SHOP MANUAL

YANMAR

Models YM135, YM135D, YM155, YM155D, YM195, YM195D, YM240, YM240D, YM330 and YM330D

Tractor serial number is stamped on left side of clutch housing on transmission housing. Engine model and serial number is located on a data plate attached to right side of engine for YM135, YM135D, YM155 and YM155D models. Engine model and serial number is located on a data plate attached to left side of engine for YM195, YM195D, YM240, YM240D, YM330 and YM330D models.

INDEX (By Starting Paragraph)

YM135, YM155, YM195, YM240, YM135D YM155D YM195D YM240D	YM330, YM330D
BRAKES 210 210 210 210	210
CLUTCH 130 130 130 130	130
COOLING SYSTEM 115 115 115 115	115
DIESEL FUEL SYSTEM	
Filters & Bleeding	85
Nozzles	90
Thermostart	97
Timing	88
DIFFERENTIAL	
Front	31
Rear	195
ELECTRICAL SYSTEM	
Alternator & Regulator 120 120 121 121	121
Starter 125 125 125 125	125
ENGINE	
Camshaft	61
Connecting Rods	71
Crankshaft	73
Cylinder Head	45
Flywheel 78 78 78 78	78
Oil Pump 80 80 80 80	80
Pistons & Rings	66
Remove & Reinstall 42 42 42 42	42
Tannet Adjustment 47 47 47 47	47
Timing Gears DDE 56 56 57 57	57
Valves & Seats 48	48
Front 20	30
Rear 200 200 202 202	204
FRONT AXLE	
Four Wheel Drive 4 4 4 4	4
Two Wheel Drive 1 1 1 1	1
FRONT WHEEL DRIVE 15 15 20 20	30
COVERNOR 101 101 103 103	103
HYDRAULIC SYSTEM 240 240 240 240	240
POWER TAKE OFF	230
STEERING GEAR 10 10 10 10	10
TRANSMISSION	170

This service manual provides specifications in both the Metric (SI) and U.S. Customary systems of measurement. The first specification is given in the measuring system used during manufacture, while the second specification (given in parenthesis) is the converted measurement. For instance, a specification of "0.28 mm (0.011 inch)" would indicate that the equipment was manufactured using the metric system of measurement and the U.S. equivalent of 0.28 mm is 0.011 inch.

CONDENSED SERVICE DATA

GENERAL Engine Make	YM135, YM135D	YM155, YM155D	YM195, YM195D	YM240, YM240D	YM330, YM330D
Engine Model	2T73A	2TR13A	2T84A	2TR20A-X	3T84A or 3T84A-LP
Number of Cylinders Bore – mm (in.) Stroke – mm (in.) Displacement – cc Cubic Inches Transmission –	$2 \\ 73(2.87) \\ 75(2.95) \\ 627 \\ 38.26$	$2 \\ 75(2.95) \\ 75(2.95) \\ 662 \\ 40.39$	$\begin{array}{c} 2\\ 84(3.31)\\ 90(3.54)\\ 997\\ 60.84 \end{array}$	$2 \\ 90(3.54) \\ 90(3.54) \\ 1145 \\ 69.87$	3 84(3.31) 90(3.54) 1496 91.29
Speeds Forward Speeds Reverse	$6\\2$	6 2	8 2	8 2	8 2
TUNE-UP					
Firing Order	1-2	1-2	1-2 — Rear —	1-2	1-3-2
Exhaust – mm (in.).	0.2(0.008) 0.2(0.008)	0.2(0.008) 0.2(0.008)	0.15(0.006) 0.15(0.006)	0.15(0.006) 0.15(0.006)	0.15(0.006) 0.15(0.006)
Battery – Volts	12 Neg.	12 Neg.	12 Neg.	19.8 12 Neg.	12 Neg.
CAPACITIES – All capacities are	e in liters a	nd (quarts).			
Cooling System	3.2(3.4) 2.2(2.3) 3.0(3.2) 9.5(10) Rear Axle –	$\begin{array}{c} 3.2(3.4) \\ 2.4(2.5) \\ 3.0(3.2) \\ 15(15.8) \end{array}$	$\begin{array}{c} 4.6(4.9) \\ 4.0(4.2) \\ 5.0(5.3) \\ 22(23.2) \end{array}$	$\begin{array}{c} 4.6(4.9) \\ 4.0(4.2) \\ 6.0(6.3) \\ 22(23.2) \end{array}$	6.2(6.5) 6.4(6.8) 7.0(7.4) 32(33.8)
Four Wheel Drive	9.5(10) 9(9.5)	9.5(10) 9(9.5)	15(15.8) 15(15.8)	15(15.8) 15(15.8)	20(21) 20(21)

FRONT AXLE AND STEERING GEAR

FRONT AXLE ASSEMBLY

Two Wheel Drive Models

1. **ADJUSTMENT.** Refer to appropriate Fig. 1, 2, 2A or 3 for exploded view of fixed or adjustable tread nondriving axle. Toe-in should be 4-8 mm (5/32-5/16 in.) for all models. Length of drag link should be adjusted to provide equally sharp turns in both directions.

Front axle should not have excessive front to rear clearance at pivot shaft (5). Excessive clearance can be removed from YM195 and YM240 models by relocating brackets (29-Fig. 2) closer together. Be sure all attaching screws are retightened after adjustment is complete. On all other models, adjust axle play at pivot by tightening the castle nut (2-Fig. 1 or 3) on pivot shaft. Be sure to install cotter pin to prevent nut from loosening after adjustment is complete.

From wheel bearings should be removed, cleaned, inspected and renewed if damaged or repacked with new grease after each 300 hours of operation. Tighten the hub retaining castle nut, then lock position by installing cotter pin. Tighten wheel lug bolts to 78-98 $N \cdot m$ (57.5-72.3 ft.-lbs.) torque.

2. **REMOVE AND REINSTALL.** Support front of tractor and disconnect drag link from steering arm. On YM135 and YM155 models, remove cotter pin and castle nut (2-Fig. 1) from axle pivot shaft, support axle with jack, then remove washer (3) and pivot shaft (5). On YM195 and YM240 models, support axle with jack, unbolt pivot brackets (29-Fig. 2 or 2A) from frame, then lower axle. On YM330 models, support axle with jack, remove cotter pin from castle nut at rear of pivot shaft, then loosen castle nut (2-Fig. 3). Remove self locking nut (39), washer (38), sleeve (37) and snap ring (36), then withdraw the pivot shaft.

When assembling YM135 model, castle nut (2-Fig. 1) should be toward rear. On YM155 model, castle nut is toward front. Bushings (4) are 25 mm (0.984 in.) long for YM135 models; 24 mm (0.945 in.) long for YM155 models. Tighten castle nut (2) on YM135 and YM155 models enough to remove all axle play; however, axle should move smoothly and freely on pivot.

3. **OVERHAUL.** The steering spindle (18-Fig. 1, 2, 2A and 3) is equipped with renewable bushings (13) and some

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Paragraph 3 Cont.

models are equipped with bearings (15	Cer
and 33). Inside diameter of bushings (13) should be sufficient to provide correct	L
clearance for the spindle. Adjust spindle end play by adding covers (11 – Fig. 1. 2	V
or 2A) or shims (40 – Fig. 3) as required.	Ax
VM135 VM155	C
Spindle diameter	
at hushing 24 948-25 0 mm	YM
(0.9822-0.9843 in.)	Spi
Spindle to bushing clearance,	a
Desired0.020-0.124 mm	
(0.0008-0.0049 in.)	Cni
Wear limit 0.4 mm	Spi
(0.0157 in.)	D
Spindle end play,	W
Desired	
(0.0008-0.0011 in.)	~ .
Wear limit1.0 mm	Spr
(0.0394 in.)	D
Center pivot pin	
diameter	V
(0.8641 - 0.8654 in.)	

Center pivot to	bushing clearance,
Desired	0.040-0.123 mm
	(0.00157-0.0048 in.)
Wear limit	
Axle end play of	n
center pin	
	(0-0.0197 in.)

1195, YM240

spinule diameter	
at bushing	24.948-25.0 mm
	(0.9822-0.9843 in.)

Spindle to bushing	g clearance,
Desired	0.020-0.122 mm
	(0.0008-0.0049 in.)
Wear limit	
	(0.0098 in.)
Spindle end play,	
Desired	0.02-0.86 mm
	(0.0008-0.0011 in.)
Wear limit	
	(0.0394 in.)

Center pivot pin	
diameter	24.967-25.0 mm
	(0.9830-0.9843 in.)
Center pivot to bush	ing clearance,
Desired	0.020-0.105 mm
	(0.0008-0.0041 in.)
Wear limit	0.4 mm
	(0.0157 in.)
Axle end play on cer	nter pin,
Desired	0.1-0.3 mm
	(0.004-0.011 in.)
Maximum limit	0.5 mm
	(0.0197 in.)

YM330

Spindle diameter	
at bushing	.29.959-29.980 mm
	(1.1735-1.1803 in.)
Spindle to bushing cl	earance,
Desired	0.020-0.074 mm
	(0.0008-0.0029 in.)
Wear limit	0.25 mm
	(0.0098 in.)
Spindle end play,	
Desired	0.02-0.6 mm
	(0.0008-0.0236 in.)
Wear limit	0.7 mm
	(0.0276 in.)

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29

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8 9

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13

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Fig. 1 - Exploded view of non-adjustable front axle used on YM155 models. Axle used on YM135 is similar.

- Cotter pin
 Castle nut
 Washer
 Bushings (25x24 mm for YM135, 25x25 mm for YM155)
- Pivot shaft Frame
- 5.6.7.8.
- Nut Lockwasher

- Plain washer
 Steering arm
 Cover washer (40x3 mm)
 "O" ring
 Bushing (29x38 mm)
 Axle main member
 Ball bearing (6205)
 Snap ring
 Seal
 Spindle

19.	Seal
20.	Snap ring
21.	Ball bearing (6205)
22.	Hub
23.	Ball bearing (6204)
24.	Plain washer
OF.	Contin must

bearing (6204) washer

axle and he	avy duty axle.
oin	
nut	12. "O" ring
	13. Bushing (29x38 mm)
rs (25x25 mm)	14. Axle main member
- (15. Ball bearing (6205)
	16. Washer (42x51.8x1 mm)
sher	17. Seal
asher	18 Spindle

- Cotter pin
 Castle nut
 Washer
- Washer
 Bushings (25
 Frame
 Nut
 Lockwasher
 Plain washer
- 9. Plain washer 10. Steering arm
- 11. Cover

28

- 18. Spindle 28. Tie rod

4

		13.
25x25	mm)	14.

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Fig. 2-Exploded view of standard non-adjustable front axle used on some YM195 and YM240 models. Refer to Fig. 1 for wheel hub and

bearings. Refer to Fig. 2A for optional adjustable

0%

29. Pivot bracket



Thank you very much for your reading. Please click here to get more information.