## **ALLISON TRANSMISSION**

# TOP SIDE ONLY



# 4000\*\*\* SERIES \*\*\* (EVS, RDS, SPS) (MHS, BUS, TRV Optional) HD-4060P, HD-4560P, HD-4070P Footnotes (1, 2, 3, & 4)

**ALLISON 10-BOLT OPENING** 

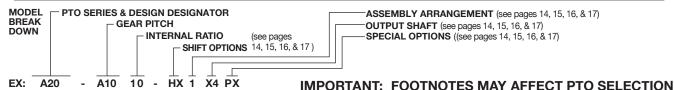
PTO DRIVE GEAR DATA:

97T 10.16P L.H. **LOCATION:** Front **PLV:** 2,648 FPM

PLMF: 1.775 RPM: 1,000



	10-BOLT TYPE	PTO MODEL NUMBER	FOOT NOTES	SHAFT ROTATION	ENGINE %	STUD KIT	SHIFT TYPE	SHAFT EXTENSION	© 1,000 RPM of PTO TORQUE HP		INTERMITTENT RATING @ 1,000 RPM of PTO TORQUE HP	
T TO EXCEED 2,500 RPM.	CONST. DRIVE MULTI GEAR	A30-A1005-MX5X4BX A30-A1006-MX5X4BX A30-A1007-MX5X4BX A30-A1008-MX5X4BX	9, 11 9, 11 9, 11 9, 11	Crnk Crnk Crnk Crnk	105 122 141 163	Included Included Included Included	None None	See ALLI-6X See ALLI-6X See ALLI-6X See ALLI-6X	400 400 415 360		ITTENT RATING  N/A  N/A  N/A  N/A	
SPEED NOT		A30-A1008-MX5X4BX A30-A1009-MX5X4BX A30-A1010-MX5X4BX A30-A1011-MX5X4BX A30-A1012-MX5X4BX A30-A1015-MX5X4BX	9, 11 9, 11 9, 11 9, 11 9, 11 9, 11	Crnk Crnk Crnk Crnk Crnk	163 175 187 215 231 287	Included Included Included Included Included	None None None None None	See ALLI-6X See ALLI-6X See ALLI-6X See ALLI-6X See ALLI-6X See ALLI-6X	340 310 275 265 205	69 65 59 52 50 39	N/A N/A N/A N/A N/A	N/A N/A N/A N/A N/A
OUTPUT SHAFT	CLUTCH SHIFT MULTI GEAR	A20-A1005-HX5X4BX A20-A1006-HX5X4BX A20-A1007-HX5X4BX A20-A1008-HX5X4BX A20-A1009-HX5X4BX A20-A1010-HX5X4BX A20-A1011-HX5X4BX A20-A1011-HX5X4BX A20-A1012-HX5X4BX A20-A1015-HX5X4BX	8, 9, 10, 11 8, 9, 10, 11	Crnk Crnk Crnk Crnk Crnk Crnk Crnk Crnk	105 122 141 163 175 187 215 231	Included Included Included Included Included Included Included Included Included	Power Power Power Power Power Power Power	See ALLI-6X	400 400 415 360 340 310 275 265 205	77 77 79 69 65 59 52 50 39	N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A
CAUTION: MAXIMUM	CLUTCH SHIFT MULTI GEAR HEAVY DUTY	CS10-A1005-H1CB CS10-A1006-H1CB CS10-A1007-H1CB CS10-A1008-H1CB CS10-A1010-H1CB CS41-A1007-H1CB	8 8 5, 8 5, 8 5, 7, 8, 10 5, 7, 8, 10	Crnk Crnk Crnk Crnk Crnk Crnk	111 125 139 164 184 144 206	Included Included Included Included Included Included	Power Power Power Power Power	None None None None None None	350 336 315 292 261 429 332	67 64 61 56 50 82 63	500 480 450 417 372 479 332	95 91 86 79 71 91 63
	ADAPTER TO CHANGE ROTATION			No Ada	pter Available	REFER TO ADAPTER GEAR ASSEMBLIES IN INDEX						



#### **FOOTNOTES:**

- 1 This opening is at the 1 o'clock position and clearance of the vehicle cab varies with application.
- Requires special lube kit included.
- 3 Internal clearance change in 2006. Transmissions built prior to 2006 are limited to PTO ratios "07" and below.
- 4 Standard output option "X4" (1410 companion flange) shown. Light-duty applications can use the "1X" option which will reduce available PTO output torque to 210 lb.ft.
- The torque rating of this PTO is based on the Allison drive gear rating (for single PTO) of 685 lb.ft. continuous rating and is shown on this page. Refer to the Allison Tech Data Book for more information. The CS41 PTO ratings are found on pages 17 with continuous ratings for Fire Pump applications to be calculated as shown on page 3. Ratings above the transmission rating are not approved. The transmission rating means that PTO CS41-A1007 is rated to 479 lb.ft. intermittent and 429 lb.ft. continuous when used on this series of transmission. The CS41-A1010 is rated 332 lb.ft. intermittent and continuous.
- 6 Connection to Allison "PTO enable" circuit must be made when PTO is engaged. Contact dealer for connection type and location.
- 7 Check for CS41 housing interference at transmission flange prior to tightening mounting cap screws. Clearance can be made by using a flat file to clear housing to transmission
- 8 A20, CS10 and CS41 PTOs in Fire Pump applications are approved to 4,000 RPM PTO output shaft speed.
- 9 A20 and A30 have a single continuous/intermittent torque rating.
- 10 PTO available with Muncie Start®; SX shift code on A20, 6 special feature on CS40.
- 11 A20/A30 1 arrangement housing interferes with transmission. Use 5 arrangement housing.

# ALLISON 10-BOLT OPENING

PTO DRIVE GEAR DATA:

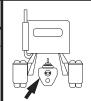


CAUTION: MAXIMUM OUTPUT SHAFT SPEED NOT TO EXCEED 2,500 RPM

# 4000\*\*\* SERIES \*\*\* (EVS, RDS, SPS) (MHS, BUS, TRV Optional) HD-4060P, HD-4560P, HD-4070P Footnotes (1, 2, 3, & 5)

97T 10.16P L.H.

**LOCATION:** Front **PLMF:** 1.775 **RPM:** 1,000



10-BOLT	PTO	FOOT	SHAFT			SHIFT	SHAFT	CONTINUO		INTERMITTE	
TYPE	MODEL NUMBER		ROTATION	ENGINE %	STUD KIT	TYPE	EXTENSION	@ 1,000 RF	M of PTO HP	@ 1,000 RF	
ITPE	WIODEL NOWIDER	NOTEG	HOTATION			TIFE	LATENSION	TORQUE	НР	TORQUE	HP
CONST.											
DRIVE											
MULTI								CONTINUOUS	AND INTERN	UTTENT DATING	O ADE CAME
GEAR								CONTINUOUS	AND INTERN	ITTENT RATING	S ARE SAIVIE
	A30-A1005-MX3X4PX	9	Crnk	105	Included	None	See ALLI-6X	400	77	N/A	N/A
		_				1				l	
	A30-A1006-MX3X4PX	9	Crnk	122	Included	None	See ALLI-6X	400	77	N/A	N/A
	A30-A1007-MX3X4PX	9	Crnk	141	Included	None	See ALLI-6X	415	79	N/A	N/A
	A30-A1008-MX3X4PX	9	Crnk	163	Included	None	See ALLI-6X	360	69	N/A	N/A
	A30-A1009-MX3X4PX	9	Crnk	175	Included	None	See ALLI-6X	340	65	N/A	N/A
	A30-A1010-MX3X4PX	9	Crnk	187	Included	None	See ALLI-6X	310	59	N/A	N/A
		-									
	A30-A1011-MX3X4PX	9	Crnk	215	Included	None	See ALLI-6X	275	52	N/A	N/A
	A30-A1012-MX3X4PX	9	Crnk	231	Included	None	See ALLI-6X	265	50	N/A	N/A
	A30-A1015-MX3X4PX	9	Crnk	287	Included	None	See ALLI-6X	205	39	N/A	N/A
								CONTINUOUS	AND INTERN	MITTENT RATING	SS ARE SAME
	A20-A1005-HX3X4PX	8, 9, 10	Crnk	105	Included	Power	See ALLI-6X	400	77	N/A	N/A
				122						N/A	
CLUTCU	A20-A1006-HX3X4PX	8, 9, 10	Crnk		Included	Power	See ALLI-6X	400	77		N/A
CLUTCH	A20-A1007-HX3X4PX	8, 9, 10	Crnk	141	Included	Power	See ALLI-6X	415	79	N/A	N/A
MULTI	A20-A1008-HX3X4PX	8, 9, 10	Crnk	163	Included	Power	See ALLI-6X	360	69	N/A	N/A
GEAR	A20-A1009-HX3X4PX	8, 9, 10	Crnk	175	Included	Power	See ALLI-6X	340	65	N/A	N/A
GE7111	A20-A1010-HX3X4PX	8, 9, 10	Crnk	187	Included	Power	See ALLI-6X	310	59	N/A	N/A
	A20-A1011-HX3X4PX	8, 9, 10	Crnk	215	Included	Power	See ALLI-6X	275	52	N/A	N/A
			1	_				1			
	A20-A1012-HX3X4PX	8, 9, 10	Crnk	231	Included	Power	See ALLI-6X	265	50	N/A	N/A
	A20-A1015-HX3X4PX	8, 9, 10	Crnk	287	Included	Power	See ALLI-6X	205	39	N/A	N/A
	CS10-A1005-H3CX	8	Crnk	111	Included	Power	See ALLI-6X	350	67	500	95
CLUTCH	CS10-A1006-H3CX	8	Crnk	125	Included	Power	See ALLI-6X	336	64	480	91
SHIFT											_
GEAR	CS10-A1007-H3CX	8	Crnk	139	Included	Power	See ALLI-6X	315	61	450	86
HEAVY	CS10-A1008-H3CX	5, 8	Crnk	164	Included	Power	See ALLI-6X	292	56	417	79
DUTY	CS10-A1010-H3CX	5, 8	Crnk	184	Included	Power	See ALLI-6X	261	50	372	71
	CS41-A1007-H3CX	5, 7, 8, 10	Crnk	144	Included	Power	See ALLI-6X	429	82	479	91
	CS41-A1010-H3CX	5, 7, 8, 10		206	Included	Power	See ALLI-6X	332	63	332	63
		3, . , 0, 10	5.1					502		552	
ADAPTE	R TO CHANGE ROTATION		No Adar	oter Available				REFER TO A	DAPTER GEA	R ASSEMBLIES	IN INDEX

MODEL BREAK DOWN

PTO SERIES & DESIGN DESIGNATOR

GEAR PITCH
OUTPUT SHAFT (see pages 14,15, 16, & 17)
OUTPUT SHAFT (see pages 14,15, 16, & 17)

SPECIAL OPTIONS ((see pages 14,15, 16, & 17)

EX: A20 - A10 10 - HX 1 X4 PX

IMPORTANT: FOOTNOTES MAY AFFECT PTO SELECTION

#### **FOOTNOTES:**

1 PTO shown with assembly arrangement with output shaft low and to the rear. The shaft high assembly can be used in chassis with interference with the PTO shown. A20 and A30 can use 5 arrangement housing; 1 arrangement has interference with transmission. Direct mount pump applications may have clearance depending on the type of pump used. The shaft high assembly of the PTO may also allow direct mount pump installs. Due to the numerous chassis and engine combinations it is not possible to note all the information here.

2 Requires special lube kit included.

3 Internal clearance change in 2006. Transmissions built prior to 2006 are limited to PTO ratios "07" and below.

4 Standard output option "X4" (1410 companion flange) shown. Light duty applications can use the "1X" option which will reduce available PTO output torque to 210 lb.ft.
5 The torque rating of this PTO is based on the Allison drive gear rating (for single PTO) of 685 lb.ft. continuous rating and is shown on this page. Refer to the Allison Tech Data Book

- 5 The torque rating of this PTO is based on the Allison drive gear rating (for single PTO) of 685 lb.ft. continuous rating and is shown on this page. Refer to the Allison Tech Data Book for more information. The CS41 PTO ratings are found on pages 17 with continuous ratings for Fire Pump applications to be calculated as shown on page 3. Ratings above the transmission rating are not approved. The intermittent and continuous.
- 6 Connection to Allison "PTO enable" circuit must be made when PTO is engaged. Contact dealer for connection type and location.
- 7 Check for CS41 housing interference at transmission flange prior to tightening mounting cap screws. Clearance can be made by using a flat file to clear housing to transmission

A20, CS10 and CS41 PTOs in Fire Pump applications are approved to 4,000 RPM PTO output shaft speed.

- 9 A20 and A30 have a single continuous/intermittent torque rating.
- 0 PTO available with Muncie Start®; SX shift code on A20, 6 special feature on CS40.

#### **ALLISON TRANSMISSION**



#### 4000\*\*\* SERIES **MUNCIE PTO SHAFT EXTENSIONS**

\*\*\* (EVS, RDS, SPS, OFS) (MHS, BUS, TRV OPTIONAL) HD-4060P, HD-4560P, HD-4070P

Footnotes (2 & 4)

#### **ALLISON 10-BOLT OPENING**

#### PTO DRIVE GEAR DATA:

97T 10.16P L.H. **LOCATION:** Front

**PLMF:** 1.775 **PLV:** 2648 FPM **RPM:** 1,000

**ALLISON 4000\*\*\* WITHOUT RETARDER OR COOLER** PTO SERIES CAUTION: MAXIMUM OUTPUT SHAFT SPEED NOT TO EXCEED 2,500 RPM. LEFT SIDE TOP SIDE XSMC-A40XX-X3\*\*XX XSMC-A40XX-X5\*\*XX A20 and A30 A\*0-A10\*\*-\*\*3CBPW A\*0-A10\*\*-\*\*5CBPW XS10-A40XX-X3\*\*XX **CS10 NOT AVAILABLE** CS10-A10\*\*-\*\*H3VX **CS41** 49TA\*\*\*\* (TURN PAGE) **NOT AVAILABLE ALLISON 4000\*\*\* WITH RETARDER** LEFT SIDE TOP SIDE XSMC-A40XX-X4\*\*RX A20 and A30 **NOT AVAILABLE** A\*0-A10\*\*-\*\*5CBPW XS10-A40XX-X3\*\*RX **CS10 NOT AVAILABLE** CS10-A10\*\*-H3VX XS41-A40XX-X3\*\*RX **CS41 NOT AVAILABLE** CS41-A10\*\*-M3VX **ALLISON 4000\*\*\* WITH INTEGRAL COOLER** LEFT SIDE TOP SIDE XSMC-A40XX-X4\*\*CX XSMC-A40XX-X5\*\*XX A20 and A30 A\*0-A10\*\*-\*\*5CBPW A\*0-A10\*\*-\*\*5CBPW **CS10 NOT AVAILABLE NOT AVAILABLE** XS41-A40XX-X4\*\*CX CS41 **NOT AVAILABLE** CS41-A10\*\*-H1VX

#### IMPORTANT: FOOTNOTES MAY AFFECT PTO SELECTION

#### **FOOTNOTES:**

- 1 49TA\*\*\*\*\* part numbers are choices for aluminum housing versions of shaft extension. These are shown on back of this page.
- PTOs and shaft extensions for integral cooler applications must be mounted shaft high in order to clear cooler.
- 3 PTO and shaft extension sold separately.
- Shaft extension choices for Allison 4700 Series transmission not shown. Only available options are XSMC-A47XX-X3\*\*XX/ A\*0-A10\*\*\*\*3CBPW or for left side, or XSMC-A47XX-X5\*\*XX/A\*0-A10\*\*-\*\*5CBPW for top opening without retarder or cooler. SAE outputs only. DIN option not available.
- 5 Table shows shaft extension part number on top, with corresponding PTO listed below where applicable. Some combinations are not available, and are listed as such.
- 6 See page ALLI-06 for PTO application details.

## **ALLISON TRANSMISSION**

SAE C



4000\*\*\* SERIES
MUNCIE PTO SHAFT EXTENSIONS

\*\*\* (EVS, RDS, SPS, OFS) (MHS, BUS, TRV OPTIONAL) HD-4060P, HD-4560P HD-4070P Footnotes (2 & 4) ALLISON 10-BOLT OPENING

**NOT AVAILABLE** 

PTO DRIVE GEAR DATA:

97T 10.16P L.H.

**LOCATION:** Front **PLMF:** 1.775 **PLV:** 2648 FPM **RPM:** 1,000

DTO OFFICE	OLITPLIT	ALLISON 4000*** WITHOUT RETARDER OR COOLER						
PTO SERIES	OUTPUT	LEFT SIDE	TOP SIDE					
	DIN-5462	49TA5445A CS41-A10**-H3VX	NOT AVAILABLE					
CS41	SAE B-C	49TA5446A CS41-A10**-H3VX	NOT AVAILABLE					
1		I						

49TA5447A

CS41-A10\*\*-H3VX

### **IMPORTANT: FOOTNOTES MAY AFFECT PTO SELECTION**

### FOOTNOTES:

- 1 PTO and shaft extension sold separately.
- 2 Shaft extension choices for Allison 4700 Series transmission not shown. Only available options are XSMC-A47XX-X3\*\*XX/ A\*0-A10\*\*\*\*3CBPW for left side or XSMC-A47XX-X5\*\*XX/ A\*0-A10\*\*-\*\*5CBPW for top opening without retarder or cooler. SAE outputs only. DIN option not available.
- 3 Table shows shaft extension part number on top, with corresponding PTO listed below where applicable. Some combinations are not available, and are listed as such.
- 4 For transmissions with retarder or integral cooler, see front of this page.
- 5 See Page ALLI-06 for PTO application details.