

**355 GAS/LP**

**Hydraulics**

**Pumps:**

|                   |           | Normal<br>Throttle | Full<br>Throttle |     |                      |
|-------------------|-----------|--------------------|------------------|-----|----------------------|
| Propelling        | Char-Lynn | 10.5               | 12.5             | GPM | 2750 PSI Relief      |
| Accessory         | Char-Lynn | 5.1                | 6.2              | GPM | 2400-2500 PSI Relief |
| Accessory (Steer) | Char-Lynn | 3.9                | 4.7              | GPM | 2400-2500 PSI Relief |

**Motors:**

|            |           |      |      |     |
|------------|-----------|------|------|-----|
| Main Brush | Char-Lynn | 410  | 500  | RPM |
| Side Brush | Char-Lynn | 90   | 110  | RPM |
| Vacuum Fan | Barnes    | 5800 | 6800 | RPM |
| Propelling | Char-Lynn | 130  | 155  | RPM |

**Electrical**

Battery: Group Size 4-24 Cold Cranking Amps - 475

**Motors:**

|         |  |
|---------|--|
| Shaker  | Normal Amp Draw - 5.8  |
| Starter | Normal Amp Draw Hot - 90 @ 11.5<br>Normal Amp Draw Cold - 105 @ 10 Volts |

Std. Alternator: Output - 48 Amps at 4800-5200 RPM  
Volts - 14.1

Vacuum System: CFM- 390/460

**Engine**

Type - Ford Model - VSG 411(D.I.S.) HP - 28 @ 2400 RPM  
MACHINES ABOVE SERIAL NUMBER 4109 HAVE THE VSG413(DIS) ENGINE IN THEM

Spark Plug Gap: LP - 0.040" (1.0 mm)  
Gas - 0.040" (1.0 mm)

Valve Clearance(Cold): Gas Intake - 0.009"(0.22mm) Exhaust - 0.013"(0.32mm)  
LP Intake - 0.009"(0.22mm) Exhaust - 0.013"(0.32mm)

Timing: Factory Set - Non Adjustable

Idle Speed: 950  $\pm$  50 RPM

Governed Speed: 2000 and 2400 RPM

Fuel Consumption: Gas - 9.6 Gal. Gas Per Hour - 1.0 Gal.  
LP - 33 # LP Per Hour - 4.8 #

Oil Pressure: 20 PSI min at operating speeds  
10 PSI min at Idle

**Chassis**

Rear Tire Pressure: 90 PSI Hub Nut Torque: 200-250 ft. lb.  
Lug Nut Torque: 85-95 ft. lb.

Front Tire: Solid

Vac Fan: Impeller Nut - 10 ft. lb.  
Dump Door Opening (Time) 15-20 Sec.

# SPECIFICATIONS

## 355 DIESEL

### Hydraulics

Pumps:

|                   |           | Normal<br>Throttle | Full<br>Throttle |     |                      |
|-------------------|-----------|--------------------|------------------|-----|----------------------|
| Propelling        | Char–Lynn | 10.5               | 12.5             | GPM | 2750 PSI Relief      |
| Accessory         | Char–Lynn | 5.1                | 6.2              | GPM | 2400–2500 PSI Relief |
| Accessory (Steer) | Char–Lynn | 3.9                | 4.7              | GPM | 2400–2500 PSI Relief |

Normal Full

Motors:

|            |           |      |      |     |
|------------|-----------|------|------|-----|
| Main Brush | Char–Lynn | 410  | 500  | RPM |
| Side Brush | Char–Lynn | 90   | 110  | RPM |
| Vacuum Fan | Barnes    | 5800 | 6800 | RPM |
| Propelling | Char–Lynn | 130  | 155  | RPM |

### Electrical

Battery: Group Size 5–24 Cold Cranking Amps – 600

Motors:

|         |  |
|---------|--|
| Shaker  | Normal Amp Draw – 5.8  |
| Starter | Normal Amp Draw Hot – 90 @ 11.5<br>Normal Amp Draw Cold – 105 @ 10 Volts |

Std. Alternator: Output – 48 Amps at 4800–5200 RPM  
Volts – 14.1

Vacuum System: CFM– 390/460

### Engine

|                         |   |                            |
|-------------------------|---|----------------------------|
| Type – Kubota           | Model – V1505                                       | HP – 34 @ 2400 RPM         |
| Valve Clearance (Cold): | Intake – 0.0057" (0.14mm)                           | Exhaust – 0.0072" (0.18mm) |
| Timing: Injection Pump  | 15 – 17 degrees                                     |                            |
| Idle Speed:             | 850 $\pm$ 50 RPM                                    |                            |
| Governed Speed:         | 2000 and 2400 RPM                                   |                            |
| Fuel Consumption:       | Diesel – 9.6 Gal. Diesel Per Hour – .77 Gal.        |                            |
| Oil Pressure:           | 29 PSI min at operating speeds<br>7 PSI min at Idle |                            |

### Chassis

|                          |        |   |
|--------------------------|--------|---|
| Rear Tire Pressure:      | 90 PSI | Hub Nut Torque : 200–250 ft.lb<br>Lug Nut Torque : 85–95 ft.lb. |
| Front Tire:              | Solid  |   |
| Vac Fan:                 |        | Impeller Nut – 10 ft. lb.                                       |
| Dump Door Opening (Time) |        | 15–20 Sec.  |

**385 GAS/LP**


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**Hydraulics**
**Pumps:**

|                  |           | Normal<br>Throttle | Full<br>Throttle |     |                      |
|------------------|-----------|--------------------|------------------|-----|----------------------|
| Propelling       | Char-Lynn | 11.2               | 13.5             | GPM | 4000 PSI Relief      |
| Accessory(Tool)  | Char-Lynn | 5.1                | 6.2              | GPM | 2400-2500 PSI Relief |
| Accessory(Fan)   | Char-Lynn | 5.1                | 6.2              | GPM | 2400-2500 PSI Relief |
| Accessory(Steer) | Char-Lynn | 3.9                | 4.7              | GPM | 2400-2500 PSI Relief |

**Motors:**

|            |           |      |      |     |
|------------|-----------|------|------|-----|
| Main Brush | Char-Lynn | 430  | 540  | RPM |
| Side Brush | Char-Lynn | 90   | 110  | RPM |
| Vacuum Fan | Barnes    | 6000 | 7300 | RPM |
| Propelling | Char-Lynn | 150  | 180  | RPM |

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**Electrical**

Battery:                      Group Size 4-24                      Cold Cranking Amps - 475

**Motors:**

|         |  |
|---------|--|
| Shaker  | Normal Amp Draw - 5.8  |
| Starter | Normal Amp Draw Hot - 90 @ 11.5<br>Normal Amp Draw Cold - 105 @ 10 Volts |

Std. Alternator:                      Output - 48 Amps at 4800-5200 RPM  
Volts - 14.1

Vacuum System:                      CFM- 410/480

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**Engine**

|                        |  |  |
|------------------------|--|--|
| Type - Ford            | Model - VSG-413(D.I.S.)                              | HP - 32 @ 2400 RPM                             |
| Spark Plug Gap:        | LP - 0.040" (1.0 mm)<br>Gas - 0.040" (1.0 mm)        |  |
| Valve Clearance(Cold): | Intake-0.009"(0.22mm)                                | Exhaust - 0.013"(0.32mm)                       |
| Valve Clearance(Cold): | Intake-0.009"(0.22mm)                                | Exhaust - 0.013"(0.32mm)                       |
| Timing:                | Factory Set - Non Adjustable                         |  |
| Idle Speed:            | 850 $\pm$ 50 RPM                                     |  |
| Governed Speed:        | 2000 and 2400 RPM                                    |  |
| Fuel Consumption:      | Gas - 9.6 Gal.<br>LP - 33 #                          | Gas Per Hour - 1.0 Gal.<br>LP Per Hour - 4.8 # |
| Oil Pressure:          | 20 PSI min at operating speeds<br>10 PSI min at Idle |  |

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**Chassis**

|                          |                           |  |
|--------------------------|---------------------------|--|
| Rear Tire Pressure:      | 90 PSI                    | Hub Nut Torque : 200-250 ft.lb.<br>Lug Nut Torque : 85-95 ft.lb. |
| Front Tire:              | Solid                     |  |
| Vac Fan:                 | Impeller Nut - 10 ft. lb. |  |
| Dump Door Opening (Time) | 15-20 Sec.                |  |

# SPECIFICATIONS

## 385 DIESEL

### Hydraulics

#### Pumps:

|                  |           | Normal<br>Throttle | Full<br>Throttle |     |                      |
|------------------|-----------|--------------------|------------------|-----|----------------------|
| Propelling       | Char–Lynn | 11.2               | 13.5             | GPM | 4000 PSI Relief      |
| Accessory(Tool)  | Char–Lynn | 5.1                | 6.2              | GPM | 2400–2500 PSI Relief |
| Accessory(Fan)   | Char–Lynn | 5.1                | 6.2              | GPM | 2400–2500 PSI Relief |
| Accessory(Steer) | Char–Lynn | 3.9                | 4.7              | GPM | 2400–2500 PSI Relief |

#### Motors:

|            |           |      |      |     |
|------------|-----------|------|------|-----|
| Main Brush | Char–Lynn | 430  | 540  | RPM |
| Side Brush | Char–Lynn | 90   | 110  | RPM |
| Vacuum Fan | Barnes    | 6000 | 7300 | RPM |
| Propelling | Char–Lynn | 150  | 180  | RPM |

### Electrical

Battery: Group Size 5–24 Cold Cranking Amps – 600

#### Motors:

|         |  |
|---------|--|
| Shaker  | Normal Amp Draw – 5.8  |
| Starter | Normal Amp Draw Hot – 90 @ 11.5<br>Normal Amp Draw Cold – 105 @ 10 Volts |

Std. Alternator: Output – 48 Amps at 4800–5200 RPM  
Volts – 14.1

Vacuum System: CFM– 410/480

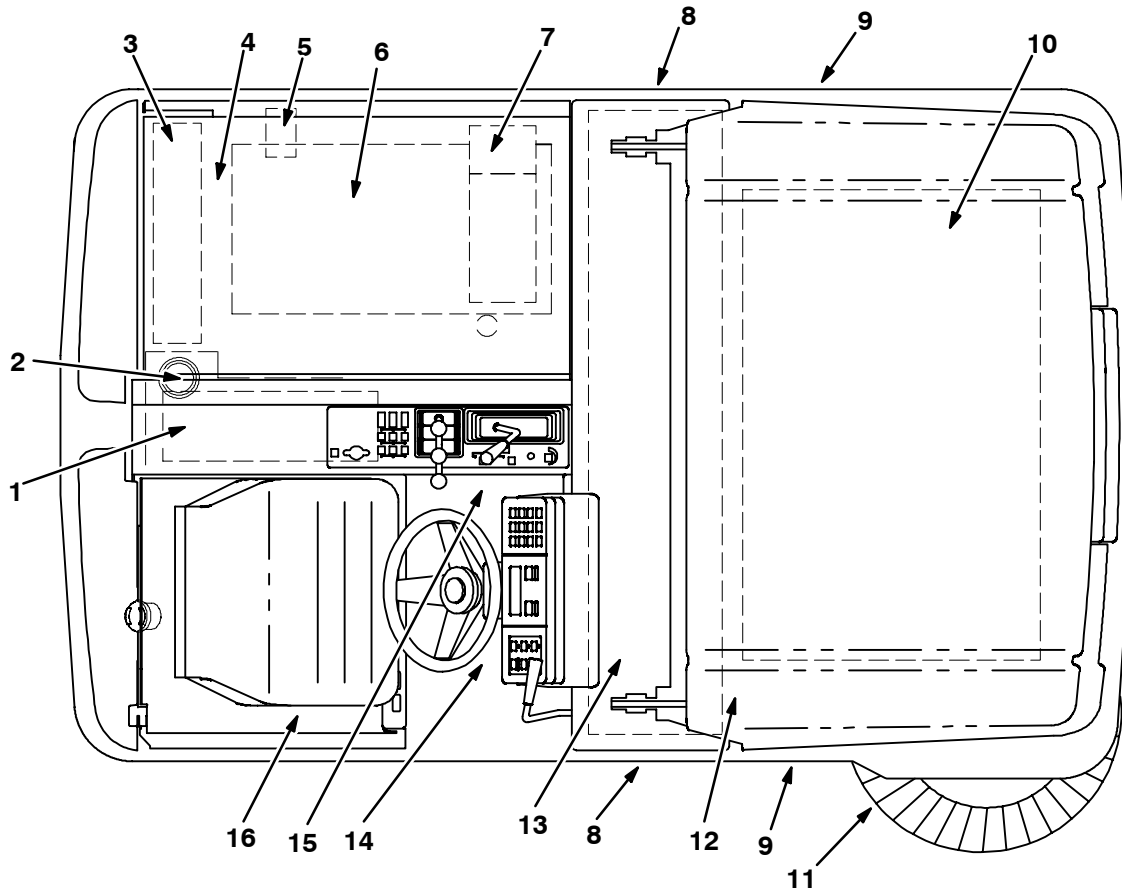
### Engine

|                         |   |                            |
|-------------------------|---|----------------------------|
| Type – Kubota           | Model – V1505                                       | HP – 34 @ 2400 RPM         |
| Valve Clearance (Cold): | Intake – 0.0057" (0.14mm)                           | Exhaust – 0.0072" (0.18mm) |
| Timing: Injection Pump  | 15 – 17 degrees                                     |                            |
| Idle Speed:             | 850 $\pm$ 50 RPM                                    |                            |
| Governed Speed:         | 2000 and 2400 RPM                                   |                            |
| Fuel Consumption:       | Diesel – 9.6 Gal.                                   | Diesel Per Hour – .77 Gal. |
| Oil Pressure:           | 29 PSI min at operating speeds<br>7 PSI min at Idle |                            |

### Chassis

|                          |        |  |
|--------------------------|--------|--|
| Rear Tire Pressure:      | 90 PSI | Hub Nut Torque : 200–250 ft. lb.<br>Lug Nut Torque : 85–95ft.lb. |
| Front Tire:              | Solid  |  |
| Vac Fan:                 |        | Impeller Nut – 10 ft. lb.  |
| Dump Door Opening (Time) |        | 15–20 Sec.   |

# **TECHNICAL SERVICE BULLETINS SECTION 12      SPECIFICATIONS** **MAINTENANCE – 355 & 385**



07747

## **MAINTENANCE CHART – GAS & LP**

| Interval | Key | Description              | Procedure                              | Lubricant/<br>Fluid | No. of<br>Service<br>Points |
|----------|-----|--------------------------|--|---------------------|-----------------------------|
| Daily    | 7   | Engine air filter        | Check indicator                        | –                   | 1                           |
|          |     |                          | Empty dust cap                         | –                   | 1                           |
|          | 6   | Engine crankcase         | Check oil level                        | EO                  | 1                           |
|          | 8   | Brush compartment skirts | Check for damage, wear and adjustment  | –                   | 5                           |
|          | 12  | Hopper lip skirts        | Check for damage, wear and adjustment  | –                   | 3                           |
|          |     | Hopper side skirt        | Check for damage and wear              | –                   | 1                           |
|          | 13  | Main brush               | Check for damage, wear, and adjustment | –                   | 1                           |
|          |     |                          | Check brush pattern                    | –                   | 1                           |
|          | 11  | Side brush               | Check for damage, wear, and adjustment | –                   | 1                           |
|          |     |                          | Check brush pattern                    | –                   | 1                           |

## SPECIFICATIONS

| Interval  | Key | Description                 | Procedure   | Lubricant/<br>Fluid | No. of<br>Service<br>Points |
|-----------|-----|-----------------------------|---|---------------------|-----------------------------|
| 50 Hours  | 13  | Main brush                  | Rotate end-for-end                                      | —                   | 1                           |
|           | 6   | Engine crankcase            | Change oil and filter element                           | EO                  | 1                           |
| 100 Hours | 10  | Hopper dust filter          | Check for damage, clean or replace                      | —                   | 1                           |
|           | 3   | Radiator                    | Clean core exterior                                     | —                   | 1                           |
|           |     |                             | Check coolant level                                     | WG                  | 1                           |
|           | 2   | Hydraulic fluid reservoir   | Check fluid level                                       | HYDO                | 1                           |
|           | 1   | Rear tire                   | Check pressure  | —                   | 1                           |
|           | 8   | Main brush and hopper seals | Check for damage or wear                                | —                   | 8                           |
| 200 Hours | 4   | Engine fan belt             | * Check tension   | —                   | 1                           |
|           | 3   | Radiator hoses and clamps   | Check for tightness and wear                            | —                   | 2                           |
|           | 15  | Parking brake               | Check adjustment  | —                   | 1                           |
|           | 14  | Brake pedal                 | Check and adjust travel                                 | —                   | 1                           |
|           | 1   | Rear wheel support bearings | Lubricate   | SPL                 | 1                           |
|           | 11  | Side brush guard            | Rotate 90°  | —                   | 1                           |
| 400 Hours | 6   | Engine                      | * Check and adjust valve clearance                      | —                   | 8                           |
|           |     |                             | Check and adjust idle speed                             | —                   | 1                           |
|           |     |                             | Check and adjust carburetor idle mixture                | —                   | 1                           |
|           |     |                             | Clean or replace and adjust spark plugs                 | —                   | 4                           |
|           |     |                             | Replace PCV valve. Clean PCV hoses, tubes, and fittings | —                   | —                           |
|           |     |                             | Fuel filters  | —                   | 2                           |
|           | 9   | Front wheel bearings        | Check, lubricate, and adjust                            | SPL                 | 2                           |
| 800 Hours | 3   | Cooling system              | Flush   | WG                  | 1                           |
|           | 2   | Hydraulic fluid reservoir   | Replace filler cap                                      | —                   | 1                           |
|           |     |                             | Replace suction strainer                                | —                   | 1                           |
|           |     |                             | Change hydraulic fluid                                  | HYDO                | 1                           |
|           |     |                             | Change filter element                                   | —                   | 1                           |
|           | 5   | Hydraulic fluid filter      | Check for wear and damage                               | —                   | 31                          |
|           | 2   | Hydraulic hoses             |   |                     |                             |
|           | 1   | Propelling motor            | * Torque shaft nut                                      | —                   | 1                           |
|           | 1   | Rear wheel                  | * Torque wheel nuts                                     | —                   | 1                           |
|           | 16  | Battery                     | * Clean and tighten battery cable connections           | —                   | 1                           |

### LUBRICANT/FLUID

EO . . . . Engine oil, 10W30 SAE—SE/SF rated

HYDO . . . Tennant Company or approved hydraulic fluid

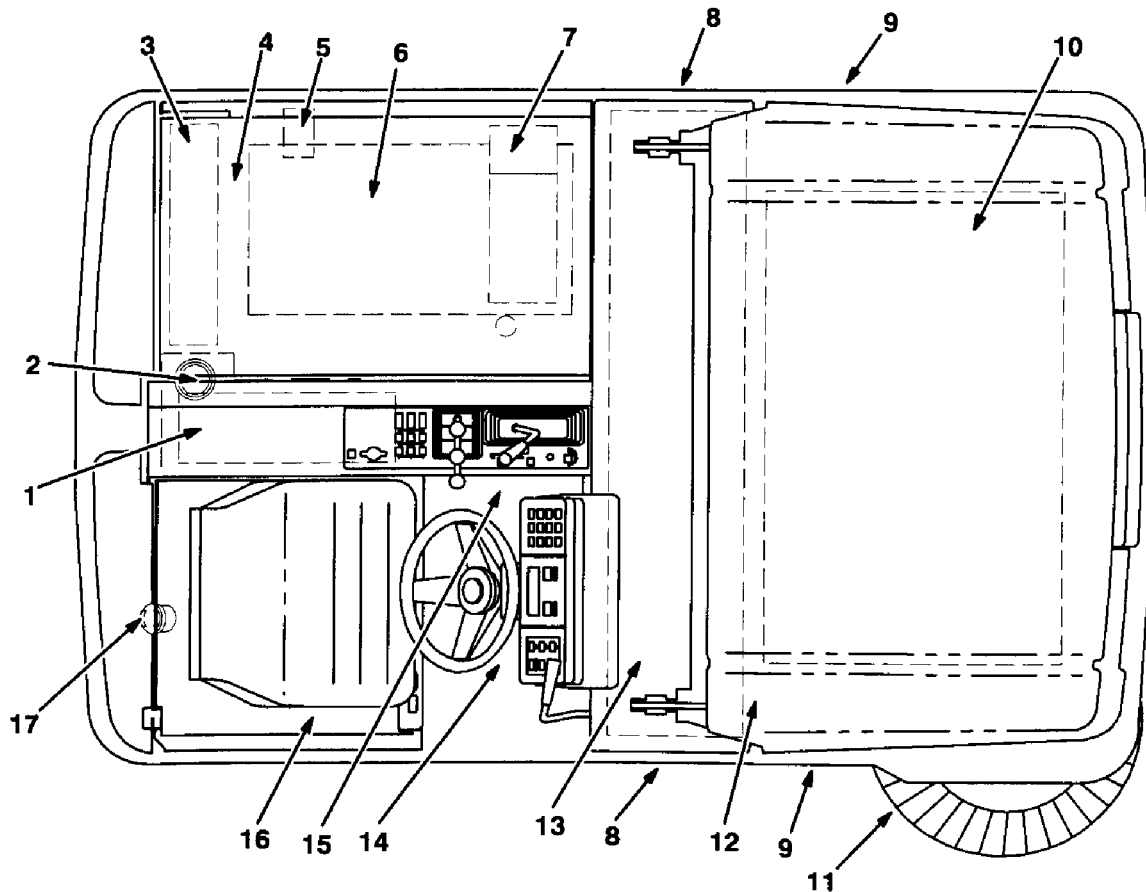
WG . . . . Water and permanent-type ethylene glycol anti-freeze, -34° C (-30° F)

SPL . . . . Special lubricant, Lubriplate EMB grease (TENNANT part no. 01433-1)

*NOTE: Also check procedures indicated (\*) after the first 50-hours of operation.*

**980355-001**

# **TECHNICAL SERVICE BULLETINS SECTION 12      SPECIFICATIONS** **MAINTENANCE – 355&385**



07747

## **MAINTENANCE CHART - DIESEL**

| Interval | Key | Description              | Procedure                              | Lubricant/<br>Fluid | No. of<br>Service<br>Points |
|----------|-----|--------------------------|--|---------------------|-----------------------------|
| Daily    | 7   | Engine air filter        | Check indicator                        | —                   | 1                           |
|          |     |                          | Empty dust cap                         | —                   | 1                           |
|          | 6   | Engine crankcase         | Check oil level                        | EO                  | 1                           |
|          | 8   | Brush compartment skirts | Check for damage, wear and adjustment  | —                   | 5                           |
|          | 12  | Hopper lip skirts        | Check for damage, wear and adjustment  | —                   | 3                           |
|          | 13  | Main brush               | Check for damage, wear, and adjustment | —                   | 1                           |
|          | 11  | Side brush               | * Check brush pattern                  | —                   | 1                           |
|          |     |                          | Check for damage, wear, and adjustment | —                   | 1                           |
|          |     |                          | * Check brush pattern                  | —                   | 1                           |
|          |     |                          |  |                     |                             |

## SPECIFICATIONS

| Interval  | Key | Description                 | Procedure                                     | Lubricant/<br>Fluid | No. of<br>Service<br>Points |
|-----------|-----|-----------------------------|---|---------------------|-----------------------------|
| 50 Hours  | 13  | Main brush                  | Rotate end-for-end                            | —                   | 1                           |
|           | 6   | Fuel pipes and clamps       | Check for tightness and wear                  | —                   | 1                           |
| 100 Hours | 6   | Engine crankcase            | Change oil and filter                         | EO                  | 1                           |
|           | 4   | Engine fan belt             | Check tension                                 | —                   | 1                           |
|           | 10  | Hopper dust filter          | Inspect, clean or replace                     | —                   | 1                           |
|           | 3   | Radiator                    | Clean core exterior                           | —                   | 1                           |
|           |     |                             | Check coolant level                           | WG                  | 1                           |
|           | 2   | Hydraulic fluid reservoir   | Check fluid level                             | HYDO                | 1                           |
|           | 1   | Rear tire                   | Check pressure                                | —                   | 1                           |
|           | 8   | Main brush and hopper seals | Check for damage or wear                      | —                   | 8                           |
| 200 Hours | 3   | Radiator hoses and clamps   | Check for tightness and wear                  | —                   | 2                           |
|           | 15  | Parking brake               | Check adjustment                              | —                   | 1                           |
|           | 14  | Brake pedal                 | Check and adjust travel                       | —                   | 1                           |
|           | 1   | Rear wheel support bearings | Lubricate                                     | SPL                 | 1                           |
|           | 11  | Side brush guard            | Rotate 90°                                    | —                   | 1                           |
| 400 Hours | 9   | Front wheel bearings        | Check, lubricate, and adjust                  | SPL                 | 2                           |
|           | 6   | Fuel filter                 | Replace cartridge                             | —                   | 1                           |
|           | 17  | Fuel tank                   | Remove sediment                               | —                   | 1                           |
|           | 3   | Cooling system              | Flush   | WG                  | 1                           |
| 800 Hours | 2   | Hydraulic reservoir         | Replace filler cap                            | —                   | 1                           |
|           |     |                             | Replace suction strainer                      | —                   | 1                           |
|           |     |                             | Change hydraulic fluid                        | HYDO                | 1                           |
|           | 5   | Hydraulic fluid filter      | Change filter element                         | —                   | 1                           |
|           | 2   | Hydraulic hoses             | Check for wear and damage                     | —                   | 31                          |
|           | 1   | Propelling motor            | * Torque shaft nut                            | —                   | 1                           |
|           | 1   | Rear wheel                  | * Torque wheel nuts                           | —                   | 1                           |
|           | 16  | Battery                     | * Clean and tighten battery cable connections | —                   | 1                           |

### LUBRICANT/FLUID

EO . . . Engine oil 10–30 SAE–CC/CD rated

HYDO . Tennant Company or approved hydraulic fluid

WG . . . Water and permanent-type ethylene glycol anti-freeze, –30° C (0° F)

SPL . . . Special lubricant, Lubriplate EMB grease (TENNANT part no. 01433–1)

*NOTE: Also check (\*) after the first 50-hours of operation.*