

# SECTION 1

## GENERAL INFORMATION AND MANUAL USAGE

### 1-1. SAFETY PRECAUTIONS.

1-1.1 Refer to the Safety Summary on page i, and observe all WARNINGS and CAUTIONS when servicing the tractors covered in this manual.



#### **WARNING**

This symbol indicates safety instructions which, if not followed, could cause personal injury and/or damage to the tractor component being serviced.



#### **CAUTION**

This symbol indicates instructions which, if not followed, could cause failure of the tractor component or could result in an environmental hazard.



#### **NOTE**

This symbol indicates general information which should be given special attention.

### 1-2 GENERAL.

1-2.1 This service manual cover Series 2000 tractors, mower decks and selected attachments. See Table 1-1. Service instructions for engines are detailed in separate service manuals. Refer to Appendix A, Related Service Manuals.

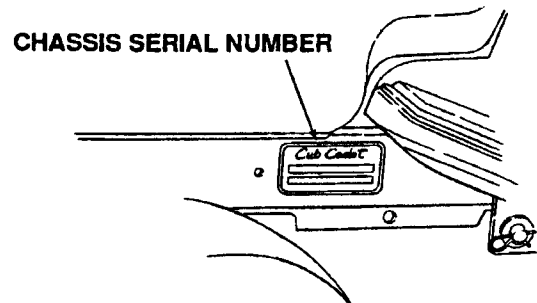
**Table 1-1. Equipment in this Manual.**

| DESCRIPTION             | MODEL NUMBER                     |
|-------------------------|----------------------------------|
| Series 2000 Tractor     | 2130                             |
| Series 2000 Tractor     | 2135                             |
| Series 2000 Tractor     | 2140                             |
| Series 2000 Tractor     | 2145                             |
| Series 2000 Tractor     | 2160                             |
| Series 2000 Tractor     | 2165                             |
| Series 2000 Tractor     | 2185                             |
| 38" Mower Deck          | Standard on models 2130 and 2135 |
| 42" Mower Deck          | Standard on models 2140 and 2145 |
| 46" Mower Deck          | 190-300                          |
| 48" Mower Deck          | 190-301                          |
| 38" Mulching Attachment | 190-314                          |
| 42" Mulching Attachment | 190-315                          |
| 42" Spring Trip Blade   | 190-302                          |
| 40" Snowthrower         | 190-303                          |
| 28" Tiller              | 190-304                          |

### 1-3 REFERENCE DATA.

1-3.1 **Specifications.** Specifications for each tractor model are contained in Tables 1-2 through 1-8.

1-3.2 **Serial Number Location.** The chassis serial number plate is located on the left hand side of the frame under the running board. Refer to Figure 1-1.



**Figure 1-1. Chassis Serial Number Plate.**

1-3.3 **Position Reference.** All references to LEFT, RIGHT, FRONT and REAR indicate that position on the tractor when seated in the operators position, unless specifically instructed to reference from a different position on the tractor.

#### 1-4 **FACILITIES.**

1-4.1 The minimum requirement for facilities sufficient to service the tractors, decks and accessories covered in this manual is a normally equipped shop for the service of commercial power equipment.

#### 1-5 **SPECIAL SERVICE INFORMATION.**

1-5.1 **Dealer Preparation.** Section 2 contains a check list of recommended procedures to be performed during pre-delivery set up of the tractors covered in this manual.

1-5.2 **Preventive Maintenance.** Maintenance schedules and lubrication guides for each Model are contained in Section 3.

1-5.3 **Troubleshooting.** Section 4 contains troubleshooting and testing information for the various systems and components of the tractors covered in this manual.

1-5.4 **Corrective Maintenance.** Instructions necessary to identify and correct problems are contained in Section 5.

1-5.6 **Adjustments.** Information on adjusting various system components is contained in Section 6.

1-5.7 **Attachments.** Information on selected attachments is contained in Section 7.

1-5.8 **Appendices.** The appendices contain the following support information:

- a. Appendix A — List of related Engine Service Manuals.
- b. Appendix B — List of bulk service items needed to maintain and service the equipment covered in this manual.
- c. Appendix C — Testing procedures for selected electrical components.
- d. Appendix D — Complete electrical schematics for each tractor.
- e. Appendix E — A graphic listing of electrical connectors/insulators available from Cub Cadet.
- f. Appendix F — Information concerning mower deck belt problems and possible causes.
- g. Appendix G — Information regarding the operation of the mower deck.
- h. Appendix H — General torque data charts and conversion tables.

**Table 1-2. Model 2130 Specifications**

|                                                   | <b>2130</b>         |
|---------------------------------------------------|---------------------|
| <b>CAPACITIES</b>                                 |                     |
| Fuel Tank .....                                   | 3 gallons           |
| Crankcase (approximately) .....                   | 4 pints             |
| Transmission Case (approximately) .....           | 6 qts.              |
| <b>SIX SPEED DRIVE</b>                            |                     |
| Speed: Forward .....                              | 0 to 5 mph          |
| Reverse .....                                     | 0 to 3 mph          |
| <b>ENGINE</b>                                     |                     |
| Make and Model .....                              | Kohler Command      |
| Horsepower .....                                  | 12.5 HP             |
| Cylinders .....                                   | 1                   |
| Bore .....                                        | 3.43 in.            |
| Stroke .....                                      | 2.64 in.            |
| Displacement (cubic inches) .....                 | 24.29               |
| Engine Speed (governed)                           |                     |
| Low Speed .....                                   | 1400 RPM            |
| High Speed (no load) .....                        | 3600 RPM $\pm$ 75   |
| Ignition .....                                    | Battery             |
| Spark Plug Gap (Cub Cadet No. 759-3336) .....     | .040 in.            |
| <b>ELECTRICAL SYSTEM</b>                          |                     |
| System Voltage .....                              | 12 volt neg. ground |
| Battery .....                                     | 725-1635            |
| Alternator .....                                  | 15 amp regulated    |
| Fuse (auto type) .....                            | 20 amp              |
| Head Lamp Bulb .....                              | 759-3693            |
| <b>BRAKES</b> .....                               | Internal expanding  |
| <b>TIRE SIZES</b>                                 |                     |
| Front .....                                       | 15 x 6-6            |
| Rear .....                                        | 20 x 9-8            |
| <b>DIMENSIONS</b>                                 |                     |
| Tread:                                            |                     |
| Front with 15 x 6-6 tires .....                   | 30.00 in.           |
| Rear with 20 x 9-6 tires .....                    | 27.50 in.           |
| Wheelbase .....                                   | 47.00 in.           |
| Length, over all .....                            | 72.00 in.           |
| Width, over all (w/ mower deck - chute up) .....  | 45.00 in.           |
| Height, over all (to top of steering wheel) ..... | 42.00 in.           |
| Ground Clearance .....                            | 6.00 in.            |
| Turning Radius .....                              | 26.50 in.           |

**Specifications are subject to change without notice.**

**Table 1-3. Model 2135 Specifications**

|                                                   | <b>2135</b>         |
|---------------------------------------------------|---------------------|
| <b>CAPACITIES</b>                                 |                     |
| Fuel Tank .....                                   | 3 gallons           |
| Crankcase (approximately) .....                   | 4 pints             |
| Transmission Case (approximately) .....           | 6 qts.              |
| <b>HYDROSTATIC DRIVE</b>                          |                     |
| Speed: Forward .....                              | 0 to 5.5 mph        |
| Reverse .....                                     | 0 to 3 mph          |
| <b>ENGINE</b>                                     |                     |
| Make and Model .....                              | Kohler Command      |
| Horsepower .....                                  | 12.5 HP             |
| Cylinders .....                                   | 1                   |
| Bore .....                                        | 3.43 in.            |
| Stroke .....                                      | 2.64 in.            |
| Displacement (cubic inches) .....                 | 24.29               |
| Engine Speed (governed)                           |                     |
| Low Speed .....                                   | 1400 RPM            |
| High Speed (no load) .....                        | 3600 RPM $\pm$ 75   |
| Ignition .....                                    | Battery             |
| Spark Plug Gap (Cub Cadet No. 759-3336) .....     | .040 in.            |
| <b>ELECTRICAL SYSTEM</b>                          |                     |
| System Voltage .....                              | 12 volt neg. ground |
| Battery .....                                     | 725-1635            |
| Alternator .....                                  | 15 amp regulated    |
| Fuse (auto type) .....                            | 20 amp              |
| Head Lamp Bulb .....                              | 759-3693            |
| <b>BRAKES</b> .....                               | Internal expanding  |
| <b>TIRE SIZES</b>                                 |                     |
| Front .....                                       | 15 x 6-6            |
| Rear .....                                        | 20 x 9-8            |
| <b>DIMENSIONS</b>                                 |                     |
| Tread:                                            |                     |
| Front with 15 x 6-6 tires .....                   | 30.00 in.           |
| Rear with 20 x 9-6 tires .....                    | 27.50 in.           |
| Wheelbase .....                                   | 47.00 in.           |
| Length, over all .....                            | 72.00 in.           |
| Width, over all (w/ mower deck - chute up) .....  | 45.00 in.           |
| Height, over all (to top of steering wheel) ..... | 42.00 in.           |
| Ground Clearance .....                            | 6.00 in.            |
| Turning Radius .....                              | 26.50 in.           |

**Specifications are subject to change without notice.**

**Table 1-4. Model 2140 Specifications**

|                                                   | <b>2140</b>         |
|---------------------------------------------------|---------------------|
| <b>CAPACITIES</b>                                 |                     |
| Fuel Tank .....                                   | 3 gallons           |
| Crankcase (approximately) .....                   | 4 pints             |
| Transmission Case (approximately) .....           | 6 qts.              |
| <b>SIX SPEED DRIVE</b>                            |                     |
| Speed: Forward .....                              | 0 to 5 mph          |
| Reverse .....                                     | 0 to 3 mph          |
| <b>ENGINE</b>                                     |                     |
| Make and Model .....                              | Onan Elite          |
| Horsepower .....                                  | 14 HP               |
| Cylinders .....                                   | 1                   |
| Bore .....                                        | 3.31 in.            |
| Stroke .....                                      | 2.76 in.            |
| Displacement (cubic inches) .....                 | 23.7                |
| Engine Speed (governed)                           |                     |
| Low Speed .....                                   | 1400 RPM            |
| High Speed (no load) .....                        | 3600 RPM $\pm$ 75   |
| Ignition .....                                    | Battery             |
| Spark Plug Gap (Cub Cadet No. 759-3340) .....     | .035 in.            |
| <b>ELECTRICAL SYSTEM</b>                          |                     |
| System Voltage .....                              | 12 volt neg. ground |
| Battery .....                                     | 725-1635            |
| Alternator .....                                  | 15 amp regulated    |
| Fuse (auto type) .....                            | 20 amp              |
| Head Lamp Bulb .....                              | 759-3693            |
| <b>BRAKES</b> .....                               | Internal expanding  |
| <b>TIRE SIZES</b>                                 |                     |
| Front .....                                       | 15 x 6-6            |
| Rear .....                                        | 20 x 9-8            |
| <b>DIMENSIONS</b>                                 |                     |
| Tread:                                            |                     |
| Front with 15 x 6-6 tires .....                   | 30.00 in.           |
| Rear with 20 x 9-6 tires .....                    | 27.50 in.           |
| Wheelbase .....                                   | 47.00 in.           |
| Length, over all .....                            | 72.00 in.           |
| Width, over all (w/ mower deck - chute up) .....  | 51.00 in.           |
| Height, over all (to top of steering wheel) ..... | 42.00 in.           |
| Ground Clearance .....                            | 6.00 in.            |
| Turning Radius .....                              | 26.50 in.           |

**Specifications are subject to change without notice.**

**Table 1-5. Model 2145 Specifications**

|                                                   | <b>2145</b>         |
|---------------------------------------------------|---------------------|
| <b>CAPACITIES</b>                                 |                     |
| Fuel Tank .....                                   | 3 gallons           |
| Crankcase (approximately) .....                   | 4 pints             |
| Transmission Case (approximately) .....           | 6 qts.              |
| <b>HYDROSTATIC DRIVE</b>                          |                     |
| Speed: Forward .....                              | 0 to 5.5 mph        |
| Reverse .....                                     | 0 to 3 mph          |
| <b>ENGINE</b>                                     |                     |
| Make and Model .....                              | Onan Elite          |
| Horsepower .....                                  | 14 HP               |
| Cylinders .....                                   | 1                   |
| Bore .....                                        | 3.31 in.            |
| Stroke .....                                      | 2.76 in.            |
| Displacement (cubic inches) .....                 | 23.7                |
| Engine Speed (governed)                           |                     |
| Low Speed .....                                   | 1400 RPM            |
| High Speed (no load) .....                        | 3600 RPM $\pm$ 75   |
| Ignition .....                                    | Battery             |
| Spark Plug Gap (Cub Cadet No. 759-3340) .....     | .035 in.            |
| <b>ELECTRICAL SYSTEM</b>                          |                     |
| System Voltage .....                              | 12 volt neg. ground |
| Battery .....                                     | 725-1635            |
| Alternator .....                                  | 15 amp regulated    |
| Fuse (auto type) .....                            | 20 amp              |
| Head Lamp Bulb .....                              | 759-3693            |
| <b>BRAKES</b> .....                               | Internal expanding  |
| <b>TIRE SIZES</b>                                 |                     |
| Front .....                                       | 15 x 6-6            |
| Rear .....                                        | 20 x 9-8            |
| <b>DIMENSIONS</b>                                 |                     |
| Tread:                                            |                     |
| Front with 15 x 6-6 tires .....                   | 30.00 in.           |
| Rear with 20 x 9-6 tires .....                    | 27.50 in.           |
| Wheelbase .....                                   | 47.00 in.           |
| Length, over all .....                            | 72.00 in.           |
| Width, over all (w/ mower deck - chute up) .....  | 51.00 in.           |
| Height, over all (to top of steering wheel) ..... | 42.00 in.           |
| Ground Clearance .....                            | 6.00 in.            |
| Turning Radius .....                              | 26.50 in.           |

**Specifications are subject to change without notice.**

**Table 1-6. Model 2160 Specifications**

|                                                   | <b>2160</b>         |
|---------------------------------------------------|---------------------|
| <b>CAPACITIES</b>                                 |                     |
| Fuel Tank .....                                   | 3 gallons           |
| Crankcase (approximately) .....                   | 3 pints 8 oz.       |
| Transmission Case (approximately) .....           | 6 qts.              |
| <b>SIX SPEED DRIVE</b>                            |                     |
| Speed: Forward .....                              | 0 to 5.5 mph        |
| Reverse .....                                     | 0 to 3 mph          |
| <b>ENGINE</b>                                     |                     |
| Make and Model .....                              | B & S Vanguard      |
| Horsepower .....                                  | 16 HP               |
| Cylinders .....                                   | 2                   |
| Bore .....                                        | 2.68 in.            |
| Stroke .....                                      | 2.60 in.            |
| Displacement (cubic inches) .....                 | 29.3                |
| Engine Speed (governed)                           |                     |
| Low Speed .....                                   | 1200 RPM            |
| High Speed                                        |                     |
| (no load) .....                                   | 3600 RPM            |
| (full load) .....                                 | 3350 RPM            |
| Valve Clearance (engine cold)                     |                     |
| Intake .....                                      | .004-.006 in.       |
| Exhaust .....                                     | .004-.006 in.       |
| Ignition .....                                    | Battery             |
| Spark Plug Gap (Cub Cadet No. 759-3336) .....     | .030 in.            |
| <b>ELECTRICAL SYSTEM</b>                          |                     |
| System Voltage .....                              | 12 volt neg. ground |
| Battery .....                                     | 725-1635            |
| Alternator .....                                  | 15 amp regulated    |
| Fuse (auto type) .....                            | 20 amp              |
| Head Lamp Bulb .....                              | 759-3693            |
| <b>BRAKES</b> .....                               | Internal expanding  |
| <b>TIRE SIZES</b>                                 |                     |
| Front .....                                       | 16 x 6.5-8          |
| Rear .....                                        | 23 x 9.5-12         |
| <b>DIMENSIONS</b>                                 |                     |
| Tread:                                            |                     |
| Front with 16 x 6.5-8 tires .....                 | 31.5 in.            |
| Rear with 23 x 9.5-12 tires .....                 | 30.25 in.           |
| Wheelbase .....                                   | 47.00 in.           |
| Length, over all .....                            | 72.00 in.           |
| Width, over all .....                             | 39.00 in.           |
| Height, over all (to top of steering wheel) ..... | 43.00 in.           |
| Ground Clearance .....                            | 6.00 in.            |
| Turning Radius .....                              | 28.00 in.           |

**Specifications are subject to change without notice.**

**Table 1-7. Model 2165 Specifications**

|                                                   | <b>2165</b>         |
|---------------------------------------------------|---------------------|
| <b>CAPACITIES</b>                                 |                     |
| Fuel Tank .....                                   | 3 gallons           |
| Crankcase (approximately) .....                   | 3 pints 8 oz.       |
| Transmission Case (approximately) .....           | 6 qts.              |
| <b>HYDROSTATIC DRIVE</b>                          |                     |
| Speed: Forward .....                              | 0 to 6 mph          |
| Reverse .....                                     | 0 to 3 mph          |
| <b>ENGINE</b>                                     |                     |
| Make and Model .....                              | B & S Vanguard      |
| Horsepower .....                                  | 16 HP               |
| Cylinders .....                                   | 2                   |
| Bore .....                                        | 2.68 in.            |
| Stroke .....                                      | 2.60 in.            |
| Displacement (cubic inches) .....                 | 29.3                |
| Engine Speed (governed)                           |                     |
| Low Speed .....                                   | 1200 RPM            |
| High Speed                                        |                     |
| (no load) .....                                   | 3600 RPM            |
| (full load) .....                                 | 3350 RPM            |
| Valve Clearance (engine cold)                     |                     |
| Intake .....                                      | .004-.006 in.       |
| Exhaust .....                                     | .004-.006 in.       |
| Ignition .....                                    | Battery             |
| Spark Plug Gap (Cub Cadet No. 759-3336) .....     | .030 in.            |
| <b>ELECTRICAL SYSTEM</b>                          |                     |
| System Voltage .....                              | 12 volt neg. ground |
| Battery .....                                     | 725-1635            |
| Alternator .....                                  | 15 amp regulated    |
| Fuse (auto type) .....                            | 20 amp              |
| Head Lamp Bulb .....                              | 759-3693            |
| <b>BRAKES</b> .....                               | Internal expanding  |
| <b>TIRE SIZES</b>                                 |                     |
| Front .....                                       | 16 x 6.5-8          |
| Rear .....                                        | 23 x 9.5-12         |
| <b>DIMENSIONS</b>                                 |                     |
| Tread:                                            |                     |
| Front with 16 x 6.5-8 tires .....                 | 31.5 in.            |
| Rear with 23 x 9.5-12 tires .....                 | 30.25 in.           |
| Wheelbase .....                                   | 47.00 in.           |
| Length, over all .....                            | 72.00 in.           |
| Width, over all .....                             | 39.00 in.           |
| Height, over all (to top of steering wheel) ..... | 43.00 in.           |
| Ground Clearance .....                            | 6.00 in.            |
| Turning Radius .....                              | 28.00 in.           |

**Specifications are subject to change without notice.**

**Table 1-8. Model 2185 Specifications**

|                                                   | <b>2185</b>         |
|---------------------------------------------------|---------------------|
| <b>CAPACITIES</b>                                 |                     |
| Fuel Tank .....                                   | 3 gallons           |
| Crankcase (approximately) .....                   | 4 pints             |
| Transmission Case (approximately) .....           | 6 qts.              |
| <b>HYDROSTATIC DRIVE</b>                          |                     |
| Speed: Forward .....                              | 0 to 6 mph          |
| Reverse .....                                     | 0 to 3 mph          |
| <b>ENGINE</b>                                     |                     |
| Make and Model .....                              | Kohler Command      |
| Horsepower .....                                  | 18 HP               |
| Cylinders .....                                   | 2                   |
| Bore .....                                        | 3.03 in.            |
| Stroke .....                                      | 2.64 in.            |
| Displacement (cubic inches) .....                 | 38.1                |
| Engine Speed (governed)                           |                     |
| Low Speed .....                                   | 1200 RPM            |
| High Speed                                        |                     |
| (no load) .....                                   | 3600 RPM            |
| (full load) .....                                 | 3350 RPM            |
| Ignition .....                                    | Battery             |
| Spark Plug Gap (Cub Cadet No. 759-3336) .....     | .040 in.            |
| <b>ELECTRICAL SYSTEM</b>                          |                     |
| System Voltage .....                              | 12 volt neg. ground |
| Battery .....                                     | 725-1635            |
| Alternator .....                                  | 15 amp regulated    |
| Fuse (auto type) .....                            | 20 amp              |
| Head Lamp Bulb .....                              | 759-3693            |
| <b>BRAKES</b> .....                               | Internal expanding  |
| <b>TIRE SIZES</b>                                 |                     |
| Front .....                                       | 16 x 6.5-8          |
| Rear .....                                        | 23 x 9.5-12         |
| <b>DIMENSIONS</b>                                 |                     |
| Tread:                                            |                     |
| Front with 16 x 6.5-8 tires .....                 | 31.5 in.            |
| Rear with 23 x 9.5-12 tires .....                 | 30.25 in.           |
| Wheelbase .....                                   | 47.00 in.           |
| Length, over all .....                            | 72.00 in.           |
| Width, over all .....                             | 39.00 in.           |
| Height, over all (to top of steering wheel) ..... | 43.00 in.           |
| Ground Clearance .....                            | 6.00 in.            |
| Turning Radius .....                              | 28.00 in.           |

**Specifications are subject to change without notice.**

