

# OPERATION AND PARTS MANUAL



***ESSICK* SERIES**  
**MODEL EM-120SM**  
**Steel-Mechanical Plaster/Mortar Mixer**

Revision #6 (03/07/17)

THIS MANUAL MUST ACCOMPANY THE EQUIPMENT AT ALL TIMES.

**EM-120SM Plaster/  
Mortar Mixer**

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# EM-120SM— SUGGESTED SPARE PARTS

## EM-120SM 1 TO 3 UNITS

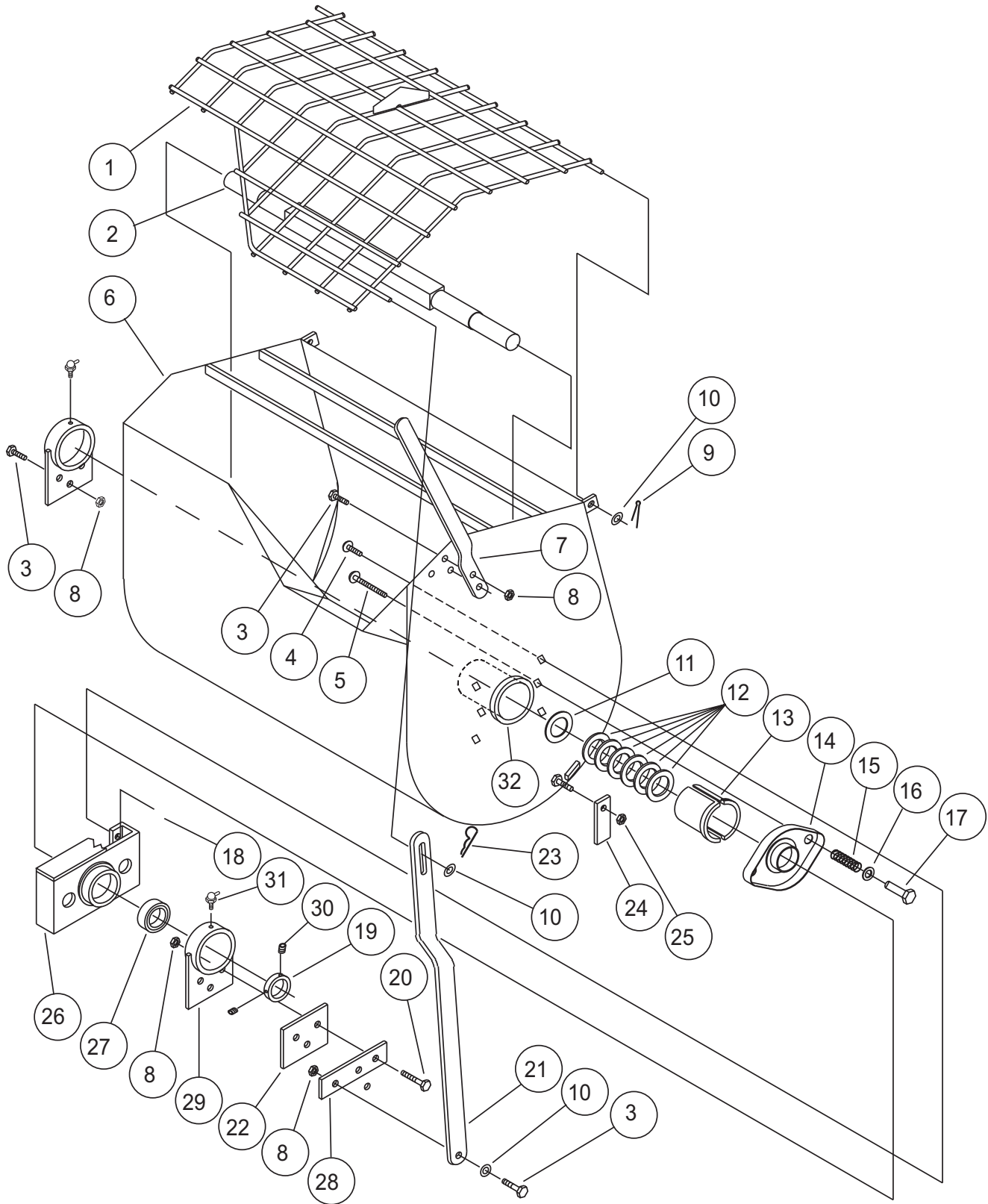
Qty.	P/N	Description
6	491010	RUBBER LATCH ASSY.
1	EM200293B	PADDLE ARM TOW SIDE
1	EM200294B	PADDLE ARM CENTER TOW SIDE
1	EM200295B	PADDLE ARM CENTER ENGINE SIDE
1	EM200296B	PADDLE ARM ENGINE SIDE
3	EM200863	RUBBER BLADE KIT (STEEL DRUM)
3	EM204625	RUBBER BLADE KIT (PLASTIC DRUM)
4	EM200297	U-BOLT
2	EM902153	BEARING, PADDLE SHAFT
3	EM963157	CONNECTOR BOLT G5
1	EM934041	CLUTCH, DRIVEN MEMBER
12	EM200301	PACKING RINGS
4	EM200286	CARRIAGE BOLT
4	EM200794	ADJUSTMENT SPRING
4	EM200285	GLAND

## EM-120SM 5 TO 10 UNITS

Qty.	P/N	Description
10	491010	RUBBER LATCH ASSY.
2	EM200293B	PADDLE ARM TOW SIDE
2	EM200294B	PADDLE ARM CENTER TOW SIDE
2	EM200295B	PADDLE ARM CENTER ENGINE SIDE
2	EM200296B	PADDLE ARM ENGINE SIDE
6	EM200863	RUBBER BLADE KIT (STEEL DRUM)
3	EM204625	RUBBER BLADE KIT (PLASTIC DRUM)
8	EM200297	U-BOLT
4	3530	PADDLE SHAFT, SEAL KIT
4	EM902153	BEARING, PADDLE SHAFT
5	EM963157	CONNECTOR BOLT G5
2	EM934041	CLUTCH, DRIVEN MEMBER
60	EM200301	PACKING RINGS
20	EM200286	CARRIAGE BOLT
20	EM200794	ADJUSTMENT SPRING
20	EM200285	GLAND

# EM-120SM — MIXING DRUM ASSY.

MIXING DRUM ASSY.



# EM-120SM — MIXING DRUM ASSY.

MIXING DRUM ASSY.

<u>NO</u>	<u>PART NO</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	EM203449	DRUM GRILL	1	
2	EM200333	PADDLE SHAFT	1	
3	EM963692	HHCS 1/2-13 x 1.1/2"	6	
4	EM966048	CARRIAGE BOLT 3/8-16 x 1.1/4"	8	
5	EM200286	CARRIAGE BOLT 3/8-16 x 3 FULL THREAD	4	
6	EM201618	DRUM .....	1	..... INCL. ITEMS W/ *
7*	EM201537	DUMP LEVER	1	
8	10176	LOCK NUT 1/2-13	9	
9	EM924015	COTTER PIN 3/16 x 1"	2	
10	13211	FLAT WASHER 1/2"	4	
11	EM200303	PACKING RING FOLLOWER	2	
12	EM200301	SHAFT PACKING RING	12	
13	EM200285	HALF GLAND PACKING	4	
14	EM200288	PACKING GLAND PRESSURE PLATE	2	
15	EM200794	GLAND ADJUSTMENT SPRING	4	
16	EM923157	FLAT WASHER 5/8"	4	
17	EM200287	SPECIAL ADJUSTING NUT 3/8-16	4	
18	10133	LOCK NUT 3/8-16	8	
19	EM200018	PADDLE SHAFT COLLAR	2	
20	6159A	HHCS 1/2-13 x 2"	3	
21	EM203344	GRILL OPENING BAR	1	
22	EM200079	BEARING BRKT. SHIM .135" THICK	AR	
22	EM200080	BEARING BRKT. SHIM .187" THICK	AR	
23	7170	HITCH CLIP PIN	1	
24*	EM201731	DRUM LATCH	1	
25	EM969023	LOCK NUT 5/8-11	1	
26	EM201648	DRUM HEAD	2	
27	EM902153	BALL BEARING	2	
28	203335	GRILL CLOSING BAR HINGE	1	
29	EM201786	BEARING BRKT. ....	2	..... INCL. ITEMS W/#
30	EM961066	SHSS 3/8-16 x 3/8"	4	
31#	EM916006	GREASE FITTING 90 DEG.	2	
32	EM200237	PACKING BOX	2	
	EM201842	DRUM & SHAFT ASSY. ....	1	..... INCLUDES ALL PARTS LISTED PAGES 25 & 27 EXCEPT ITEMS 33 & 34 PAGE 25

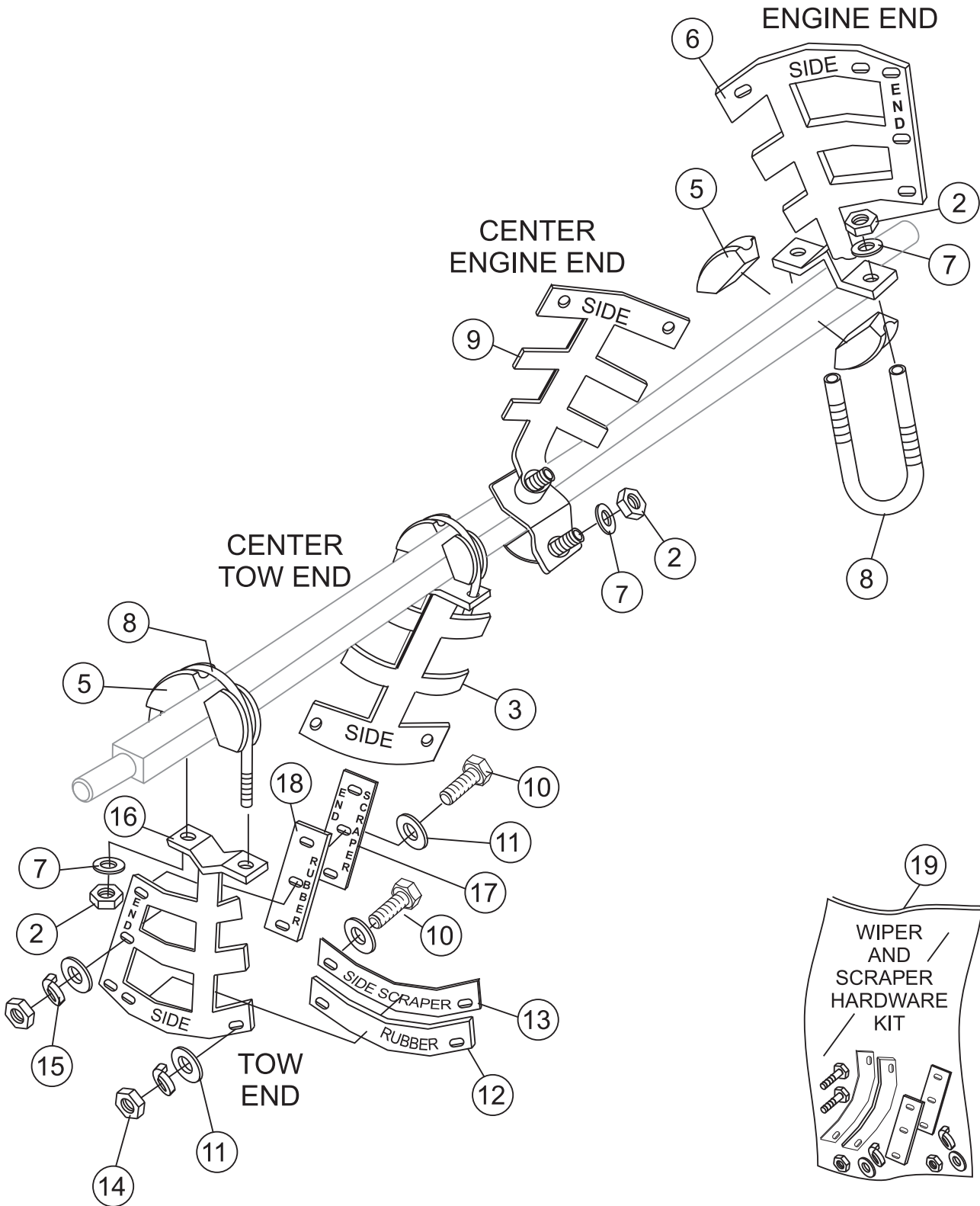


# EM-120SM — PADDLE SHAFT ASSY. (OLD)

PADDLE SHAFT ASSY.

<u>NO</u>	<u>PART NO</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1		TOW END CAST PADDLE .....	1 .....	NO LONGER AVAILABLE
2		CENTER TOW END CAST PADDLE .....	1 .....	NO LONGER AVAILABLE
3		CENTER ENGINE END CAST PADDLE .....	1 .....	NO LONGER AVAILABLE
4		ENGINE END CAST PADDLE .....	1 .....	NO LONGER AVAILABLE
5#	0300B	FLAT WASHER 5/16"	7	
6#	EM200213	SIDE RUBBER WIPER	1	
7#	EM203433	SIDE SCRAPER BLADE	1	
8#	0161C	LOCK WASHER 5/16"	7	
9#	1207	HHCS 5/16-18 x 1.3/4"	7	
10	EM200333	PADDLE SHAFT	1	
11	EM200292	PADDLE ARM INSERT CASTING	4	
12	EM200297	END PADDLE U-BOLT	1	
13	EM200268	CENTER PADDLE U-BOLT	1	
14#	EM203432	TOP SCRAPER BLADE	2	
15#	EM200212	TOP RUBBER WIPER	2	
16	0161D	HEX NUT 5/16-18	7	
17	5054A	LOCK WASHER 1/2"	4	
18	EM968011	HEX NUT 1/2-13	4	
	EM200863	RUBBER BLADE KIT .....	1 .....	INCLUDES ITEMS W/#

# EM-120SM — PADDLE SHAFT ASSY. (NEW)

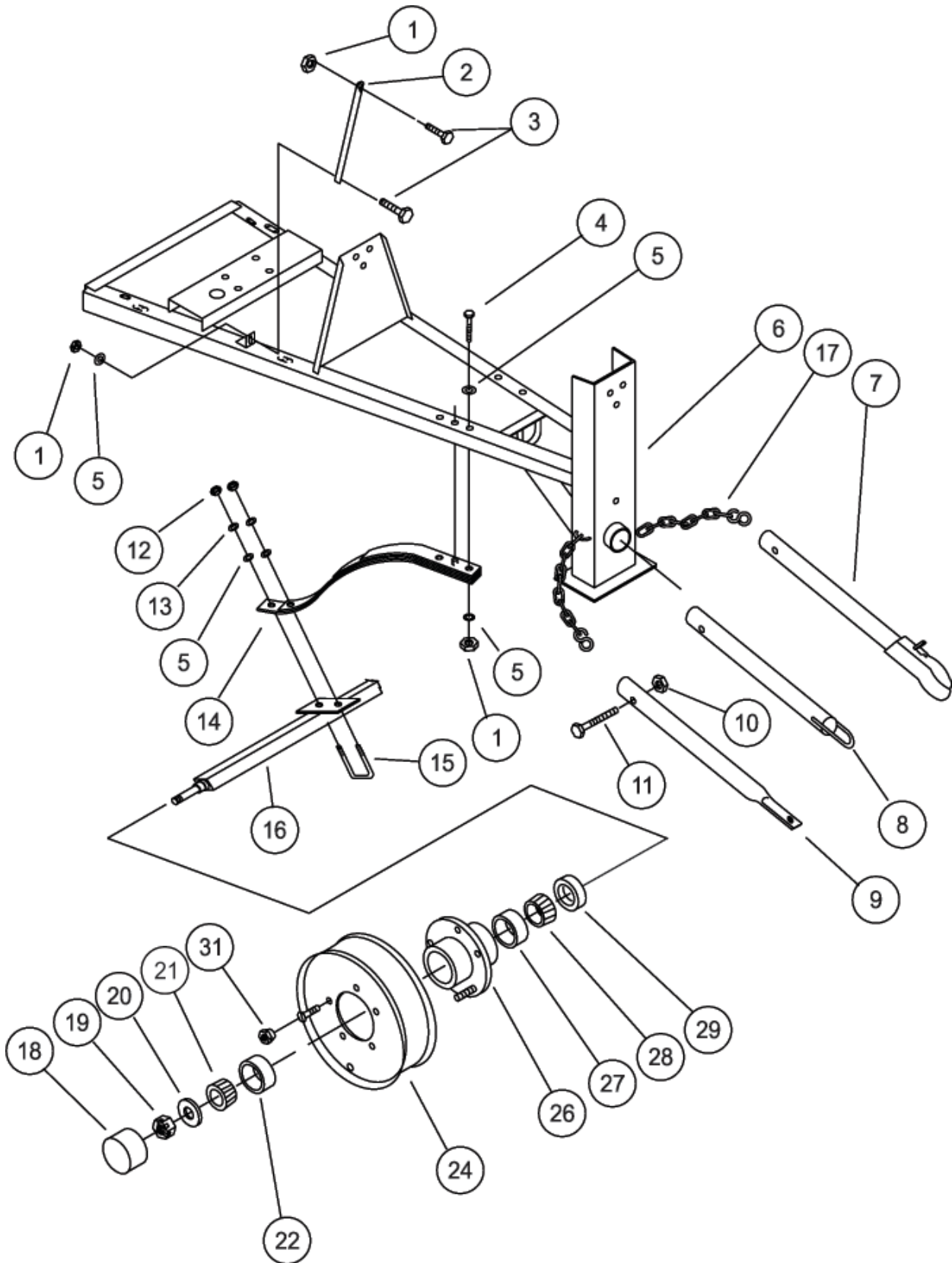


# EM-120SM — PADDLE SHAFT ASSY. (NEW)

## PADDLE SHAFT ASSY. (NEW)

<u>NO</u>	<u>PART NO</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
2	492584	NUT, LOCK 1/2" DIA. NC	8	
3	EM200294B	PADDLE ARM, CENTER (TOW END)	1	
5	EM200292	INSERT, PADDLE ARM .....	8	REPLACES P/N 200292
6	EM200296B	PADDLE ARM, ENGINE END	1	
7	6109170	WASHER, FLAT 1/2" .....	8	REPLACES P/N 504322
8	EM200297	U-BOLT .....	4	REPLACES P/N 200297
9	EM200295B	PADDLE ARM, CENTER (ENGINE END)	1	
10\$	2105162	SCREW HHC .....	14	REPLACES P/N 492367
11\$	EM923023	WASHER, FLAT 3/8" .....	28	REPLACES P/N 492597
12\$	EM200212	SIDE WIPER, RUBBER	4	
13\$	EM203432	SIDE SCRAPER BLADE	4	
14\$	2105164	NUT HEX 5/16" DIA. NC .....	14	REPLACES P/N 492553
15\$	EM923343	WASHER, LOCK 5/16" .....	14	REPLACES P/N 492623
16	EM200293B	PADDLE ARM, TOW END	1	
17	EM203433	END SCRAPER BLADE	2	
18	EM200213	END WIPER, RUBBER	2	
19	EM200863	KIT, RUB. BLADES, SCRAPERS AND HDW .....	1	INCLUDES ITEMS W/\$

FRAME ASSY.

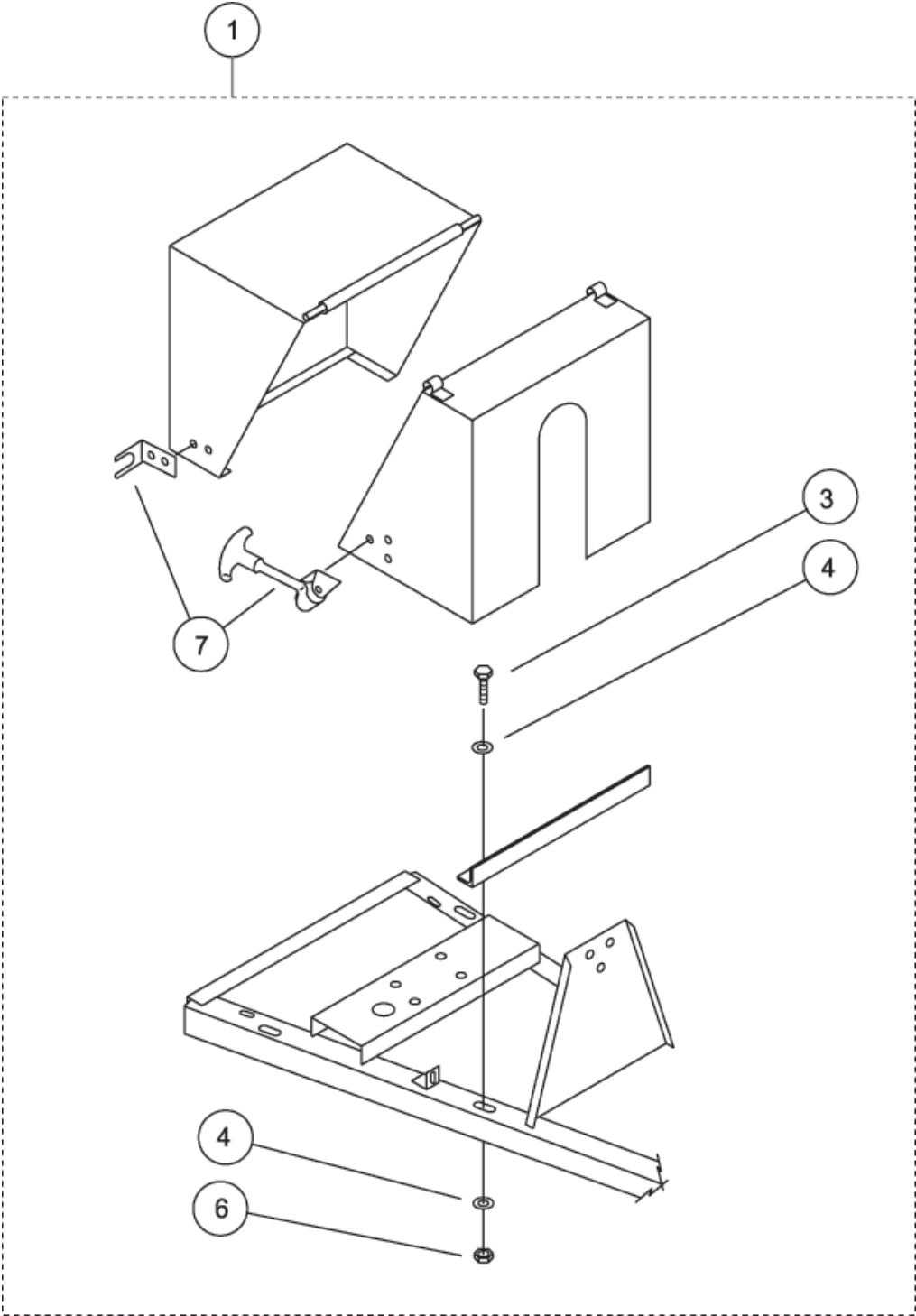


# EM-120SM — FRAME ASSY.

## FRAME ASSY.

<u>NO</u>	<u>PART NO</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	10176	LOCK NUT 1/2-13	8	
2	EM204086	TRANSMISSION SUPPORT BAR	2	
3	5218	HHCS 1/2-13 x 1.1/2"	4	
4	2549	HHCS 1/2-13 x 3"	4	
5	0447	FLAT WASHER 1/2"	14	
6	EM202765	FRAME W/A	1	
7	EBC-1	BALL HITCH TOW BAR	1	
8	ELC-1	PINTLE EYE TOW BAR	1	
9	EDC-1	PIN HOLE TOW BAR	1	
10	5070B	LOCK NUT 3/4-10	1	
11	EM963580	HHCS 3/4-10 x 4.1/2"	1	
12	8244	HEX NUT 1/2-20	4	
13	5054A	LOCK WASHER 1/2"	4	
14	EM201225	AXLE SPRING	2	
15	EM966204	SQUARE AXLE U-BOLT 1.1/2"	2	
16	EM202983	AXLE	1	
17	3148	SAFETY CHAIN ASSY.	2	
18*	EM941278	GREASE CAP	2	
19	EM968302	AXLE NUT	2	
20	EM923161	AXLE WASHER	2	
21*	EM903113	OUTER BEARING CONE	2	
22*	EM903012	OUTER BEARING CUP FOR ORIGINAL HUB	2	
24	19045	WHEEL AND TIRE	2	
26	EM941277	HUB COMPLETE .....	2	INCLUDES ITEMS W/*
27*	EM903169	INNER BEARING CUP	2	
28*	EM906168	INNER BEARING CONE	2	
29*	EM914324	SEAL	2	
31*	EM941280	WHEEL NUT	10	

CAB ASSY.

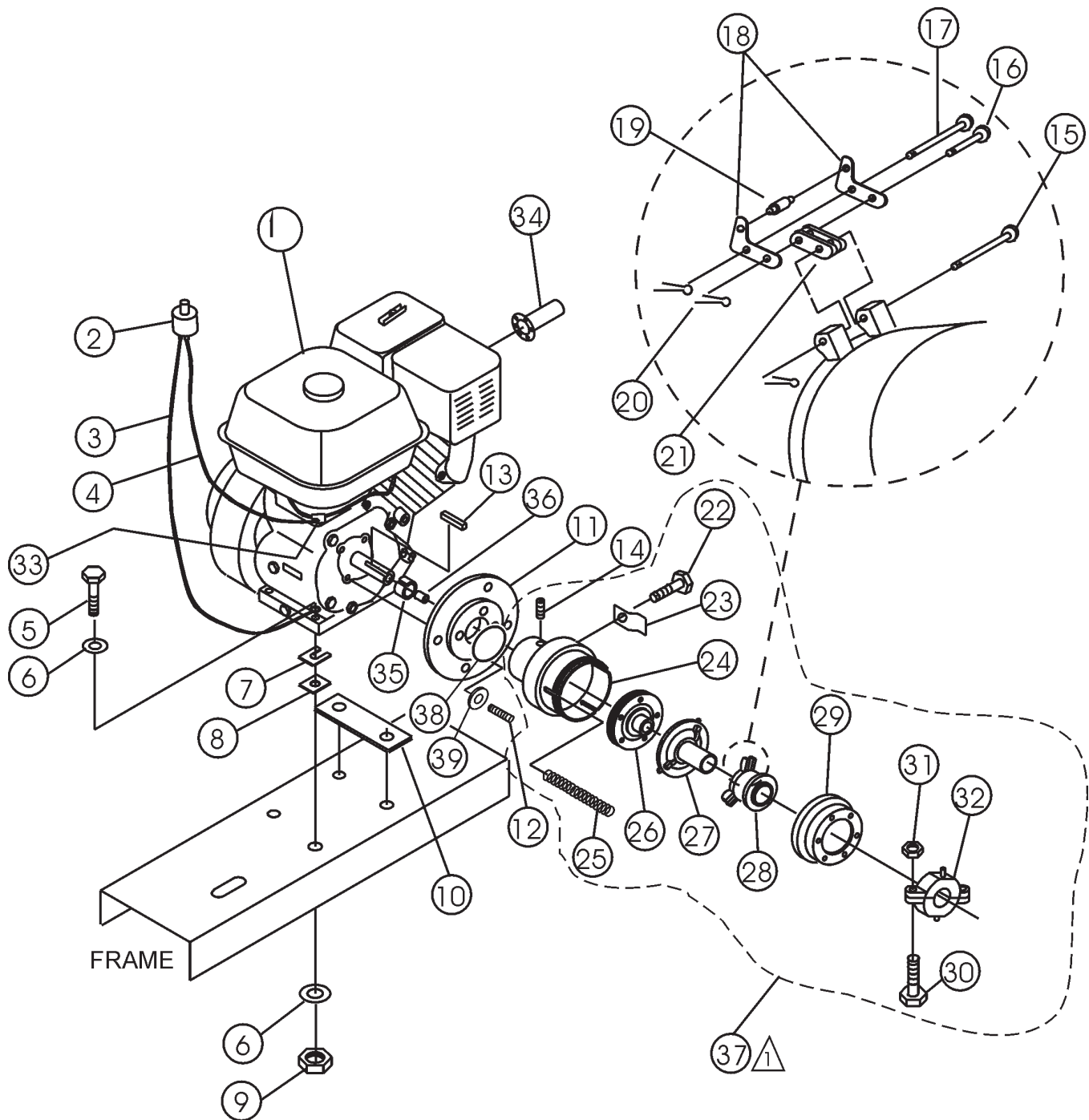


CAB ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	EM202957	COMPLETE CAB ASSY.....	1 .....	INCLS. ITEMS W/*
3*	1284	HHCS 3/8-16 x 1.1/2"	4	
4*	4001	FLAT WASHER 3/8"	8	
6*	10133	LOCK NUT 3/8-16	4	
7*	491010	LATCH ASSY.	2	

# EM-120SM — HONDA ENGINE ASSY.

HONDA ENGINE ASSY.



NOTES:

△ COMPLETE CLUTCH ASSEMBLY,  
ITEM 37, P/N 934022 INCLUDES  
ALL ITEMS WITHIN OUTLINE.

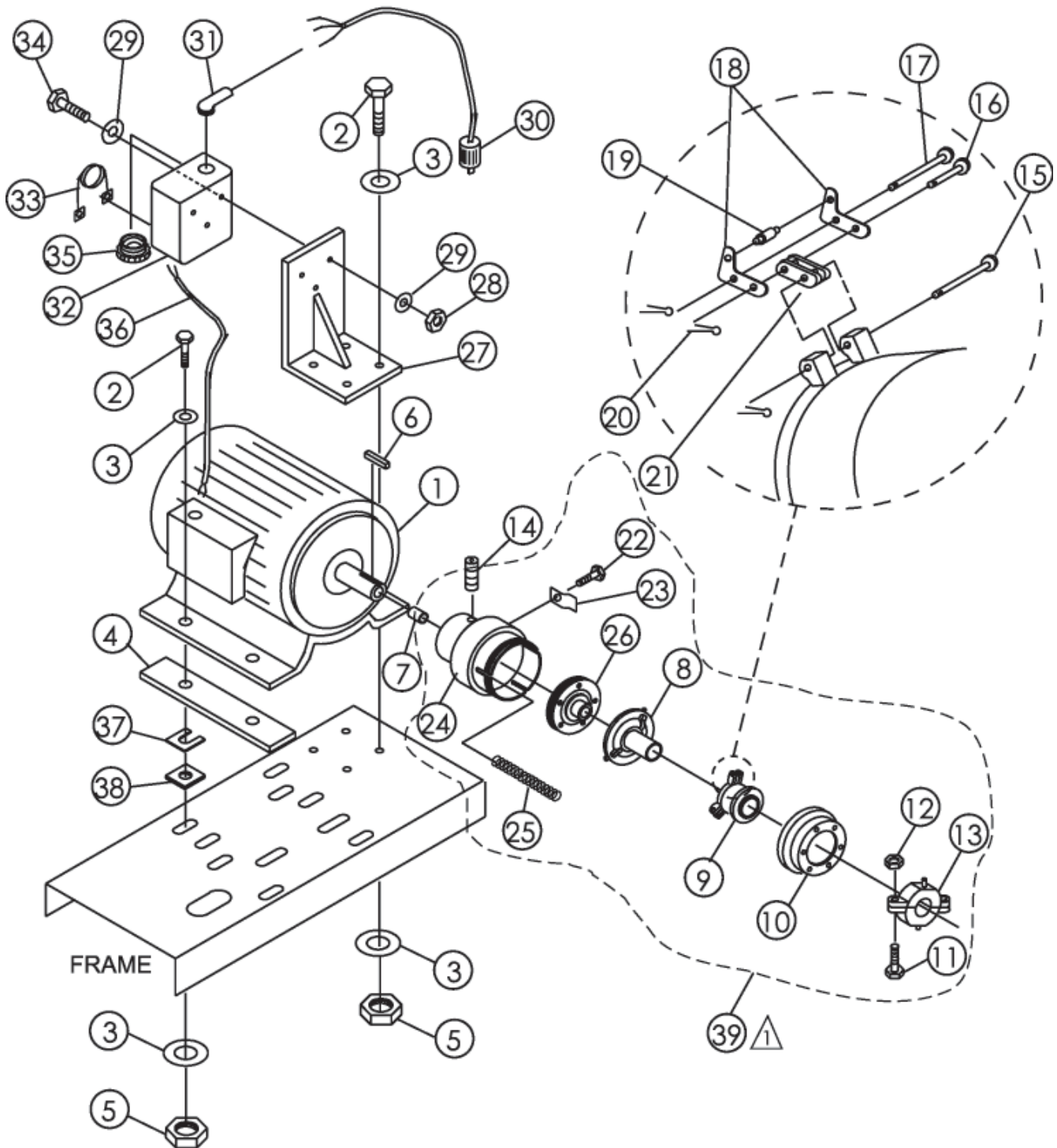
# EM-120SM — HONDA ENGINE ASSY.

HONDA ENGINE ASSY.

<u>NO</u>	<u>PART NO</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	EM203456	10.7 HP HONDA ENGINE	1	
2	EM940734	KILL SWITCH	1	
3	EM203298	ENGINE KILL GROUND WIRE	1	
4	EM203035	ENGINE KILL WIRE	1	
5	9154	HHCS 3/8-16 x 1.3/4"	4	
6	10136	FLAT WASHER 3/8"	8	
7	EM100235	ENGINE SHIM .030	AR	
7	EM100236	ENGINE SHIM .018	AR	
7	EM100237	ENGINE SHIM .010	AR	
8	EM203007	ENGINE PAD .187	AR	
8	EM203016	ENGINE PAD .135	AR	
8	EM203017	ENGINE PAD .060	AR	
9	10133	LOCK NUT 3/8-16	4	
10	EM204550	MOTOR MOUNT	2	
11	EM203038	ADAPTER KIT .....	1	INCLUDES ITEMS W/*
12*	11090	STUD, 3/8 SHC	4	
13	EM927066	SQ KEY	1	
14	EM961045	SHSS 5/16-18 x 1/2" NYLOC	1	
15#	EM925013	LEVER PIN	3	
16#	EM925018	SHORT LINK PIN	3	
17#	EM925016	LONG LINK PIN	3	
18#	EM959012	LEVER	6	
19#	EM934054	ROLLER	3	
20#	5117	COTTER PIN	9	
21#	EM934053	CONNECTING LINK	6	
22#		SLOTTED HHCS 1/4-20 x 1/2" .....	1	NOT AVAILABLE SEPARATELY
23#	EM934040	ADJUSTING LOCK	1	
24#	EM934039	CLUTCH HOUSING	1	
25#	EM918009	SPRING	3	
26#	EM934041	SPLINED CENTER W/FACING	1	
27#	EM934042	PRESSURE PLATE ASSY.	1	
28#	EM934043	RELEASE SLEEVE	1	
29#	EM934045	ADJUSTING RING	1	
30#	EM963289	BOLT	2	
31#	EM969009	LOCK NUT	2	
32#	EM934044	RELEASE BEARING ASSY.	1	
33	1475	WIRE SPLICE	1	
34	EM203149	EXHAUST DEFLECTOR	1	
35*	EM203040	SLEEVE	1	
36	EM801570	PILOT BUSHING	1	
37	EM934022	CLUTCH ASSEMBLY .....	1	INCLUDES ITEMS W/#
38*	13377	OIL SEAL	4	
39*	13379	COPPER WASHER	4	

# EM-120SM — ELECTRIC MOTOR ASSY.

ELECTRIC MOTOR ASSY.



NOTES:

▲ COMPLETE CLUTCH ASSEMBLY, ITEM 39, P/N 934022 INCLUDES ALL ITEMS WITHIN OUTLINE.

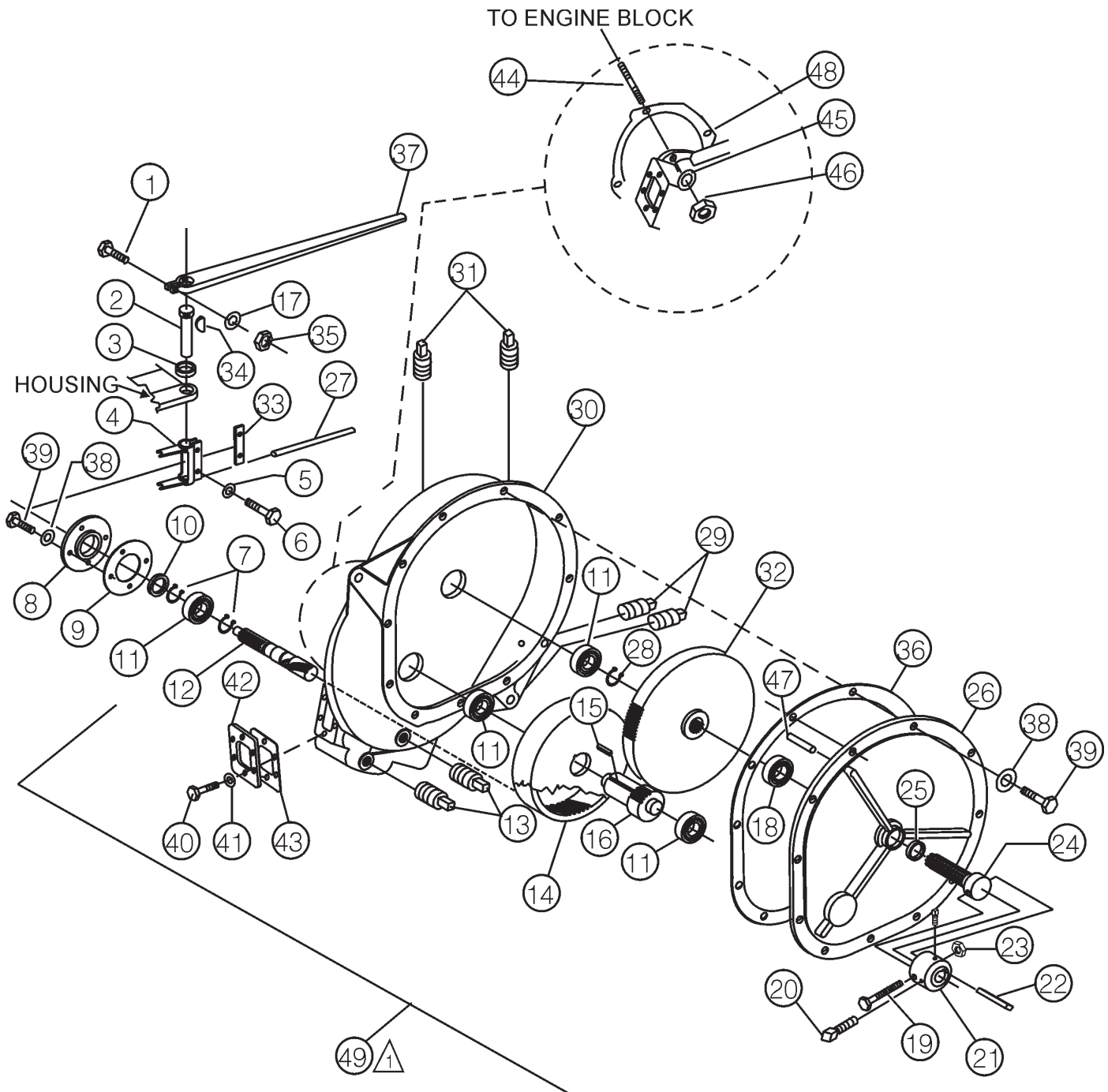
# EM-120SM — ELECTRIC MOTOR ASSY.

ELECTRIC MOTOR ASSY.

<u>NO</u>	<u>PART NO</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	EM939228	5 HP 1 PHASE ELECT. MOTOR	1	
1	EM239229	5 HP 3 PHASE ELECT. MOTOR	1	
2	1023	HHCS 3/8-16 x 1.1/4"	8	
3	10136	FLAT WASHER 3/8"	16	
4	EM204549	MOTOR MOUNT	2	
5	10133	LOCK NUT 3/8-16	8	
6	EM010009	SQ KEY	1	
7	EM801570	BUSHING	1	
8	EM934042	PRESSURE PLATE ASSY.	1	
9	EM934043	RELEASE SLEEVE	1	
10#	EM934045	ADJUSTING RING	1	
11#	EM963289	BOLT	2	
12#	EM969009	LOCK NUT	2	
13#	EM934044	RELEASE BEARING ASSY.	1	
14#	EM961045	SHSS 5/16-18 x 1/2" NYLOC	1	
15#	EM925013	LEVER PIN	3	
16#	EM925018	SHORT LINK PIN	3	
17#	EM925016	LONG LINK PIN	3	
18#	EM959012	LEVER	6	
19#	EM934054	ROLLER	3	
20#	5117	COTTER PIN	9	
21#	EM934053	CONNECTING LINK	6	
22	9503	SLOTTED HHCS 1/4-20 x 1/2"	1	
23#	EM934040	ADJUSTING LOCK	1	
24#	EM934039	CLUTCH HOUSING	1	
25#	EM918009	SPRING	3	
26#	EM934041	SPLINED CENTER W/FACING	1	
27	EM204526	MOUNT BRKT.	1	
28	10019	LOCK NUT 10-32	3	
29	2203	FLAT WASHER #10	6	
30	EM940547	PLUG L-630P	1	
30	511647	PLUG L-1430P	1	
30	EM98285	PLUG L-1630P	1	
31	0174	90 DEG ELBOW	1	
32	EM98187	SWITCH ASSY 230 V 1 PHASE	1	
32	EM98191	SWITCH ASSY 230 V 3 PHASE	1	
32	EM98284	SWITCH ASSY 460 V 3 PHASE	1	
33	EM940198	HEATER 1 PHASE	1	
33	EM940198	HEATER 3 PHASE	1	
34	8133	RHMS 10-32 x 3/4"	3	
35	EM940184	REDUCER BUSHING	1	
36	EM012295	CONDUIT	1	
37	EM100235	ENGINE SHIM .030	AR	
37	EM100236	ENGINE SHIM .018	AR	
37	EM100237	ENGINE SHIM .010	AR	
38	EM203007	ENGINE PAD .187	AR	
38	EM203016	ENGINE PAD .135	AR	
38	EM203017	ENGINE PAD .060	AR	
39	EM934022	CLUTCH ASSY. ....	1	INCLUDES ITEMS W/#

# EM-120SM — TRANSMISSION ASSY.

TRANSMISSION ASSY.



NOTES:

- 1 COMPLETE TRANSMISSION ASSEMBLY, ITEM 49, P/N 600000 INCLUDES ALL ITEMS WITHIN BRACKET, EXCEPT ITEMS, 19, 20, 21, 22, 23, 37, AND 44, 45, 46 AND 48.

# EM-120SM — TRANSMISSION ASSY.

TRANSMISSION ASSY.

<u>NO</u>	<u>PART NO</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1#	2200	HHCS 3/8-24 x 2"	1	
2#	EM600029	SHIFTER SHAFT	1	
3#	EM914005	SEAL	1	
4#	EM600028	CLUTCH YOKE	1	
5#	0181B	LOCK WASHER 1/4"	2	
6#	0730	HHCS 1/4-20 x 1"	2	
7#	EM926029	SNAP RING	2	
8#	EM600023	BEARING RETAINER	1	
9#	EM600022	BEARING RETAINER GASKET	1	
10#	914209	SEAL	1	
11#	EM902091	BALL BEARING	4	
12#	EM600016	INPUT PINION SHAFT	1	
13#	EM911329	SQ HEAD MAG. PIPE PLUG 3/8"	2	
14#	EM600020	INTERNAL GEAR	1	
15#	EM010062	SQ KEY 3/8 x 3/8 x 1.3/8"	1	
16#	EM600131	OUTPUT DRIVE PINION	1	
17#	10136	FLAT WASHER 3/8"	1	
18#	EM902161	BALL BEARING	1	
19	EM963157	HHCS 5/8-11 x 4.1/2" GD2	1	
20	EM961019	SQHSS 3/8-16 x 1.1/4" CUP	2	
21	EM200255	PADDLE SHAFT COUPLER	1	
22	EM010022	SQ KEY 3/8 x 3/8 x 1.3/4"	1	
23	9503	LOCK NUT 5/8-11	1	
24#	EM600015	OUTPUT SHAFT	1	
25#	EM914207	OIL SEAL	1	
26#	EM600014	TRANSMISSION COVER	1	
27#	1729	ROLL PIN	1	
28#	EM926036	SNAP RING	1	
29#	EM911064	SQ HEAD PIPE PLUG 1/2 NPT	2	
30#	EM600012	MAIN TRANSMISSION HOUSING	1	
31#	EM911356	BREATHER VENT PIPE PLUG 1/2"	2	
32#	EM600133	OUTPUT SHAFT GEAR	1	
33#	EM600024	LOCK PLATE	1	
34#	EM927048	WOODRUFF KEY #A	1	
35#	10133	LOCK NUT 3/8-16	1	
36#	EM600021	TRANSMISSION COVER GASKET	1	
37	EM600018	SHIFTER LEVER	1	
38#	0161C	LOCK WASHER 3/8"	17	
39#	0202	HHCS 5/8-16 x 1"	17	
40#	4196	HHCS 3/8-16 x 3/4"	6	
41#	1875	INTER. SHKP WASHER 3/8"	6	
42#	EM931233	SHIFTER COVER	1	
43#	EM600026	SHIFTER COVER GASKET	1	
44#	EM300999	STUD 7 / 16-14 x 2.1/16"	4	
45#	2955	LOCK WASHER 7/16"	4	
46#	EM968010	HEX NUT 7/16-14	4	
47#	EM925109	DOWEL PIN	3	
48	EM801965	GASKET	1	
49	EM600000	COMP. TRANSMISSION ASSY. ....	1	INCLUDES ITEMS/W#