |                     |               |            |
| 44            |             |                       |                                                                              |              |            |               |                     |               |            |
| 45            |             |                       |                                                                              |              |            |               |                     |               |            |
| 46            |             |                       |                                                                              |              |            |               |                     |               |            |

NOTE: WHEN ORDERING PARTS SPECIFY PART NUMBER, NAME OF PART AND STYLE OF MACHINE.

## MATERIAL LIST

HART CARTER CO.  
NORTHERN DIVISION

PRINTED

MAY 9 1948

STYLE NO. FE2

MACHINE NO. 33 HART UNI-FLOW GRAIN SEPARATOR  
UNIT SCALPER & ASPIRATOR

SHEET NO. 2

TOTAL SHEETS 7

DATE 7-24-35

## \* IN SUB ASSEMBLY

| * NO.     | PART NO. | NAME OF PART                                            | PATT. NO. | ORG. NO. | FIN. WGT. | COST RAW MAT. | TOTAL COST | SALE PRICE |
|-----------|----------|---------------------------------------------------------|-----------|----------|-----------|---------------|------------|------------|
| Section 2 |          |                                                         |           |          |           |               |            |            |
| 1         | 11559    | 1 Shaft, Conveyor                                       |           |          |           | 33029         |            |            |
| 2         | 11558    | 1 Shaft, Fan                                            |           |          |           | 33028         |            |            |
| 3         | 11467    | 1 Shaft, Feed Roll                                      |           |          |           | 23827         |            |            |
| 4         | 11470    | 1 Shaft, Lower Feed Gate                                |           |          |           | 23829         |            |            |
| 5         | 11462    | 1 Shaft, Scalper Roll                                   |           |          |           | 23822         |            |            |
| 6         | 11469    | 1 Shaft, Upper Feed Gate                                |           |          |           | 23828         |            |            |
| 7         | 3184     | 1 Stud, 5/8" Diam.                                      |           |          |           | 21025         |            |            |
| 8         | 10845    | 1 Stud, 1-1/4" Diam.                                    |           |          |           | 23780         |            |            |
| Section 3 |          |                                                         |           |          |           |               |            |            |
| 14        | 11985    | 1 Angle, 3/4"x3/4"x1/8"x5"                              |           |          |           | 23927         |            |            |
| 15        | 11986    | 1 Angle, 3/4"x3/4"x1/8"x5"                              |           |          |           | 23927         |            |            |
| 16        | 3118     | 2 Angle, 3/4"x3/4"x1/8"x6-1/2"                          |           |          |           | 21034         |            |            |
| 17        | 3119     | 2 Angle, 3/4"x3/4"x1/8"x7"                              |           |          |           | 21035         |            |            |
| 18        | 11987    | 1 Angle, 3/4"x3/4"x1/8"x8-3/4"                          |           |          |           | 23928         |            |            |
| 19        | 11988    | 1 Angle, 3/4"x3/4"x1/8"x8-3/4"                          |           |          |           | 23928         |            |            |
| 20        | 12054    | 1 Angle, 3/4"x3/4"x1/8"x55-5/8"                         |           |          |           | 21042         |            |            |
| 21        | 12220    | 1 Angle, 2"x2"x1/4"x66"                                 |           |          |           | 33230         |            |            |
| 22        | 12222    | 1 Brace, Scalping Spout                                 |           |          |           | 33231         |            |            |
| 23        | 11575    | 1 Flighting, R.H. 6" O.D., 1-1/4" C.O.,<br>61-1/2" Long |           |          |           | 33037         |            |            |
| 24        | 8115     | 1 Key, 1/4"x1/4"x1-1/2" (Curved End)                    |           |          |           | 21254         |            |            |
| 25        | 11617    | 1 Key, 1/4"x1/4"x2-1/4"                                 |           |          |           | 21225         |            |            |
| 26        | 8133     | 2 Key, 3/8"x3/8"x3"                                     |           |          |           | 21257         |            |            |
| 27        | 11967    | 2 Link, Connecting                                      |           |          |           | 23917         |            |            |
| 28        | 12041    | 2 Link, Connecting                                      |           |          |           | 23940         |            |            |
| 29        | 11945    | 8 Rod, Tie                                              |           |          |           | 23577         |            |            |
| 30        | 11567    | 2 Rod, Valve                                            |           |          |           | 23845         |            |            |
| Section 4 |          |                                                         |           |          |           |               |            |            |
| 36        | 12051    | 8 Baffle, Scalper Roll                                  |           |          |           | 32961         |            |            |
| 37        | 11629    | 10 Blade, Impeller                                      |           |          |           | 33053         |            |            |
| 38        | 12030    | 1 Box, Conveyor & Door, Exp. Chamber                    |           |          |           | 33176         |            |            |
| 39        | 12038    | 1 Door, Cleatout & Support                              |           |          |           | 33182         |            |            |
| 40        | 11621    | 1 Door, Inspection                                      |           |          |           | 23857         |            |            |
| 41        | 11939    | 1 Door, Inspection                                      |           |          |           | 23914         |            |            |

NOTE: WHEN ORDERING PARTS SPECIFY PART NUMBER, NAME OF PART AND STYLE OF MACHINE.

## MATERIAL LIST

HART CARTER CO.  
NORTHERN DIVISION

PRINTED

FEB 14 1936

MACHINE NO. 33 HART UNI-FLOW GRAIN SEPARATOR  
UNIT SCALPER & ASPIRATOR

STYLE NO. PE2

SHEET NO. 3

TOTAL SHEETS 7

DATE 7-24-35

\* IN SUB ASSEMBLY

| * IN | PART NO. | NAME OF PART                       | PATT NO. | ORG NO. | FIN. WEIGHT | COST RAW MAT. | TOTAL COST | SALE PR. |
|------|----------|------------------------------------|----------|---------|-------------|---------------|------------|----------|
|      |          | Section 4 Cont.                    |          |         |             |               |            |          |
|      | 12185    | 1 Filler, Fan                      |          |         |             |               | 41017      |          |
|      | 12186    | 1 Filler, Fan                      |          |         |             |               | 41017      |          |
| *    | 12055    | 1 Gate, Lower Feed                 |          |         |             |               | 30772      |          |
| *    | 12044    | 1 Gate, Upper Feed                 |          |         |             |               | 33130      |          |
|      | 11930    | 1 Guard, Chain                     |          |         |             |               |            |          |
|      |          | 2-Rivet, Tinners 4#                |          |         |             |               |            |          |
|      |          | 4-Washer, Brass 7/16" O.D. x .200" |          |         |             |               |            |          |
|      |          | I.D. x .036"                       |          |         |             |               | 40954      |          |
|      | 12129    | 1 Hopper, Receiving, Center        |          |         |             |               |            |          |
|      |          | 4-Bolt, Stove F.H. 1/4"-20x1/2"    |          |         |             |               |            |          |
|      |          | 4-Washer, Lock                     |          |         |             |               | 33198      |          |
|      | 12128    | 1 Hopper, Receiving, L.H.          |          |         |             |               |            |          |
|      |          | 4-Bolt, Stove F.H. 1/4"-20x1/2"    |          |         |             |               |            |          |
|      |          | 4-Washer, Lock                     |          |         |             |               | 33197      |          |
|      | 12130    | 1 Hopper, Receiving, R.H.          |          |         |             |               |            |          |
|      |          | 4-Bolt, Stove F.H. 1/4"-20x1/2"    |          |         |             |               |            |          |
|      |          | 4-Washer, Lock                     |          |         |             |               | 33199      |          |
|      | 12138    | 1 Hopper, Scalping                 |          |         |             |               | 41004      |          |
|      | 12026    | 1 Plate, Back Air Duct, Lower      |          |         |             |               | 33172      |          |
|      | 12027    | 1 Plate, Back Air Duct, Upper      |          |         |             |               | 33173      |          |
|      | 12031    | 1 Plate, Back Expansion Chamber    |          |         |             |               |            |          |
|      |          | 3-Rivet, Tinners 4#                |          |         |             |               |            |          |
|      |          | 6-Washer, Brass 7/16" O.D. x .200" |          |         |             |               |            |          |
|      |          | I.D. x .036"                       |          |         |             |               | 33177      |          |
|      | 12039    | 1 Plate, Baffle & Support          |          |         |             |               |            |          |
|      |          | 2-Rivet, R.H. 3/16"x3/8"           |          |         |             |               | 33183      |          |
| *    | 12100    | 1 Plate, End, L.H.                 |          |         |             |               |            |          |
|      |          | 3-Bolt, Mach.Hex.Hd. 5/16"-18x3/4" |          |         |             |               |            |          |
|      |          | 6-Bolt, Mach. Sq.Hd. 3/8"-16x7/8"  |          |         |             |               | 40988      |          |
| *    | 12101    | 1 Plate, End, R.H.                 |          |         |             |               |            |          |
|      |          | 4-Bolt, Mach.Hex.Hd. 5/16"-18x3/4" |          |         |             |               | 40989      |          |
|      | 12037    | 1 Plate, Front                     |          |         |             |               |            |          |
|      |          | 3-Rivet, Tinners 4#                |          |         |             |               |            |          |
|      |          | 6-Washer, Brass 7/16" O.D. x .200" |          |         |             |               |            |          |
|      |          | I.D. x .036"                       |          |         |             |               | 33181      |          |
|      | 12028    | 1 Plate, Front Air Duct            |          |         |             |               | 33174      |          |
|      | 12029    | 1 Plate, Front Expansion Chamber   |          |         |             |               | 33175      |          |
|      | 12036    | 1 Plate, Front Hopper              |          |         |             |               | 33180      |          |
|      | 12034    | 1 Plate, Lower Back Hopper         |          |         |             |               | 33179      |          |
|      | 12025    | 1 Plate, Lower Front               |          |         |             |               | 33171      |          |
|      | 11684    | 1 Plate, Perforated Scalper Roll   |          |         |             |               | 33187      |          |

NOTE: WHEN ORDERING PARTS SPECIFY PART NUMBER, NAME OF PART AND STYLE OF MACHINE.

# MATERIAL LIST

HART CARTER CO.  
NORTHERN DIVISION

PRINTED

MAY 9, 1945  
STYLE NO. 752

MACHINE NO. 53 HART ONE-PHASE DRAIN SEPARATOR  
UNIT SCALPER & ASPIRATOR

SHEET NO. 14  
TOTAL SHEETS 7  
DATE 7-24-55

\* IN SUB ASSEMBLY

| QTY            | PART NO. | NAME OF PART                             | PATT. NO. | ENG. NO. | FIN. QTY | COST RAW MAT. | TOTAL COST | BASE PRICE |
|----------------|----------|------------------------------------------|-----------|----------|----------|---------------|------------|------------|
| Section 1 Bent |          |                                          |           |          |          |               |            |            |
| 1              | 12174    | Plate, Side Pan                          |           | 21021    |          |               |            |            |
| 1              | 12175    | Plate, Side Pan                          |           |          |          |               |            |            |
| 1              |          | Bolt, Mach. Sq. Hd., 3/8" - 16 1/2 x 8"  |           | 21012    |          |               |            |            |
| 1              | 12052    | Plate, Top                               |           | 21022    |          |               |            |            |
| 1              | 12051    | Plate, Bottom Back Support               |           | 21017    |          |               |            |            |
| 1              | 12053    | Roll, Feed                               |           | 21023    |          |               |            |            |
| 1              | 12054    | Roller, Bottom Roll                      |           | 21024    |          |               |            |            |
| 1              | 12156    | Roll, Indicator (Driving)                |           | 21025    |          |               |            |            |
| 1              | 12157    | Roll, Indicator (Driven)                 |           | 21026    |          |               |            |            |
| 1              | 12158    | Roll, Indicator (Driven)                 |           | 21027    |          |               |            |            |
| 1              |          | Bolt, Mach. Sq. Hd., 3/16" - 18 5/8"     |           | 21028    |          |               |            |            |
| 1              | 12225    | Spout, Scalpings                         |           | 21029    |          |               |            |            |
| 1              | 12198    | Support To Spout                         |           | 21018    |          |               |            |            |
| 1              | 12199    | Tube, Section                            |           | 21019    |          |               |            |            |
| Section 2      |          |                                          |           |          |          |               |            |            |
| 1              | 55       | Bearing, Rod 3/4" Bore                   |           | 2201     |          |               |            |            |
| 1              | 56       | Bearing, Rod 1 1/16" Bore                |           | 2202     |          |               |            |            |
| 1              | 57       | Bearing, Rod 1 3/16" Bore                |           | 2203     |          |               |            |            |
| 1              | 58       | Frame, Foundation                        |           | 2204     |          |               |            |            |
| 1              | 1165     | Disc, Angle                              |           | 21030    |          |               |            |            |
| 1              | 1166     | Disc, Bell 5/16"                         |           | 21031    |          |               |            |            |
| 1              | 1167     | Disc, Bell 3/8"                          |           | 21032    |          |               |            |            |
| 1              | 1168     | Disc, Bell                               |           | 21033    |          |               |            |            |
| 1              | 1677     | Disc, Bell 5/16"                         |           | 21034    |          |               |            |            |
| 1              | 1585     | Roller, Rod 1 3/16" x 35/16" x 5/8"      |           | 21035    |          |               |            |            |
| 1              | 5392     | Roller, Rod 1 3/4" x 2 1/2" x 5/8"       |           | 21036    |          |               |            |            |
| 1              | 3335     | Handle                                   |           | 21037    |          |               |            |            |
| 1              | 39-4     | Bearing, Rod Bearing 3/4" Bore           |           | 21038    |          |               |            |            |
| 1              | 39-5     | Bearing, Rod Bearing 3/4" Bore           |           | 21039    |          |               |            |            |
| 1              | 53-4     | Bearing, Rod Bearing 1 1/16" Bore        |           | 21040    |          |               |            |            |
| 1              | 53-5     | Bearing, Rod Bearing 1 1/16" Bore        |           | 21041    |          |               |            |            |
| 1              | 53-6     | Bearing, Rod Bearing 1 3/16" Bore        |           | 21042    |          |               |            |            |
| 1              | 3256     | Indicator, Rod                           |           | 21043    |          |               |            |            |
| 1              | 7589     | Latch                                    |           | 21044    |          |               |            |            |
| 1              | 12718    | Log, Connecting Rod                      |           | 21010    |          |               |            |            |
| 1              | 11465    | Ring, Lock 2 1/2" x 3 1/2" x 1 1/2" Bore |           | 21045    |          |               |            |            |
| 1              | 11466    | Ring, Lock 3 1/2" x 3 1/2" x 1 1/2" Bore |           | 21046    |          |               |            |            |
| 1              | 121035   | Strap, Rubber                            |           | 21047    |          |               |            |            |
| 1              | 121032   | Washer, Yoke 3 1/2" x 1 1/2" x 1/2"      |           | 21048    |          |               |            |            |

NOTE: WHEN ORDERING PARTS SPECIFY PART NUMBER, NAME OF PART AND STYLE OF MACHINE.

## MATERIAL LIST

HART CARTER CO.  
NORTHERN DIVISIONMACHINE NO. 33 HART UNI-FLOW GRAIN SEPARATOR  
UNIT SCALPER & ASPIRATORPRINTED  
MAY 8 1948  
STYLE NO. PE2SHEET NO. 5  
TOTAL SHEETS 7  
DATE 7-24-35

## \* IN SUB ASSEMBLY

| * IN | PART NO. | QTY. EACH REQD. | NAME OF PART                                                                       | PATT. NO. | DRG NO. | FIN. WGT. | COST RAW MAT. | TOTAL COST | SALE PRICE |
|------|----------|-----------------|------------------------------------------------------------------------------------|-----------|---------|-----------|---------------|------------|------------|
| 1    |          |                 | Section 5 Cont.                                                                    |           |         |           |               |            |            |
| 2    | 213      | 4               | Washer, Felt 2-9/16"x1-13/16"x1/4"                                                 |           |         |           | 2127          |            |            |
| 3    | 11472    | 2               | Washer, Felt 3-7/8"x2-3/8"x1/4"                                                    |           |         |           | 23830         |            |            |
| 4    | 10821    | 1               | Washer, Packing 1-63/64"x1-1/4"x #16 Ga.                                           |           |         |           | 23776         |            |            |
| 6    | 11463    | 4               | Washer, Packing 2-1/2"x2"x#16 Ga.                                                  |           |         |           | 23823         |            |            |
| 7    | 11464    | 4               | Washer, Packing 3-3/4"x2-9/16"x#16 Ga.                                             |           |         |           | 23824         |            |            |
| 8    |          |                 |                                                                                    |           |         |           |               |            |            |
| 9    |          |                 |                                                                                    |           |         |           |               |            |            |
| 10   |          |                 |                                                                                    |           |         |           |               |            |            |
| 11   |          |                 |                                                                                    |           |         |           |               |            |            |
| 12   |          |                 | Section 6                                                                          |           |         |           |               |            |            |
| 13   | 10862    | 2               | Bearing, #I-71231 S.K.F.                                                           |           |         |           |               |            |            |
| 14   | 11938    | 1               | Belt, Leather Single (16 Oz.Center Stock) 3" Wide, 14'-7-5/8" Long (Tape Measure)  |           |         |           |               |            |            |
| 15   |          |                 |                                                                                    |           |         |           |               |            |            |
| 16   |          |                 |                                                                                    |           |         |           |               |            |            |
| 17   | 11937    | 1               | Belt, Leather Single (16 Oz.Center Stock) 3" Wide, 14'-10-1/2" Long (Tape Measure) |           |         |           |               |            |            |
| 18   |          |                 |                                                                                    |           |         |           |               |            |            |
| 19   | 9125     | 113             | Bolt, Spec.Conn.Rod, 5/16"-18x1-31/32"                                             |           |         |           | 25051         |            |            |
| 21   | 9124     | 2               | Bolt, Spec.Conn.Rod, 5/16"-18x2-1/16"                                              |           |         |           | 25051         |            |            |
| 22   | 9123     | 10              | Bolt, Spec.Conn.Rod, 5/16"-18x2-1/2"                                               |           |         |           | 25051         |            |            |
| 23   | 199      | 1               | Chain, Diamond #65, 1/2" P., 1/4" W., 160 P. (80") Long                            |           |         |           |               |            |            |
| 24   | 11936    | 1               | Chain, Diamond #449, 5/8" P., 3/8" W., 140 P. (87-1/2") Long                       |           |         |           |               |            |            |
| 25   |          |                 |                                                                                    |           |         |           |               |            |            |
| 26   |          |                 |                                                                                    |           |         |           |               |            |            |
| 27   | 3532     | 1               | Fitting, Alemite-Dot #1461 Straight, 1/8" P.T.                                     |           |         |           |               |            |            |
| 28   |          |                 |                                                                                    |           |         |           |               |            |            |
| 29   | 11340    | 1               | Plate, Patent-Etched                                                               |           |         |           | 23607         |            |            |
| 30   | 11973    | 1               | Pulley, Rockwood 5" Dia. x 3-1/2"x 1-15/16" Bore, 3/8"x3/16" Keyway                |           |         |           | 23922         |            |            |
| 31   |          |                 |                                                                                    |           |         |           |               |            |            |
| 32   |          |                 |                                                                                    |           |         |           |               |            |            |
| 33   |          |                 |                                                                                    |           |         |           |               |            |            |
| 34   |          |                 |                                                                                    |           |         |           |               |            |            |
| 35   |          |                 | Section 7                                                                          |           |         |           |               |            |            |
| 36   | 12022    | 1               | Assy., Conveyor Flighting, R.H. Composed of Parts 4462, 11575                      |           |         |           |               |            |            |
| 37   |          |                 | 4-Rivet, R.H. 1/4"x7/8"                                                            |           |         |           |               |            |            |
| 38   |          |                 | 4-Screw, Set Sq.Hd. 1/2"-13x5/8"                                                   |           |         |           | 23885         |            |            |
| 39   |          |                 |                                                                                    |           |         |           |               |            |            |
| 40   | 12154    | 1               | Assy., End Plate, L.H. Composed of Parts 3118, 3119, 11986, 11988, 12100           |           |         |           |               |            |            |
| 41   |          |                 | 4-Rivet, F.H. 3/16"x3/8"                                                           |           |         |           |               |            |            |
| 42   |          |                 | 6-Rivet, R.H. 3/16"x3/8"                                                           |           |         |           | 41007         |            |            |
| 43   |          |                 |                                                                                    |           |         |           |               |            |            |
| 44   |          |                 |                                                                                    |           |         |           |               |            |            |
| 45   |          |                 |                                                                                    |           |         |           |               |            |            |
| 46   |          |                 |                                                                                    |           |         |           |               |            |            |

NOTE: WHEN ORDERING PARTS SPECIFY PART NUMBER, NAME OF PART AND STYLE OF MACHINE.

## MATERIAL LIST

HART CARTER CO.  
NORTHERN DIVISION

FEB 14 1936

PRINTED

MACHINE NO. 33 HART UNI-FLOW GRAIN SEPARATOR  
UNIT SCALPER & ASPIRATOR

STYLE NO. PE2

SHEET NO. 6

TOTAL SHEETS 7

DATE 7-24-35

## \* IN SUB ASSEMBLY

| PART NO.        | NAME OF PART                                                                                                                                                             | PATT NO. | ORG NO. | FIN. WGT | COST RAW MAT. | TOTAL COST | SALE PRICE |
|-----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|---------|----------|---------------|------------|------------|
| Section 7 Cont. |                                                                                                                                                                          |          |         |          |               |            |            |
| 12153           | 1 Assy., End Plate, R.H.<br>Composed of Parts 3118, 3119,<br>11985, 11987, 12101<br>2-Rivet, F.H. 3/16"x3/8"<br>7-Rivet, R.H. 3/16"x3/8"                                 |          |         |          |               | 41006      |            |
| 12125           | 1 Assy., Feed Gate, Lower<br>Composed of Parts 1474, 12054, 12055<br>4-Screw, Mach. F.H. #10-24x3/8"<br>10-Rivet, F.H. 3/16"x1/2"                                        |          |         |          |               | 30771      |            |
| 12045           | 1 Assy., Feed Gate, Upper<br>Composed of Parts 1113, 12044<br>4-Screw, Mach. F.H. #10-24x1/2"                                                                            |          |         |          |               | 33131      |            |
| 11633           | 1 Assy., Impeller<br>Composed of Parts 11629, 11630,<br>11631<br>40-Rivet, R.H. 1/4"x3/8"                                                                                |          |         |          |               | 40889      |            |
| 12169           | 1 Assy., Impeller Complete<br>Composed of Parts 11451, 11633<br>10-Rivet, R.H. 1/4"x3/4"                                                                                 |          |         |          |               | 33213      |            |
| 12052           | 1 Assy., Scalper Roll<br>Composed of Parts 10760, 11945,<br>12050, 12051<br>16-Nut, Sq. 1/4"-20<br>8-Screw, Mach., F.H. 1/4"-20x3/8"<br>4-Screw, Set Sq.Hd. 3/8"-16x5/8" |          |         |          |               | 40895      |            |
| 11673           | 1 Assy., Scalper Roll Bearing Support<br>Composed of Parts 10773, 10845<br>1-Pin, Taper, #4 x 2"                                                                         |          |         |          |               | 33066      |            |
| 12191           | 1 Assy., Square-To-Round<br>Composed of Parts 12188, 12190<br>14-Rivet, R.H. 3/16"x1/2"                                                                                  |          |         |          |               | 33221      |            |

## Section 8

- 6 Bolt, Mach.Hex.Hd. 5/16"-18x1/2"
- 8 Bolt, Mach.Hex.Hd. 3/8"-16x3/4"
- 4 Bolt, Mach. Hex.Hd. 3/8"-16x7/8"
- 2 Bolt, Stove, F.H. 1/4"-20x2"
- 6 Bolt, Stove, R.H. 3/16"-24x5/8"

PRINTED

## MATERIAL LIST

HART CARTER CO.  
NORTHERN DIVISION

FEB 14 1936

MACHINE NO. 33 HART UNI-FLOW GRAIN SEPARATOR  
UNIT SCALPER & ASPIRATOR

STYLE NO. PE2

SHEET NO. 7

TOTAL SHEETS 7

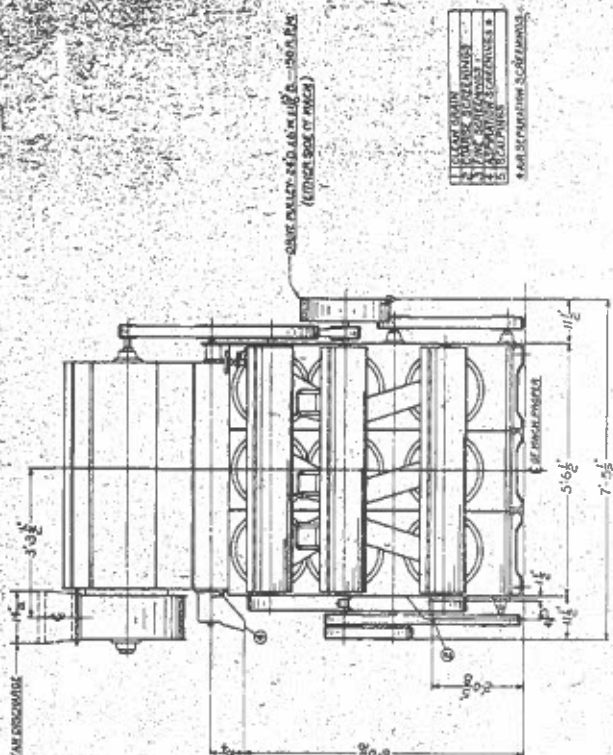
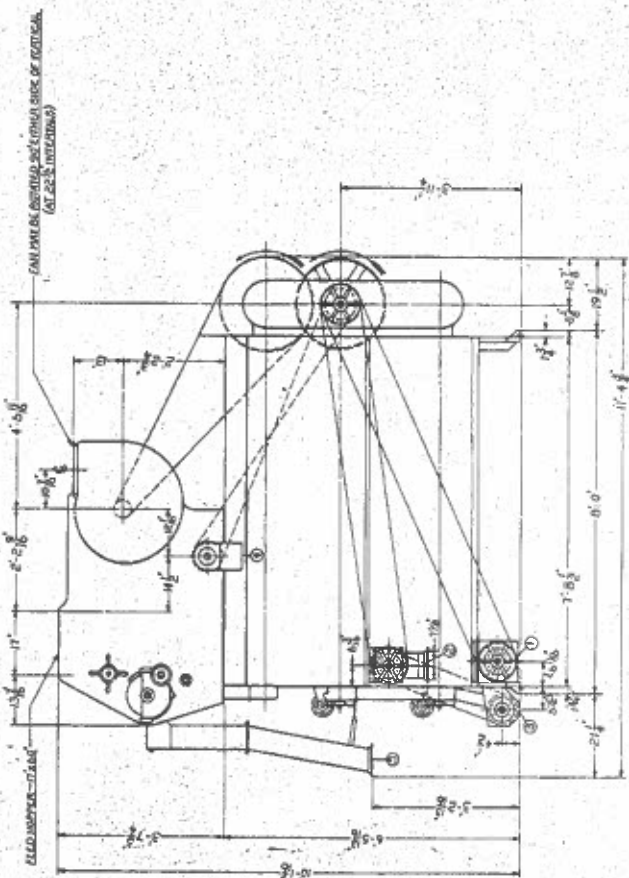
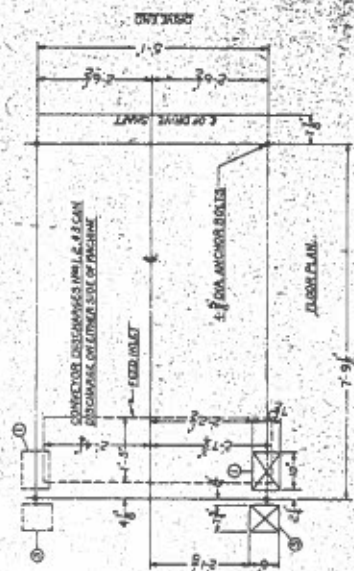
DATE 7-24-35

## \* IN SUB ASSEMBLY

| * IN | PART NO. | NAME OF PART                     | PATT NO. | DRG NO. | FIN WGT | COST RAW MAT. | TOTAL COST | SALE PRICE |
|------|----------|----------------------------------|----------|---------|---------|---------------|------------|------------|
|      |          | Section 8 Cont.                  |          |         |         |               |            |            |
| 60   |          | Bolt, Stove R.H. 1/4"-20x3/8"    |          |         |         |               |            |            |
| 30   |          | Bolt, Stove R.H. 1/4"-20x1/2"    |          |         |         |               |            |            |
| 11   |          | Bolt, Stove R.H. 1/4"-20x5/8"    |          |         |         |               |            |            |
| 4    |          | Bolt, Stove R.H. 1/4"-20x3/4"    |          |         |         |               |            |            |
| 12   |          | Nut, Hex. 3/8"-16                |          |         |         |               |            |            |
| 180  |          | Nut, Hex. Jam 5/16"-18           |          |         |         |               |            |            |
| 2    |          | Nut, Hex. Jam 1/2"-13            |          |         |         |               |            |            |
| 4    |          | Nut, Sq. 1/4"-20                 |          |         |         |               |            |            |
| 2    |          | Nut, Wing 5/16"-18               |          |         |         |               |            |            |
| 4    |          | Screw, Drive Brass #4x3/16"      |          |         |         |               |            |            |
| 2    |          | Screw, Mach.R.H. #10-24x1/4"     |          |         |         |               |            |            |
| 11   |          | Screw, Mach.R.H. 1/4"-20x3/8"    |          |         |         |               |            |            |
| 22   |          | Screw, Mach.R.H. 1/4"-20x1/2"    |          |         |         |               |            |            |
| 4    |          | Screw, Mach.R.H. 1/4"-20x5/8"    |          |         |         |               |            |            |
| 18   |          | Screw, Mach.R.H. 5/16"-18x1/2"   |          |         |         |               |            |            |
| 28   |          | Screw, Mach.R.H. 5/16"-18x5/8"   |          |         |         |               |            |            |
| 28   |          | Screw, Mach.R.H. 5/16"-18x3/4"   |          |         |         |               |            |            |
| 4    |          | Screw, Mach.R.H. 5/16"-18x1"     |          |         |         |               |            |            |
| 4    |          | Screw, Mach.R.H. 5/16"-18x1-1/2" |          |         |         |               |            |            |
| 1    |          | Screw, Set Hol.Hd. 1/4"-20x3/8"  |          |         |         |               |            |            |
| 8    |          | Screw, Set Hol.Hd. 5/16"-18x3/8" |          |         |         |               |            |            |
| 1    |          | Screw, Set Hol.Hd. 3/8"-16x3/8"  |          |         |         |               |            |            |
| 8    |          | Screw, Set Sq. Hd. 5/16"-18x1/2" |          |         |         |               |            |            |
| 4    |          | Screw, Set Sq. Hd. 5/16"-18x5/8" |          |         |         |               |            |            |
| 5    |          | Screw, Set Sq. Hd. 3/8"-16x1/2"  |          |         |         |               |            |            |
| 4    |          | Screw, Set Sq. Hd. 3/8"-16x5/8"  |          |         |         |               |            |            |
| 4    |          | Screw, Set Sq. Hd. 3/8"-16x3/4"  |          |         |         |               |            |            |
| 2    |          | Sheepskin, 3"x7-1/2"             |          |         |         |               |            |            |
| 12   |          | Washer, Cut 1/4"                 |          |         |         |               |            |            |
| 2    |          | Washer, Cut Brass 5/16"          |          |         |         |               |            |            |
| 6    |          | Washer, Lock 1/4"                |          |         |         |               |            |            |
| 22   |          | Washer, Lock 5/16"               |          |         |         |               |            |            |
| 24   |          | Washer, Lock 3/8"                |          |         |         |               |            |            |

Section 9  
Section Thru Shafting  
Section Thru Sheet Metal

5557  
41009



|   |                 |
|---|-----------------|
| 1 | CLAN DOON       |
| 2 | PAUL & SCARLETT |
| 3 | PAUL & SCARLETT |
| 4 | PAUL & SCARLETT |
| 5 | PAUL & SCARLETT |

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HART CARTER CO.

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COSTS BY J. 10-11-11

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