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MANUAL PREVIEW

**Allis Chalmers**

Service Manual

L & M

Gleaners

Volume 1 of 3

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# SERVICE MANUAL

MANUAL PREVIEW

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MODELS L & M COMBINES

SECTION A – ENGINE

**A**

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350 V—8 ENGINE (GASOLINE)

2900 MK II ENGINE (DIESEL)

3500 MK II ENGINE (DIESEL)  
(Model "L" Only)

2900 MK I ENGINE (DIESEL)  
(Model "M" Only)

RAY—JAY 301 SERIES TURBOCHARGER

DELCO ALTERNATOR

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**MODELS L & M COMBINES**  
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**GENERAL DATA — MODEL 350 V-8  
GAS**

|                                     |                                 |
|-------------------------------------|---------------------------------|
| Bore                                | 4.00"                           |
| Stroke                              | 3.48"                           |
| Compression Ratio                   | 8.0:1                           |
| Firing Order                        | 1-8-4-3-6-5-7-2                 |
| Cylinder Bore                       |                                 |
| Diameter                            | 3.9995 - 4.0025"                |
| Out-of-Round                        | .001"                           |
| Taper                               |                                 |
| Thrust Side                         | .0005"                          |
| Relief Side                         | .001"                           |
| Piston                              |                                 |
| Clearance                           | .0030" Max.                     |
| Piston Rings                        |                                 |
| Compression Ring                    |                                 |
| Groove Clearance                    | .0012" - .0032"                 |
| Gap                                 | .010" - .020"                   |
| Oil Ring                            |                                 |
| Groove Clearance                    | .002" - .007"                   |
| Gap                                 | .015" - .055"                   |
| Piston Pin                          |                                 |
| Diameter                            | .9270" - .9273"                 |
| Clearance                           | .00025" - .00035" - .001" max.  |
| Fit in Rod                          | .0008" - .0016" interference    |
| Crankshaft                          |                                 |
| Diameter                            | 2.4484 - 2.4493"                |
| Taper                               | .001" max.                      |
| Out-of-Round                        | .001" max.                      |
| Main Bearing Clearance              | .004" max.                      |
| Crankshaft End Play                 | .003" - .011"                   |
| Crank Pin                           |                                 |
| Diameter                            | 2.099" - 2.100"                 |
| Taper                               | .001" max.                      |
| Out-of-Round                        | .001" max.                      |
| Rod Bearing Clearance               | .004" max.                      |
| Rod Side Clearance                  | .009" - .013"                   |
| Camshaft                            |                                 |
| Lobe Lift $\pm$ .002" (Int. & Exh.) | .2658"                          |
| Journal Diameter                    | 1.8682" - 1.8692"               |
| Camshaft Runout                     | .0015" max.                     |
| Valve System                        |                                 |
| Lifter - Hydraulic                  |                                 |
| Rocker Arm Ratio                    | 1 turn down from zero lash      |
| Face Angle                          |                                 |
| Intake                              | 45°                             |
| Exhaust                             | 46°                             |
| Seat Angle                          | 46°                             |
| Seat Run-out                        | .002" max.                      |
| Seat Width                          |                                 |
| Intake                              | 1/32" to 1/16"                  |
| Exhaust                             | 1/16" to 1/32"                  |
| Stem Clearance                      |                                 |
| Intake                              | .0010" - .0027"                 |
| Exhaust                             | .0010" - .0027"                 |
| Valve Spring                        |                                 |
| Free Length                         | 2.08"                           |
| Pressure Lbs. @ In.                 | 78-86 @ 1.66" - 170-178 @ 1.26" |
| Installed Height Exhaust and Intake | 1-21/32"                        |
| Damper - Free Length                | 1 - 94"                         |