

**ES52-5 SERIES
TRANSMISSION
SERVICE MANUAL**



**Bulletin No. T210-ES52-5
ES52-5 Series Parts List
August 1988**



MODEL ES52-5

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T210-ES52-5

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RATIO TABLE

SPEEDS	MODELS	
	ES52-5A	ES52-5D
1st	7.25	7.25
2nd	3.98	3.98
3rd	2.23	2.23
4th	1.44	1.29
5th	1.00	1.00
Rev.	7.25	7.25

Parts listed in this catalog may no longer be available. Use with transmission superseding list.

IDENTIFICATION

The Name Plate (NP-96) affixed to the RIGHT side of the Transmission is stamped with information:

Abbreviations used in this parts list include:

N.S. — Not Shown
N.S.S. — Not Sold Separately
N.R. — Not Required

SERIAL

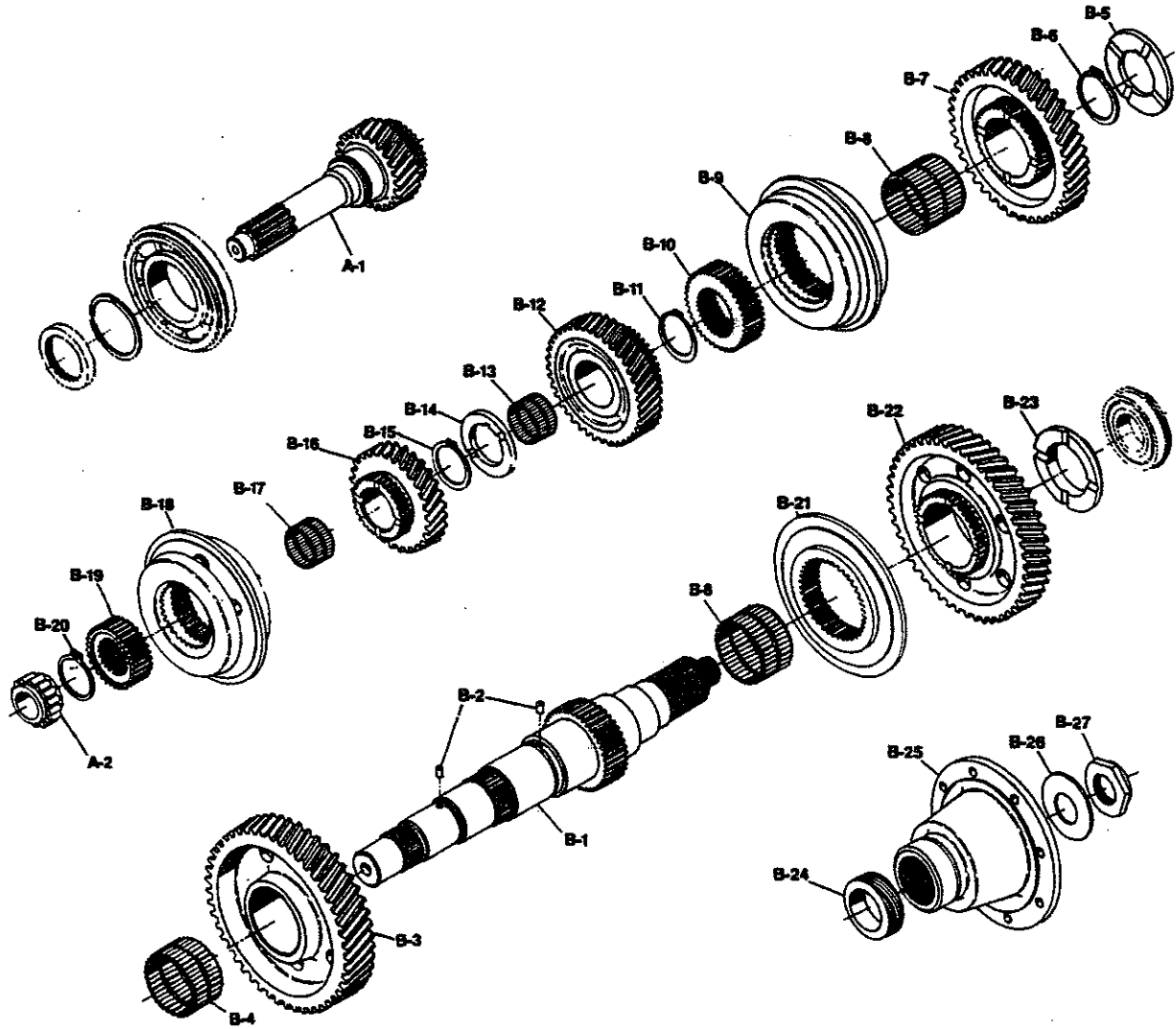
B/M No. MODEL

In requesting more information on these transmissions, furnish the B/M No. and the Serial Number.

MODEL ES52-5

GEARS and RELATED PARTS

T210-ES52-5



MODEL ES52-5

GEARS and RELATED PARTS

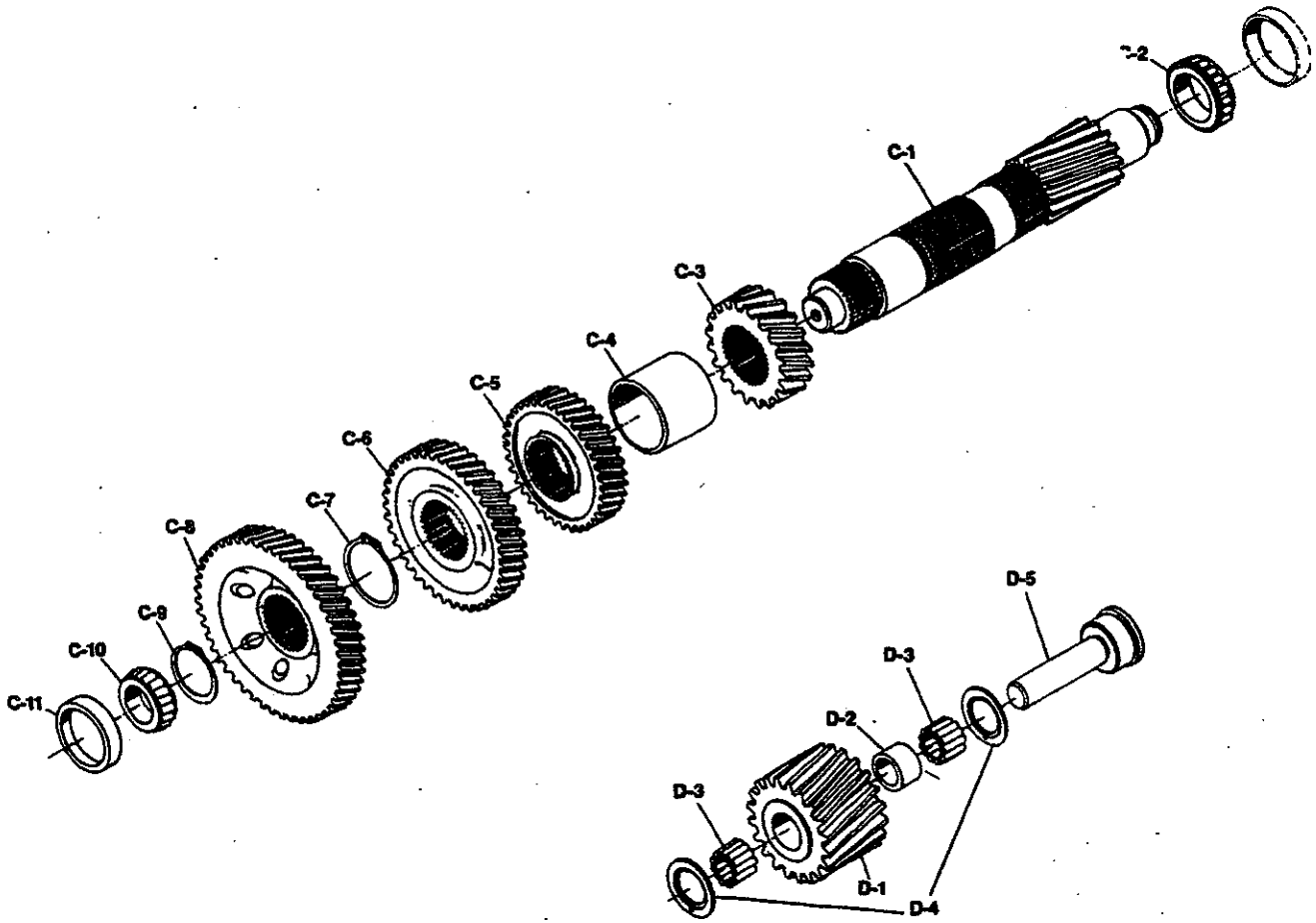
T210-ES52-5

Ref. No.	Part Number	Part Description	Qty.
A-1	See Tab Bills	DRIVE GEAR GROUP—INPUT	
A-2	550986	Gear—drive—input (see table page 5).....	1
		Bearing—mainshaft pocket.....	1
		MAINSHAFT GROUP—OUTPUT	
B-1	49-362-1	Mainshaft	1
B-2	545087	Pin—thrust washer lock	2
B-3	49-8-3	Gear—1st speed mainshaft (45T)	1
B-4	550991	Bearing—1st speed mainshaft gear needle	1
B-5	49-47-1	Thrust Washer—1st & 2nd speed mainshaft gear	1
B-6	49-381-1	Snap Ring—1st & 2nd thrust washer	1
B-7	49-8-5	Gear—2nd speed mainshaft (38T)	1
B-8	550963	Bearing—2nd & reverse speed needle	2
B-9	313616X	Synchronizer—2nd & 3rd speed	1
B-10	49-466-1	Gear—2nd & 3rd speed clutch gear	1
B-11	40-381-4	Snap Ring—2nd & 3rd clutch gear	1
B-12	49-8-7	Gear—3rd speed gear mainshaft	1
B-13	550968	Bearing—3rd speed mainshaft gear	1
B-14	49-47-2	Thrust Washer—3rd & 4th speed gear	1
B-15	40-381-3	Snap Ring—3rd & 4th thrust washer	1
B-16	49-8-9	Gear—4th speed, mainshaft	1
	49-8-11	(22T) for ES52-5A	
		(21T) for ES52-5D	
B-17	550990	Bearing—4th speed mainshaft gear	1
B-18	313558X	Synchronizer—4th & 5th speed gear	1
B-19	49-466-2	Gear—4th & 5th speed clutch (33T)	1
B-20	40-381-1	Snap Ring—4th & 5th speed clutch gear	1
B-21	49-465-7	Clutch Collar—1st & reverse	1
B-22	49-8-1	Gear—reverse (45T)	1
B-23	49-47-3	Thrust Washer—reverse	1
B-24	See Tab Bills	Gear—speedometer drive	1
B-25	See Tab Bills	Companion flange or end yoke	1
B-26	53-205-1	Washer—mainshaft nut	1
B-27	501200	Nut—mainshaft (1.250-18)	1

MODEL ES52-5

GEARS and RELATED PARTS

T210-ES52-5

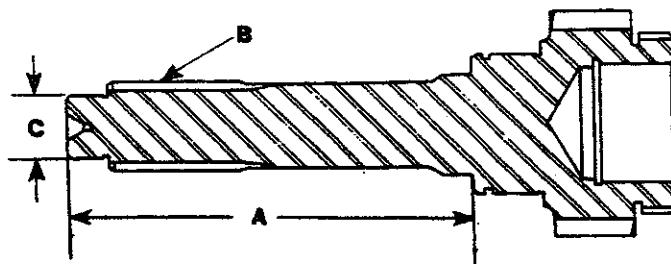


MODEL ES52-5

GEARS and RELATED PARTS

T210-ES52-5

Ref. No.	Part Number	Part Description	Qty.
COUNTERSHAFT GROUP			
C-1	49-30-3	Countershaft (with P.T.O drive)	1
C-2	550868	Cone-bearing-countershaft rear	1
C-3	49-196-1	Gear-2nd speed countershaft (20T)	1
C-4	49-37-5	Spacer-2nd & 3rd countershaft gear	1
C-5	49-196-3	Gear-3rd speed countershaft (32T)	1
C-6		Gear-4th speed, countershaft	1
	49-196-5	(32T) for ES52-5A	
	49-196-7	(34T) for ES52-5D	
C-7	27-381-5	Snap Ring-4th countershaft gear	1
C-8	49-1-1	Gear-drive (44T), countershaft	1
C-9	40-381-3	Snap Ring-countershaft drive gear	1
C-10	550964	Cone-bearing-countershaft front	1
C-11	550965	Cup-bearing-countershaft front	1
REVERSE IDLER SHAFT GROUP			
D-1	49-5-1	Gear-reverse idler (19T)	1
D-2	97-37-1	Spacer-bearing reverse idler gear	1
D-3	550886	Bearing-reverse idler	2
D-4	974-W	Thrust Washer-reverse idler	2
D-5	40-60-1	Shaft-idler gear	1

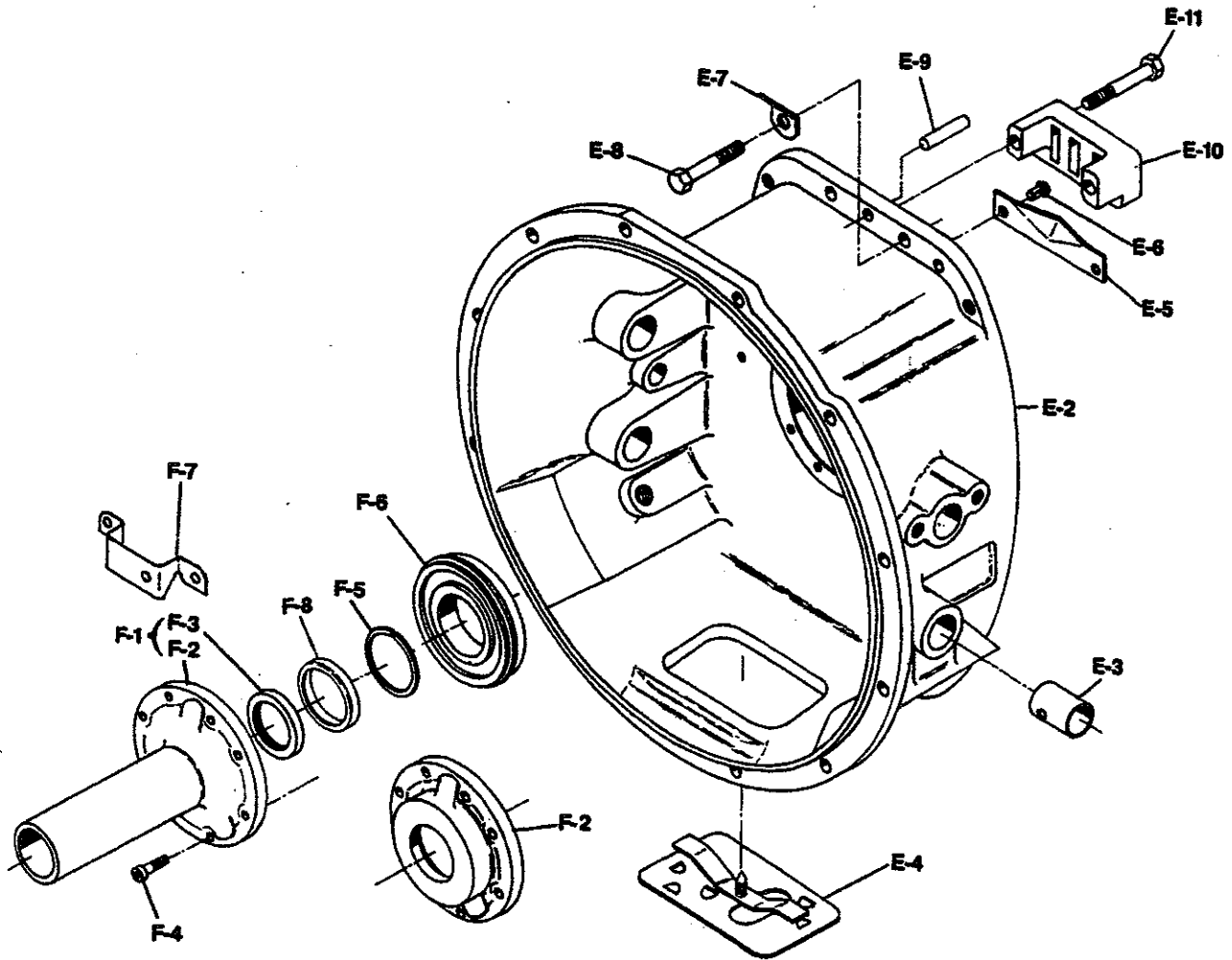


DRIVE GEAR TABLE

A Overall Length	B Spline Dia. Teeth	C-Pilot Size	Drive Gear Assembly (Includes 49-468-2)
21 Teeth for Model ES52-5			
9.929"	1½" -10	.9837"	49-35-3-1X
8.179"	1½" -10	.9837"	49-35-4-1X
9.875"	1¾" -10	1.1800"	49-35-6-1X
9.929"	1¾" -10	.9837"	49-35-8-1X

MODEL ES52-5

T210-ES52-5 CLUTCH HOUSING and DRIVE GEAR BEARING CAP GROUP



DRIVE GEAR BEARING CAP CHART

A Outside Diameter	B Stem Diameter	C Length	D Inside Diameter For Oil Seal	FRONT BEARING CAP F-1	
				Part Number N.S.S. F-2	Assy. Includes Oil Seal F-3
FLAT TYPE—For Spicer Pull Type Clutches PULL TYPE RELEASE					
5 ⁵ / ₁₆ "	—	1 ⁷ / ₁₆ "	2 ⁹ / ₁₆ "	40-19-40	40-19-40-1X
STEM TYPE—For all Push Type Clutches PUSH TYPE RELEASE					
5 ⁵ / ₁₆ "	1 ¹⁵ / ₁₆ "	6 ¹⁷ / ₆₄ "	2 ¹ / ₁₆ "	40-19-1	40-19-1-1X
5 ⁵ / ₁₆ "	1 ⁷ / ₈ "	6 ²¹ / ₃₂ "	2 ¹ / ₁₆ "	40-19-24	40-19-24-1X
5 ⁵ / ₁₆ "	1 ⁷ / ₈ "	4 ⁵⁹ / ₆₄ "	2 ¹ / ₁₆ "	40-19-32	40-19-32-1X
5 ⁵ / ₁₆ "	1 ⁷ / ₈ "	6 ²¹ / ₃₂ "	2 ¹ / ₁₆ "	40-19-35	40-19-35-1X

N.S.S.—Not Sold Separately

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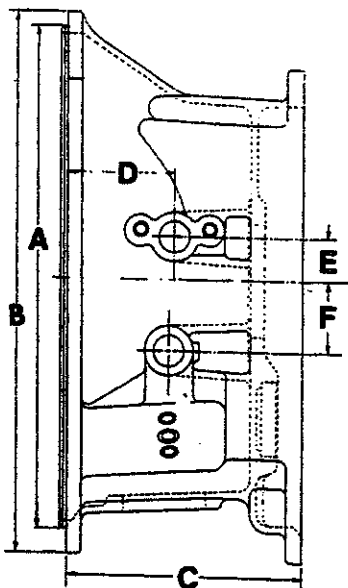
MODEL ES52-5

CLUTCH HOUSING and DRIVE GEAR BEARING CAP GROUP T210-ES52-5

Ref. No.	Part Number	Part Description	Qty.
CLUTCH HOUSING			
E-2	See Tab Bills	Clutch Housing Assembly (see page 20).....	1
E-3	See Below	Clutch Housing	1
E-4	128C-20	Bushing—clutch release shaft	2
E-5	46-96-2-1X	Hand Hole Cover Assembly.....	1
E-5	40-468-1	Oil Trough	1
E-6	545088	Pin—drive oil trough.....	2
E-7	330564-1	Lift Hook	1
E-8	545082-7	Bolt—clutch housing to case (MF10 × 1.25 × 55mm)	16
E-9	545086-6	Dowel Pin—case front.....	2
E-10	49-477-1	Support—front shift bar	1
E-11	545082-9	Bolt—shift bar support (MF10 × 1.25 × 35mm)	2
N.S.	500169-5	Nipple—clutch release shaft.....	2
DRIVE GEAR BEARING CAP GROUP			
F-1	See Tab Bills	Cap & Seal Assembly (see table page 6)	1
F-2	N.S.S.	Cap	1
F-3	40-463-6-1X	Seal—drive gear bearing cap (stem only).....	1
or	40-463-4-1X	Seal—drive gear bearing cap (flat only)	1
F-4	545093	Cap Screw—drive gear bearing cap	8
F-5	97-381-30	Snap Ring—bearing drive gear front	1
F-6	550988	Bearing—drive front	1
F-7	40-411-1	Return spring bracket (navistar only).....	1
F-8	49-468-2	Oil Ring	1

CLUTCH HOUSING DIMENSIONS

SAE		
Size No.	A Pilot Dia.	B O.D.
1	20 ¹ / ₈ "	21 ³ / ₄ "
2	17 ⁵ / ₈ "	19 ¹ / ₄ "
3	16 ¹ / ₈ "	17 ³ / ₄ "



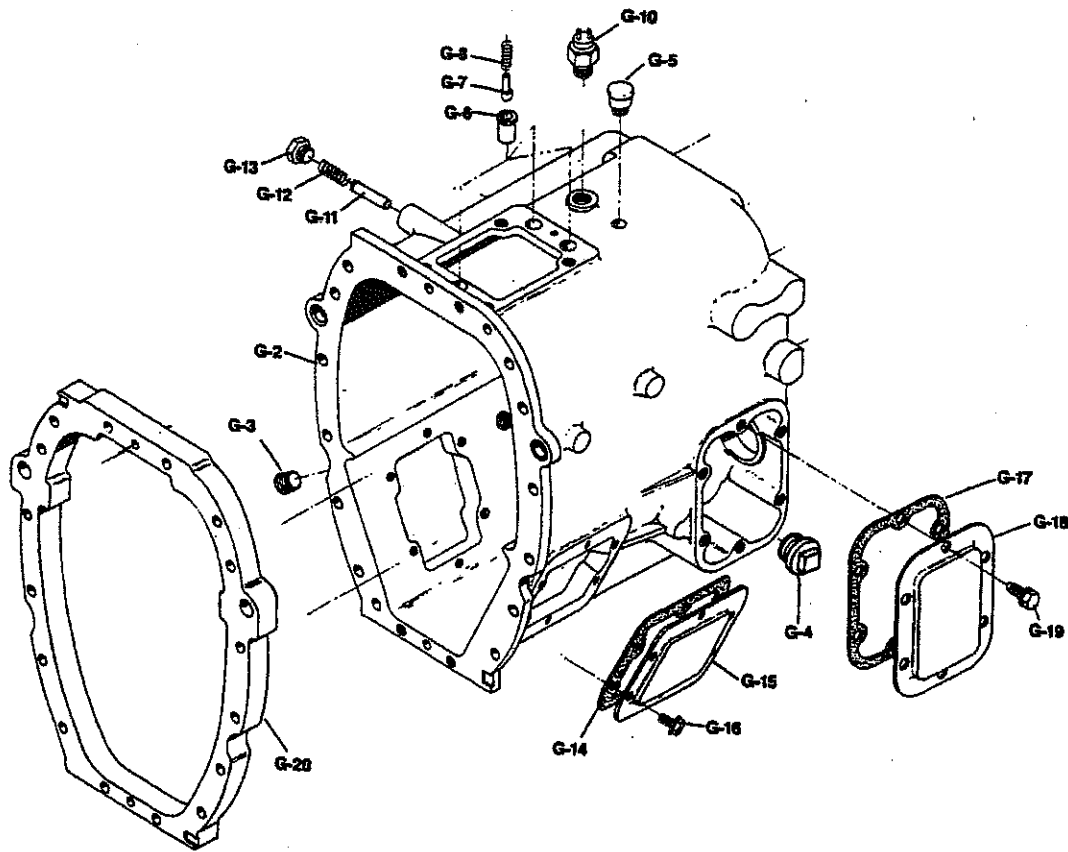
CLUTCH HOUSING					RELEASE SHAFT HOLE			
Assembly No.	Part No.	Casting No.	S A E	C Length	Dia.	D C/L to Front Face	E Above C/L	F Below C/L
†49-518-4-2X	49-518-4	C40-518-2	2	8 ¹⁷ / ₃₂ "	1"	3 ³ / ₄ "	1 ¹ / ₂ "	—
†49-518-5-2X	49-518-5	C40-518-2-1	2	8 ¹⁷ / ₃₂ "	1"	3 ¹⁹ / ₃₂ "	—	2 ¹ / ₂ "
	49-518-6-1X	C40-518-4-1	2	6.802"	—	3 ³ / ₄ "	1 ¹ / ₂ "	—
						2 ⁹ / ₁₆ "	—	3"

†Includes (4) release shaft bushings 128C-20.

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T210-ES52-5

MODEL ES52-5 CASE GROUP



MODEL ES52-5

CASE GROUP and RELATED PARTS

T210-ES52-5

Ref. No.	Part Number	Part Description	Qty.
CASE GROUP			
G-1	See Tab Bills	Case Assembly (see case table below)	1
G-2	N.S.S.	Case	1
N.S.	NP-96	Plate—name	1
N.S.	NP-196	Plate—patent	1
N.S.	252-SP	Pin—nameplate	4
N.S.	330934	Magnet Cermic	1
N.S.	330800	Plug—side hole (3/8" -16 x 3/4")	2
G-3	500100	Plug—filler (3/4" -14 N.P.T.F.)	1
G-4	62-39-3	Plug—magnetic drain (3/4" -14 N.P.T.F.)	1
G-5	312268	Breather—assembly	1
G-6	40-487-1	Insert—poppet spring & ball	3
G-7	101-438-4	Plunger—poppet	3
G-8	97-72-23	Spring—shift bar poppet	3
G-10	313538	Switch—back-up lite (Navistar only)	1
or	313539	Switch—back-up lite (Ford)	1
G-11	40-438-1	Pin—1st & reverse select plunger	1
G-12	62-72-8	Spring—1st & reverse shift finger plunger	1
or	40-72-3	Spring—1st & reverse shift finger plunger (White) (R.V.I.)	1
G-13	40-59-1	Plug—1st & reverse plunger	1
G-14	97-324-1-1X	Gasket—6 bolt P.T.O. aperture cover	2
G-15	50-267-2	Cover—6 bolt P.T.O. aperture	2
G-16	330800	Bolt—P.T.O. aperture (3/8" -16 x 3/4")	12
G-17	49-324-1-1X	Gasket—reverse idler cover	1
G-18	40-96-3	Cover—reverse idler	1
G-19	545085	Bolt—reverse idler cover (M10 x 1.5 x 20mm)	6
G-20	49-215-1	Spacer—case to clutch housing	1

CASE TABLE

Case Assembly	Case Casting No. (N.S.S.)	Plug—Side Hole (N.S.)	4 Pins N.S. (252-SP) Nameplate N.S.	OIL PLUG		G-6 Poppet Insert	G-5 Breather	Used by
				G-3 Filler	G-4 Drain			
49-15-1-1X	C49-15-2	—	NP-96	500100	62-39-3	40-487-1	312268	Navistar
49-15-4-1X	C49-15-2	330800	NP-96	500100	62-39-3	40-487-1	312268	

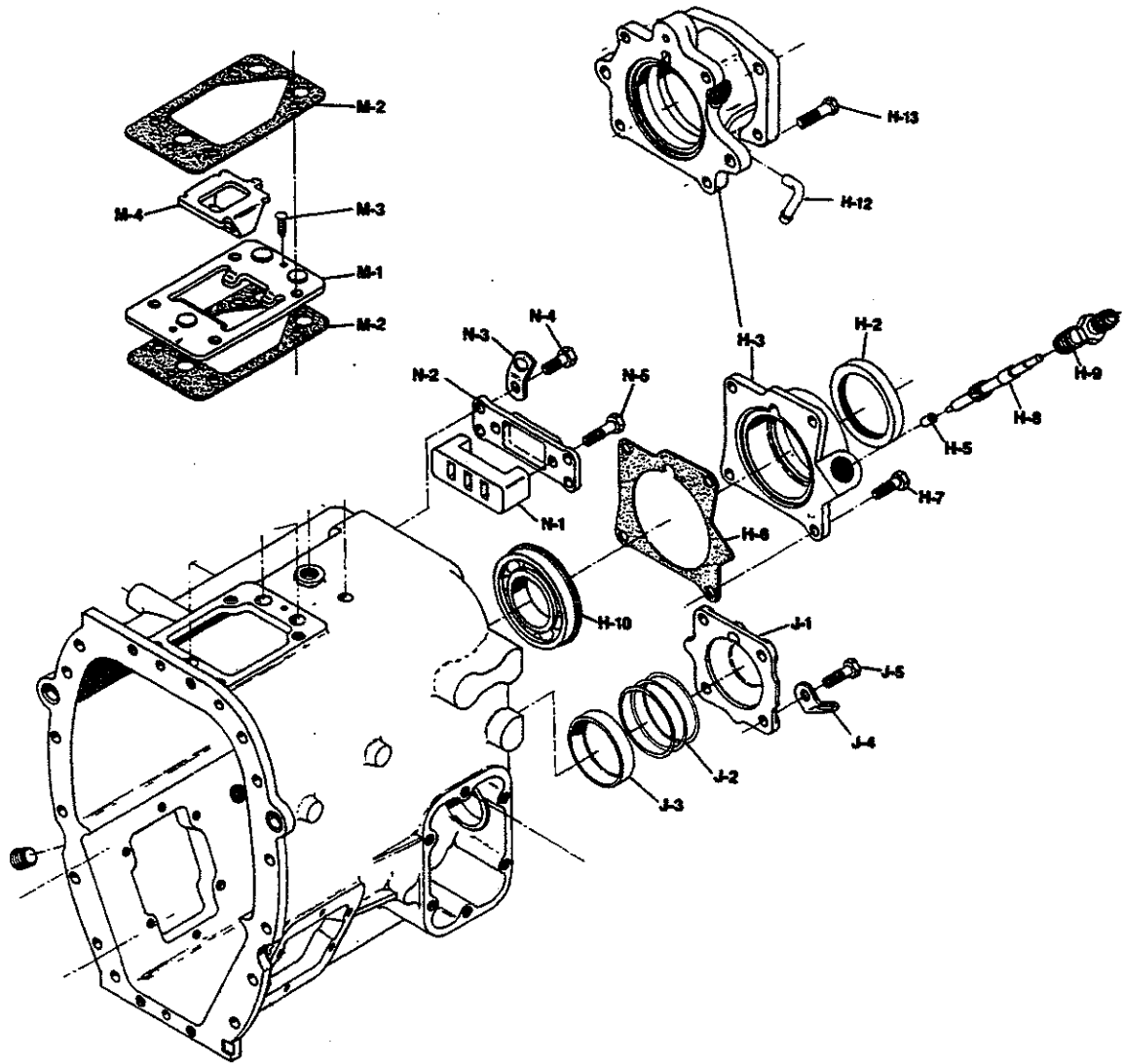
N.S.—Not Shown

N.S.S.—Not Sold Separately

MODEL ES52-5

T210-ES52-5

REAR BEARING CAP GROUP and RELATED PARTS



BEARING CAP ASSEMBLY INCLUDES

Part Number	Oil Seal	Casting Number	Speedometer Bushing		
H-1	H-2	—	H-5	Brake	Used By
40-19-19-2X	63-463-1	40-19-19	60-475-1	DCM	Navistar
40-19-22-2X	63-463-1	40-19-22	60-475-1	DCM	Navistar
40-19-38-2X	63-463-1	40-19-38	60-475-1	—	Navistar
40-19-39-1X	63-463-1	40-19-39	—	—	Ford
40-19-41-2X	63-463-1	40-19-41	—	DCM	Navistar
40-19-42-2X	63-463-1	40-19-42	—	DCM	Navistar
40-19-43-2X	63-463-1	40-19-43	60-475-1	—	Navistar

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REAR BEARING CAP GROUP and RELATED PARTS

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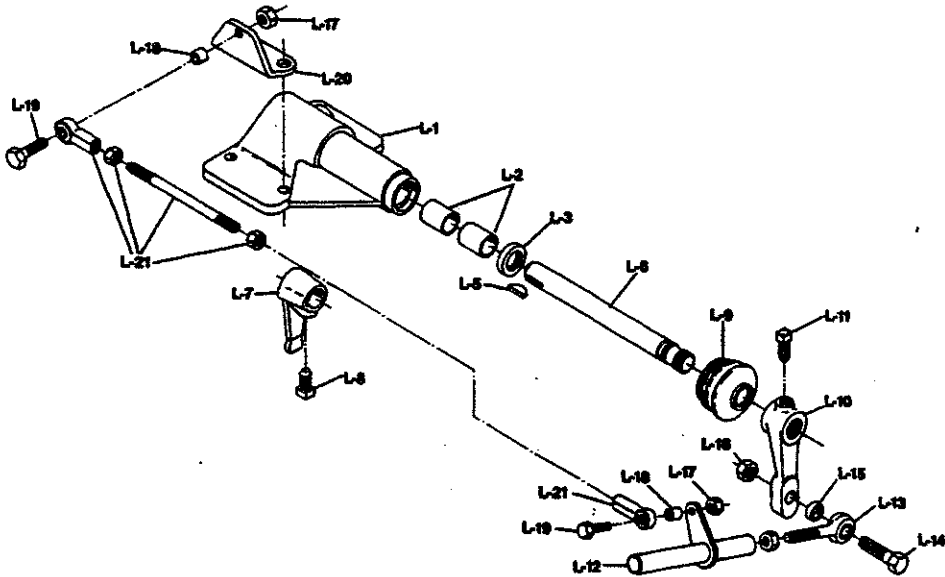
Ref. No.	Part Number	Part Description	Qty.
MAINSHAFT REAR BEARING CAP GROUP			
H-1	See Tab Bills	Cap Assembly—mainshaft bearing rear	1
H-2	63-463-1	Oil Seal—mainshaft rear bearing cap	1
H-3	See page 10	Cap Sub Assembly—mainshaft rear	1
H-4	N.S.S.	Cap—mainshaft rear bearing	1
H-5	See Page 10	Bushing—speedometer	1
H-6	40-223-1	Gasket—mainshaft rear bearing cap	1
or	40-223-3	Gasket—mainshaft rear bearing cap (brake only)	1
H-7	545082-3	Bolt—rear bearing cap (MF10 x 1.378 x 35mm)	4
H-8	See Tab Bills	Gear—speedometer drive	1
H-9	55-454-1	Sleeve—1¼" speedometer driven gear	1
or	97-454-2-1X	Sleeve & oil seal	1
N.S.	44-539-1	Cap—speedometer dust	1
N.S.	55-334-1	Plug—speedometer (used without driven gear)	1
N.S.	545106	Plug—speedometer outlet (electronic)	1
H-10	550989	Bearing—mainshaft rear	1
H-11	545021	Plug—electronic speedometer (Ford)	1
H-12	37179	Tube—vent (assembly to front of transmission)	1
H-13	545084-2	Bolt—cap (D.C.M. Brake) (MF12 x 1.25 x 35mm)	2
or	545084-4	Plug—case (rear holes) (MF12 x 1.25 x 16mm)	2
COUNTERSHAFT REAR BEARING CAP GROUP			
J-1	49-22-1	Cap—countershaft rear bearing	1
J-2		Shim—countershaft rear bearing	
	49-228-1-1	(.0055/.0045)	1
	49-228-1-2	(.0110/.0090)	1
	49-228-1-3	(.0165/.0135)	1
J-3	550978	Cup—countershaft rear bearing	1
J-4	330564-1	Lift hook	1
J-5	545002-4	Bolt—countershaft rear bearing cap (.375 -16 x 1.750)	4
INTERLOCK GROUP			
M-1	40-200-1	Plate—interlock retainer	1
M-2	40-155-1	Gasket—case to interlock plate	2
M-3	545091	Screw—drive (interlock retainer)	2
M-4	40-200-2	Plate—interlock	1
REAR SHAFT BAR SUPPORT GROUP			
N-1	40-477-2	Support—rear shift bar	1
N-2	40-96-1	Cap—rear shift bar	1
N-3	330564-1	Lift hook	1
N-4	545082-1	Screw—shift bar cap (MF10 x 1.25 x 25mm)	4
N-5	545082-3	Screw—shift bar support (MF10 x 1.25 x 35mm)	2

N.S.S.—Not Sold Separately

MODEL ES52-5

REMOTE CONTROL ASSEMBLY

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Ref. No.	Part Number	Part Description	40-18-1-2X	40-18-1-3X	40-18-1-6X
	See Tab Bills	Remote control assembly	1	1	1
	40-18-1-1X	Remote control cover assembly	1	1	1
L-1	N.S.S.	Remote control cover	1	1	1
L-2	40-24-1	Bushing—remote control cover	2	2	2
L-3	28P-19	Seal—remote control rod	1	1	1
L-4	40-65-1-1X	Inner shifter shaft, finger and key	1	1	1
L-5	500007-19	Key—shift bracket	1	1	1
L-6	40-65-1	Shaft—remote control	1	1	1
L-7	40-6-1	Finger—shift	1	1	1
L-8	545004-1	Set screw— $\frac{7}{16}$ "-20 x 72" square head	1	1	1
L-9	97-483-3	Boot—shift rod	1	1	1
N.S	LW-3-9	Lockwire	1	1	1
L-10	40-6-3	Control lever	1	—	1
or	40-6-5	Control lever	—	1	—
L-11	500550-7	Set screw— $\frac{7}{16}$ "-14 x $\frac{7}{8}$ " square head	1	1	1
L-12	40-65-3-1X	Shift rod	1	1	—
L-13	330938	Rod end	1	1	—
L-14	545001-2	Bolt—control lever ($\frac{1}{2}$ "-13 x $2\frac{1}{4}$ " hex head) ..	1	1	—
L-15	40-38-2	Spacer—control lever bolt	1	1	—
L-16	500370-5	Nut—control lever and rod end ($\frac{1}{2}$ "-13 hex) ..	1	1	—
L-17	500370-3	Nut—tie rod assy. mounting bolt ($\frac{3}{8}$ "-16 hex) ..	2	2	—
L-18	40-38-3	Spacer—tie rod assembly mounting bolt	2	2	—
L-19	545002-7	Bolt—tie rod assy. ($\frac{3}{8}$ "-16 x $1\frac{1}{2}$ " hex head) ..	2	2	—
L-20	40-354-3	Bracket—tie rod	1	1	—
L-21	40-65-2-1X	Tie rod assembly	1	1	—

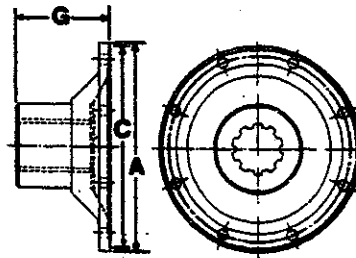
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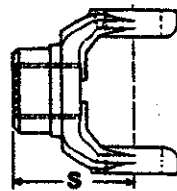
COMPANION FLANGES and END YOKES

T210-ES52-5

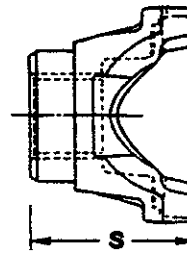


COMPANION FLANGE

Companion Flanges						
Joint Series	A Flange Diameter	Part No. Companion Flange Assembly	Part No. Companion Flange	G End of Hub to Flange Face Length	C Pilot Diameter F-Female M-Male	Brake Size
1480/1550	Rectangular	—	53-106-2	2 ⁷ / ₈ "	F-3 ³ / ₄ "	9x3 or 12x4



FULL ROUND



U-BOLT--BRG. STRAP--HALF ROUND

Series	Yoke Style	End Yoke Part Number	S End of Hub To Center Line Length	Joint Angle	Brake Size
1480	U-Bolt	3-4-8781	4 ¹¹ / ₆₄ "	22 ¹ / ₂ °	—
1480	Brg. Strap**	3-4-8931-2	3 ²⁹ / ₃₂ "	23 ¹ / ₂ °	—
1550	U-Bolt	4-4-4491	4 ¹ / ₆₄ "	21 ¹ / ₂ °	—
1550	Brg. Strap*	4-4-4491-1	4 ¹ / ₆₄ "	21 ¹ / ₂ °	—
1550	Brg. Strap**	4-4-4491-2	4 ¹ / ₆₄ "	21 ¹ / ₂ °	—
1550	U-Bolt	4-4-4601	6 ²⁷ / ₆₄ "	22°	12x4
1550	U-Bolt	4-4-4611	4 ¹¹ / ₆₄ "	22 ¹ / ₂ °	—
1550	Brg. Strap*	4-4-4611-1	4 ¹¹ / ₆₄ "	22 ¹ / ₂ °	—
1550	Brg. Strap**	4-4-4611-2	4 ¹¹ / ₆₄ "	22 ¹ / ₂ °	—
1550	Half Rnd.	(A) 4-4-6111-1X	7 ¹ / ₃₂ "	22°	12x4
1610	Full Rnd.	5-4-6321	4"	19°	—
1610	Half Rnd.	5-4-6321-1	4"	19°	—
1610	Full Rnd.	5-4-6481	4 ¹¹ / ₆₄ "	22 ¹ / ₂ °	—
1610	Half Rnd.	5-4-6481-1	4 ¹¹ / ₆₄ "	22 ¹ / ₂ °	—
1610	Full Rnd.	5-4-6491	6 ²¹ / ₃₂ "	22°	12x4
1610	Half Rnd.	(A) 5-4-7611-1X	7 ⁹ / ₁₆ "	22°	12x4
1710	Full Rnd.	6-4-7301	5 ¹ / ₄ "	33 ¹ / ₂ °	—
1710	Half Rnd.	6-4-7301-1	5 ¹ / ₄ "	33 ¹ / ₂ °	—

(A) Assembly Includes Brake Drum

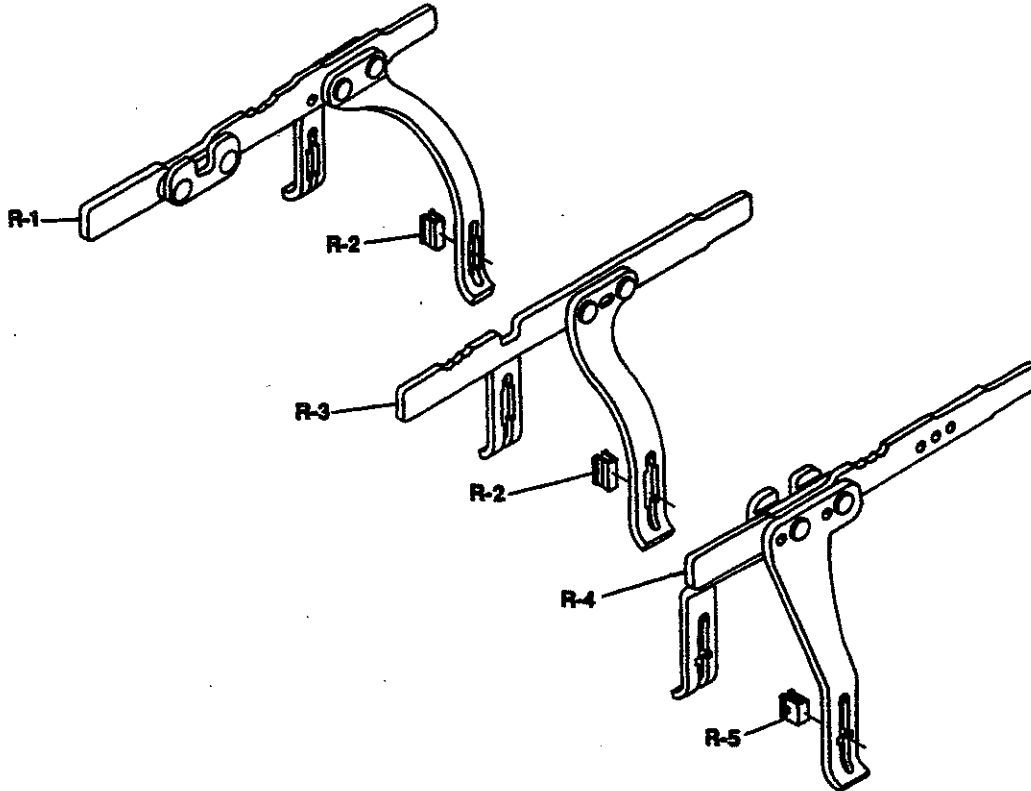
*With Tapped Holes

**With Thru Holes

MODEL ES52-5

T210-ES52-5

SHIFT BAR and FORK ASSEMBLY

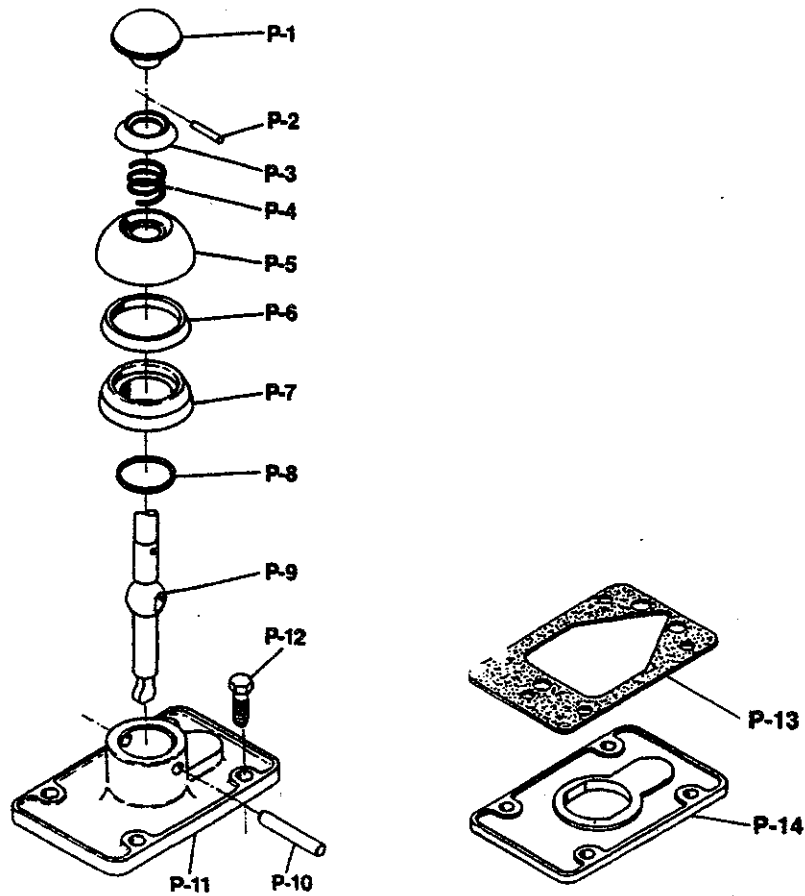


Ref. No.	Part Number	Part Description	Qty.
		SHIFT BAR and FORK ASSEMBLY	
R-1	313685-1X	Kit—1st & reverse shift fork & bar, clips, plunger	1
R-2	49-486-3	Clip—1st, reverse, 2nd & 3rd shift fork	4
R-3	313688-1X	Kit—2nd & 3rd shift fork & bar, clips, plunger	1
R-4	313689-1X	Kit—4th & 5th shift fork & bar, clips, plunger	1
R-5	40-486-1	Clip—4th & 5th shift fork	2

MODEL ES52-5

SHIFT LEVER and DOME ASSEMBLY

T210-ES52-5



Ref. No.	Part Number	Part Description	40-17-1-30X	40-17-1-12X	40-17-3-2X	40-17-3-5X
	See Tab Bills	Shift lever and dome assembly . . .	1	1	1	1
P-1	39Q-27	Handle—shift lever	—	1	1	1
P-2	286-SP	Pin—shift lever collar	1	1	1	1
P-3	55Q-7	Collar—compression	1	1	1	1
P-4	56Q-25	Spring—compression	1	1	1	1
P-5	54Q-13	Cup—compression	1	1	1	1
P-6	69Q-6	Washer—compression	1	1	1	1
P-7	54Q-20	Insert—dome	1	1	1	1
P-8	30-463-9	“O” ring—dome seal	1	1	1	1
P-9	25Q-1701-20	Shift lever—straight	—	1	—	—
	25Q-1701-49	Shift lever—straight	—	—	1	—
	25Q-2461	Shift lever—lower end (RVI)	—	—	—	1
	25Q-2464	Shift lever—lower end	1	—	—	—
P-10	53Q-15	Shaft—rock	1	1	1	1
P-11	40-17-1	Dome—shift lever (overall height 2”)	1	1	—	—
	40-17-3	Dome—shift lever (overall height 3.31”)	—	—	1	1
P-12	545028	Bolt—shift tower (7/16”-14 x 1 1/4”) (not included in assembly)	—	4	4	4
or	545028-1	Bolt—shift tower (7/16”-14 x 1 3/4”)	4	—	—	—
P-13	40-155-1	Gasket—tower	2	1	1	1
P-14	49-37-6	Spacer—tower (.445”)	1	—	—	—

PARTS LISTED IN THIS CATALOG MAY NO LONGER BE AVAILABLE, USE WITH TRANSMISSION SUPERSEDING LIST.

MODEL ES52-5

T210-ES52-5

CLUTCH RELEASE CODE TABLE

Rel.Code See Tab Bill	CR-7 Yoke*	Shaft		CR-6 Pedal Adjusting Arm	Rel.Code See Tab Bill	CR-7 Yoke*	Shaft		CR-6 Pedal Adjusting
		CR-1 Short	CR-2 Long				CR-1 Short	CR-2 Long	
1	105C-64	106C-1142	106C-1047	310233X	58	105C-137	106C-1141	106C-1169	310233.
2	105C-64	106C-1185	106C-438	—	59	105C-137	106C-1185	106C-438	—
3	105C-64	106C-1185	106C-839	310233X	60	105C-137	106C-1185	106C-617	310233X
4	105C-64	106C-1185	106C-1046	310233X	61	105C-137	106C-1185	106C-839	310233X
5	105C-64	106C-1185	106C-1047	310233X	62	105C-137	106C-1185	106C-939	310233X
6	105C-64	106C-1185	106C-1047	47-526-1-1X	63	105C-137	106C-1185	106C-939	310473X
7	105C-64	106C-1544	106C-839	310233X	64	105C-137	106C-1185	106C-953	310473X
					65	105C-137	106C-1185	106C-1046	310233X
8	105C-68	106C-1142	106C-438	—	66	105C-137	106C-1185	106C-1046	310473X
9	105C-68	106C-1142	106C-617	—	67	105C-137	106C-1185	106C-1047	310233X
10	105C-68	106C-1142	106C-617	310233X	68	105C-137	106C-1185	106C-1083	310233X
11	105C-68	106C-1142	106C-839	310233X	69	105C-137	106C-1185	106C-1094	—
12	105C-68	106C-1142	106C-939	310233X	70	105C-137	106C-1185	106C-1094	310233X
13	105C-68	106C-1142	106C-1046	310233X	71	105C-137	106C-1185	106C-1123	—
14	105C-68	106C-1142	106C-1047	310233X	72	105C-137	106C-1185	106C-1123	310233X
15	105C-68	106C-1278	106C-438	—	73	105C-137	106C-1185	106C-1367	—
					74	105C-137	106C-1185	106C-1367	310233X
16	105C-117	106C-1071	106C-939	310233X	75	105C-137	106C-1185	106C-1375	310873X
17	105C-117	106C-1071	106C-1094	310233X	76	105C-137	106C-1185	106C-1515	—
18	105C-117	106C-1142	106C-939	310233X	77	105C-137	106C-1185	106C-1529	—
19	105C-117	106C-1185	106C-438	—	78	105C-137	106C-1185	330610-5	—
20	105C-117	106C-1185	106C-617	310233X	79	105C-137	106C-1216	106C-617	310233X
21	105C-117	106C-1185	106C-839	47-526-1-1X	80	105C-137	106C-1278	106C-438	—
22	105C-117	106C-1185	106C-839	310233X	81	105C-137	106C-1278	106C-588	—
23	105C-117	106C-1185	106C-953	310873X	82	105C-137	106C-1278	106C-588	310233X
24	105C-117	106C-1185	106C-960	310233X	83	105C-137	106C-1278	106C-617	310233X
25	105C-117	106C-1185	106C-1046	310233X	84	105C-137	106C-1278	106C-939	310233X
26	105C-117	106C-1185	106C-1047	310233X	85	105C-137	106C-1278	106C-939	310873X
27	105C-117	106C-1185	106C-1083	—	86	105C-137	106C-1278	106C-960	310233X
28	105C-117	106C-1185	106C-1083	310233X	87	105C-137	106C-1278	106C-1046	—
29	105C-117	106C-1185	106C-1083	310473X	88	105C-137	106C-1278	106C-1046	310233X
30	105C-117	106C-1185	106C-1094	310233X	89	105C-137	106C-1278	106C-1047	—
31	105C-117	106C-1185	106C-1094	310873X	90	105C-137	106C-1278	106C-1047	310233X
32	105C-117	106C-1185	106C-1169	310233X	91	105C-137	106C-1278	106C-1083	310233X
33	105C-117	106C-1185	106C-1315	—	92	105C-137	106C-1278	106C-1094	310233X
34	105C-117	106C-1185	106C-1315	310233X	93	105C-137	106C-1278	106C-1375	310233X
35	105C-117	106C-1185	106C-1315	47-526-1-1X	94	105C-137	106C-1278	106C-1422	310233X
36	105C-117	106C-1185	106C-1417	310233X	95	105C-137	106C-1278	106C-1529	—
37	105C-117	106C-1185	106C-1417	310873X	96	105C-137	106C-1360	106C-1083	—
38	105C-117	106C-1185	106C-1490	310233X	97	105C-137	106C-1360	106C-1422	310233X
39	105C-117	106C-1278	106C-939	310233X	98	105C-137	106C-1375	106C-438	310233X
40	105C-117	106C-1278	106C-960	310873X	99	105C-137	106C-1498	106C-438	—
41	105C-117	106C-1278	106C-1047	310233X	100	105C-137	106C-1498	106C-617	310233X
42	105C-117	106C-1278	106C-1094	310233X	101	105C-137	106C-1498	106C-617	310473X
43	105C-117	106C-1278	106C-1315	310233X	102	105C-137	106C-1498	106C-939	310233X
44	105C-117	106C-1278	106C-1367	310233X	103	105C-137	106C-1498	106C-939	310473X
45	105C-117	106C-1360	106C-1083	310233X	104	105C-137	106C-1498	106C-953	310233X
46	105C-117	106C-1360	106C-1315	310233X	105	105C-137	106C-1498	106C-959	310233X
47	105C-117	Thru Shaft	106C-1550	—	106	105C-137	106C-1498	106C-1046	310233X
48	105C-117	Thru Shaft	106C-1558	—	107	105C-137	106C-1498	106C-1047	—
					108	105C-137	106C-1498	106C-1047	310233X
49	105C-124	106C-1185	106C-438	—	109	105C-137	106C-1498	106C-1083	310233X
50	105C-124	Thru Shaft	106C-1566	310233X	110	105C-137	106C-1498	106C-1094	—
51	105C-124	Thru Shaft	106C-1566	310473X	111	105C-137	106C-1498	330610-11	310233X
52	105C-124	Thru Shaft	106C-1566	310873X	112	105C-137	330601-1	106C-939	310233X
52A	105C-124	Thru Shaft	49-510-1	310233X					
53	105C-132	106C-1185	106C-1047	310233X	113	85-509-3	106C-1360	106C-1417	310233X
54	105C-132	106C-1185	106C-1083	310233X	114	85-509-3	Thru Shaft	106C-1578	310233X
55	105C-132	106C-1185	106C-1417	310873X	115	85-509-3	Thru Shaft	106C-1578	310873X
56	105C-132	106C-1185	46-510-9	—					
57	105C-132	106C-1278	46-510-9	—	116	312916	Thru Shaft	97-510-2	—

■ Use Clutch Release Bearing 7743X

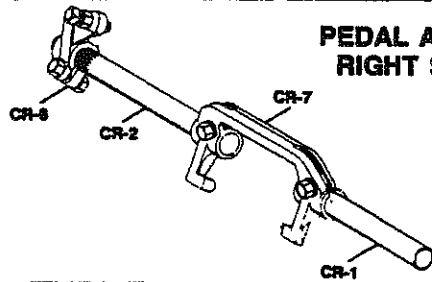
* CLUTCH RELEASE YOKE ATTACHING PARTS—Use one KEY 10-30, two SCREWS 330231 and two LOCK WASHERS 500356-12

PARTS LISTED IN THIS CATALOG MAY NO LONGER BE AVAILABLE, USE WITH TRANSMISSION SUPERSEDING LIST.

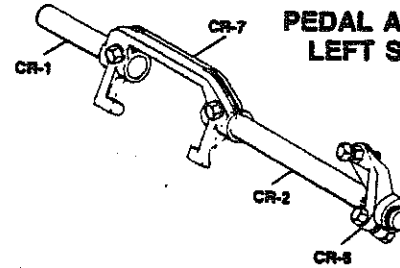
MODEL ES52-5

CLUTCH RELEASE PARTS and DIMENSIONS

T210-ES52-5



**PEDAL ADJUSTING ARM
RIGHT SIDE—310473X**



**PEDAL ADJUSTING ARM
LEFT SIDE—310233X**

CR-1 SHORT SHAFT

Part No.	Length
106C-1071	4.062"
106C-1141	5.125"
106C-1142	6.125"
106C-1185	5.750"
106C-1216	4.750"
106C-1278	4.812"
106C-1360	5.312"
106C-1375	6.781"
106C-1498	6.500"
106C-1544	7.000"
330601-1	6.250"

CR-2 LONG SHAFT (Cont'd)

Part No.	Type	Length
106C-1083	RS-8	7.969"
106C-1094	RS-8	8.469"
106C-1123	RS-8	12.968"
106C-1169	RS-8	9.125"
106C-1315	RS-8	7.625"
106C-1367	RS-8	10.312"
106C-1375	RS-8	6.781"
106C-1417	RS-8	7.250"
106C-1422	RS-8	7.500"
106C-1490	RS-8	16.000"
106C-1515	RS-5	11.375"
106C-1529	RS-5	8.312"
330610-5	RS-8	9.469"
330610-11	RS-8	10.750"
46-510-9	RS-5	7.125"



CR-2 LONG SHAFT

Part No.	Type	Length
106C-438	RS-5	14.000"
106C-588	RS-5	7.000"
106C-617	RS-8	10.469"
106C-839	RS-8	11.469"
106C-939	RS-8	10.000"
106C-953	RS-8	9.750"
106C-959	RS-8	11.968"
106C-960	RS-8	8.719"
106C-1046	RS-8	8.968"
106C-1047	RS-8	9.469"

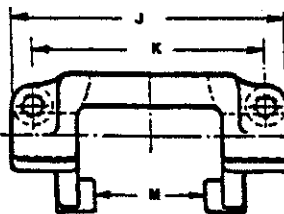
CR-6 PEDAL ADJ. ARM

310233X	For Left Side Mtg.
310473X	For Right Side Mtg.
47-526-1-1X	Lever Type 7/8"
310873X	Lever Type 7/8"

■Lever type can be used on either right or left side.

THRU SHAFT (used with Push Type Clutch)

Part No.	Type	Length
106C-1566	Splined	19.125"
106C-1550	Keyed	16.375"
106C-1558	Keyed	19.000"
106C-1578	Splined	19.500"
49-510-1	Keyed	19.120"
97-510-2	Splined	19.313"



CLUTCH RELEASE YOKES

CR-7	Forging No.	Used With	Type	J	K	M
105C-64	F105C64	Spicer 15 1/2" SP	Pull	8.000"	6.500"	4.895"
105C-68	F105C99	Spicer 14" SP	Pull	7.125"	5.750"	4.132"
105C-117 ¹	F105C118	Spicer & Others	Push	8.375"	7.000"	4.885"
105C-124	F105C125	Spicer AL & AR	Push	3.750"	2.125"	2.885"
105C-132 ²	F105C118	Spicer & Others	Push	8.375"	7.000"	4.885"
105C-137	F105C138	Spicer 13" and	Pull	8.000"	6.500"	4.895"
	C105C138	14" 2P				
85-509-3 ³	F105C118	Spicer & Others	Push	8.375"	7.000"	4.885"

¹Machined washer surface on yoke front

²Machined washer surface on yoke rear (for clearance)

³Same as ¹ above except contains spring holes in lugs

■Use 7743X Clutch Release Bearing

★ CLUTCH RELEASE YOKE ATTACHING PARTS—

Use one KEY 10-30, two SCREWS 330231 and two LOCK WASHERS 500356-12

NOTE: When changing from a two plate to single plate clutch or vice versa, a different bearing cap will be required.

PARTS LISTED IN THIS CATALOG MAY NO LONGER BE AVAILABLE, USE WITH TRANSMISSION SUPERSEDING LIST.

MODEL ES52-5

OVERHAUL KITS

T210-ES52-5

Part Number	Part Description	Qty.
	MAJOR OVERHAUL KIT	
313400-67X	Major Overhaul Kit	1
501200	Nut—mainshaft output	1
53-205-1	Washer—mainshaft nut	1
313401-29X	Thrust Washer Kit	1
313429-7X	Shifter Housing Small Parts Kit	1
313432-30X	Minor Overhaul kit	1
	MINOR OVERALL KIT	
	(Included in MAJOR OVERHAUL KIT)	
313432-30X	Minor Overhaul Kit	1
	BEARINGS	
550986	Mainshaft Pocket	1
550989	Mainshaft Rear Cone	1
550988	Drive Gear Front	1
550963	Mainshaft 2nd & reverse	2
550886	Reverse Idler Gear	2
550964	Countershaft Front—cone	2
550965	Countershaft Front—cup	1
550868	Countershaft Rear—cone	1
550978	Countershaft Rear—cup	1
550968	Mainshaft 3rd Needle	1
550991	Mainshaft 1st Speed	1
550990	Mainshaft 4th Speed	1
40-486-1	Clip—shift fork; (4th & 5th)	2
49-486-2	Clip—shift fork (1st & reverse) (2nd & 3rd)	4
49-486-3	Clip—shift fork (1st & reverse) (2nd & 3rd)	4
40-463-4-1X	Seal—drive gear (flat type)	1
40-463-6-1X	Seal—drive gear (stem type)	1
63-463-1	Seal-mainshaft rear	1
545077	#2 Moly Grease (packet)	1
545080-1	Locite—Threadlock Adhesive (vial)	1
312475-40X	Gasket Kit	1
313438-3X	Shim Kit—countershaft rear	1
313024-17X	Snap Ring—kit	1
2359	Service Manual	1
2770	Bulletin—bearing lube instruction	1
2783	Bulletin—locite application for mainshaft nut	1
	(Included in MAJOR OVERHAUL KIT)	
313401-29X	THRUST WASHER KIT	1
974-W	Reverse Idler	2
49-47-2	Mainshaft—3rd & 4th speed	1
49-47-1	Mainshaft—1st & 2nd speed	1
49-47-3	Mainshaft—reverse	1
545087	Pin-lock	2
313429-7X	SHIFTER HOUSING SMALL PARTS	1
2823	Bulletin—shift bar assembly & poppet plunger	1
40-80-1	Ball—poppet	3
101-438-4	Plunger—poppet	3
40-487-1	Insert—poppet spring and ball	3
40-438-1	Pin-1st and reverse select plunger	1
97-72-23	Spring—shift bar poppet	3
62-72-8	Spring—1st & reverse shift finger plunger	1

MODEL ES52-5

OVERHAUL KITS

T210-ES52-5

Part No.	Part Description	Qty.
	(Included in MAJOR OVERHAUL KIT)	
312475-40X	GASKET KIT	1
40-223-1	Mainshaft Rear Bearing Cap	1
40-223-3	Mainshaft Rear Bearing Cap (D.C.M. Brake)	1
97-324-1-1X	P.T.O. Aperture Cover	2
49-324-1-1X	Reverse Idler Cover	1
40-155-1	Tower	1
545056-9	Anaerobic Sealant	1
2792	Bulletin—liquid gasket	1
313024-17X	SNAP RING KIT	1
40-381-3	Mainshaft 3rd & 4th Thrust Washer	1
40-381-3	Countershaft Head End Gear	1
40-381-4	Mainshaft 2nd & 3rd Clutch Gear	1
49-381-1	Mainshaft 1st & 2nd Speed Thrust Washer	1
27-381-5	Countershaft 4th Gear	1
97-381-30	Mainshaft Front Bearing	1
40-381-1	4th & 5th Clutch Gear	1
313438-3X	SHIM KIT	1
49-228-1-3	Countershaft Rear Bearing Cap (.0165/.0135)	1
49-228-1-2	Countershaft Rear Bearing Cap (.0110/.0090)	1
49-228-1-1	Countershaft Rear Bearing Cap (.0055/.0045)	1
2793	Bulletin—countershaft shim kit	1
40-463-4-1X	SUB ASSEMBLY—oil seal & installation sleeve (flat cap)	1
2819	Bulletin—oil seal installation instruction	1
40-463-4	Seal—drive gear bearing cap	1
40-204-1	Sleeve—oil seal installation (1.75 diameter shaft)	1
40-463-6-1X	SUB ASSEMBLY—oil seal & installation sleeve (stem cap)	1
2819	Bulletin—oil seal installation instruction	1
40-463-6	Seal—drive gear bearing cap	1
40-204-2	Sleeve—oil seal installation (1.500 diameter shaft)	1
40-204-3	Sleeve—oil seal installation (1.375 diameter shaft)	1
97-324-1-1X	KIT—gasket 6 bolt P.T.O.	1
97-324-1	Gasket—P.T.O. aperture cover	1
330950	Tag—instruction (service gasket)	1
49-324-1-1X	KIT—gasket—reverse idler cover	1
49-324-1	Gasket—reverse idler cover	1
330950	Tag—instruction (service gasket)	1
313685-1X	KIT—1st & reverse shift fork & bar, clips & plunger	1
2823	Bulletin—shift bar assembly & poppet plunger	1
313685X	Sub-Assembly 1st & reverse shift fork & bar	1
49-486-3	Clip—1st & reverse shift fork	2
101-438-4	Plunger—poppet	1
313688-1X	KIT—2nd & 3rd shift fork & bar, clips & plunger	1
2823	Bulletin—shift bar assembly & poppet plunger	1
313688X	Sub-Assembly 2nd & 3rd shift fork & bar	1
49-486-3	Clip—1st reverse & 2nd, 3rd shift fork	2
101-438-4	Plunger—poppet	1
313689-1X	Kit—4th & 5th Shift fork & bar, clips & plunger	1
2823	Bulletin—shift bar assembly & poppet plunger	1
313688X	Sub-Assembly 3rd & 4th shift fork & bar	1
40-486-1	Clip—4th & 5th shift fork	2
101-438-4	Plunger—poppet	1

MODEL ES52-5

T210-ES52-5

TABULATED BILLS OF MATERIAL

Tab No.	Used By	For Use With Clutch 13" or 14" Single or 2PL	CLUTCH HOUSING			Main Drive Gear	Drive Gear Bearing Cap	Main Case Assembly
			S A E	Assembly No. E-1	Rel. Code			
Model ES52-5A								
301455								
-1		Never Released For Production						
-2		Never Released For Production						
-3		Never Released For Production						
-4		Never Released For Production						
-5	Blue Bird Body	Push Type	2	49-518-4-2X	52A	49-35-3-1X	40-19-24-1X	49-15-4-1X
-6	Navistar	Pull Type	2	49-518-5-2X	—	49-35-8-1X	40-19-40-1X	49-15-4-1X
-7		Never Released For Production						
-8	Spicer France	Push Type	2	49-518-6-1X	—	49-35-4-1X	40-19-32-1X	49-15-1-1X
-9	Spicer France	Push Type	2	49-518-6-1X	—	49-35-4-1X	40-19-32-1X	49-15-1-1X
-10	Navistar	Pull Type	2	49-518-5-2X	—	49-35-8-1X	40-19-40-1X	49-15-4-1X
-11	Ford	Push Type	2	49-518-4-2X	—	49-35-3-1X	40-19-1-1X	49-15-1-1X
Model ES52-5D								
301456								
-1	Navistar	Push Type	2	49-518-5-2X	—	49-35-3-1X	40-19-35-1X	49-15-4-1X
-2	Navistar	Pull Type	2	49-518-5-2X	—	49-35-8-1X	40-19-40-1X	49-15-4-1X
-3	Navistar	Pull Type	2	49-518-5-2X	—	49-35-8-1X	40-19-40-1X	49-15-4-1X
-4	Navistar	Push Type	2	49-518-5-2X	—	49-35-3-1X	40-19-35-1X	49-15-4-1X
-5	Navistar	Push Type	2	49-518-5-2X	—	49-35-3-1X	40-19-35-1X	49-15-4-1X
-6	Famsa	Pull Type	2	49-518-5-2X	—	49-35-8-1X	40-19-40-1X	49-15-4-1X
-7		Never Released For Production						
-8		Never Released For Production						
-9	Australia	Pull Type	2	49-518-5-2X	—	49-35-6-1X	40-19-40-1X	49-15-1-1X
-10		Never Released For Production						
-11	Spicer France	Push Type	2	49-518-6-1X	—	49-35-4-1X	40-19-32-1X	49-15-1-1X
-12	Spicer France	Push Type	2	49-518-6-1X	—	49-35-4-1X	40-19-32-1X	49-15-1-1X
-13		Never Released For Production						
-14	Navistar	Pull Type	2	49-518-5-2X	—	49-35-8-1X	40-19-40-1X	49-15-4-1X
-15	Navistar	Pull Type	2	49-518-5-2X	—	49-35-8-1X	40-19-40-1X	49-15-4-1X

MODEL ES52-5

TABULATED BILLS OF MATERIAL

T210-ES52-5

Tab No.	Rear Bearing Cap Assembly Cap, Seal and Bushing H-1	SPEEDOMETER		End Yoke or Companion Flange (page 13)	SHIFTER	
		Drive Gear B-23	Driven Gear H-8		Lever & Dome Ass'y (page 15)	Remote Control (page 17)

**Model ES525A
301455**

-1	Never Released For Production					
-2	Never Released For Production					
-3	Never Released For Production					
-4	Never Released For Production					
-5	40-19-22-2X	53-452-3	62-453-4	4-1-6051X	—	40-18-1-2X
-6	40-19-19-2X	53-452-3	—	—	—	—
-7	Never Released For Production					
-8	40-19-38-2X	53-452-4	53-453-2	5-4-6321-1	40-17-1-30X	—
-9	40-19-38-2X	53-452-4	53-453-2	4-4-4491	—	40-18-1-7X
-10	40-19-38-2X	53-452-3	—	—	—	—
-11	40-19-39-2X	53-452-6	—	—	—	—

**Model ES52-5D
301456**

-1	40-19-22-2X	53-452-3	—	—	—	—
-2	40-19-38-2X	53-452-3	—	—	—	—
-3	40-19-19-2X	53-452-3	—	—	—	—
-4	40-19-38-2X	53-452-3	—	—	—	—
-5	40-19-22-2X	53-452-3	—	—	—	—
6	40-19-38-2X	53-452-3	62-453-4	53-106-2	40-17-1-12X	—
-7	Never Released For Production					
-8	Never Released For Production					
-9	40-19-38-2X	53-452-4	53-453-2	4-4-4491-1	—	40-18-1-6X
-10	Never Released For Production					
-11	40-19-38-2X	53-452-4	53-453-2	5-4-6321-1	40-17-1-30X	—
-12	40-19-38-2X	53-452-4	53-453-2	4-4-4491	—	40-18-1-7X
-13	Never Released For Production					
-14	40-19-40-2X	53-452-5	—	—	—	—
-15	40-19-43-2X	53-452-5	—	—	—	—



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