

**Allison
Transmissions**

**Preliminary
TT 3000 Series
Parts Catalog**



Parts Catalog

Preliminary Allison Transmissions

POWERSHIFT MODELS

TT 3420-1

1 SEPTEMBER 1976



Detroit Diesel Allison

Division of General Motors Corporation
Indianapolis, Indiana 46206

NOTE:

This printed parts catalog is published annually. Interim revisions are available only on Microfiche. Either may be purchased from authorized Detroit Diesel Allison service outlets. See your yellow pages under Engines—Diesel or Transmissions—Truck, Tractor, etc.

MODELS COVERED

The Allison 3000 series models covered in this catalog are listed on page 4-1 by A/N (Assembly Number) in numerical sequence.

YOU MUST KNOW TRANSMISSION PART NUMBER

To use this catalog you must know the Allison assembly number (A/N) found on the transmission name plate. The name plate is attached to the transmission housing.

NUMERICAL INDEX

A numerical index is included in the rear of this catalog. This index is cross-referenced to indicate the history of 3000 series parts. Parts both current and superseded appear in numerical order in the Part No. column. Current part numbers refer to the figure and reference numbers of the parts. Parts replacing older parts are followed by the older part number in the history column. Parts that have been replaced are followed by the part number of the replacing part. Footnote symbols show when a part is replaced by (RB), or when a part replaces (R) an older part.

CROSS SECTION

A cross sectional view of the transmission and available options are shown on a foldout at the back of this catalog.

HOW TO ORDER PARTS

If an assembly or subassembly is ordered, all subassemblies and detail parts indented beneath it will be included.

If a detail part is ordered, only the detail part will be sent unless its part number is starred (*). A starred (*) part number means that such a part is not serviced alone. This is necessary because certain parts require factory installation or adjustment. If an order is received for a starred (*) part, the assembly or subassembly under which it is indented will be sent.

NOTE

All parts orders must be directed to your dealer — do not send them to Allison. Always include the model, the transmission assembly, and serial numbers when ordering parts. Be sure to include part name and part number.

MODEL DESIGNATION CODE
(Stamped on the Transmission Name Plate)

The letters "TT" indicate the type of transmission and its major components.

The designation 3420-1 indicates the POWERSHIFT transmission series, the converter series, the transmission basic speed ranges and either standard or heavy-duty components. The dash number indicates long or short center distance. (Center line of input shaft to center line of output shaft). The example below illustrates the meaning of the letters and numbers.

"TT" describes an integral transmission unit composed of a hydraulic twin-turbine torque converter, and a planetary gear transmission, two speeds forward and one speed reverse. The first digit (3) indicates 3000 POWERSHIFT transmission series. The second digit (4) indicates the converter series. The third digit (2) indicates the transmission basic speed ranges. The fourth digit (0) indicates standard duty components. The dash number (-1) indicates long center distance.

Code explanation

- T - indicates twin turbine
- T - indicates two speeds forward and one speed reverse
- 3 - indicates 3000 Series POWERSHIFT transmission
- 4 - indicates converter series
- 2 - indicates transmission basic speed ranges
- 0 - indicates standard duty components
- 1 - indicates long center distance (long drop)

QUICK REFERENCE LISTING
FOR YOUR POWERSHIFT DRIVE

Fill In Now

ALLISON POWERSHIFT TRANSMISSION

1. Model No. _____ Assy Part No. _____
Serial No. _____ Installation _____

ALLISON POWERSHIFT TRANSMISSION

2. Model No. _____ Assy Part No. _____
Serial No. _____ Installation _____

ALLISON POWERSHIFT TRANSMISSION

3. Model No. _____ Assy Part No. _____
Serial No. _____ Installation _____

ALLISON POWERSHIFT TRANSMISSION

4. Model No. _____ Assy Part No. _____
Serial No. _____ Installation _____

ALLISON POWERSHIFT TRANSMISSION

5. Model No. _____ Assy Part No. _____
Serial No. _____ Installation _____

ALLISON POWERSHIFT TRANSMISSION

6. Model No. _____ Assy Part No. _____
Serial No. _____ Installation _____

ALLISON POWERSHIFT TRANSMISSION

7. Model No. _____ Assy Part No. _____
Serial No. _____ Installation _____

ALLISON POWERSHIFT TRANSMISSION

8. Model No. _____ Assy Part No. _____
Serial No. _____ Installation _____

ALLISON POWERSHIFT TRANSMISSION

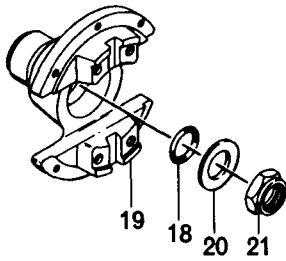
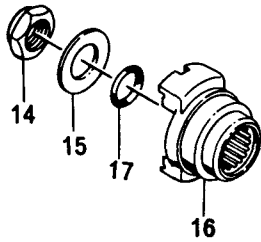
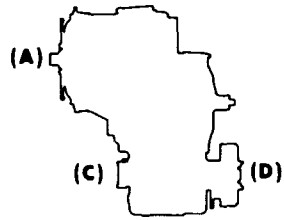
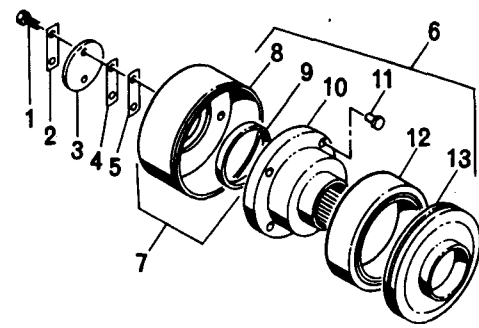
9. Model No. _____ Assy Part No. _____
Serial No. _____ Installation _____

FLANGE SECTION

TO FIND DETAIL PARTS FOR YOUR ALLISON POWERSHIFT TRANSMISSION, TURN TO
THE GROUP LISTED OPPOSITE THE ASSEMBLY PART NUMBER OF YOUR TRANSMISSION

A/N*	MODEL	GROUP	LOCATION	A/N*	MODEL	GROUP	LOCATION
6881891	TT 3420-1	C	A	6883657	TT 3420-1	A	A
6881891	TT 3420-1	D	C	6883657	TT 3420-1	B	C
6881891	TT 3420-1	D	D	6883657	TT 3420-1	E	D

* A/N* - ASSEMBLY NUMBER - FOUND ON YOUR TRANSMISSION NAMEPLATE



NOTE

Letters in parenthesis identify locations and variety of flanges available and should not be confused with the alphabetical group listings.

FIG. 1. FLANGE

GROUP A

FLANGE, FIGURE 1
LOCATION A

REF NO	NOMENCLATURE	PART NO	REQ	RECOMMENDED SPARES FOR UNITS		
				1-3	4-10	11-25
1	BOLT, HX HD, 3/8-24 X 1 1/8	9409036	2	2	4	8
2	STRIP, LOCKING	6757243	1	1	2	5
3	WASHER	6757184	1	1	2	5
4	SHIM, 0.025	6835629	AR	2	6	12
5	SHIM, 0.005	6835630	AR	2	6	12
6	KIT, FLANGE ASSY, MECH 7C TORQMATIC COUPLING	6882786	1		1	2
	6882786 KIT CONSISTS OF 6882138 FLANGE ASSY AND 6880388 INSTRUCTION SHEET					
7	FLANGE AND BUSHING ASSY	6882143	* 1			
8	FLANGE	6882141	* 1			
9	BUSHING	6830154	* 1			
10	COUPLING	6779690	* 1			
11	PIN, DOWEL	6882144	* 1			
12	HUB	6882145	* 1			
13	RETAINER	6880037	* 1			

GROUP B

FLANGE, FIGURE 1
LOCATION C

14	NUT, FLANGE RETAINING	9416389	1	1	3	5
15	WASHER, FLANGE	6773457	1	1	3	5
16	FLANGE, MECH 7C	6880097	1		1	2
17	SEAL, OIL	6880101	1	1	3	5

GROUP C

FLANGE, FIGURE 1
LOCATION A

1	BOLT, HX HD, 3/8-24 X 1 1/8	9409036	2	2	4	8
2	STRIP, LOCKING	6757243	1	1	2	5
3	WASHER	6757184	1	1	2	5
4	SHIM, 0.025	6835629	AR	2	6	12
5	SHIM, 0.005	6835630	AR	2	6	12

GROUP D

FLANGE, FIGURE 1
LOCATION C AND D

14	NUT, FLANGE RETAINING	9416389	1	1	3	5
15	WASHER, FLANGE RETAINING	6773457	1	1	3	5
16	NOT USED IN THIS GROUP					
17	SEAL, OIL	6880101	1	1	3	5

GROUP E

FLANGE, FIGURE 1
LOCATION D

18	SEAL, OIL	6880101	1	1	3	5
19	FLANGE, MECH 7C	6881090	1		1	2
20	WASHER, FLANGE RETAINING	6773457	1	1	3	5
21	NUT, FLANGE, RETAINING	9416389	1	1	3	5

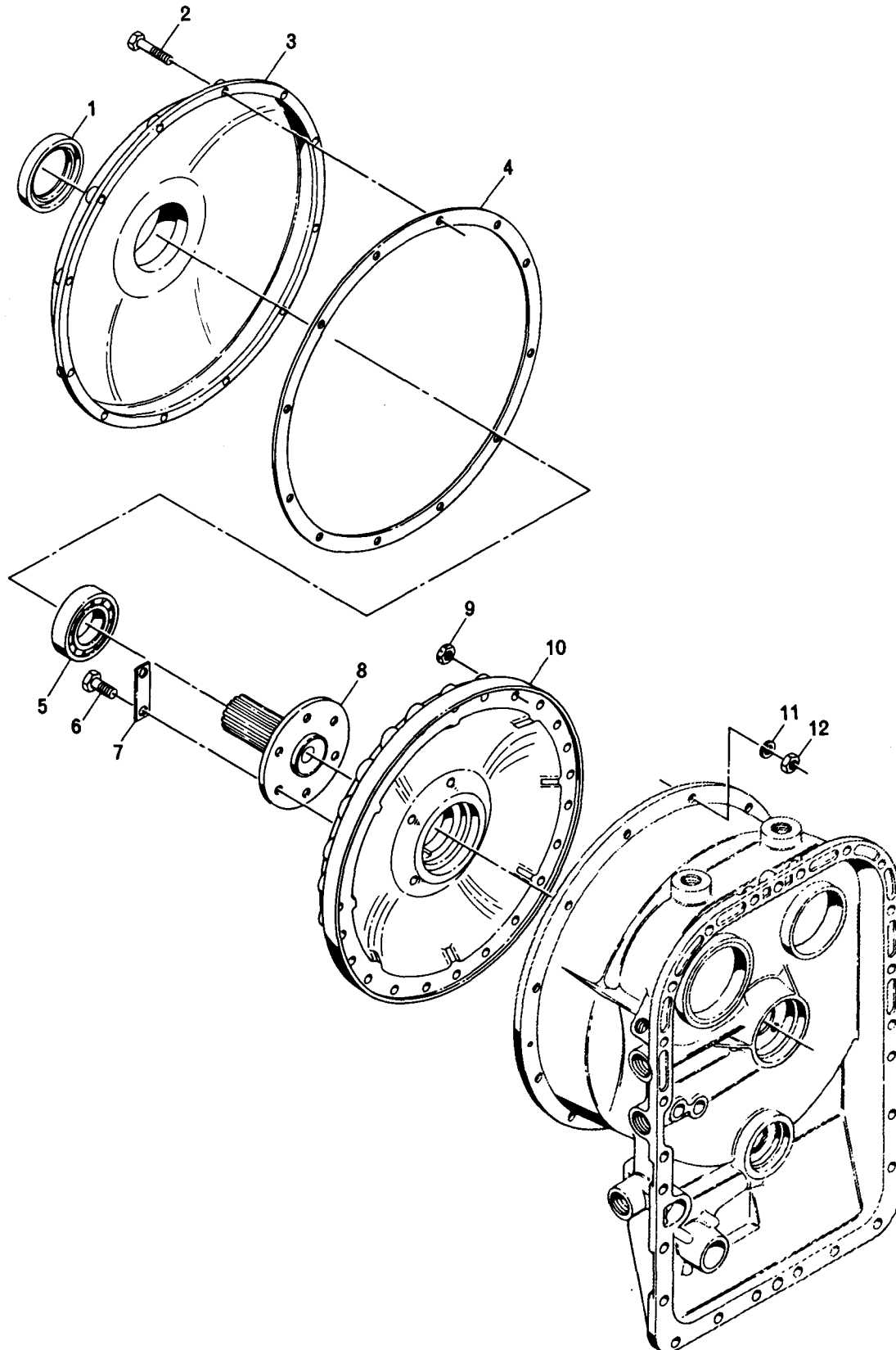
* SERVICED AS AN ASSY - NOT AS A DETAIL PART

TRANSMISSION FRONT COVER AND CONVERTER DRIVE SECTION

TO FIND DETAIL PARTS FOR YOUR ALLISON POWERSHIFT TRANSMISSION, TURN TO
THE GROUP LISTED OPPOSITE THE ASSEMBLY PART NUMBER OF YOUR TRANSMISSION.

A/N*	MODEL	GROUP	A/N*	MODEL	GROUP
6881891	TT 3420-1	A	6883657	TT 3420-1	A

* A/N* - ASSEMBLY NUMBER - FOUND ON YOUR TRANSMISSION NAMEPLATE



14507

FIG. 2. TRANSMISSION FRONT COVER AND CONVERTER DRIVE

GROUP A

TRANSMISSION FRONT COVER AND CONVERTER DRIVE, FIGURE 2
REMOTE MOUNTED

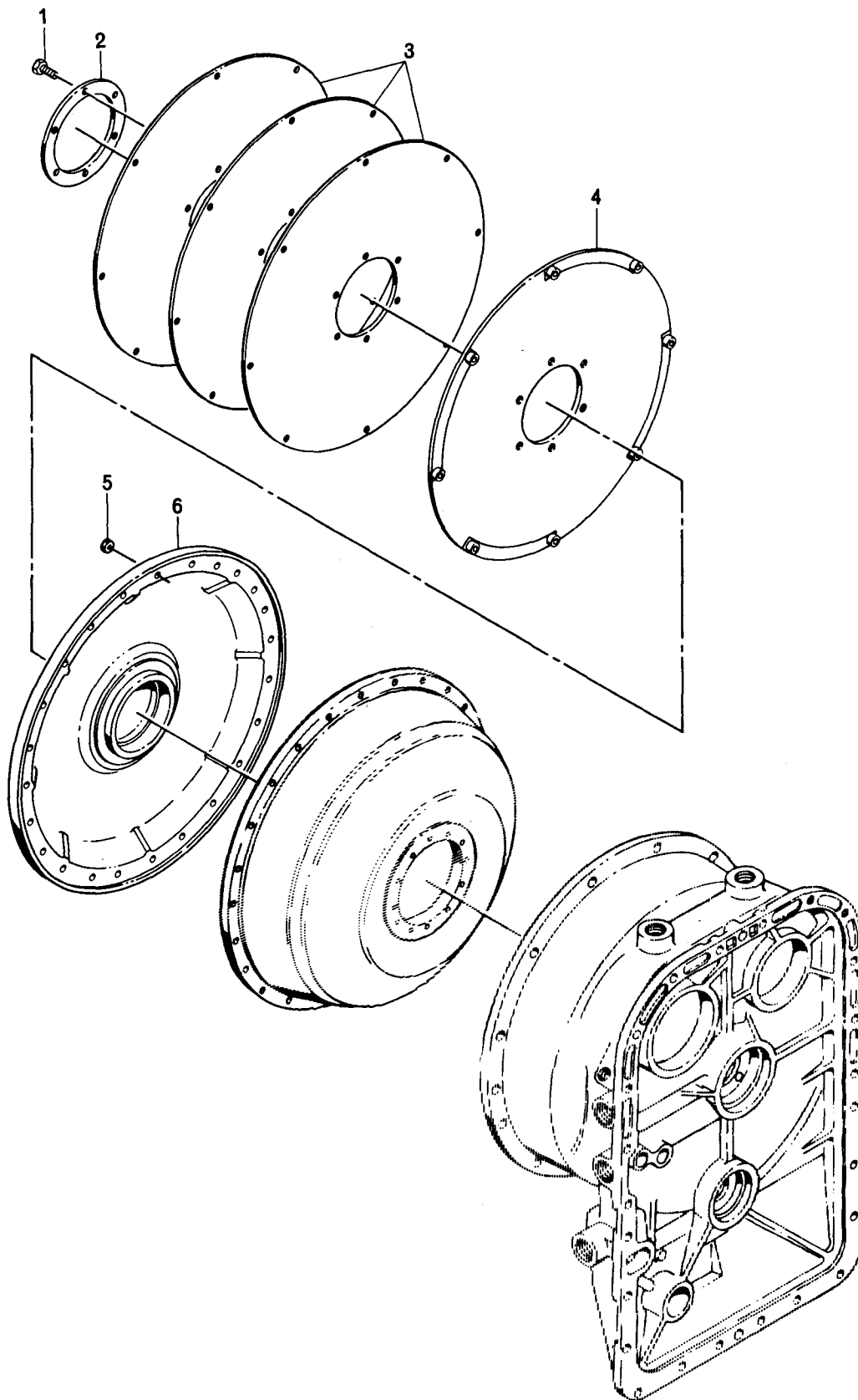
REF NO	NOMENCLATURE	PART NO	REQ	RECOMMENDED SPARES FOR UNITS		
				1-3	4-10	11-25
1	SEAL	6773373	1	1	3	10
2	BOLT, 3/8-24 X 2	181379	12	12	24	36
3	COVER, TRANSMISSION FRONT	6757254	1			1
4	GASKET, FRONT COVER	6758030	1	1	3	10
5	BEARING, SINGLE ROW BALL, ND3211XR1A	903211	1	1	2	5
6	BOLT, 1/2-13 X 1 1/8	179882	6	6	12	18
7	STRIP, LOCKING	6757230	3	3	6	12
8	SHAFT, INPUT	6757250	1		1	2
9	NUT, HX, 5/16-24	451006	24	24	48	96
10	COVER, TORQUE CONVERTER PUMP	6880543	1		1	2
11	WASHER, LOCK, 3/8	103321	12	12	24	36
12	NUT, HX, 3/8-24	103026	12	12	24	36

FLEX DISK. CONVERTER DRIVE AND DRY CONVERTER TYPE HOUSING SECTION

TO FIND DETAIL PARTS FOR YOUR ALLISON POWERSHIFT TRANSMISSION, TURN TO
THE GROUP LISTED OPPOSITE THE ASSEMBLY PART NUMBER OF YOUR TRANSMISSION.

A/N*	MODEL	GROUP	A/N*	MODEL	GROUP
XXXXXXX	XX XXXX-X				

* A/N* - ASSEMBLY NUMBER - FOUND ON YOUR TRANSMISSION NAMEPLATE



14525

FIG. 3. FLEX DISK, CONVERTER DRIVE AND DRY CONVERTER TYPE HOUSING

GROUP A

FLEX DISK. CONVERTER DRIVE AND DRY CONVERTER TYPE HOUSING, FIGURE 3
ENGINE MOUNTED

REF NO	NOMENCLATURE	PART NO	REQ	RECOMMENDED SPARES FOR UNITS		
				1-3	4-10	11-25
1	BOLT, HX HD, SELF-LOCKING, 1/2-13 X 7/8	9409052	6	6	12	18
2	PLATE, FLEX DISK	6774012	1	1	2	3
3	DISK, FLEXIBLE	6777448	3	3	6	9
4	DISK AND WASHER ASSY, FLEXIBLE	6777449	1	1	2	3
5	NUT, HX, 5/16-24	451006	24	24	48	96
6	COVER, TORQUE CONVERTER	6880516	1		1	2

TORQUE CONVERTER SECTION

TO FIND DETAIL PARTS FOR YOUR ALLISON POWERSHIFT TRANSMISSION, TURN TO
THE GROUP LISTED OPPOSITE THE ASSEMBLY PART NUMBER OF YOUR TRANSMISSION.

A/N*	MODEL	GROUP	A/N*	MODEL	GROUP
6881891	TT 3420-1	A	6883657	TT 3420-1	A

* A/N* - ASSEMBLY NUMBER - FOUND ON YOUR TRANSMISSION NAMEPLATE

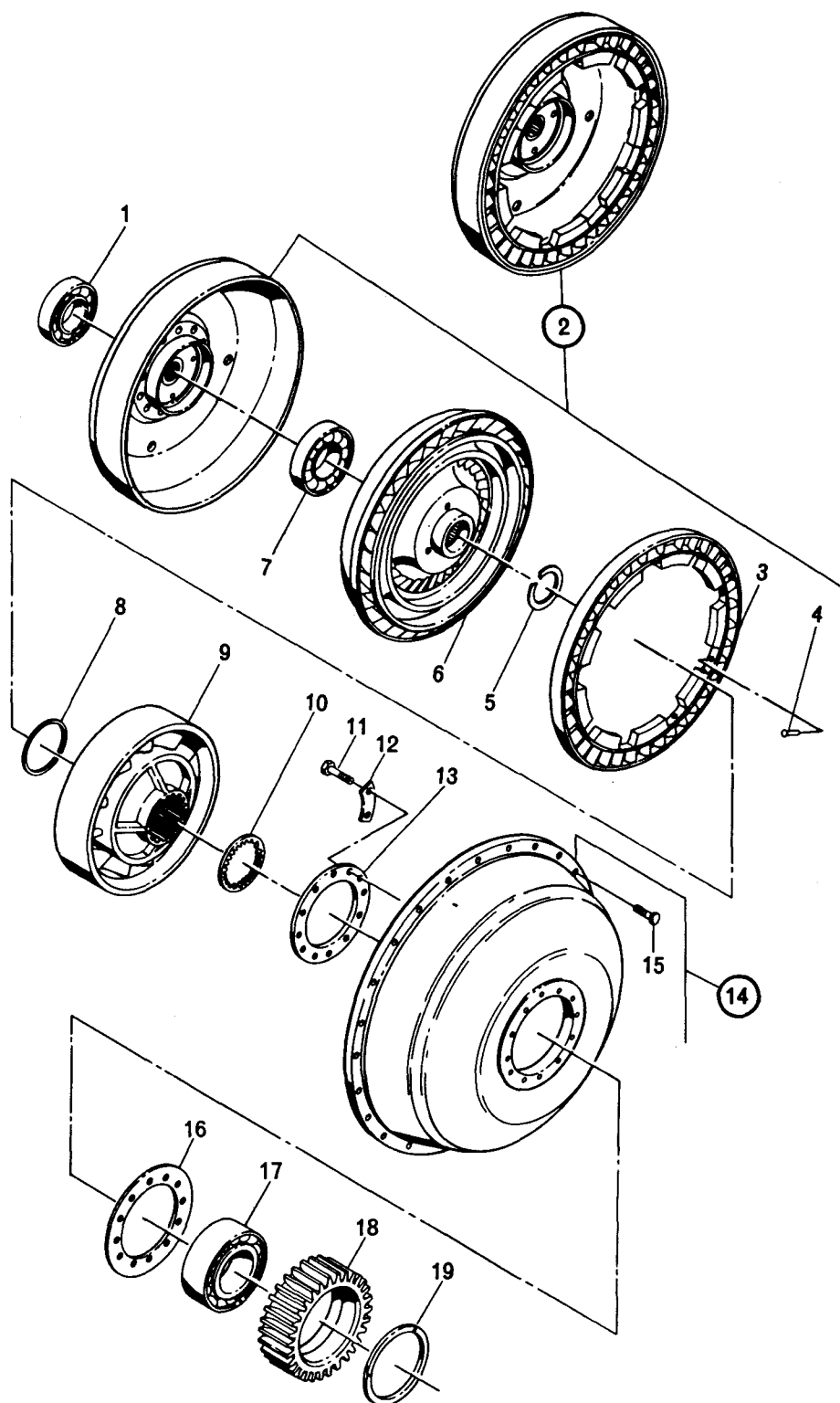


FIG. 4. TORQUE CONVERTER

GROUP A

TORQUE CONVERTER, FIGURE 4

REF NO	NOMENCLATURE	PART NO	REQ	RECOMMENDED SPARES FOR UNITS		
				1-3	4-10	11-25
1	BEARING, SINGLE ROW BALL, ND3209X1A	903209	1	1	2	5
2	TURBINE ASSY, TORQUE CONVERTER, FIRST	6880486	1		1	2
3	TURBINE, TORQUE CONVERTER, FIRST	6777566 *	1			
4	PIN	6776508	6	6	12	18
5	RING, SNAP	6880513	1	1	2	5
6	TURBINE, TORQUE CONVERTER, SECOND	6880488	1		1	2
7	BEARING, SINGLE ROW BALL, ND3211LR1214A	954528	1	1	2	5
8	RING, SNAP, EXTERNAL	6703059	1	1	2	5
9	STATOR, TORQUE CONVERTER, TT445 SERIES	6832000	1		1	2
10	SPACER	6832996	1		1	2
11	BOLT, SELF-LOCKING, 1/4-28 X 1 1/4	454823	12	12	24	36
12	STRIP, LOCKING	6773486	6	6	12	18
13	RETAINER, PUMP	6773491	1		1	2
14	PUMP ASSY, TORQUE CONVERTER	6777575	1		1	2
15	BOLT, 5/16-24 X 1.30	6755988	24	24	48	72
16	GASKET, PUMP	6835421	1	1	3	10
17	BEARING, DOUBLE ROW BALL, ND5211WL1214A	908195	1	1	2	5
18	GEAR, INPUT ACCESSORY DRIVE, 1 TO 1 RATIO	6880185	1		1	2
19	RING, SEAL	6773492	1	1	3	10

* SERVICED AS AN ASSY - NOT AS A DETAIL PART

TORQUE CONVERTER HOUSING SECTION

TO FIND DETAIL PARTS FOR YOUR ALLISON POWERSHIFT TRANSMISSION, TURN TO
THE GROUP LISTED OPPOSITE THE ASSEMBLY PART NUMBER OF YOUR TRANSMISSION.

A/N*	MODEL	GROUP	A/N*	MODEL	GROUP
6881891	TT 3420-1	A	6883657	TT 3420-1	A

* A/N* - ASSEMBLY NUMBER - FOUND ON YOUR TRANSMISSION NAMEPLATE

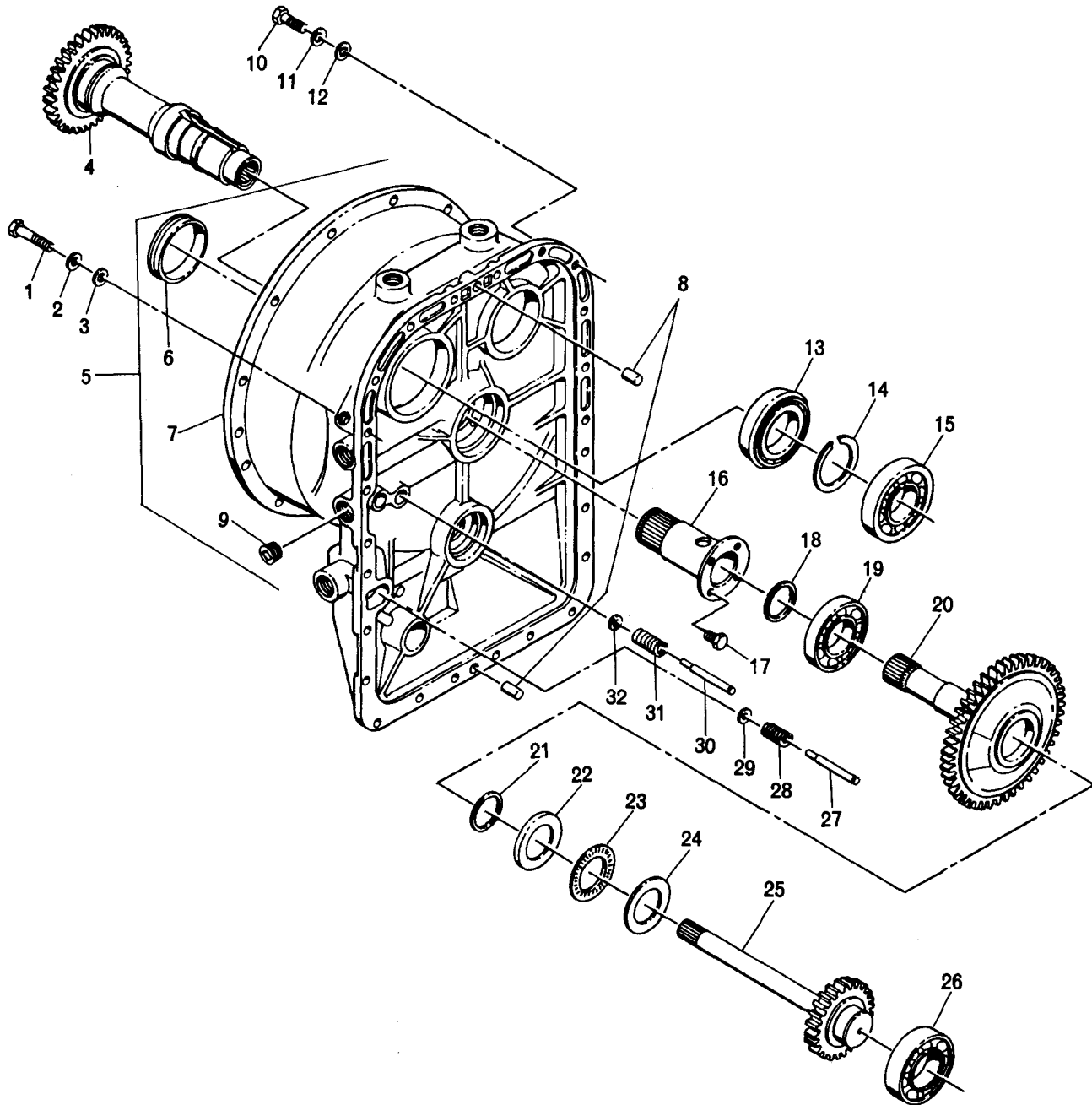


FIG. 5. TORQUE CONVERTER HOUSING

GROUP A

TORQUE CONVERTER HOUSING, FIGURE 5

REF NO	NOMENCLATURE	PART NO	REQ	RECOMMENDED SPARES FOR UNITS		
				1-3	4-10	11-25
1	BOLT, HX HD, 7/16-14 X 2 3/4	179869	1	1	2	3
2	WASHER, LOCK, 7/16	103322	1	1	2	3
3	WASHER, FLAT, 7/16	103342	1	1	2	3
4	GEAR, ACCESSORY DRIVEN, 1 TO 1 RATIO	6880496	1		1	2
5	HOUSING ASSY, CONVERTER	6837639	1		1	2
6	SLEEVE, CONVERTER HOUSING	6773487	1		1	2
7	HOUSING, CONVERTER	6837638	* 1			
8	PIN, DOWEL, CONVERTER HOUSING	141281	2		2	4
9	PLUG, PIPE, 3/4 NPTF	6765238	1		1	2
10	BOLT, HX HD, 7/16-14 X 1 3/8	179861	23	23	46	69
11	WASHER, LOCK, 7/16	103322	23	23	46	69
12	WASHER, FLAT, 7/16	103342	23	23	46	69
13	BEARING, SINGLE ROW BALL, ND43L13L1214A	907428	1	1	2	5
14	RING, SNAP, EXTERNAL	6750259	1	1	2	5
15	BEARING, SINGLE ROW BALL, NDHBU1012L	7451558	1	1	2	5
16	SLEEVE, CONVERTER GROUND	6880493	1		1	2
17	BOLT, HX HD, 5/16-18 X 3/4	9409011	4	4	8	12
18	RING, SEAL	6773483	1	1	3	10
19	BEARING, SINGLE ROW BALL, ND3L11LR1214A	905599	1	1	2	5
20	GEAR, SECOND TURBINE DRIVE	6880489	1		1	2
21	RING, SEAL	6833999	1	1	3	10
22	RACE, THRUST	8619652	1	1	3	10
23	BEARING, THRUST, ROLLER, TORRINGTON FA 23382	9414207	1	1	3	10
24	RACE, THRUST	8619650	1	1	3	10
25	GEAR, FIRST TURBINE DRIVE	6880491	1		1	2
26	BEARING, SINGLE ROW BALL, ND3213LR1214A	907703	1	1	2	5
27	PIN, VALVE GUIDE	6834176	1		1	2
28	SPRING, LUBE OVERAGE	6773689	1	1	2	5
29	VALVE, LUBE OVERAGE	6757447	1		1	2
30	PIN, VALVE GUIDE	6834176	1		1	2
31	SPRING, CONVERTER REGULATOR	6773551	1		1	2
32	VALVE, CONVERTER REGULATOR	6757447	1		1	2

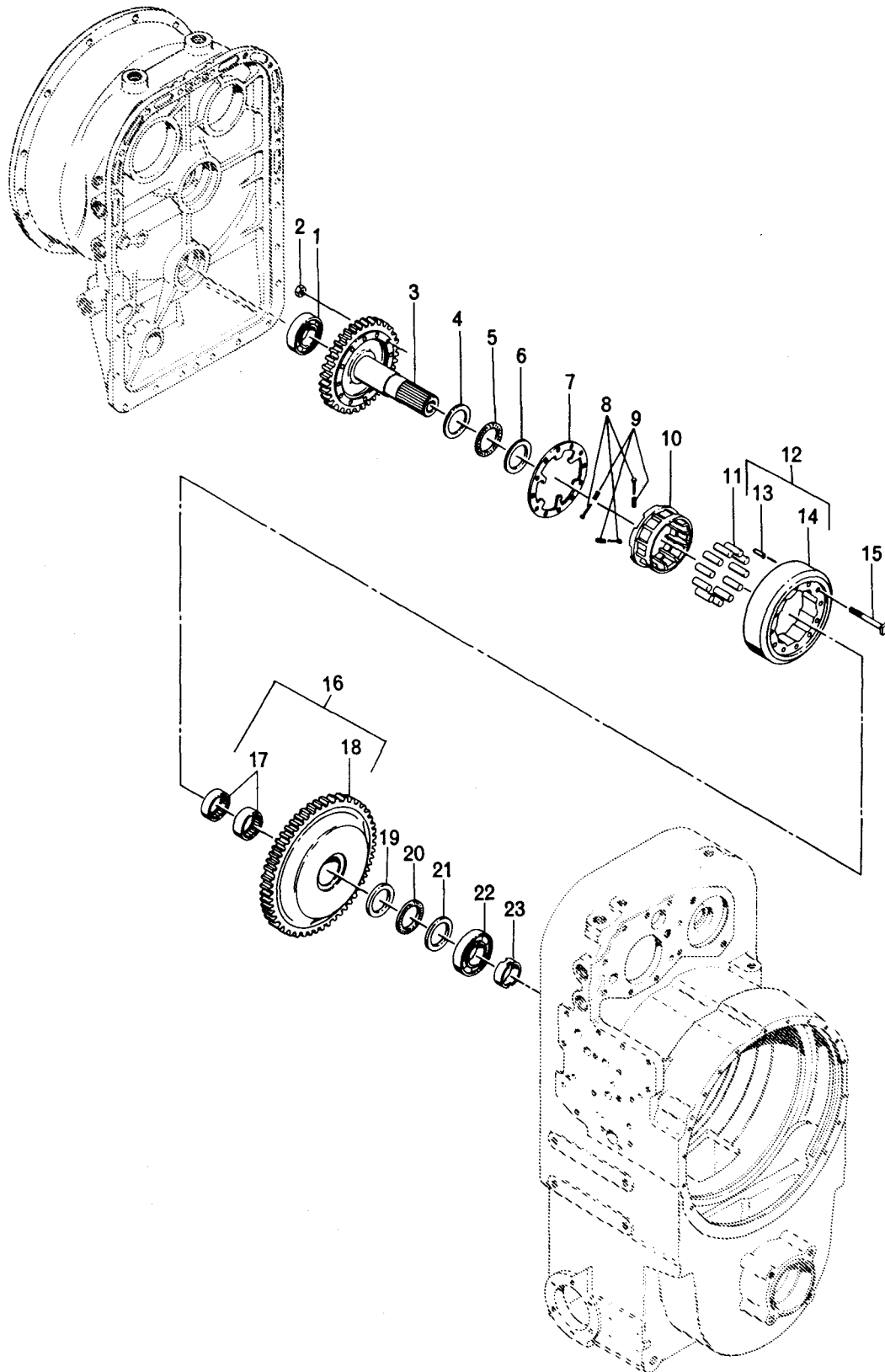
* SERVICED AS AN ASSY - NOT AS A DETAIL PART

TURBINE DRIVEN GEARS AND FREEWHEEL UNIT SECTION

TO FIND DETAIL PARTS FOR YOUR ALLISON POWERSHIFT TRANSMISSION, TURN TO
THE GROUP LISTED OPPOSITE THE ASSEMBLY PART NUMBER OF YOUR TRANSMISSION.

A/N*	MODEL	GROUP	A/N*	MODEL	GROUP
6881891	TT 3420-1	A	6883657	TT 3420-1	A

* A/N* - ASSEMBLY NUMBER - FOUND ON YOUR TRANSMISSION NAMEPLATE



14522

FIG. 6. TURBINE DRIVEN GEARS AND FREEWHEEL UNIT

GROUP A

TURBINE DRIVEN GEARS AND FREEWHEEL UNIT, FIGURE 6

REF NO	NOMENCLATURE	PART NO	REQ	RECOMMENDED SPARES FOR UNITS		
				1-3	4-10	11-25
1	BEARING, SINGLE ROW BALL, NDH1207X1A	901207	1	1	2	5
2	NUT, HX, SELF-LOCKING, 3/8-24	560545	12	12	24	60
3	GEAR, SECOND TURBINE DRIVEN	6880507	1		1	2
4	RACE, BEARING, THRUST	9436605	1	1	2	5
5	BEARING, THRUST	9421006	1	1	2	5
6	RACE, BEARING, THRUST	9436605	1	1	2	5
7	PLATE, RETAINER SPRING, FREEWHEEL	6837671	1	1	2	4
8	PIN, SPRING TICKLE, FREEWHEEL	6834208	3	3	6	12
9	SPRING, TICKLE, FREEWHEEL	6835343	3	3	6	12
10	CAGE, ROLLER, FREEWHEEL	6880506	1	1	2	4
11	ROLLER, FREEWHEEL	6770574	15	15	30	75
12	CAM ASSY, FREEWHEEL	6880504	1	1	2	4
13	PIN, CAM, FREEWHEEL	274889	1		1	2
14	CAM, FREEWHEEL	6880505	* 1			
15	BOLT, SQUARE HEAD, .375-24 X 3.060	6880572	12	12	24	36
16	GEAR ASSY, FIRST TURBINE DRIVEN	6881142	1	1	2	4
17	BEARING, ROLLER	9418206	2	2	4	8
18	GEAR, FIRST TURBINE DRIVEN	6880502	* 1			
19	RACE, BEARING, THRUST	9436605	1	1	2	5
20	BEARING, THRUST	9421006	1	1	2	5
21	RACE, BEARING, THRUST	9436605	1	1	2	5
22	BEARING, SINGLE ROW BALL, ND3208XR1A	903208	1	1	2	5
23	SPACER	6880511	1		1	2

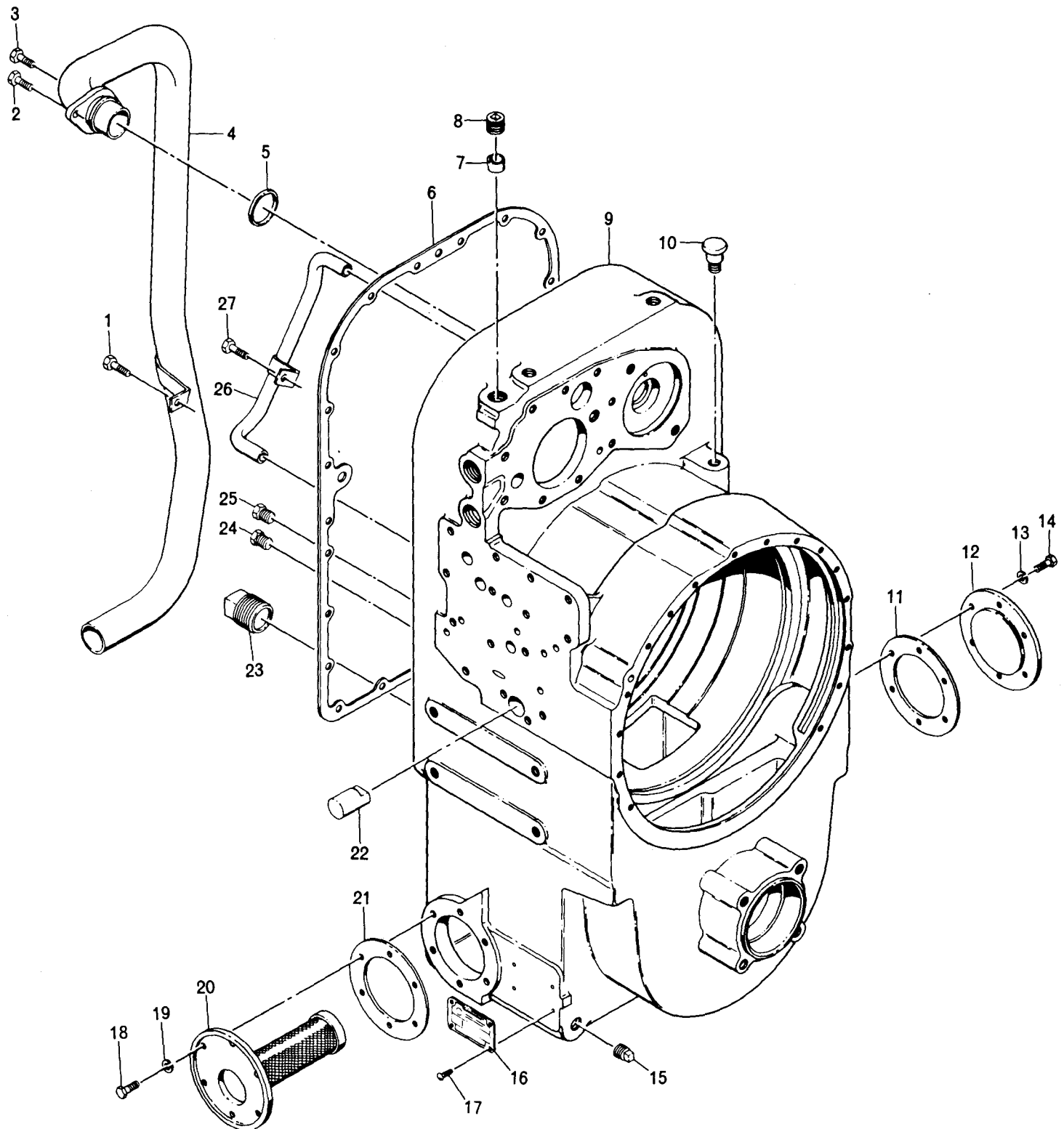
* SERVICED AS AN ASSY - NOT AS A DETAIL PART

TRANSMISSION HOUSING SECTION

TO FIND DETAIL PARTS FOR YOUR ALLISON POWERSHIFT TRANSMISSION, TURN TO
THE GROUP LISTED OPPOSITE THE ASSEMBLY PART NUMBER OF YOUR TRANSMISSION.

A/N*	MODEL	GROUP	A/N*	MODEL	GROUP
6881891	TT 3420-1	A	6883657	TT 3420-1	A

* A/N* - ASSEMBLY NUMBER - FOUND ON YOUR TRANSMISSION NAMEPLATE



14518

FIG. 7. TRANSMISSION HOUSING

GROUP A

TRANSMISSION HOUSING, FIGURE 7

REF NO	NOMENCLATURE	PART NO	REQ	RECOMMENDED SPARES FOR UNITS		
				1-3	4-10	11-25
1	BOLT, HX HD, 3/8-16 X 3/4	9409027	1	1	2	3
2	BOLT, HX HD, 3/8-16 X 3/4	9409027	1	1	2	3
3	BOLT, HX HD, 3/8-16 X 3/4	9409027	1	1	2	3
4	TUBE, SUCTION	6880540	1			1
5	SEAL, SUCTION TUBE	6838732	1			2
6	GASKET, TRANSMISSION HOUSING	6835141	1	1	3	10
7	PLUG, REMOTE FILTER	6777173	1			1
8	PLUG	444672	1			1
9	HOUSING, TRANSMISSION, LONG DROP TYPE	6880500	1			1
10	BREATHER	6769936	1		1	2
11	GASKET, CORE HOLE COVER	6882702	1	1	3	10
12	COVER, CORE HOLE	6758337	1			7
13	WASHER, LOCK, 3/8	103321	6	6	12	18
14	BOLT, HX HD, 3/8-16 X 7/8	179838	6	6	12	18
15	PLUG, DRAIN	444594	1		1	2
16	PLATE, NAME	6838494	1		1	2
17	SCREW, DRIVE, NO. 4 X 1/4	145372	4		4	8
18	BOLT, HX HD, 3/8-16 X 7/8	179838	6	6	12	18
19	WASHER, LOCK, 3/8	103321	6	6	12	18
20	STRAINER, OIL	6838733	1			1
21	GASKET, OIL STRAINER	6882702	1	1	3	10
22	PIN, ANCHOR	6880564	1		1	2
23	PLUG, OIL FILTER	143938	1		1	2
24	PLUG, OIL LEVEL ADD	444618	1	1	2	4
25	PLUG, OIL LEVEL FULL	444618	1	1	2	4
26	TUBE, AUX LUBE	6880542	1			1
27	BOLT, HX HD, 3/8-16 X 3/4	9409027	1	1	2	3

REVERSE CLUTCH AND PLANETARY SECTION

TO FIND DETAIL PARTS FOR YOUR ALLISON POWERSHIFT TRANSMISSION, TURN TO
THE GROUP LISTED OPPOSITE THE ASSEMBLY PART NUMBER OF YOUR TRANSMISSION.

A/N*	MODEL	GROUP	A/N*	MODEL	GROUP
6881891	TT 3420-1	A	6883657	TT 3420-1	A

* A/N* - ASSEMBLY NUMBER - FOUND ON YOUR TRANSMISSION NAMEPLATE

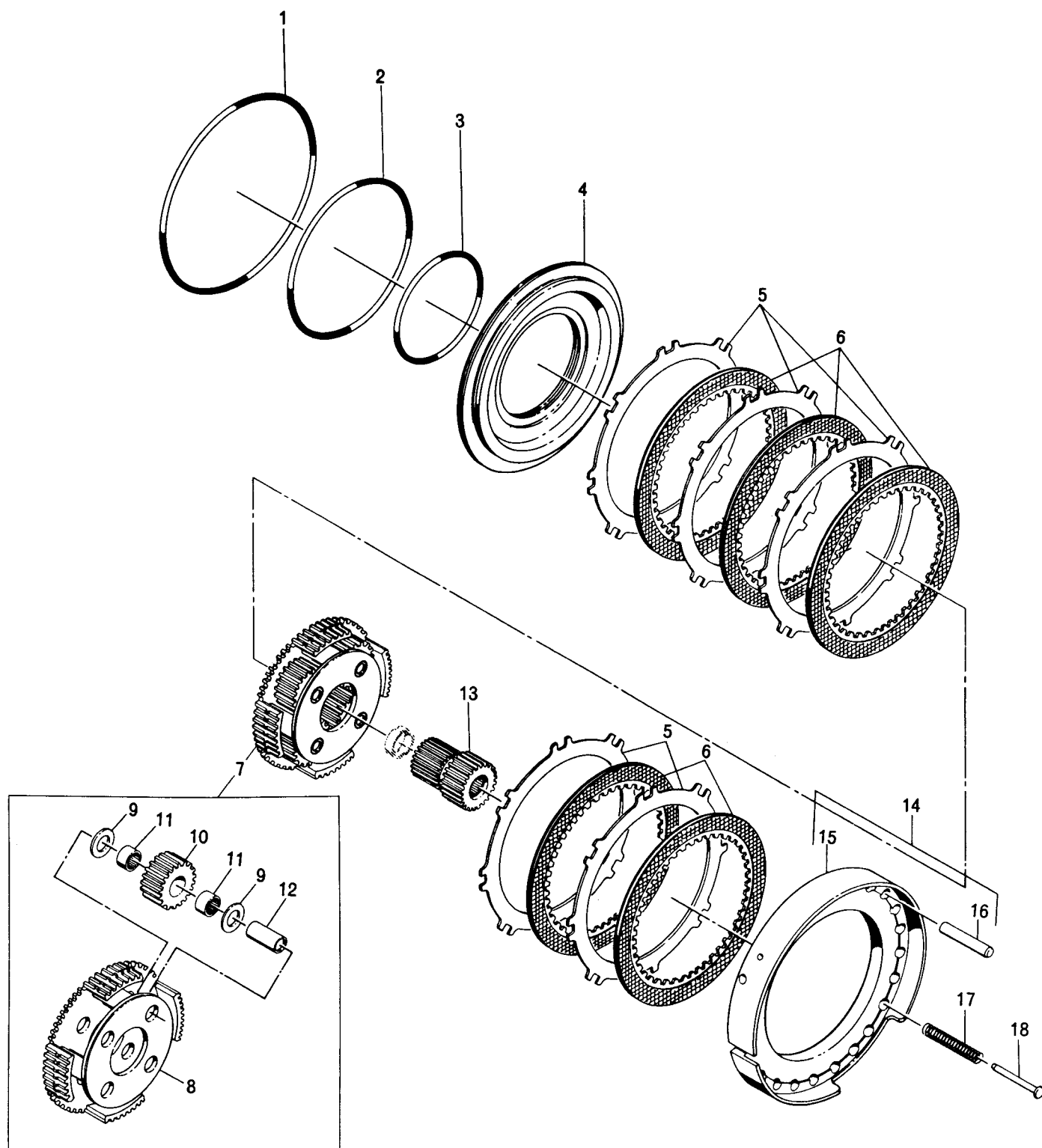


FIG. 8. REVERSE CLUTCH AND PLANETARY

GROUP A

REVERSE CLUTCH AND PLANETARY. FIGURE 8

REF NO	NOMENCLATURE	PART NO	REQ	RECOMMENDED SPARES FOR UNITS		
				1-3	4-10	11-25
1	RING, SEAL, LIP TYPE	6838063	1	1	3	10
2	RING, SEAL, LIP TYPE	6838064	1	1	3	10
3	RING, SEAL, LIP TYPE	6832531	1	1	3	10
4	PISTON ASSY, REVERSE CLUTCH	6880527	1		1	2
5	PLATE, EXTERNAL SPLINED	6839914	5	5	10	20
6	PLATE, INTERNAL SPLINED	6830293	5	5	10	20
7	CARRIER ASSY, REVERSE CLUTCH PLANETARY	6880520	1			1
8	CARRIER, REVERSE CLUTCH PLANETARY	6880521	1		1	2
9	WASHER, THRUST	6830225	8		8	16
10	PINION, PLNT.	6880514	4		1	2
11	BEARING ASSY, TORRINGTON NO. WJ-162112	9422966	8		88	176
12	SPINDLE	6835182	4		4	8
13	GEAR, FORWARD AND REVERSE CLUTCH SUN	6880512	1		1	2
14	ANCHOR ASSY, REVERSE AND FORWARD CLUTCH	6880522	1		1	2
15	ANCHOR, REVERSE AND FORWARD CLUTCH	6880523	* 1			
16	PIN	6880524	* 8			
17	SPRING, PISTON RETURN, GREEN	6880526	15		15	30
18	PIN, PISTON RETURN	6880525	15		15	30

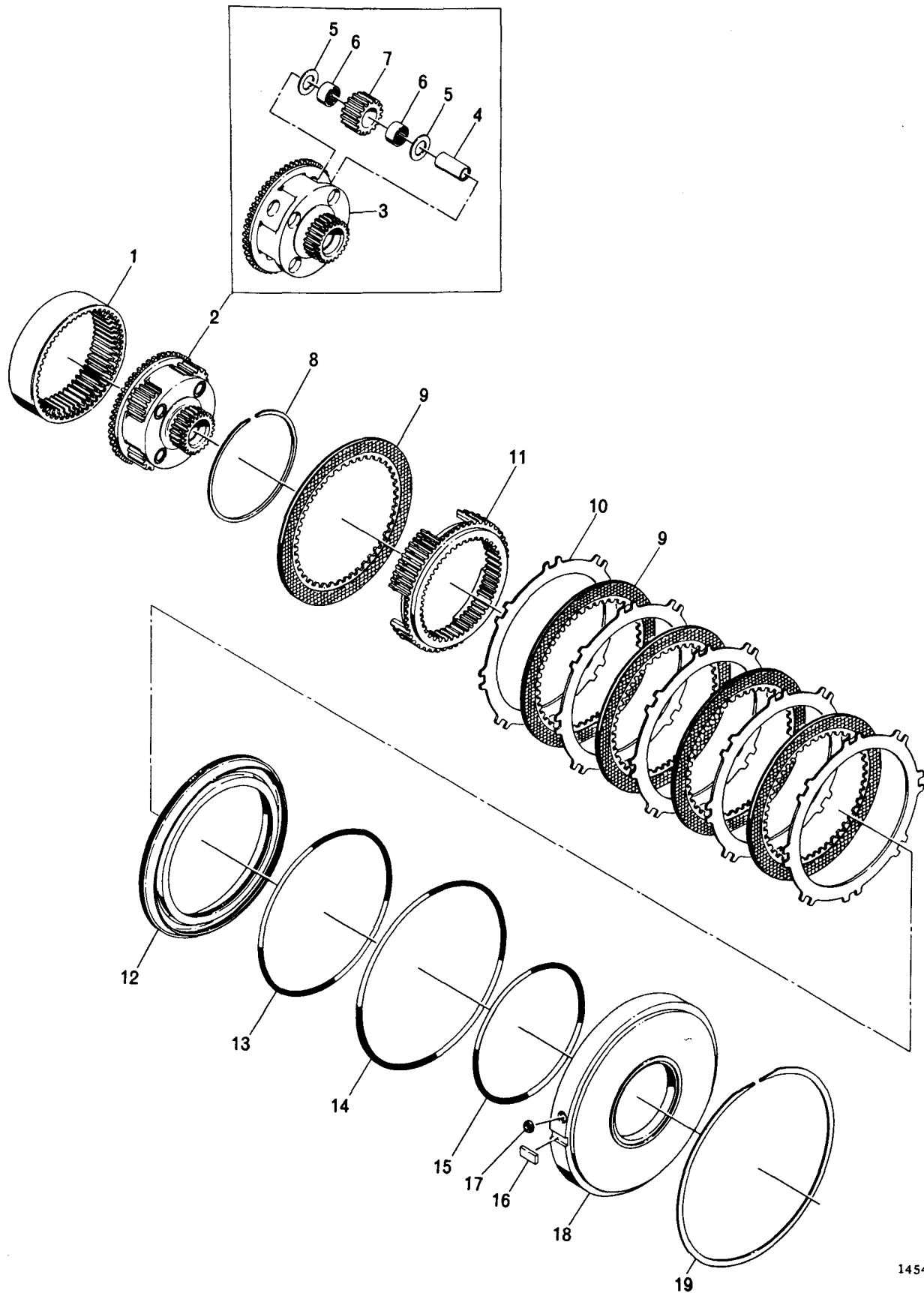
* SERVICED AS AN ASSY - NOT AS A DETAIL PART

FORWARD CLUTCH AND PLANETARY SECTION

TO FIND DETAIL PARTS FOR YOUR ALLISON POWERSHIFT TRANSMISSION, TURN TO
THE GROUP LISTED OPPOSITE THE ASSEMBLY PART NUMBER OF YOUR TRANSMISSION.

A/N*	MODEL	GROUP	A/N*	MODEL	GROUP
6881891	TT 3420-1	A	6883657	TT 3420-1	A

* A/N* - ASSEMBLY NUMBER - FOUND ON YOUR TRANSMISSION NAMEPLATE



14546

FIG. 9. FORWARD CLUTCH AND PLANETARY

GROUP A

FORWARD CLUTCH AND PLANETARY, FIGURE 9

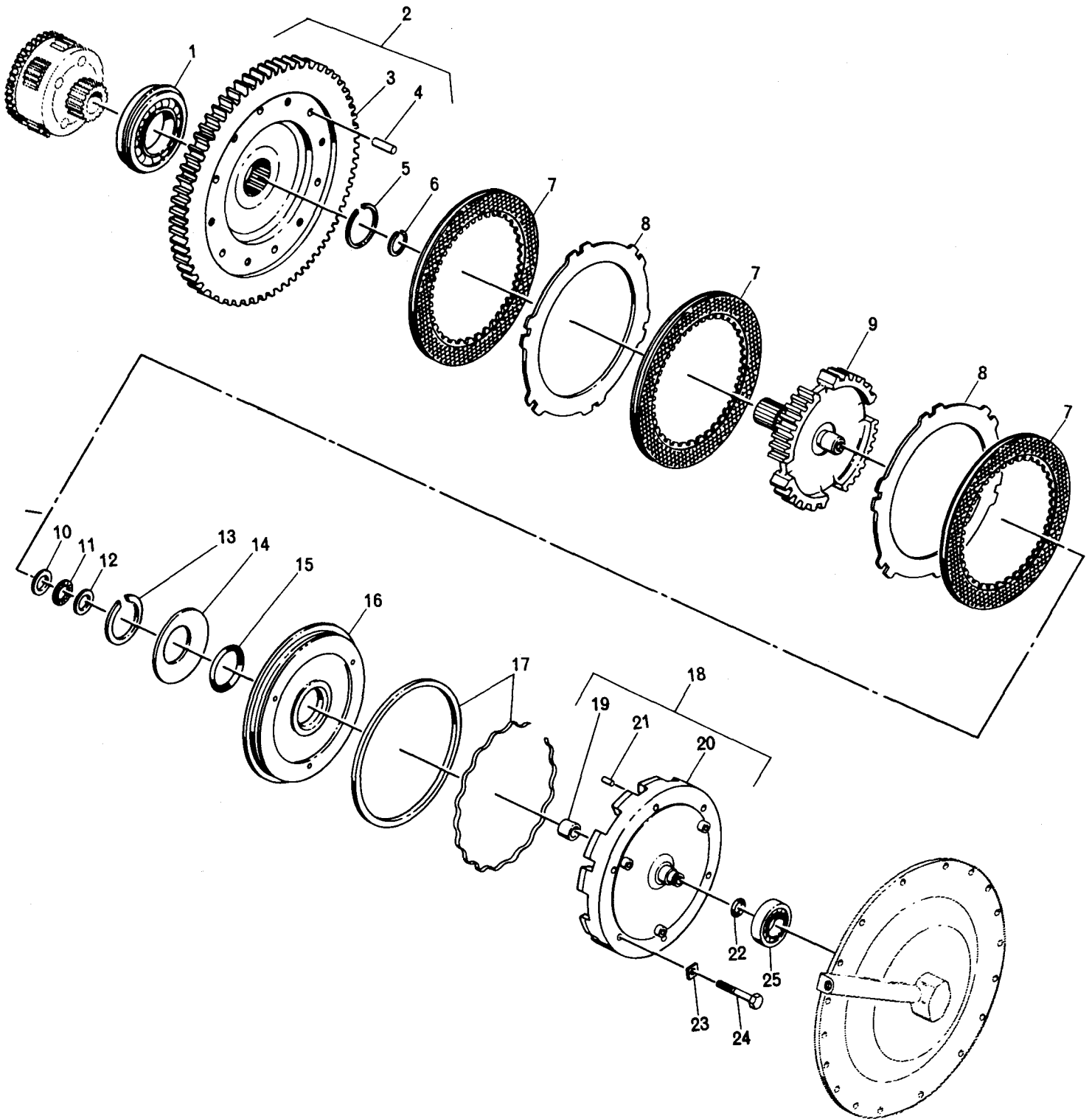
REF NO	NOMENCLATURE	PART NO	REQ	RECOMMENDED SPARES FOR UNITS		
				1-3	4-10	11-25
1	GEAR, REVERSE RING	6880515	1		1	2
2	CARRIER ASSY, FORWARD CLUTCH PLANETARY	6880518	1			1
3	CARRIER, FORWARD CLUTCH PLANETARY	6880519	1		1	2
4	SPINDLE	6835182	1		4	8
5	WASHER, THRUST	6830225	8		8	16
6	BEARING ASSY, ROLLER, PLANETARY PINION, TORRINGTON NO. WJ 162112	9422966	8		8	16
7	PINION, PLNT.	6835181	4		1	2
8	RING, SNAP	6880638	1	1	2	5
9	PLATE, INTERNAL SPLINED	6830293	4	4	8	16
10	PLATE, EXTERNAL SPLINED	6839914	4	4	8	16
11	GEAR, FORWARD RING	6880517	1		1	2
12	PISTON, FORWARD CLUTCH	6880529	1		1	2
13	RING, SEAL, LIP TYPE OUTSIDE	6838064	1	1	3	10
14	RING, SEAL, LIP TYPE, CENTER	6838813	1	1	3	10
15	RING, SEAL, LIP TYPE, INSIDE	6838061	1	1	3	10
16	KEY, ANCHOR	6880563	1	1	2	4
17	INSERT, FORWARD CLUTCH HOUSING	6881143	1	1	3	10
18	HOUSING, FORWARD CLUTCH PISTON	6880531	1		1	2
19	RING, SNAP	6833907	1	1	2	4

HIGH RANGE CLUTCH AND TRANSFER DRIVE GEAR SECTION

TO FIND DETAIL PARTS FOR YOUR ALLISON POWERSHIFT TRANSMISSION, TURN TO
THE GROUP LISTED OPPOSITE THE ASSEMBLY PART NUMBER OF YOUR TRANSMISSION.

A/N*	MODEL	GROUP	A/N*	MODEL	GROUP
6881891	TT 3420-1	A	6883657	TT 3420-1	A

* A/N* - ASSEMBLY NUMBER - FOUND ON YOUR TRANSMISSION NAMEPLATE



14515

FIG. 10. HIGH-RANGE CLUTCH AND TRANSFER DRIVE GEAR

GROUP A

HIGH-RANGE CLUTCH AND TRANSFER DRIVE GEAR, FIGURE 10

REF NO	NOMENCLATURE	PART NO	REQ	RECOMMENDED SPARES FOR UNITS		
				1-3	4-10	11-25
1	BEARING, SINGLE ROW BALL, ND43L18L1A	903687	1	1	2	5
2	GEAR ASSY, TRANSFER DRIVE, .846 TO 1 RATIO	6880532	1		1	2
3	GEAR, TRANSFER DRIVE	6880533 *	1			
4	PIN	6773459	6			
5	RING, SNAP	6750337	1	1	2	5
6	RING, SNAP	6839293	1	1	2	5
7	PLATE, INTERNAL SPLINED	6830221	3	3	6	9
8	PLATE, EXTERNAL SPLINED	6837690	2	2	4	8
9	HUB, HIGH-RANGE CLUTCH	6880535	1		1	2
10	RACE, BEARING, THRUST	9425295	1	1	2	5
11	BEARING, THRUST	457151	1	1	2	5
12	RACE, BEARING, THRUST	9425295	1	1	2	5
13	RING, SNAP, EXTERNAL	6756739	1	1	2	5
14	SPRING, PISTON RETURN	6756134	1	1	2	4
15	RING, SEAL	6754823	1	1	3	10
16	PISTON, HIGH-RANGE CLUTCH	6839403	1		1	2
17	KIT, SEAL AND EXPANDER, CONSISTS OF 1-6774342	6776999	1	1	3	10
	SEAL RING, 1-6776749 EXPANDER AND 1-6777057 INSTRUCTION SHEET					
18	HOUSING ASSY, HIGH-RANGE CLUTCH	6883735	1		1	2
19	BUSHING	6757034	1	1	2	5
20	HOUSING, HIGH-RANGE CLUTCH PISTON	6883736 *	1			
21	PIN	141244	3		3	6
22	RING, SEAL	6839163	1	1	3	10
23	LOCK, TAB	6773461	6	6	12	24
24	BOLT, HX HD, 1/2-20 X 2 3/4	181441	6	6	12	18
25	BEARING, SINGLE ROW BALL, ND3207LR1214A	907808	1	1	2	5

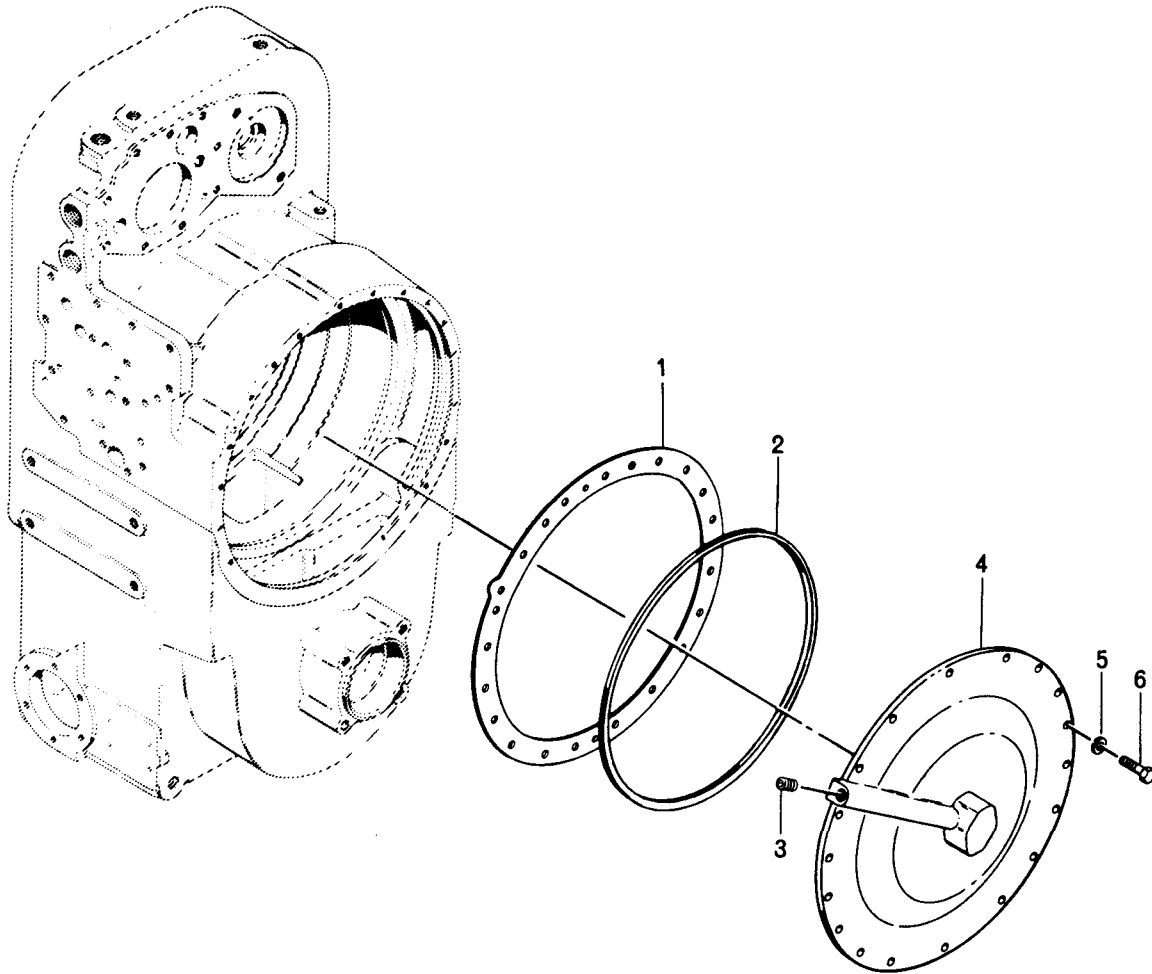
* SERVICED AS AN ASSY - NOT AS A DETAIL PART

TRANSMISSION REAR HOUSING AND SPEEDOMETERDRIVE SECTION

TO FIND DETAIL PARTS FOR YOUR ALLISON POWERSHIFT TRANSMISSION, TURN TO
THE GROUP LISTED OPPOSITE THE ASSEMBLY PART NUMBER OF YOUR TRANSMISSION.

A/N*	MODEL	GROUP	A/N*	MODEL	GROUP
6881891	TT 3420-1	A	6883657	TT 3420-1	A

* A/N* - ASSEMBLY NUMBER - FOUND ON YOUR TRANSMISSION NAMEPLATE



14524

FIG. 11. TRANSMISSION REAR COVER AND SPEEDOMETER DRIVE

GROUP A

TRANSMISSION REAR HOUSING AND SPEEDOMETER DRIVE, FIGURE 11

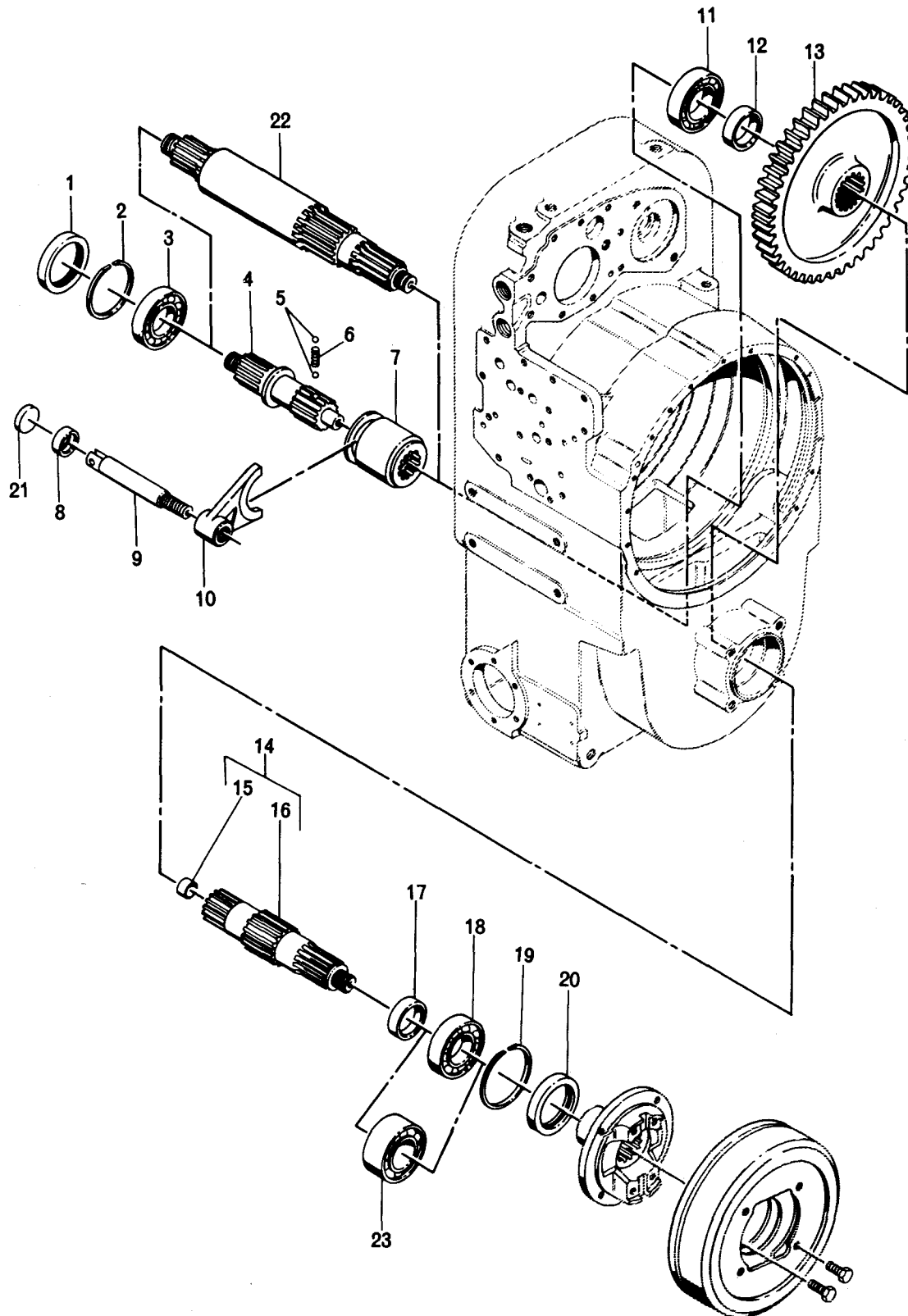
REF NO	NOMENCLATURE	PART NO	REQ	RECOMMENDED SPARES FOR UNITS		
				1-3	4-10	11-25
1	GASKET, REAR COVER	6773477	1	1	3	10
2	RING, SEAL	6776396	1	1	3	10
3	PLUG, 1/8	444687	1		1	2
4	COVER, REAR	6883737	1			1
5	WASHER, LOCK, 3/8	103321	16	16	32	49
6	BOLT, HX HD, 3/8-16 X 1 1/8	179840	16	16	32	49

FRONT OUTPUT DISCONNECT CLUTCH AND REAR OUTPUT SHAFT SECTION

TO FIND DETAIL PARTS FOR YOUR ALLISON POWERSHIFT TRANSMISSION, TURN TO
THE GROUP LISTED OPPOSITE THE ASSEMBLY PART NUMBER OF YOUR TRANSMISSION.

A/N*	MODEL	GROUP	A/N*	MODEL	GROUP
6881891	TT 3420-1	B	6883657	TT 3420-1	A

* A/N* - ASSEMBLY NUMBER - FOUND ON YOUR TRANSMISSION NAMEPLATE



14519

FIG. 12. FRONT OUTPUT DISCONNECT CLUTCH AND REAR OUTPUT SHAFT

GROUP A

FRONT OUTPUT DISCONNECT CLUTCH AND REAR OUTPUT SHAFT, FIGURE 12

REF NO	NOMENCLATURE	PART NO	REQ	RECOMMENDED SPARES FOR UNITS		
				1-3	4-10	11-25
1	SEAL, OIL	6773466	1	1	3	10
2	RING, SNAP, INTERNAL	6753893	1	1	2	5
3	BEARING, SINGLE ROW BALL, MRC NO. 210 SF	9433260	1	1	2	5
4	SHAFT, FRONT OUTPUT	6880537	1		1	2
5	BALL	145643	2	2	4	8
6	SPRING	6773464	1	1	2	4
7	COUPLING, DISCONNECT	6773468	1		1	2
8	SEAL, OIL	6703159	1	1	3	10
9	SHAFT, SHIFTER FORK	6772187	1		1	2
10	FORK, SHIFTER	6757246	1		1	2
11	BEARING, SINGLE ROW BALL, ND1210LR1214A	907819	1	1	2	5
12	SPACER	6777499	1		1	2
13	GEAR, TRANSFER DRIVEN	6773478	1		1	2
14	SHAFT ASSY, REAR OUTPUT	6880538	1		1	2
15	BUSHING	6756835	1	1	2	3
16	SHAFT, REAR OUTPUT	6880539 *	1			
17	SPACER	6777499	1		1	2
18	BEARING, SINGLE ROW BALL ND1210LR1214A	907819	1	1	2	5
19	RING, SNAP, INTERNAL	6753893	1	1	2	5
20	SEAL, OIL	6773466	1	1	3	10
21-23	NOT USED IN THIS GROUP					

GROUP B

FRONT OUTPUT DISCONNECT CLUTCH AND REAR OUTPUT SHAFT, FIGURE 12

SAME AS GROUP A, EXCEPT FOR PARTS LISTED BELOW

3	BEARING, SINGLE ROW BALL, ND3210LR1214A	907418	1	1	2	5
4-12	NOT USED IN THIS GROUP					
14-16	NOT USED IN THIS GROUP					
17	SPACER	6880495	1		1	2
19	NOT USED IN THIS GROUP					
21	CAP	6774572	1			1
22	SHAFT, FRONT AND REAR OUTPUT	6880494	1		1	2
23	BEARING, DOUBLE ROW BALL, ND5210L1A	954853	1	1	2	5

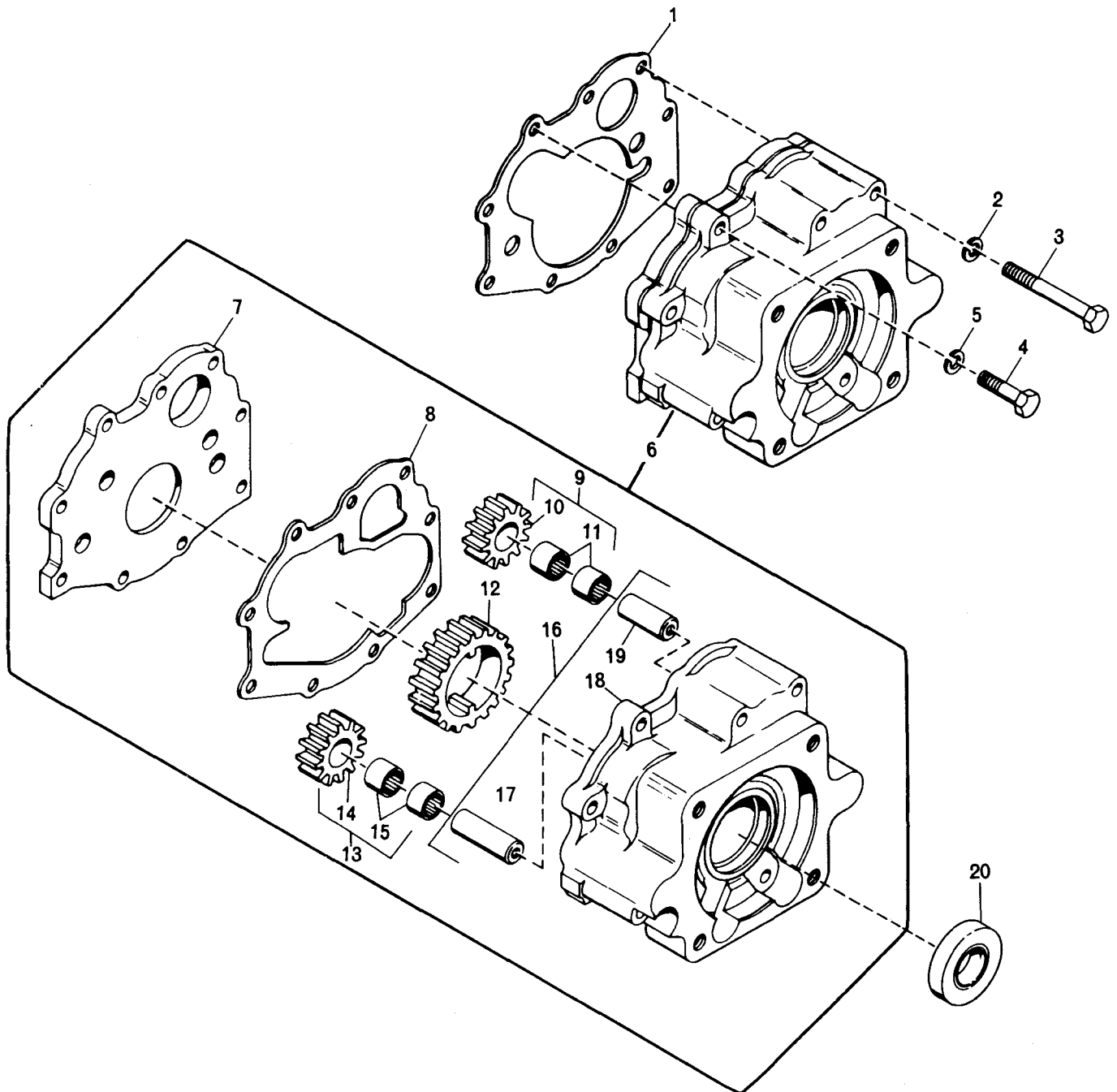
* SERVICED AS AN ASSY - NOT AS A DETAIL PART

CHARGING OIL PUMP SECTION

TO FIND DETAIL PARTS FOR YOUR ALLISON POWERSHIFT TRANSMISSION, TURN TO
THE GROUP LISTED OPPOSITE THE ASSEMBLY PART NUMBER OF YOUR TRANSMISSION.

A/N*	MODEL	GROUP	A/N*	MODEL	GROUP
6881891	TT 3420-1	A	6883657	TT 3420-1	A

* A/N* - ASSEMBLY NUMBER - FOUND ON YOUR TRANSMISSION NAMEPLATE



14506

FIG. 13. CHARGING OIL PUMP

GROUP A

CHARGING OIL PUMP, FIGURE 13

REF NO	NOMENCLATURE	PART NO	REQ	RECOMMENDED SPARES FOR UNITS		
				1-3	4-10	11-25
1	GASKET, OIL PUMP	6838645	1	1	3	10
2	WASHER, LOCK, 3/8	103321	7	7	14	21
3	BOLT, HX HD, 3/8-16 X 4	186285	7	7	14	21
4	BOLT, HX HD, 3/8-16 X 2	179847	2	2	4	6
5	WASHER, LOCK, 3/8	103321	2	2	4	6
6	PUMP ASSY, CHARGING OIL, C PAD, 2 BOLT	6839462	1		1	2
7	COVER, OIL PUMP	6838646	1			
8	GASKET, OIL PUMP COVER	6838644	1	1	3	10
9	GEAR ASSY, OIL PUMP DRIVEN	6776427	* 1			
10	GEAR, DRIVEN	6776426	* 1			
11	BEARING, ROLLER, TORRINGTON NO. J1210	9417600	2	2	4	10
12	GEAR, DRIVE	6776425	* 1			
13	GEAR ASSY, OIL PUMP DRIVEN	6776427	* 1			
14	GEAR, DRIVEN	6776426	* 1			
15	BEARING, ROLLER, TORRINGTON NO. J1210	9417600	1	2	4	10
16	BODY ASSY, OIL PUMP	6839463	* 1			
17	SHAFT, PUMP, GEAR DRIVEN	6776428	* 1			
18	BODY, OIL PUMP	6839464	* 1			
19	SHAFT, PUMP, GEAR DRIVEN	6838636	* 1			
20	SEAL, OIL	6769590	1	1	3	10

* SERVICED AS AN ASSY - NOT AS A DETAIL PART

CONTROL VALVE SECTION

TO FIND DETAIL PARTS FOR YOUR ALLISON POWERSHIFT TRANSMISSION, TURN TO
THE GROUP LISTED OPPOSITE THE ASSEMBLY PART NUMBER OF YOUR TRANSMISSION.

A/N*	MODEL	GROUP	A/N*	MODEL	GROUP
6881891	TT 3420-1	A	6883657	TT 3420-1	A

* A/N* - ASSEMBLY NUMBER - FOUND ON YOUR TRANSMISSION NAMEPLATE

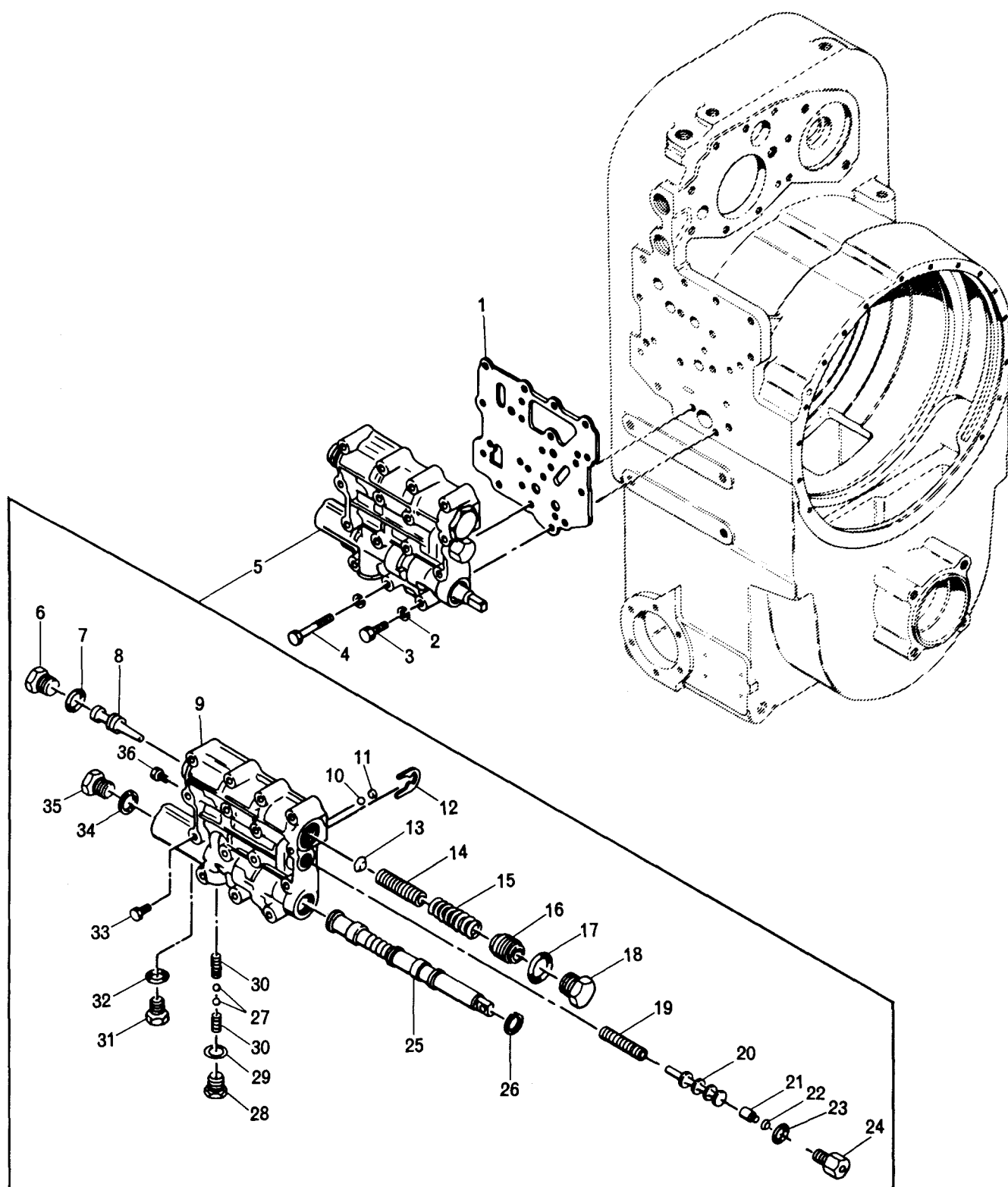


FIG. 14. CONTROL VALVE

GROUP A

CONTROL VALVE, FIGURE 14
WITH AIR ACTUATED CLUTCH CUTOFF

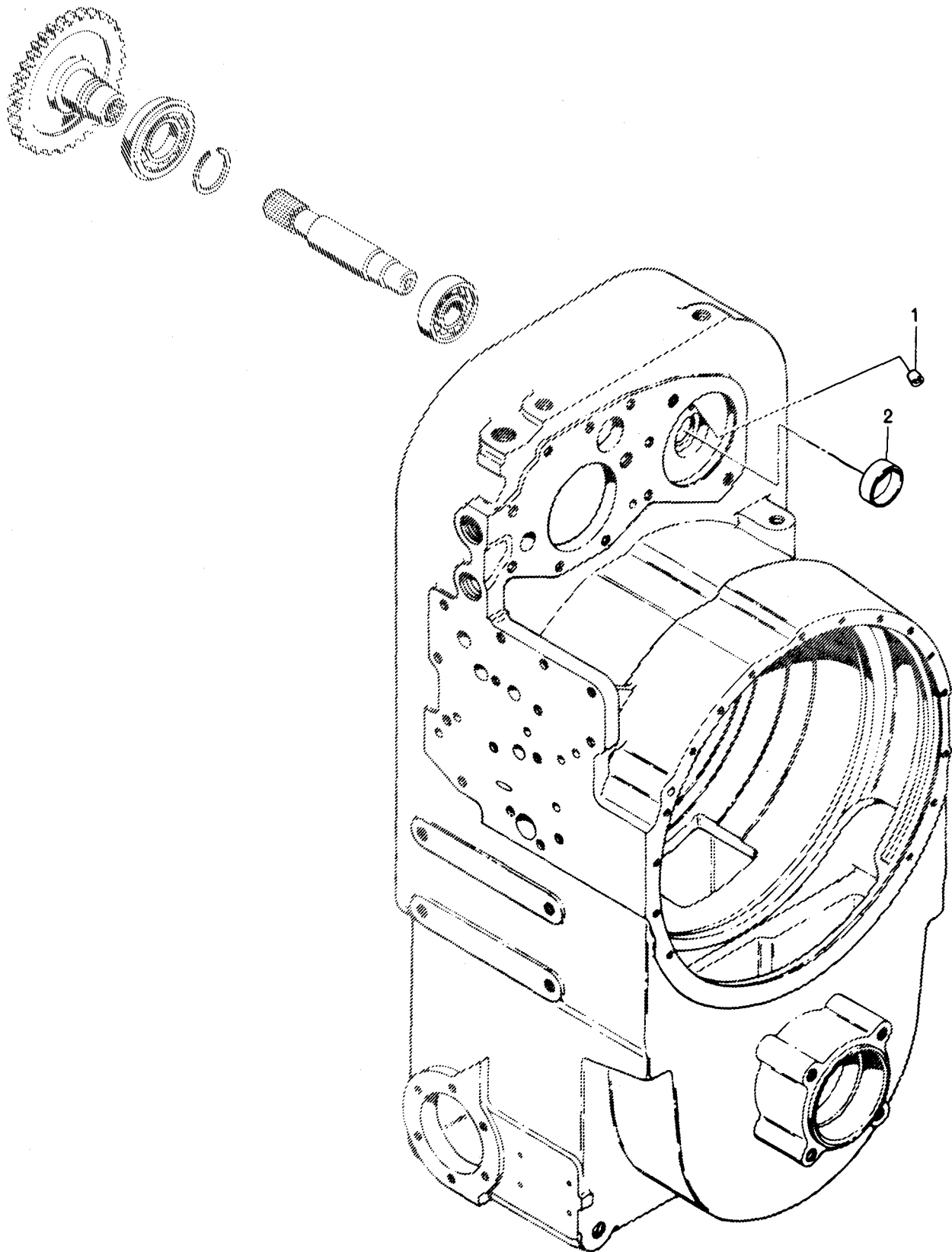
REF NO	NOMENCLATURE	PART NO	REQ	RECOMMENDED SPARES FOR UNITS		
				1-3	4-10	11-25
1	GASKET, CONTROL VALVE	6881382	1	1	3	10
2	WASHER, LOCK, 3/8	103321	16	16	32	48
3	BOLT, HX HD, 3/8-16 X 1	179839	1	1	2	3
4	BOLT, HX HD, 3/8-16 X 2 1/2	179849	15	15	30	45
5	VALVE ASSY, CONTROL	6881881	1			1
6	PLUG	6773618	1		1	2
7	GASKET	6701353	1	1	3	10
8	VALVE, REGULATOR	6831187	1		1	2
9	BODY, CONTROL VALVE	6881882	1		1	1
10	BALL	6755913	1	1	2	3
11	PLUG, BALL RETAINER	6773622	1	1	2	3
12	STOP, VALVE	6773592	1		1	2
13	RETAINER, SPRING	6835702	1		1	2
14	SPRING, REGULATOR VALVE	6835705	1	1	2	3
15	SPRING, TRIMMER VALVE	6830365	1	1	2	3
16	PLUG, TRIMMER VALVE	6835502	1		1	2
17	GASKET	6773607	1	1	3	10
18	PLUG	6773616	1		1	2
19	SPRING	6765710	1	1	2	3
20	VALVE, CLUTCH CUTOFF	6880946	1		1	2
21	PLUG	6758305	1		1	2
22	RING, SEAL	6750558	1	1	3	10
23	GASKET	6772740	1	1	3	10
24	PLUG, CUTOFF VALVE	6771378	1		1	2
25	VALVE, RANGE SELECTOR	6839891	1		1	2
26	SEAL, OIL	6880484	1	1	3	10
27	BALL, DETENT	145657	2	2	4	8
28	PLUG	6774155	1		1	2
29	GASKET	6772740	1	1	3	10
30	SPRING, DETENT	6833934	2	2	4	8
31	PLUG	6880391	1		1	2
32	SEAL, GASKET	6880392	1		1	2
33	PLUG	444612	1	1	2	3
34	GASKET	6701353	1	1	3	10
35	PLUG	6773618	1		1	2
36	PLUG	444612	1	1	2	3

POWER TAKEOFF SECTION

TO FIND DETAIL PARTS FOR YOUR ALLISON POWERSHIFT TRANSMISSION, TURN TO
THE GROUP LISTED OPPOSITE THE ASSEMBLY PART NUMBER OF YOUR TRANSMISSION.

A/N*	MODEL	GROUP	A/N*	MODEL	GROUP
6881891	TT 3420-1	A	6883657	TT 3420-1	A

* A/N* - ASSEMBLY NUMBER - FOUND ON YOUR TRANSMISSION NAMEPLATE



14528

FIG. 15. POWER TAKEOFF

GROUP A

POWER TAKEOFF, FIGURE 15

REF NO	NOMENCLATURE	PART NO	REQ	RECOMMENDED SPARES FOR UNITS		
				1-3	4-10	11-25
1	CAP, ACCESSORY DRIVE ORIFICE	6836279	1			
2	PLUG, CUP	6833947	1			

PARKING BRAKE SECTION

TO FIND DETAIL PARTS FOR YOUR ALLISON POWERSHIFT TRANSMISSION, TURN TO
THE GROUP LISTED OPPOSITE THE ASSEMBLY PART NUMBER OF YOUR TRANSMISSION.

A/N*	MODEL	GROUP	A/N*	MODEL	GROUP
6881891	TT 3420-1	A			

* A/N* - ASSEMBLY NUMBER - FOUND ON YOUR TRANSMISSION NAMEPLATE

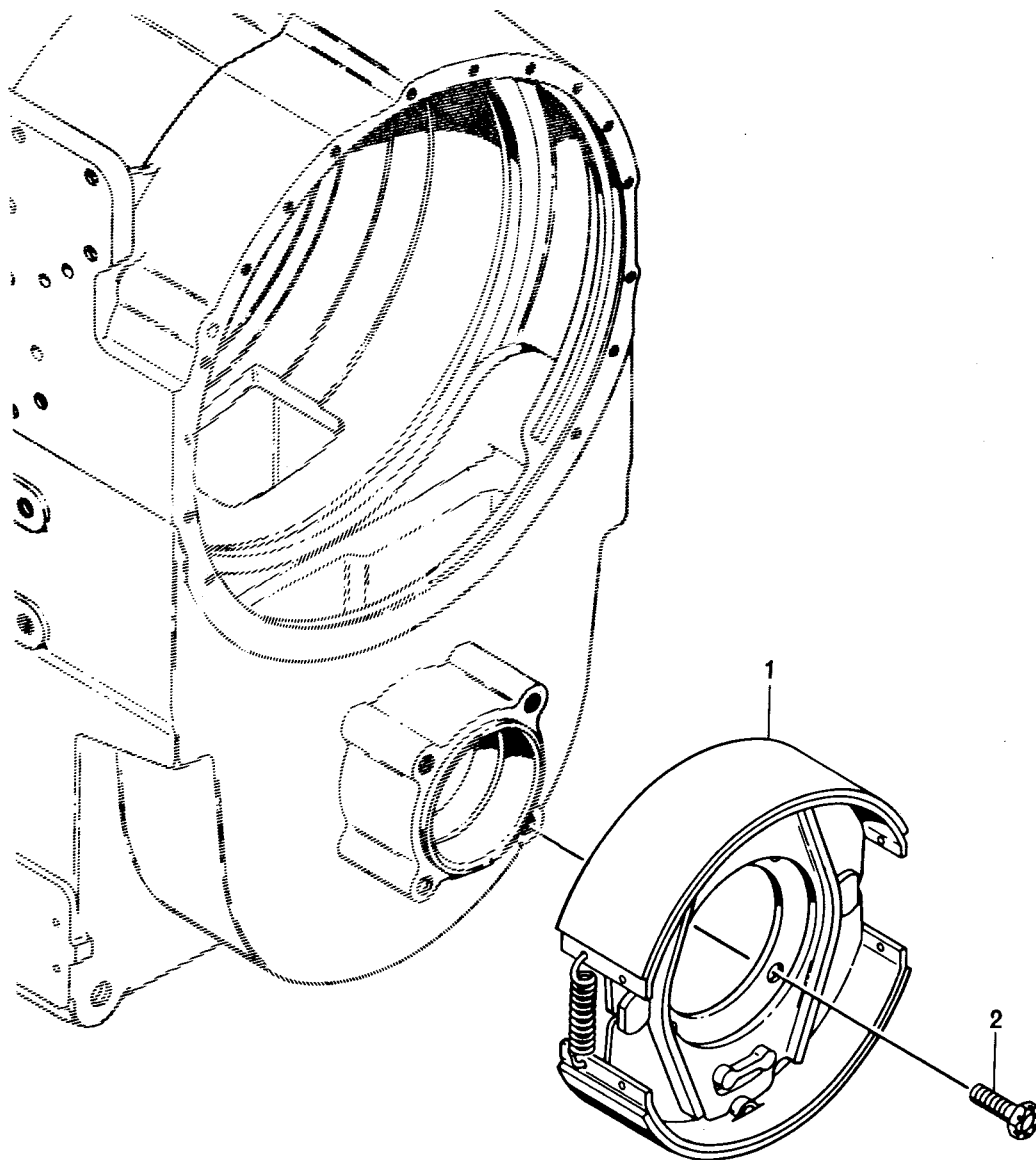


FIG. 16. PARKING BRAKE

GROUP A

PARKING BRAKE, FIGURE 16

REF NO	NOMENCLATURE	PART NO	REQ	RECOMMENDED SPARES FOR UNITS		
				1-3	4-10	11-25
1	BRAKE ASSY, MECHANICAL ACTUATED, ROCKWELL 10 X 3	6881357	1			1
2	BOLT, HX HD, 1/2-13 X 1	9409258	4	4	8	12

NUMERICAL PARTS INDEX

The numerical parts index lists the parts reference number and the figure number of the illustration in which it appears. The reference numbers are keyed to the group listings. However, you must know the transmission assembly part number to identify the right group.

PART NO	FIG NO	REF NO	HISTORY	PART NO	FIG NO	REF NO	HISTORY
103326	2	12		6703059	4	8	
103321	2	11		6703159	12	8	
103321	7	13		6750259	5	14	
103321	7	19		6750337	10	5	
103321	11	5		6750558	14	22	
103321	13	2		6753893	12	2	
103321	13	5		6753893	12	19	
103321	14	2		6754823	10	15	
103322	5	2		6755913	14	10	
103322	5	11		6755988	4	15	
103342	5	3		6756134	10	14	
103342	5	12		6756739	10	13	
141244	10	21		6756835	12	15	
141281	5	8		6757034	10	19	
143938	7	23		6757184	1	3	
145372	7	17		6757230	2	7	
145643	12	5		6757243	1	2	
145657	14	27		6757246	12	10	
179838	7	14		6757254	2	3	
179838	7	18		6757256	2	8	
179839	14	3		6757447	5	29	
179840	11	6		6757447	5	32	
179847	13	4		6758030	2	4	
179849	14	4		6758305	14	21	
179861	5	10		6758337	7	12	
179869	5	1		6765238	5	9	
179882	2	6		6765710	14	19	
181379	2	2		6769590	13	20	
181441	10	24		6769936	7	10	
186285	13	3		6770574	6	11	
274889	6	13		6771378	14	24	
444594	7	15		6772187	12	9	
444612	14	33		6772740	14	23	
444612	14	36		6772740	14	29	
444618	7	24		6773373	2	1	
444618	7	25		6773457	1	15	
444672	7	8		6773457	1	20	
444687	11	3		6773459	10	4	
451006	2	9		6773461	10	23	
451006	3	5		6773464	12	6	
454823	4	11		6773466	12	1	
457151	10	11		6773466	12	20	
560545	6	2		6773468	12	7	
901207	6	1		6773477	11	1	
903208	6	22		6773478	12	13	
903209	4	1		6773483	5	18	
903211	2	5		6773486	4	12	
903687	10	1		6773487	5	6	
905599	5	19		6773491	4	13	
907418	12	3		6773492	4	19	
907428	5	13		6773551	5	31	
907703	5	26		6773592	14	12	
907808	10	25		6773607	14	17	
907819	12	11		6773616	14	18	
907819	12	18		6773618	14	6	
908195	4	17		6773618	14	35	
954528	4	7		6773622	14	11	
954853	12	23		6773689	5	28	
6701353	14	7		6774012	3	2	
6701353	14	34		6774155	14	28	

PART NO	FIG NO	REF NO	HISTORY	PART NO	FIG NO	REF NO	HISTORY
6774572	12	21		6838646	13	7	
6776396	11	2		6838732	7	5	
6776425	13	12		6838733	7	20	
6776426	13	10		6838813	9	14	
6776426	13	14		6839163	10	22	
6776427	13	9		6839293	10	6	
6776427	13	13		6839403	10	16	
6776428	13	17		6839462	13	6	
6776508	4	4		6839463	13	16	
6776999	10	17		6839464	13	18	
6777173	7	7		6839891	14	25	
6777448	3	3		6839914	8	6	
6777449	3	4		6839914	9	10	
6777499	12	12		6880037	1	13	
6777499	12	17		6880097	1	16	
6777566	4	3		6880101	1	17	
6777575	4	14		6880101	1	18	
6779690	1	10		6880185	4	18	
6830154	1	9		6880391	14	31	
6830221	10	7		6880392	14	32	
6830225	8	10		6880484	14	26	
6830225	9	5		6880486	4	2	
6830293	8	7		6880488	4	6	
6830293	9	9		6880489	5	20	
6830365	14	15		6880491	5	25	
6831187	14	8		6880493	5	16	
6832000	4	9		6880494	12	22	
6832531	8	3		6880495	12	17	
6832996	4	10		6880496	5	4	
6833907	9	19		6880500	7	9	
6833934	14	30		6880502	6	18	
6833947	15	2		6880504	6	12	
6833999	5	21		6880505	6	14	
6834176	5	27		6880506	6	10	
6834176	5	30		6880507	6	3	
6834208	6	8		6880511	6	23	
6835141	7	6		6880512	8	5	
6835181	9	7		6880513	4	5	
6835182	8	13		6880514	8	11	
6835182	9	4		6880515	9	1	
6835343	6	9		6880516	3	6	
6835421	4	16		6880517	9	11	
6835502	14	16		6880518	9	2	
6835629	1	4		6880519	9	3	
6835630	1	5		6880520	8	8	
6835702	14	13		6880521	8	9	
6835705	14	14		6880522	8	14	
6836279	15	1		6880523	8	15	
6837638	5	7		6880524	8	16	
6837639	5	5		6880525	8	18	
6837671	6	7		6880526	8	17	
6837690	10	8		6880527	8	4	
6838061	9	15		6880529	9	12	
6838063	8	1		6880531	9	18	
6838064	8	2		6880532	10	2	
6838064	9	13		6880533	10	3	
6838494	7	16		6880536	10	9	
6838636	13	19		6880537	12	4	
6838644	13	8		6880538	12	14	
6838645	13	1		6880539	12	16	

INDEX 4

ALLISON POWERSHIFT TRANSMISSION TT 3000 SERIES PARTS CATALOG

PART NO	FIG NO	REF NO	HISTORY	PART NO	FIG NO	REF NO	HISTORY
6880540	7	4					
6880542	7	26					
6880543	2	10					
6880563	9	16					
6880564	7	22					
6880572	6	15					
6880638	9	8					
6880946	14	20					
6881090	1	19					
6881142	6	16					
6881143	9	17					
6881357	16	1					
6881382	14	1					
6881881	14	5					
6881882	14	9					
6882141	1	8					
6882143	1	7					
6882144	1	11					
6882145	1	12					
6882702	7	11					
6882702	7	21					
6882786	1	6					
6883735	10	18					
6883736	10	20					
6883737	11	4					
7451558	5	15					
8619650	5	24					
8619652	5	22					
9409011	5	17					
9409027	7	1					
9409027	7	2					
9409027	7	3					
9409027	7	27					
9409036	1	1					
9409052	3	1					
9409258	16	2					
9414207	5	23					
9416389	1	14					
9416389	1	21					
9417600	13	11					
9417600	13	15					
9418206	6	17					
9421006	6	5					
9421006	6	20					
9422966	8	12					
9422966	9	6					
9425295	10	10					
9425295	10	12					
9433260	12	3					
9436605	6	4					
9436605	6	6					
9436605	6	19					
9436605	6	21					
-15, 19-2			R 1, 1-2, 4				
-15, 19-2	3, 16	.52	RB -15, 19-2				
1, 1-2, 4							

R - REPLACES

RB - REPLACED BY