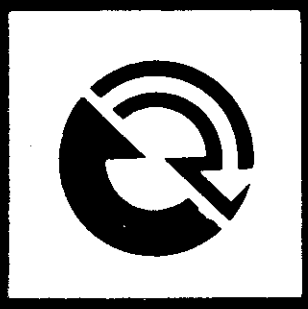
VOL. II

SALES AND APPLICATIONS

data

ALLISON TRANSMISSIONS



UPDATED
OCT. 14, 1977

MASTER INDEX

AS DRAWINGS

ON & OFF-HIGHWAY TRANSMISSION PRODUCTS

ON-HIGHWAY	OFF-HIGHWAY	AS NUMBER	SUBJECT	TRANSMISSION MODEL
X	X	00-001G	Transmission Drive Adaptation Chart (Shts.1 & 2)	See chart
X	X	00-002D	Engine-Tran./Conv. Adaptation Requirements	General
X	X	00-003C	Transmission Trunnion Support	See chart
X	X	00-004C	Single Filter Installation Data	Various
	X	00-006	Grease Specifications	TC-300, CRT-3000
	X	00-007E	Physical Adaptation Chart	TC-300, CRT-3000
	X	00-008	Recommended Support Plate Construction	TC-400, 500, 800, 900
	X	00-009	Heat Exchanger Performance	TC-300, CRT-3000
X	X	00-011U	Drive Flange Option	TT-4000, CLBT-4460, HT-70
	X	00-012	Output Flange Option	TC Series
X	X	00-013	Pump Suction Screen	General
X	X	00-014	Shift Control Tower Recommended Design	See Chart
	X	00-015	Physical Adaptation Chart	TC-800, 900
	X	00-016M	Flex Plate Input Drive Data	TT-2000, 3000, CRT-3000, TC-300
X		00-018D	Transmission Drive Adaptation Data	MT-600
X	X	00-019B	Remote Mounted Breather Option	CLBT-4460, HT-70, CLBT-5/6000, DP-800C

ON-HIGHWAY	OFF-HIGHWAY	AS NUMBER	SUBJECT	TRANSMISSION MODEL
	X	00-021A	Physical Adaptation	DP-8000
	X	00-026E	Shift Tower Gating Patterns	TT-2000, 3000, 4000
	X	00-027C	Air Actuated Clutch Cutoff Option	TT-2000, 3000, 4000
	X	00-028E	Inching Control Valve Body	TT-2000, 4000
	X	00-029	Selector Lever Chart	CLBT-4460, CLT-3460
X	X	00-031C	Installation Requirements for Electric Shift Control	Various
	X	00-032A	Off-Highway Transmission Gauges	See Chart
	X	00-033B	Wire Harness, Manual Electric	CLBT-5000, 6000, DP-8000
	X	00-034A	Electric Shift Inhibitor Switch Installation Rqmts.	DP-8000
	X	00-036	Flex Drive Characteristics	TT-2000, CRT-3000
	X	00-038B	Installation Requirements for SPG	DP-8000
	X	00-039C	Installation Requirements for Auto Shift Tower	DP-8000
	X	00-040C	Installation Requirements for Throttle Potentiometer	DP-8000
	X	00-041D	Installation Requirements for Cab Harness	DP-8000
	X	00-042B	Installation Requirements for Vehicle Harness	DP-8000
	X	00-043C	Installation Requirements for 12-24 Volt Converter	DP-8000, CLBT-5/6000
	X	00-044A	Range Restricter Harness	DP-8000
	X	00-045A	Off-Highway Transmission Gauges	See Chart
	X	00-046	Filter By-Pass Switch	CLBT-5000

ON-HIGHWAY	OFF-HIGHWAY	AS NUMBER	SUBJECT	TRANSMISSION MODEL
	X	00-048D	Installation Requirements, Auto Shift Control	DP-8961, CLT-5/6000
	X	00-049B	Installation Requirements for 24 Volt Overload Protector	DP-8000
X	X	00-050A	Drive Flange Information (Shts. 1 & 2)	CLBT, HT-700
	X	00-051	Cooler Oil Flow Data (Shts. 1 & 2)	TT/TRT Series
	X	00-052A	Neutral Start Switch Provision	TT/TRT Series
X		00-053	Drive Flange Information (Shts. 1 & 2)	AT-540
X		00-054	Drive Flange Information (Shts. 1 & 2)	MT, CLT-600
	X	00-055	Installation Reqmts. for Hold in Range Option	CLT-5/6000, DP-8961
	X	00-056	Installation Reqmts., Cab Harness for Hold in Range Option	CLT-5/6000, DP-8961
	X	00-057	Installation Reqmts. Automatic Shift Tower Hold in Range Option	CLT-5/6000, DP-8961
	X	00-058	Installation Instruction-Tightening Elec. Harness Conn.	DP-8961/CLT-5000
X		00-059	Flex Plate Recommendations	AT-543
X		00-060	Flex Plate Recommendations	AT-540
	X	00-061	Flex Plate Recommendations, Range Indicator Assy.	DP-8961, 5/6000
X		02-021B	Input Adaptation Requirements	V-730
X		02-022C	External Circuit Requirements	V-730
X		02-023A	Speedo Drive Provision	V-730
X		02-024A	Range Selection Requirements	V-730

ON-HIGHWAY	OFF-HIGHWAY	AS NUMBER	SUBJECT	TRANSMISSION MODEL
X		02-026	Mechanical Modulator Installation	V-730
X		02-027B	Output Flange Delineation	V-730
X		02-028B	Engine Driven PTO	V-730
X		02-030A	Shift Modulator Rquirements	V-730
X		02-033D	Basic Installation	V-730
X		02-034A	Pneumatic Modulator Installation	V-730
X		02-035A	Oil Level and Dipstick Requirements	V-730
X		20-007P	Basic Installation Drawing (Shts. 1 & 2)	AT-500
X		20-008M	Physical Adaptation Requirements (Shts. 1 & 2)	AT-540
X		20-009B	External Hydraulic Circuit Requirements	AT-540/543
X		20-010D	Transmission Driven Side PTO Option	AT-500
X		20-011D	Provision for Parking Brake	AT-500
X		20-012C	Manual Range Selector Control Data	AT-500
X		20-013C	Speedo Driven Gear Design Requirements	AT-500
X		20-014D	Output Drive Flange Data	AT-500
X		20-016D	Neutral and Reverse Signal Provision	AT-540/543
X		20-023B	Modulator Design Requirements (Shts. 1 & 2)	AT-540/543
X		20-024B	Physical Adaptation Requirements	AT-543
X		20-025A	Oil Pan Pre-Heat Provision Option	AT-540/543

ON-HIGHWAY	OFF-HIGHWAY	AS NUMBER	SUBJECT	TRANSMISSION MODEL
X		20-028	Installation Drawing	AT-543
	X	22-003S	Basic Installation Drawing	TT-2000-1
	X	22-004P	External Hydraulic Circuit Requirements	TT-2000, 3000
	X	22-008AA	Drive Flange Option	TT-2000, 3000
	X	22-011N	Implement and Steer Pump Drives	TT-2000
	X	22-015C	Speedometer Drive Option	TT-2000, 3000
	X	22-016E	Two Speed Fwd. - Two Speed Rev.	TT-2000
	X	22-017B	Two Speed Fwd. - Two Speed Rev.	TT-2000
	X	22-021L	Basic Installation Drawing	TRT-2211, 2411-3
	X	22-022H	Implement and Steer Pump Drives	TT-2000
	X	22-026A	Converter Driven PTO and Service Brake Option	TT-2000
	X	22-028	Implement and Steer Pump Clearance Information	TT-2000
	X	22-029	Implement and Steer Pump Clearance Information	TT-2000
	X	22-030	Implement Pump Mounting Flange and Spline Information	TT-2000
	X	22-031B	Steer Pump Mounting Flange and Spline Information	TT-2000
	X	31-001A	Basic Installation Drawing	TC-300
	X	31-003	Cooler Oil Flow	TC-300
	X	31-004	Installation Diagram	TCO-300

ON-HIGHWAY	OFF-HIGHWAY	AS NUMBER	SUBJECT	TRANSMISSION DRAWING
	X	31-005	Power Take-Off Sprocket Chart	TC-300
	X	31-006A	External Hydraulic Circuit Requirements	TC-300
	X	31-007	Recommended Support Plant Construction	TC-300
	X	31-008	Industrial Output with Heavy Duty Bearings	TC-300
	X	31-009	Rear Disconnect Output	TCRD-300
	X	31-010B	10 Inch Overcenter Front Disconnect Clutch	TC-300
	X	31-011	Governor Drive Option	TC-300
	X	31-012	Special Industrial Output	TC-300
	X	31-013	Chain Coupling Output	TC-300
	X	31-015	Rear Disconnect Output	TC-300
	X	32-001D	Basic Installation Drawing (Shts. 1 & 2)	TT-3420-1
	X	32-003A	Implement and Steer Pump Clearance Information	TT-3000
	X	32-004	Implement Pump Mounting Flange and Spline Information	TT-3000
	X	32-005	Steer Pump Mounting Flange and Spline Information	TT-3000
	X	32-006	Drive Flange Recommendations	TT-3420
	X	33-001D	External Hydraulic Circuit Requirements	CRT-3000
	X	33-002E	Basic Installation Drawing	CRT-3000
	X	33-003D	Basic Installation Drawing	CRT-3000

ON-HIGHWAY	OFF-HIGHWAY	AS NUMBER	SUBJECT	TRANSMISSION MODEL
	X	33-005	Cooler Oil Flow	CRT-3000
	X	33-008C	Steer Pump Drive	CRT-3000
	X	33-009D	Implement Pump Drive	CRT-3000
	X	33-010L	Drive Flange Option	CLT, CRT-3000
	X	33-011	Remote Mounted Sump Option	CRT-3000
	X	33-012A	Inching Control Valve Body	CRT-3000
	X	33-013	Governor Drive Option	CRT-3000
	X	33-014A	Air Actuated Clutch Cutoff Option	CRT-3000
	X	33-020	Speedometer Drive Option	CRT-3000
	X	33-024	Shift Tower Gating Patterns	CRT-3000
	X	33-028	Front Output Option	CRT-3000
	X	34-001	Cooler Oil Flow	CLT-3000
	X	34-002F	Installation Diagram (Transfer Gear Output)	CLT-3000
	X	34-004G	Installation Diagram	CLT-3000
	X	34-005B	Remote Input Option	CLT-3000
	X	34-006A	External Hydraulic Circuit Requirements	CLT-3000
	X	34-007A	Side PTO - Transmission Driven	CLT-3000
	X	34-008B	10½ x 3 Parking Brake Option	CLT-3000
	X	34-009C	Heavy Duty Output Option	CLT-3000

ON-HIGHWAY	OFF-HIGHWAY	AS NUMBER	SUBJECT	TRANSMISSION MODEL
	X	34-010	Recommended Remote Mount Configuration	CT-3000
	X	34-014B	6-Speed Manual Control Option	CLT-3000
	X	34-015B	Air Cylinder Shift Control Requirements	CLT-3000
	X	34-017C	Drive Flange Option	CLT-3000
	X	34-018B	Variable Capacity Converter Air Control Option	CLT-3000
	X	34-021	Optional Deep Sump Pan	CLT-3000
X		36-002C	Output Drive Flange Data (Shts. 1 & 2)	MT-643/644
X	X	36-003H	External Hydraulic Circuit Requirements (Shts.1 & 2)	MT, CLT-600
X		36-004C	Provision for Parking Brake	MT-643/644
X		36-005D	Installation Drawing	MT-653DR
X	X	36-006D	Converter Driven PTO	MT, CLT-600
X		36-007D	Manual Range Selector Control Data	MT-643, 644, 653DR
X		36-008D	Speedo Drive Data	MT-643/644
X		36-009E	Output Drive Flange Data	MT-653DR/654CR
X		36-013C	Provision for Parking Brake	MT-653DR/654CR
X		36-014D	Speedo Drive Data	MT-653DR/654CR
X		36-015D	Adaptation Requirements	MT-643/653DR
X	X	36-016B	Modulator Installation	MT, CLT-600
X	X	36-017B	Modulator Design Requirements (Shts. 1 & 2)	MT, CLT-600

ON-HIGHWAY	OFF-HIGHWAY	AS NUMBER	SUBJECT	TRANSMISSION MODEL
X		36-019E	Drive Plate Design Recommendations	MT-600
X		36-023E	Installation Drawing (Shts. 1 & 2)	MT-654CR
X	X	36-024C	Manual Range Selector Control Data	MT-654CR, CLT-600
X		36-025B	Adaptation Requirements (TC-400 Series Converter)	MT-644/654CR
X	X	36-030F	Basic Installation Drawings (Shts. 1 & 2)	MT, CLT-600
	X	36-031C	Installation Drawing (Shts. 1 & 2)	CLT-600
	X	36-032D	Remote Input Option	CLT-600
X	X	36-033	Electric Circuit Requirements	MT, CLT-600
X	X	36-035A	Oil Pan Pre-Heat Option	MT, CLT-600
X		36-036	Remote Input Option (Shts. 1 & 2)	MT-643/653DR
X		36-038	Manual/Automatic Controls	MT-654CR
X	X	40-001L	Installation Diagram	HT-70
X	X	40-003C	External Hydraulic Circuit Requirements	HT-70
X	X	40-016D	Manual Range Selector Control Data	HT-70
X	X	40-017H	Throttle Valve Control Data	HT-70
X	X	40-020	Integral Hydraulic Retarder HP Absorption Charac.	HT-70
X	X	40-023	Cooler Oil Flow	HT-70

ON-HIGHWAY	OFF-HIGHWAY	AS NUMBER	SUBJECT	TRANSMISSION MODEL
	X	42-003K	External Hydraulic Circuit Requirements	TT-4000
	X	42-004D	Implement and Steer Pump Drives	TT-4000
	X	42-009K	Flex Plate Input Drive Data	TT & TRT-4000
	X	42-011B	Basic Installation Drawing	TT-4000
	X	42-012A	Speedometer Drive Option	TT-4000
	X	42-015E	Basic Installation Drawing	TT-4720, TRT-4820-1
	X	42-016	Implement and Steer Pump Drives	TT-4000
	X	44-001R	Installation Diagram (Straight Thru Output)	CLBT-4460
	X	44-004D	External Hydraulic Circuit Requirements	CLBT-4460
	X	44-005R	Installation Diagram (Transfer Gear Output)	CLBT-4460
X	X	44-008E	Engine Driven Top PTO	CLBT-4460, HT-70
X	X	44-009B	Transmission Driven Side PTO	CLBT-4460, HT-70
X	X	44-010A	Transmission Driven Top PTO	CLBT-4460, HT-70
X	X	44-013E	Front Output Disconnect Option	CLBT-4460, HT-70
	X	44-017A	Rear Output Disconnect Option	CLBT-4460
	X	44-018	Integral Hydraulic Retarder HP Absorption Charac.	CLBT-4460
	X	44-023	Cooler Oil Flow	CLBT, VCLBT-4460
X	X	44-025B	Variable Capacity Converter Air Control Option	CLBT-4460, HT-70

ON-HIGHWAY	OFF-HIGHWAY	AS NUMBER	SUBJECT	TRANSMISSION MODEL
X	X	44-027	Drum Brake Option	CLBT-4460, HT-70
	X	44-028A	Drum Brake Option	CLBT-4460
X	X	45-030A	Basic Installation Drawing (Shts. 1 & 2)	CLT, HT-700
X		45-031A	Installation Drawing	HT-750
	x	45-032B	Installation Drawing (Shts. 1 & 2)	CLT-750
X	X	45-033C	Engine Driven PTO Input Housing Option (Shts. 1 &2)	CLT, HT-700
X	X	45-035A	Hydraulic Retarder Option (Shts. 1, 2, 3)	CLT, HT-700
	X	45-036C	Output Transfer Gear Housing Option (Shts. 1 & 2)	CLBT 750DB
X	X	45-037A	Shift Modulator Installation Requirements	CLT, HT-700
X	X	45-038A	External Hydraulic Circuit Requirements (Shts. 1 & 2)	CLT, HT-700
X	X	45-040	External Electric Requirements	CLT, HT-700
X		45-041A	Manual Shift Control Data	HT-700
	X	45-042A	Manual Shift Control Data	CLT-750
X	X	45-043A	Speedometer Drive Data	CLT, HT-700
X	X	45-044A	Drive Flange Option (Shts 1A & 2B)	CLT, HT-700
X	X	45-045B	Parking Brake Provision	CLT, HT-700
X	X	45-046A	Transmission Driven Side PTO Data	CLT, HT-700
X	X	45-047B	Drive Flange Data (Shts. 1 & 2)	CLBT 750DB

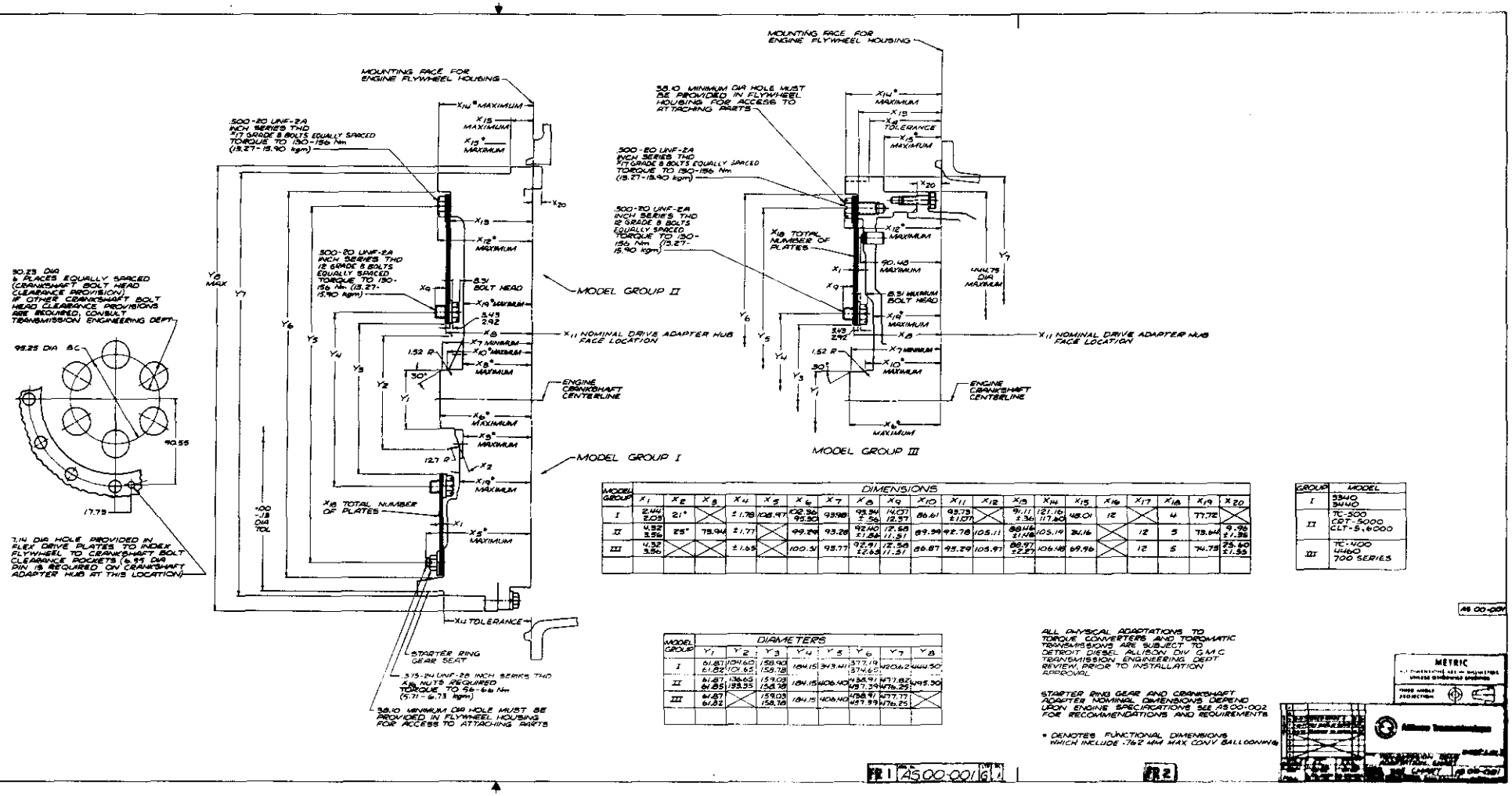
ON-HIGHWAY	OFF-HIGHWAY	AS NUMBER	SUBJECT	TRANSMISSION MODEL
X		45-049	Oil Pan Pre-Heat Provision Option	HT-700
X	X	45-052	Manual/Automatic Controls Installation (Shts 1 & 2)	HT-750DRD, CLT-700
X	X	45-054A	Oil Level & Dipstick Requirements	CLT, HT-700
X	X	45-056	Variable Capacity Converter	700 Series
	X	45-057	Special Input & Output (Shts. 1 & 2)	CLBT-750
	X	45-058	Output Disconnect Option (Shts. 1 & 2)	CLT-750
	X	TC-15490	Retarder Absorption Chart	CLBT-750
	X	TC-15491	External Cooler Circuit - Oil Flow (Sht. 1)	CLBT-750
	X	TC-15491	External Circuit Characteristics for Retarder Operation (Sht. 2)	CLBT-750
	X	51-001	Cooler Oil Flow	TC-500
	X	51-002	Torqmatic Brake HP Absorption Characteristics	TCB
	X	51-003D	Installation Diagram	TC-400, 500
	X	51-004C	External Hydraulic Circuit Requirements (Converter Only)	TC-400, 500
	X	51-005C	External Hydraulic Circuit Requirements with Trans.	TC-400, 500
	X	51-006	Hydraulic Retarder Option	TCB-500
	X	51-007A	Lock-Up Clutch Option	TCL-500
	X	51-008	Disconnect Clutch Adaptation	TCD-400, 500
	X	51-009	PTO Sprocket Chart	TC-400, 500
	X	51-011B	Special Output Shaft	TC-400, 500

ON-HIGHWAY	OFF-HIGHWAY	AS NUMBER	SUBJECT	TRANSMISSION MODEL
	X	51-012	Governor Drive Option	TC-400, 500
	X	51-014	Converter Feedback Performance	TC-500
	X	52-017	Basic Installation Drawing (Shts. 1, 2, 3)	CRT-7031
	X	56-005C	Side PTO Option	CRT-5000
	X	56-007A	Implement Pump Drive Option	CRT-5000
	X	56-015A	Basic Installation Drawing - Loader Version (Shts. 1, 2, 3)	CRT-5000
	X	56-016A	Basic Installation Drawing - Non-Loader Version (Shts. 1, 2, 3)	CRT-5000
	X	56-017	Output Option w/o Transfer Housing - Non-Loader Option (Shts. 1 & 2)	CRT-5000
	X	56-018	Auxiliary Lube Circuit	CRT-5000
	X	56-019	Air Actuated Clutch Cutoff Option	CRT-5000
	X	56-020	Hydraulic Clutch Cutoff Option	CRT-5000
	X	56-021	External Hydraulic Circuit	CRT-5000
	X	56-022	Cooler Oil Flow (Shts. 1 & 2)	CRT-5000
	X	58-004G	Filter Installation	CLBT-5/6000
	X	58-029P	Installation Diagram (Straight Thru Output)	CLBT-5/6000
	X	58-031P	Installation Diagram	CLBT-5000

ON-HIGHWAY	OFF-HIGHWAY	AS NUMBER	SUBJECT	TRANSMISSION MODEL
	X	58-032	Integral Hydraulic Retarder HP Absorption Charac.	CLBT-5/6000
	X	58-034	Cooler Oil Flow	CLBT-5/6000
	X	58-035J	Drive Flange Option	CRT-5000, CLBT-5/6000
	X	58-036C	Installation Diagram - Torqmatic Retarder	CLBT-5/6000
	X	58-037C	Installation Diagram - Torqmatic Retarder Low Profile Valve Body	CLBT-5000
	X	58-038A	Installation Diagram - Top PTO	CLBT-5/6000
	X	58-039A	Installation Diagram - Side PTO	CLBT-5/6000
	X	58-040A	External Hydraulic Circuit	CLT-5/6000
	X	58-041A	External Hydraulic Circuit	CLBT-5/6000
	X	58-042	Reverse Filter Installation	CLBT-5/6000
	X	58-048B	Variable Capacity Converter Air Controlled Option	CLBT-5/6000
	X	58-057D	Electric Shift Control Option	CLBT-5/6000
	X	58-061	Rear Output Disconnect Options	CLBT-5860
	X	58-062	Speed Sensing Pick-Up - Straight Thru Models	CLT-5/6000
	X	58-063	Speed Sensing Pick-Up - Transfer Case Models	CLT-5/6000
	X	58-064	Sight Oil Level Option	CLT-5/6000
	X	58-065	Cooler Circuit Oil Flow	CLBT-5/6000
	X	58-066	Cooler Circuit Oil Flow	CLBT-5/6000
	X	58-067	Cooler Circuit Oil Flow	CLBT-5/6000

ON-HIGHWAY	OFF-HIGHWAY	AS NUMBER	SUBJECT	TRANSMISSION MODEL
	X	58-068	Cooler Circuit Oil Flow	CLBT-5/6000
	X	58-069	Cooler Circuit Oil Flow Instruction Sheets (Shts. 1 & 2)	CLBT-5/6000
	X	80-007F	Drive Flange Option	DP-8000
	X	80-008A	External Hydraulic Circuit	DP-8000
	X	80-015G	Installation Diagram	DP-8000
	X	80-016	Side PTO Option	DP-8000
	X	80-017	Top PTO Option	DP-8000
	X	80-019	Cooler Circuit Oil Flow	DP-8000
	X	80-020	Retarder Capacity	DP-8000
	X	80-021	Cooler Circuit Oil Flow	DP-8000
	X	80-023A	Installation Requirements for Speed Sensing Magnetic Pickup	DP-8000
	X	80-024	Oil Fill and Level Check Requirements	DP-8000
	X	80-025	Retarder Oil Flow	DP-8000
	X	81-002	Cooler Oil Flow	TC-800
	X	81-003D	External Hydraulic Circuit Requirements	TCHD-800, 900
	X	81-004	Basic Installation Drawing	TC-800, 900

ON-HIGHWAY	OFF-HIGHWAY	AS NUMBER	SUBJECT	TRANSMISSION MODEL
	X	81-005C	Front Disconnect Clutch	TCD-800, 900
	X	81-007	PTO Sprocket Chart	TC-800, 900
	X	81-008	Governor Drive Option	TC-800, 900
	X	81-009B	External Hydraulic Circuit Requirements	TC-800, 900



MODEL GROUP	DIMENSIONS																		
	X1	X2	X3	X4	X5	X6	X7	X8	X9	X10	X11	X12	X13	X14	X15	X16	X17	X18	X19	X20
I	2.44 2.03	21°		±1.78	108.97	102.36 95.50	93.98	93.34 ±.56	14.07 12.57	86.61	93.73 ±1.07		91.11 ±.36	121.16 117.60	48.01	12		4	77.72	
II	4.52 3.56	25°	79.94	±1.77		99.29	93.28	92.40 ±1.54	12.58 11.51	89.39	92.78	105.11	88.46 ±1.98	105.19	34.16		12	5	73.64	9.96 ±1.35
III	4.52 3.56			±1.65		100.51	95.77	92.91 ±2.68	12.58 11.51	86.87	95.29	105.97	88.97 ±2.27	106.48	69.96		12	5	74.78	25.60 ±1.55

GROUP	MODEL
I	5340 5440
II	TC-500 CRT-5000 CLT-5,6000
III	TC-400 4460 700 SERIES

MODEL GROUP	DIAMETERS							
	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8
I	61.87 61.82	101.60 101.55	158.90 158.78	184.15	349.41	377.19 374.65	420.62	444.50
II	61.87 61.85	136.65 133.35	159.08 158.78	184.15	408.40	434.99 437.34	477.82 476.25	495.30
III	61.87 61.82		159.03 158.78	184.15	408.40	434.99 437.99	477.77 476.25	

ALL PHYSICAL ADAPTATIONS TO TORQUE CONVERTERS AND TORQMATIC TRANSMISSIONS ARE SUBJECT TO DETROIT DIESEL ALLISON DIV G.M.C TRANSMISSION ENGINEERING DEPT REVIEW, PRIOR TO INSTALLATION APPROVAL

STARTER RING GEAR AND CRANKSHAFT ADAPTER NOMINAL DIMENSIONS DEPEND UPON ENGINE SPECIFICATIONS SEE A500-002 FOR RECOMMENDATIONS AND REQUIREMENTS

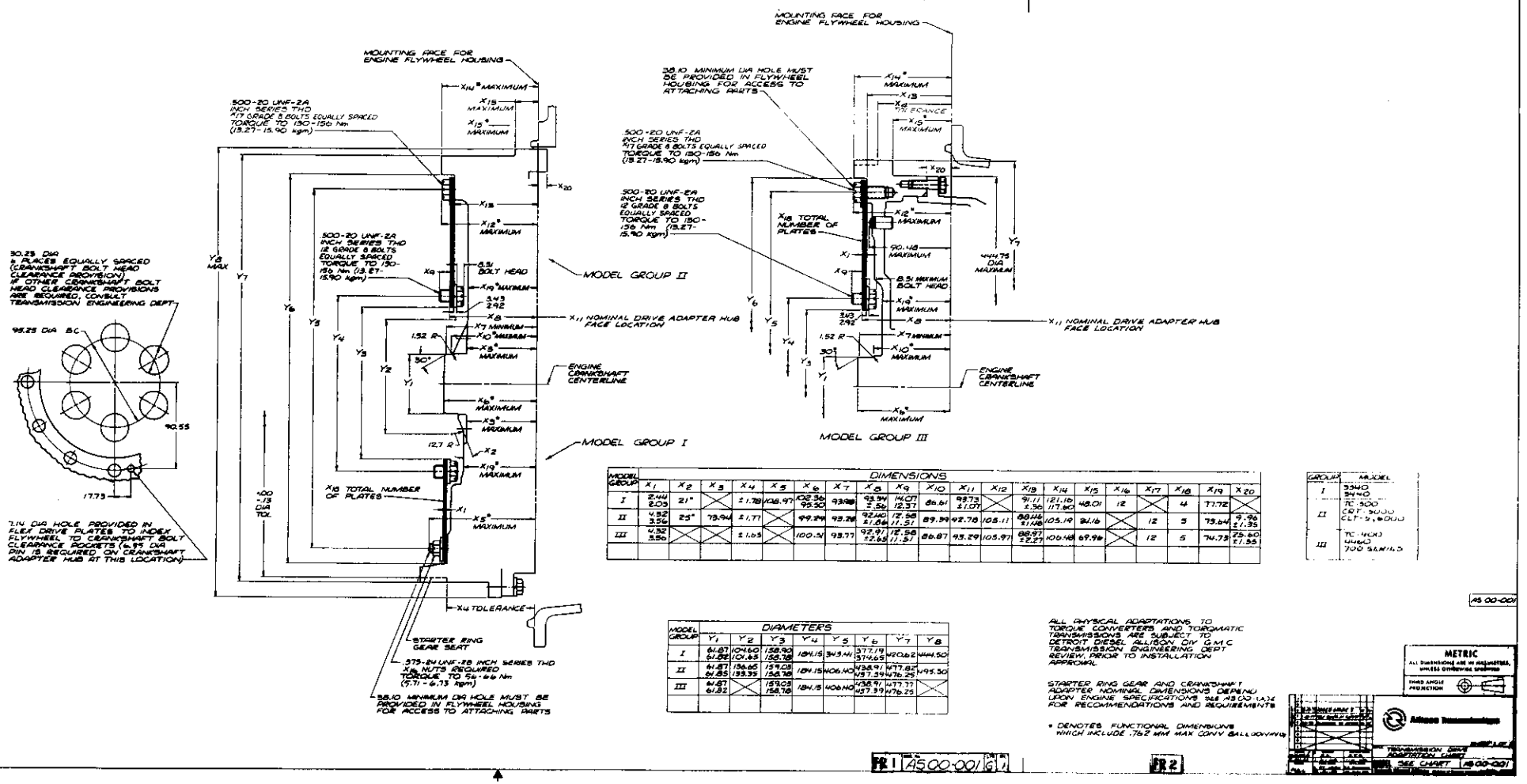
* DENOTES FUNCTIONAL DIMENSIONS WHICH INCLUDE .762 MM MAX CONV BALLOONING

A500-001

METRIC

FR1 A500-001 REV 2

FR2



MODEL GROUP	DIMENSIONS																			
	X_1	X_2	X_3	X_4	X_5	X_6	X_7	X_8	X_9	X_{10}	X_{11}	X_{12}	X_{13}	X_{14}	X_{15}	X_{16}	X_{17}	X_{18}	X_{19}	X_{20}
I	2.44 2.03	21°	X	±1.78	108.97	102.36 99.30	93.98	93.94 ±.56	114.07 12.37	86.61	93.73 ±1.07	X	91.11 121.16 117.60	48.01	12	X	4	77.72	X	
II	4.52 3.56	25°	73.94	±1.77	X	99.24	93.78	92.40 ±1.66	13.58 11.51	89.39	92.78	105.11	88.11 ±1.48	105.19	21.16	X	12	5	73.64	9.96 ±1.35
III	4.52 3.56	X	X	±1.65	X	100.51	93.77	92.91 ±2.65	12.58 11.51	86.87	93.29	105.97	88.97 ±2.27	106.48	69.96	X	12	5	74.73	29.60 ±1.55

MODEL GROUP	DIAMETERS							
	Y_1	Y_2	Y_3	Y_4	Y_5	Y_6	Y_7	Y_8
I	61.87 61.82	104.60 101.65	158.90 155.78	184.15	343.41	377.19 374.65	420.62	444.50
II	61.87 61.85	136.65 133.35	159.05 156.78	184.15	406.40	438.91 437.39	477.82 476.25	495.50
III	61.87 61.82	X	159.05 156.78	184.15	406.40	438.91 437.39	477.77 476.25	X

GROUP	MODEL
I	3340 3440
II	TC-500 CRT-5000 CLT-5,6000
III	TC-400 4460 700 SERIES

ALL PHYSICAL ADAPTATIONS TO TORQUE CONVERTERS AND TORQMATIC TRANSMISSIONS ARE SUBJECT TO DETROIT DIESEL ALLISON DIV. G.M.C. TRANSMISSION ENGINEERING DEPT. REVIEW, PRIOR TO INSTALLATION APPROVAL

STARTER RING GEAR AND CRANKSHAFT ADAPTER NOMINAL DIMENSIONS DEPEND UPON ENGINE SPECIFICATIONS. SEE A5.00-L.A.X FOR RECOMMENDATIONS AND REQUIREMENTS

* DENOTES FUNCTIONAL DIMENSIONS WHICH INCLUDE .762 MM MAX CONV BALLOON VAR

A5.00-001

METRIC
ALL DIMENSIONS ARE IN MILLIMETERS, UNLESS OTHERWISE SPECIFIED
THIRD ANGLE PROJECTION

Allison Transmission

TRANSMISSION DRIVE ADAPTATION CHART
SEE CHART A5.00-001

PR 1 A5.00-001 (6)

PR 2

MILLIMETRES TO INCHES

mm MIN/NOM	mm MAX	in MIN/NOM	in MAX	mm MIN/NOM	mm MAX	in MIN/NOM	in MAX
	.13		.005		104.90		4.13
.36		.014			105.44		4.151
.56		.022			105.99		4.173
1.02		.040			108.97		4.29
1.07		.042		117.60	121.16	4.63	4.77
1.12		.044		133.35	136.65	5.25	5.38
1.22		.048		158.78	158.90	6.251	6.256
1.32		.052		158.78	159.03	6.251	6.261
1.40		.055		184.15		7.250	
1.52		.06		343.41		13.52	
1.60		.063		374.65	377.19	14.75	14.85
1.65		.065		406.40		16.00	
1.78		.070		420.62		16.56	
2.03	2.44	.080	.096	437.39	438.91	17.22	17.28
2.92	3.43	.115	.135		444.50		17.50
3.56	4.32	.140	.170		444.75		17.51
6.35		.250		476.25	477.77	18.75	18.81
7.14		.2813			495.30		19.50
	8.31		.327				
11.28	11.81	.444	.465				
11.73	11.84	.4619	.4662				
12.37	14.07	.487	.554				
12.70		.50					
17.73		.698					
	23.88		.94				
30.23		1.19					
38.10		1.50					
	48.01		1.89				
61.82	61.87	2.434	2.436				
64.52		2.54					
	73.41		2.89				
	73.91		2.910				
	73.96		2.912				
	77.72		3.06				
	86.61		3.41				
88.75		3.494					
	88.95		3.502				
89.28		3.515					
90.55		3.565					
	90.68		3.57				
	90.86		3.577				
91.11		3.587					
92.68		3.649					
93.22		3.670					
93.34		3.675					
93.73		3.690					
93.98		3.70					
94.03		3.702					
94.49		3.72					
94.57		3.723					
94.67		3.727					
95.25		3.75					
95.50	102.36	3.76	4.03				
95.68	99.62	3.767	3.922				
95.76	98.81	3.77	3.89				
101.60	104.65	4.00	4.12				
102.11	104.90	4.02	4.13				

METRIC VALUES	EQUIVALENTS
56-66 Nm	41-49 POUND FEET
130-156 Nm	96-115 POUND FEET

ADDITIONS CHANGE F

MILLIMETRES TO INCHES

mm MIN/NOM	mm MAX	in. MIN/NOM	in. MAX
1.35		.053	
1.48		.058	
1.55		.061	
1.77		.069	
1.86		.073	
2.27		.089	
2.65		.104	
9.96		.392	
11.51		.453	
12.58		.495	
24.16		.951	
25.60		1.007	
61.85		2.435	
69.96		2.754	
73.64		2.899	
73.94		2.911	
74.64		2.938	
74.73		2.942	
86.87		3.420	
88.46		3.482	
88.97		3.502	
89.39		3.519	
	90.48		3.562
92.29		3.633	
92.40		3.637	
92.78		3.652	
92.91		3.657	
93.28		3.672	
93.29		3.673	
93.77		3.691	
99.29		3.909	
100.51		3.957	
105.11		4.138	
105.19		4.141	
105.97		4.172	
106.48		4.192	
477.82		18.811	

AS 00-001

Allison Transmissions

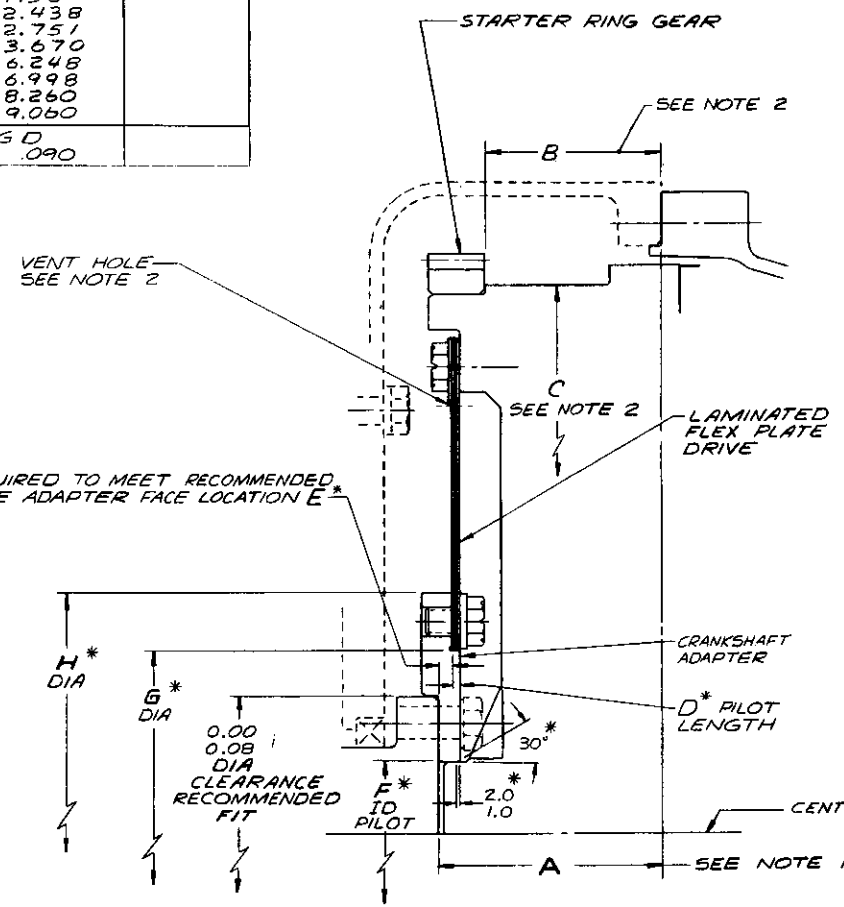
SHEET 2

TRANSMISSION DRIVE ADAPTING CHART

SEE SHEET 1 AS 00-581

MILLIMETRES TO INCHES			
mm MIN/NOM	mm MAX	in. MIN/NOM	in. MAX
0.03		.001	
0.05		.002	
0.08		.003	
1.17		.046	
1.27		.050	
1.0	2.0	.04	.08
3.99		.157	
5.64		.222	
38.0		1.50	
61.93		2.438	
69.88		2.751	
93.22		3.670	
158.70		6.248	
177.75		6.998	
209.80		8.260	
230.12		9.060	
ADDITIONS - CHG D			
2.30		.090	

ITEM	ADAPTATION CHART	
	AS 00-001	AS 00-015
D	3.99±0.05	5.64±0.05
E	SEE AS00-001 X11	93.22±1.17
F	61.93±0.03	69.88±0.03
G	158.70±0.05	177.75±0.05
H	209.80±1.27	230.12±1.27



THE SKETCH AT THE LEFT SHOWS THE GENERAL DRIVE ARRANGEMENT FOR ENGINE-MOUNTED DETROIT DIESEL ALLISON TORQMATIC CONVERTERS AND TRANSMISSIONS. TO OBTAIN A SATISFACTORY ENGINE AND CONVERTER ADAPTATION, CERTAIN REQUIREMENTS MUST BE OBSERVED FOR THE SPECIFIC ENGINE TO BE USED. THE FOLLOWING IS A SUMMARY OF THESE GENERAL REQUIREMENTS AND THE INFORMATION WHICH MUST BE FORWARDED TO THE DETROIT DIESEL ALLISON TRANSMISSION ENGINEERING DEPARTMENT PRIOR TO MAKING A PRELIMINARY ADAPTATION STUDY OR APPROVAL OF AN ADAPTATION MADE BY THE ENGINE MANUFACTURER OR EQUIPMENT BUILDER:

1. THE CRANKSHAFT ADAPTER MUST BE DESIGNED TO PROVIDE ADEQUATE PILOTING AND MUST BE OF THE PROPER THICKNESS TO ALLOW A MINIMUM FLEX PLATE DRIVE DEFLECTION AND RESULTANT LOADING. PROVIDE THE NOMINAL **A** DIMENSION SHOWN AT LEFT AND TOTAL TOLERANCE (INCLUDING ALLOWABLE CRANKSHAFT END PLAY), DEFINITION OF CRANKSHAFT ATTACHING BOLT CIRCLE, AND CRANKSHAFT PILOT DIA. AND TOLERANCE. FURNISH DETAIL PRINT OF PROPOSED ADAPTER IF AVAILABLE.
2. THE STARTER RING GEAR MUST BE PROPERLY LOCATED ON THE TRANSMISSION FLYWHEEL. A REPRODUCIBLE PRINT OF THE STARTER RING GEAR SHOULD BE PROVIDED WITH THE RECOMMENDED PRESS FIT AND ASSEMBLY INSTRUCTIONS IF THE GEAR IS NOT SYMMETRIC. THE **B** DIMENSION SHOWN AT LEFT FOR OPTIMUM ENGAGEMENT SHOULD BE SPECIFIED ALONG WITH THE MAXIMUM AND MINIMUM ALLOWANCE TO AVOID INTERFERENCE WITH THE PINION OR STARTER MOTOR WHILE RUNNING. THE MAXIMUM **C** DIA. FOR CLEARANCE SHOULD BE SPECIFIED. IF THE STARTER RING GEAR IS BOLTED TO THE FLYWHEEL IN A MANNER THAT CAUSES THE FLEX PLATE TO CREATE A SEAL AROUND THE FLEX PLATE O.D., VENT HOLES MUST BE PROVIDED IN THE FLEX PLATES TO VENT THE RESULTING CAVITY BETWEEN THE FLYWHEEL AND FLEX PLATES. THERE MUST BE 12 VENT HOLES, 2.30 DIA MIN. LOCATED ON A HOLE CIRCLE DIA AS LARGE AS POSSIBLE WITHOUT BEING SEALED BY THE RESULTING ASSEMBLY, EQUALLY SPACED MIDWAY BETWEEN THE OUTER BOLT HOLES.
3. CLEARANCE BETWEEN THE TRANSMISSION FLYWHEEL AND THE ENGINE FLYWHEEL HOUSING AND ATTACHING PARTS MUST BE ADEQUATE. THE FOLLOWING DRAWINGS SHOULD BE PROVIDED TO CHECK FOR CLEARANCE:
   - 3.1 ENGINE FLYWHEEL HOUSING DETAIL.
   - 3.2 BOLTS, WASHERS, AND OTHER PARTS WHICH EXTEND INTO THE FLYWHEEL HOUSING CAVITY.
   - 3.3 STARTER MOTOR ASSEMBLY AND LOCATING SHIMS.
4. A 38.0 MINIMUM DIA ACCESS HOLE MUST BE PROVIDED IN THE ENGINE FLYWHEEL HOUSING FOR BOLTING THE FLEX PLATE TO THE TRANSMISSION FLYWHEEL AT ASSEMBLY.
5. IN SOME CASES PROVISION FOR A WET TYPE FLYWHEEL HOUSING MUST BE MADE. THE INSTALLATION DRAWING FOR THIS PARTICULAR PRODUCT SHOULD BE REFERRED TO FOR DETAILS, SPLITLINE GASKETS, SEALED STARTER, DOUBLE SEAL ON THE CRANKSHAFT AND DRAIN-BACK PROVISION MUST BE SUPPLIED ON THE ENGINE.

AS00-002

STARTER RING GEAR AND CRANKSHAFT ADAPTER NOMINAL DIMENSIONS DEPEND UPON ENGINE SPECIFICATIONS

CONCENTRICITY AND FLATNESS REQUIREMENTS PER SAE STANDARD

REFER TO AS 00-001 OR AS 00-015 FOR DIMENSIONS OF TORQMATIC CONVERTERS AND TRANSMISSIONS WHICH ARE REQUIRED FOR DETAILED ADAPTATION STUDIES.

*RECOMMENDED ADAPTER DIMENSIONS WITH STANDARD DETROIT DIESEL ALLISON FLEX PLATE DRIVE.

METRIC
ALL DIMENSIONS ARE IN MILLIMETRES, UNLESS OTHERWISE SPECIFIED

THIRD ANGLE PROJECTION

LTR	DATE	DESCRIPTION	BY	CK
D	2-16-78	ADD NOTES	GM	
C	2-6-75	REV DIM AND CHAR	HK	MC
B	6-13-74	REDRAWN TO METRIC	JP	
A	3-26-62	REVISE REDRAWN	DP	GA

HUSHES	ST. JOHN	975	
T-H-5.0	2-10-60	2-12-60	
MT-5.0	PILOT ENGR	APPL ENGR	
FULL	ST. JOHN	BONHAM	
	2-12-60	2-11-60	

Allison Transmissions

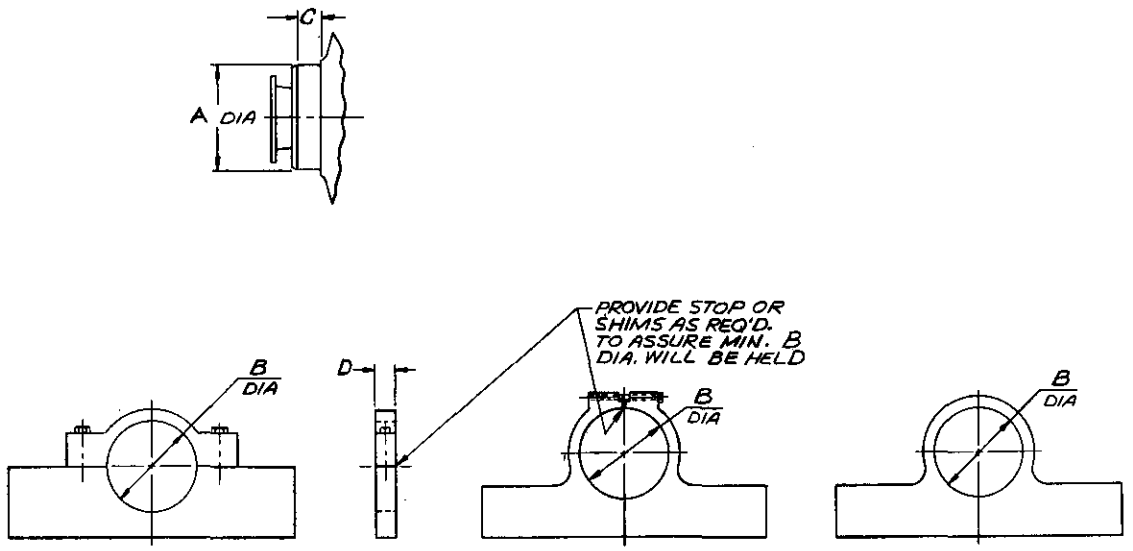
TITLE ENGINE-TRANSMISSION/CONVERTER ADAPTATION REQUIREMENTS

MODEL VARIOUS | AS00-002

Detroit Diesel Allison Division of General Motors Indianapolis, Indiana

METRIC TO INCHES			
MM MIN/NOM	MM MAX	IN MIN/NOM	IN MAX
25.40		1.000	
28.96		1.140	
31.75		1.250	
35.05		1.380	
38.10		1.500	
40.13		1.580	
45.21		1.780	
139.67	139.73	5.499	5.501
139.85	139.98	5.506	5.511
152.27	152.40	5.995	6.000
152.53	152.65	6.005	6.010
183.97	184.10	7.243	7.248
184.23	184.35	7.253	7.258
304.67	304.80	11.995	12.000
304.93	305.05	12.005	12.010

TRANSMISSION TRUNNION SUPPORT REQUIREMENTS			
A DIA	B DIA	C DIM.	D DIM.
152.40 152.27	152.65 152.53	28.96	25.40 MIN
184.10 183.97	184.35 184.23	45.21	38.10 MIN
184.10 183.97	184.35 184.23	40.13	31.75 MIN
139.73 139.67	139.98 139.85	35.05	31.75 MIN
304.80 304.67	305.05 304.93	45.21	38.10 MIN



AS 00-003

TYPICAL CONSTRUCTION OF TRUNNION SUPPORTS

METRIC
ALL DIMENSIONS ARE IN MILLIMETRES, UNLESS OTHERWISE SPECIFIED

THIRD ANGLE PROJECTION

REVISIONS			
X	C	4-14-78	REDRAWN
	B	10-19-60	ADD 2" TRUNNION
	A	1-8-86	REV. & REDRAWN

DRAWN	CHECKED	ENG APPROVAL
HUGHES 1-14-80	RLH 1-19-80	PTS 1-30-80
KELLY	PAUL TRUE	IND. MGR.
NONE	MUELLER 1-14-80	WAGNER 1-31-80

Allison Transmissions

TITLE: TRANSMISSION TRUNNION SUPPORT

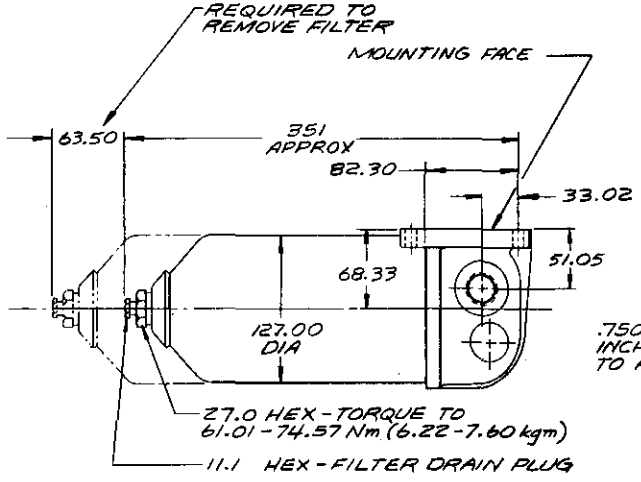
MODEL SEE BASIC INSTALLATION DRAWINGS | AS 00-003

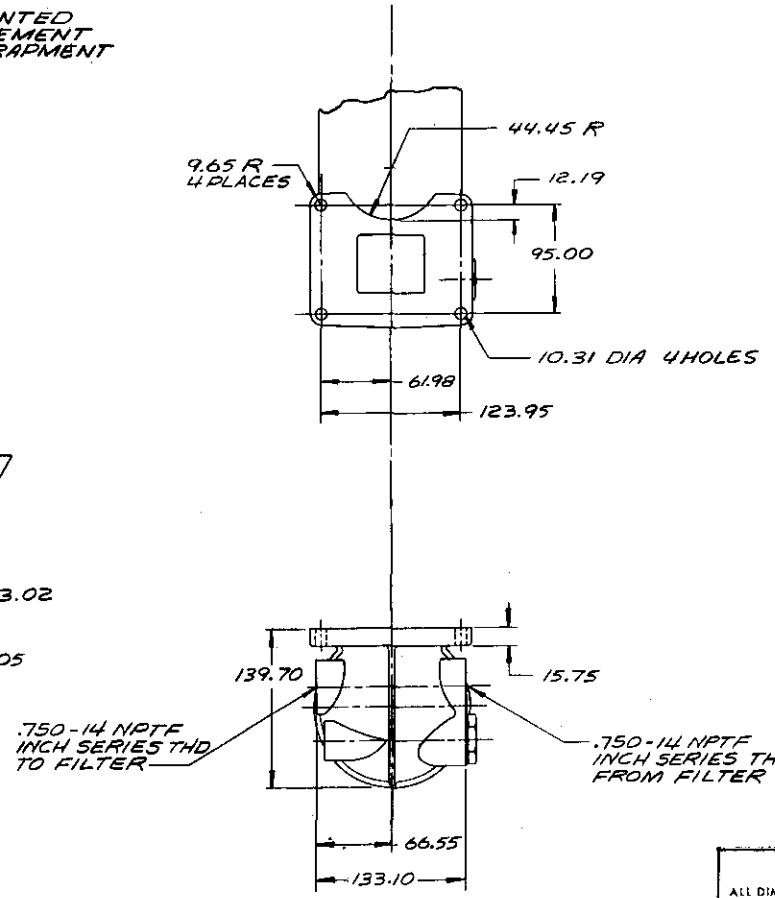
Detroit Diesel Allison Division of General Motors Indianapolis, Indiana

MILLIMETRES TO INCHES			
mm MIN/NOM	mm MAX	in. MIN/NOM	in. MAX
9.65		.38	
10.31		.406	
11.1		.4375	
12.19		.48	
15.75		.62	
27.0		1.0625	
33.02		1.30	
44.45		1.75	
51.05		2.01	
61.98		2.44	
63.50		2.50	
66.55		2.62	
68.33		2.69	
82.30		3.24	
95.00		3.74	
123.95		4.88	
127.00		5.00	
133.10		5.24	
139.70		5.50	
351.		13.82	

METRIC VALUES	EQUIVALENTS
61.01 Nm 74.57 Nm 83-103 kPa	45 LB FT 55 LB FT - 12-15 PSI

CAUTION :
FILTER MUST BE MOUNTED AS SHOWN OR WITH ELEMENT DOWN TO AVOID AIR ENTRAPMENT INSIDE SHELL





A500-004

INTEGRAL BY-PASS VALVE OPENING PRESSURE 83-103 kPa (.84-1.05 kg/cm²)

BASE AND FILTER ASSEMBLY A C DIVISION G.M.C.
OEM ASSEMBLY PART NUMBER 5575208
RESALE PACKAGE ASSEMBLY PART NUMBER 5575224
REPLACEMENT FILTER ELEMENT PACKAGE
TYPE PF-132 PART NUMBER 5573014

METRIC
ALL DIMENSIONS ARE IN MILLIMETRES, UNLESS OTHERWISE SPECIFIED
THIRD ANGLE PROJECTION

Allison Transmissions

DRAWN	S. PITNEY	A.C.	
CHECKED	D. LEAT	J. CLAY	
ENGR APPD.	CORNET	BONHAM	
DATE	8-22-67	8-31-67	

TITLE: SINGLE FILTER INSTALLATION DATA
MODEL VARIOUS | A500-004
Detroit Diesel Allison Division of General Motors - Indianapolis, Indiana

The grease used in the input drive ring for the TC-300 Converter and the CRT-3331 Transmission, must meet the following specification:

"High quality wheel bearing type grease. Must not attack Buna or Polyacrylate rubber compounds and shall show no separation when centrifuged in accordance with ASTM D91-52, paragraph 36 for 30 minutes immediately after heating to 250°F."

CHANGES				
J				
H				
G				
F				
E				
D				
C				
B				
A				

GM GENERAL MOTORS

Allison TORQMATIC Drives

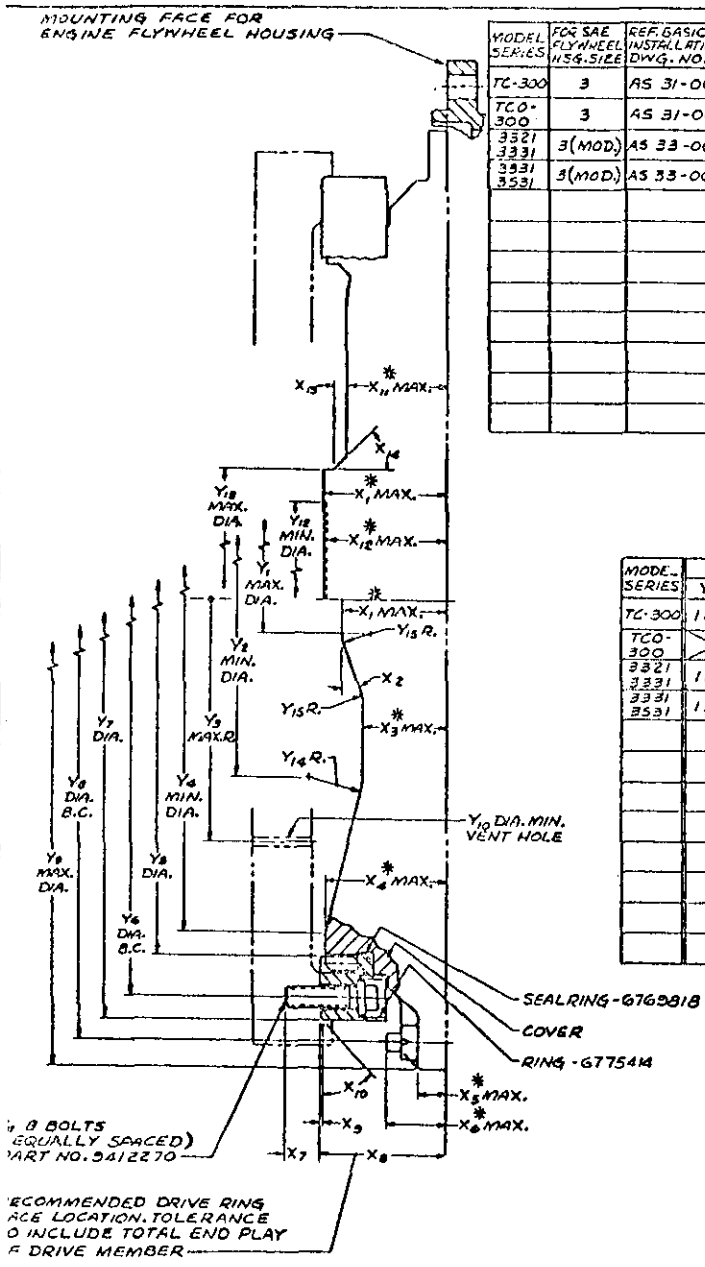
DRAWN	CHECKED	CHF. ENGINEER
J.R.B. 6/3/60	St. John 6/3/60	
SCALE	PROJ. ENGR.	APPL. ENGR.
None	St. John 6/6/60	R.B.R. 6/6/60

TITLE: GREASE SPECIFICATION TC-300 AND CRT-3331 INPUT DRIVE

MODEL

AS-00-006

ALLISON DIVISION · GENERAL MOTORS CORPORATION · INDIANAPOLIS, INDIANA



DENOTES FUNCTIONAL DIMENSIONS FOR CLEARANCE PROVISION ONLY.

MODEL SERIES	FOR SAE FLYWHEEL HSG. SIZE	REF. BASIC INSTALLATION DWG. NO.	DIMENSIONS													
			X_1	X_2	X_3	X_4	X_5	X_6	X_7	X_8	X_9	X_{10}	X_{11}	X_{12}	X_{13}	X_{14}
TC-300	3	AS 31-001	1.76	20°	1.44	2.04	.514	1.004	.615 .503	2.125 ±.030	.02 .04	45°				
TCO-300	3	AS 31-001	2.06			2.05	.275	1.004	.615 .503	2.125 ±.030	.02 .04	45°	1.69	2.02	.20	45°
3321 3331	3(MOD.)	AS 33-002	1.77	20°	1.45	2.05	.524	1.014	.615 .503	2.125 ±.030	.02 .04	45°				
3531 3531	3(MOD.)	AS 33-003	1.77	20°	1.45	2.05	.524	1.014	.615 .503	2.125 ±.030	.02 .04	45°				

MODEL SERIES	DIAMETERS AND RADII													
	Y_1	Y_2	Y_3	Y_4	Y_5	Y_6	Y_7	Y_8	Y_9	Y_{10}	Y_{11}	Y_{12}	Y_{13}	Y_{14}	Y_{15}
TC-300	1.16	5.82	4.00	10.94	11.760 11.765	13.125	13.875 13.870	14.500	15.46	.125	3/8-16 UNC-3A			.92	.50
TCO-300			4.00	10.99	11.760 11.765	13.125	13.875 13.870	14.500	15.46	.125	3/8-16 UNC-3A	3.149	4.26		
3321 3331	1.16	5.82	4.00	10.94	11.760 11.765	13.125	13.875 13.870	14.500	15.46	.125	3/8-16 UNC-3A			.92	.50
3331 3531	1.16	5.82	4.00	10.94	11.760 11.765	13.125	13.875 13.870	14.500	15.46	.125	3/8-16 UNC-3A			.92	.50

AS 00-007

~INSTALLATION ASSEMBLY INSTRUCTIONS~ (REF 6775501)

1. PROVIDE Y_{10} VENT HOLE IN DRIVE MEMBER AS SHOWN
2. APPLY PERMATEX No 3 (6758918) TO THE MATING FACES OF THE ENGINE FLYWHEEL AND DRIVE RING
3. INSTALL DRIVE RING USE 5/8 THINWALL (12 POINT) SOCKET TO TORQUE BOLTS TO 36-43 LB.-FT.
4. ASSEMBLE SEALRING INTO COVER GROOVE APPLY A LIGHT COATING OF GREASE TO SEALRING O.D.
5. DISTRIBUTE ENOUGH WHEEL BEARING GREASE, (REF. AS 00-006), OR EQUIVALENT, EVENLY TO FILL ALL CAVITIES OUTSIDE 'Y5' DIA. INCLUDING SPLINE TOOTH SPACES.
6. COMPLETE INSTALLATION CAREFULLY TO AVOID DAMAGING SEALRING.

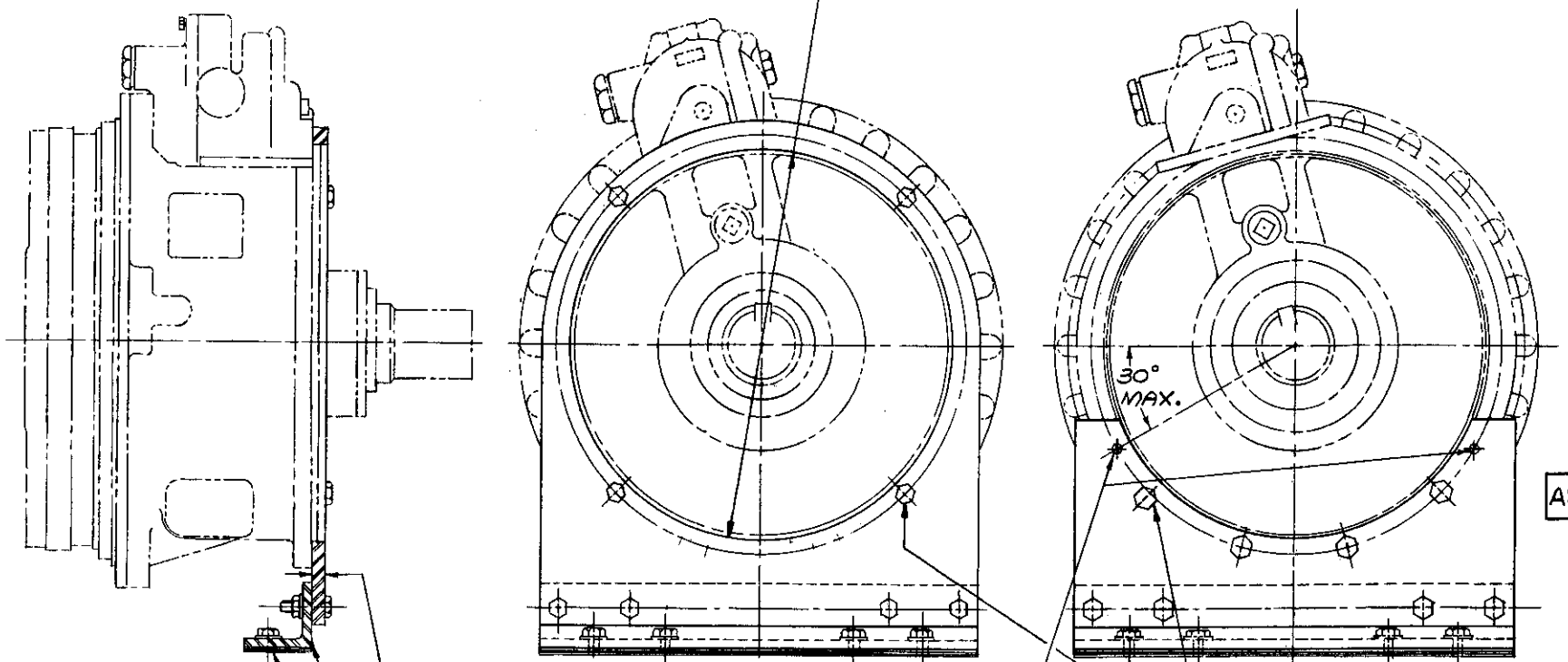
Allison TRANSMATIC Drives

PHYSICAL ADAPTATION CHART

SEE CHART | AS 00-007

SUPPORT PLATE PILOT DIA. TO PROVIDE .000 TO .010 LOOSE FIT WITH CONVERTER MOUNTING FLANGE

NOTE:
THE SUPPORT PLATE MUST BE DESIGNED TO ABSORB THE TOTAL SPROCKET SIDE PULL FOR THE SPECIFIC INSTALLATION. WEIGHT SUPPORT AND TORQUE REACTION ARE TO BE ABSORBED BY THE ENGINE MOUNTING.



AS 00-008

REFER TO BASIC INSTALLATION DRAWING FOR SPECIFIC CONVERTER DIMENSIONS.

MODEL	DRAWING
TC-400	AS 51-003
TC-500	AS 51-003
TC-800	AS 81-004
TC-900	AS 81-004

REF. CS 2771

CHANGES			
J			
H			
G			
F			
E			
D			
C			
B			
A			

DRAWN	DESIGNED	CHK. DESIGN
HUGHES 6-25-60	HIGGINS 7-2-62	BTS 7-2-62
SCALE	PROJ. ENGR.	APPL. ENGR.
NONE	ST. JOHN 8-8-62	WELCHER 6-7-62

GM GENERAL MOTORS

Allison TORQMATIC Drives

TITLE: RECOMMENDED SUPPORT PLATE CONSTRUCTION

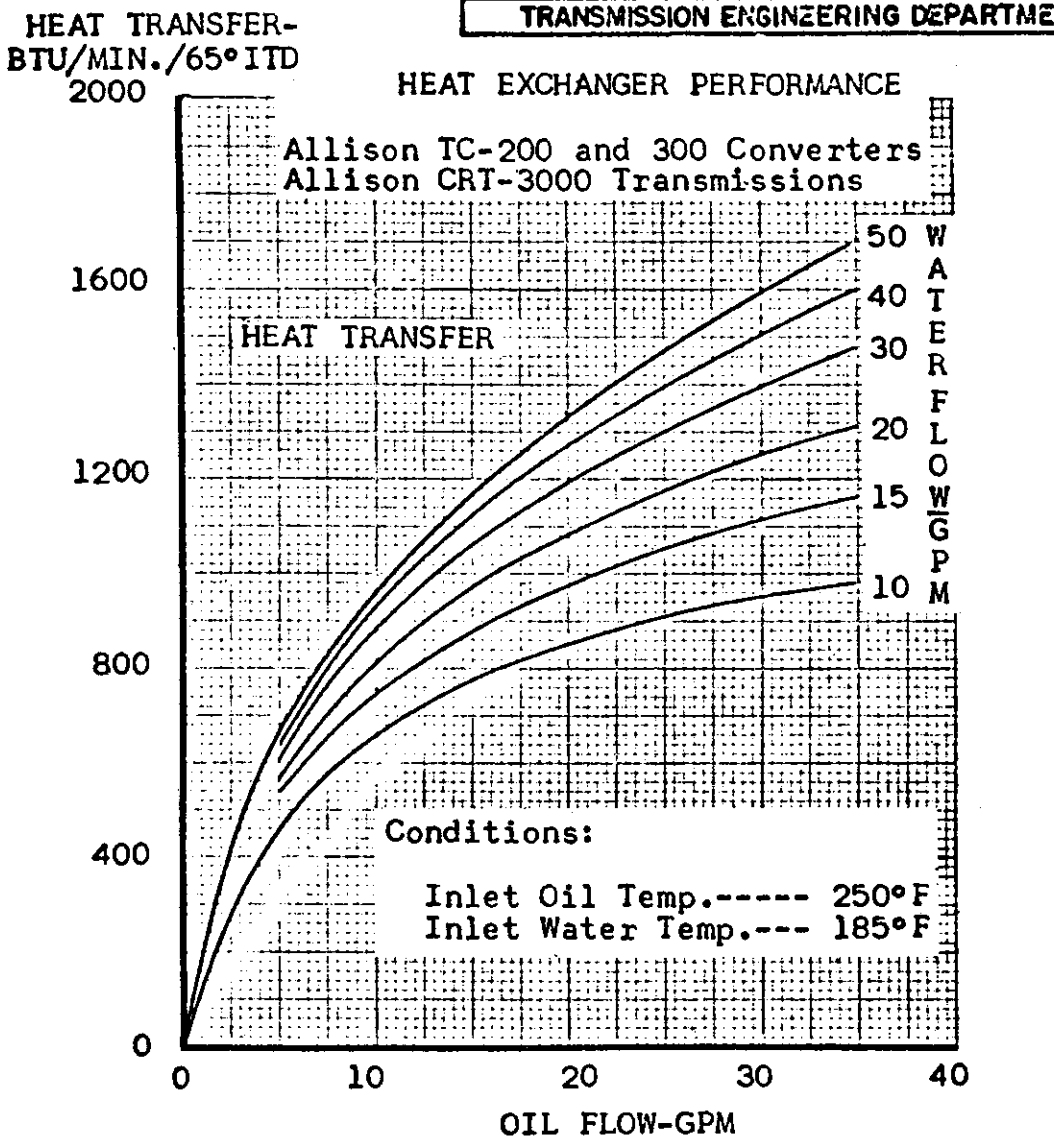
MODEL TC SERIES | AS 00-008

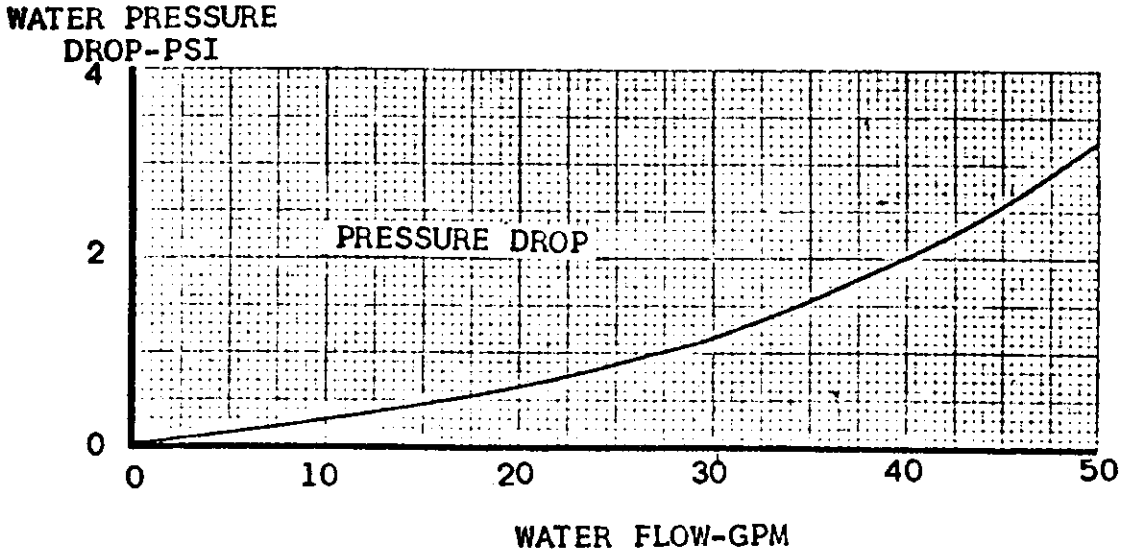
ALLISON DIVISION · GENERAL MOTORS CORPORATION · INDIANAPOLIS, INDIANA

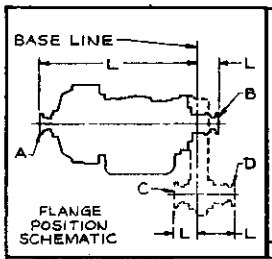
Allison TORQMATIC Drives
INDIANAPOLIS, INDIANA

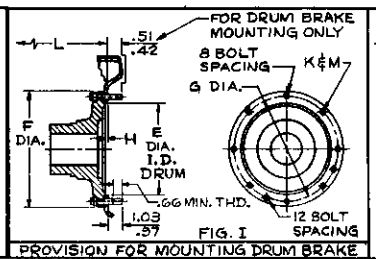
DATE	
5-2-67	AS 00-009
BY Ramsey	

TRANSMISSION ENGINEERING DEPARTMENT









PROVISION FOR MOUNTING DRUM BRAKE

FIG. I

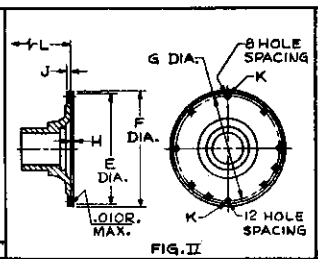


FIG. II

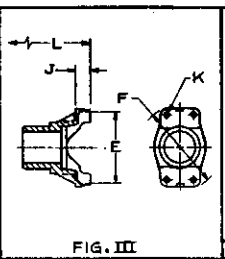


FIG. III

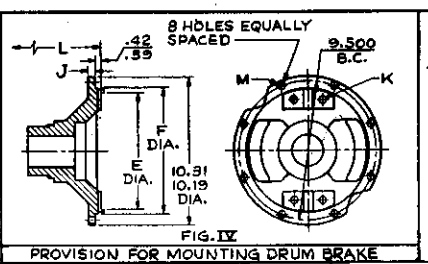


FIG. IV

PROVISION FOR MOUNTING DRUM BRAKE

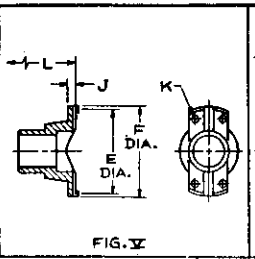


FIG. V

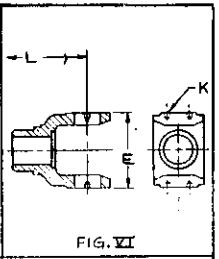


FIG. VI

POSITION	TYPE	SIZE	FIG. NO.	PART NO.	DETAIL NO.	L DIMENSION FOR MODEL & INSTALLATION REF. DWG.							FLANGE DETAIL DIMENSIONS						
	FLANGE					TT, TRT-4000 AS 42-011 AS 42-015	HT-70 AS40 -001	4460 AS44 -001	4460 AS44 -005				E	F	G	H	J	K FOR DRIVE LINE MOUNTING	M FOR PARKING BRAKE DRUM MOUNTING
A	MECH.	7-C	VII	6882139 (NEOPRENE)	6882141	30.82	—	—	—				5.842 5.844	7.87 7.81				$\frac{3}{8}$-24 THD.-.80 MIN. DEEP 4 HOLES	
A	SPICER	1550	III	6771394	6771393	—	—	40.54	48.34				4.9640 4.9655	5.86			1.041 1.021	.452 .459 DIA.-THRU 4 HOLES	
A	SPICER	1700	II	6771257	6771256	—	—	39.30	47.10				7.750 7.752	8.01 7.99	7.250	.050 .065	.39 .37	.377 .379 DIA.-THRU 8 HOLES	
A	MECH	7-C	V	6771988	6771976	27.77	—	39.80	47.60				5.842 5.844	6.25 6.22			.59 .55	.5212 .5412 DIA.-THRU 4 HOLES	
A	MECH	7-C	VII	6882140 (RUBBER)	6882141	30.82	—	—	—				5.842 5.844	7.87 7.81				$\frac{3}{8}$-24 THD.-.80 MIN. DEEP 4 HOLES	
A	SPICER	1500	VIII	6777069	6777068	—	—	39.60	47.40				3.750 3.752			.068 .088	.385 .505	.506 .511 DIA.-THRU 4 HOLES	
A	SPICER	1650	III	6770787	6770787	—	—	40.98	48.78				5.5890 5.5905				1.187 1.177	$\frac{1}{2}$-20 THD.-.69 MIN. DEEP 4 HOLES	

TYPE	SIZE	FIG. NO.	PART NO.	DETAIL NO.	HT-70 AS 40 -001 POS. B	4460 AS44 -001 POS. B	TT, TRT-4000 AS 42-011 AS 42-015 POS. C	4460 AS 44-005 POS. D	4460 AS 44-005 POS. C	HT 70 AS 40-016 POS. D	HT 70 AS 40-016 POS. C	E	F	G	H	J	K FOR DRIVE LINE MOUNTING	M FOR PARKING BRAKE DRUM MOUNTING
MECH	7-C	IV	6778273	6778273	10.29	11.32	—	—	13.46	8.74	—	—	5.844 5.842	8.686 8.684			.62 .50	$\frac{1}{2}$-20THD-.85 MIN. DEEP 4 HOLES	$\frac{1}{2}$-20 THD THRU
MECH	7C	V	6778274	6778274	10.29	11.32	—	—	10.93	*6.20	—	—	5.844 5.842	6.28 6.22				$\frac{1}{2}$-20THD-.85 MIN. DEEP 4 HOLES	
MECH	8-C	IV	6771255	6771255	10.29	11.32	—	—	13.46	8.74	—	—	8.123 8.125	8.686 8.684			.62 .50	$\frac{1}{2}$-20THD-.85 MIN. DEEP 4 HOLES	$\frac{1}{2}$-20 THD THRU
MECH	7-C	IV	6839407	6839407			—	15.47			—	—	5.842 5.844	8.686 8.684			.62 .50	$\frac{1}{2}$-20 THD.-.85 MIN. DEEP 4 HOLES	$\frac{1}{2}$-20 THD THRU
MECH	7-C	V	6839408	6839408			8.96	15.47			—	—	5.842 5.844	6.28 6.22				$\frac{1}{2}$-20 THD.-.85 MIN. DEEP 4 HOLES	
MECH	8-C	IV	6839405	6839405			—	15.47			—	—	8.123 8.125	8.686 8.684			.62 .50	$\frac{1}{2}$-20 THD.-.85 MIN. DEEP 4 HOLES	$\frac{1}{2}$-20 THD THRU
MECH	8-C	V	6838787	6838787			8.96	15.47			—	—	8.123 8.125	8.53 8.41			.74 .70	$\frac{1}{2}$-20 THD.-.85 MIN. DEEP 4 HOLES	
MECH	9-C	V	6839942	6839942			8.96	15.47			—	—	8.249 8.251	8.65 8.59			.74 .70	$\frac{1}{2}$-20 THD.-THRU 4 HOLES	
SPICER	1700	I	6771285	6771284	9.11	10.14	—	—	12.29	7.56	—	—	6.436 6.438	8.01 7.99	7.250	.145 .175		$\frac{3}{8}$-24 THD. 8 BOLTS	$\frac{3}{8}$-24 THD. 8 BOLTS
SPICER	1700	II	6771535	6771535	9.11	10.14	7.78	14.30	4.75	*5.02	—	—	7.750 7.752	8.01 7.99	7.250	.050 .065	.51 .49	.377 .379 DIA.-THRU 8 HOLES	
SPICER	1800	I	6771519	6771518	9.11	10.14	—	—	12.29	7.56	—	—	6.436 6.438	8.01 7.99	7.250	.145 .175		$\frac{7}{16}$-20 THD. 12 BOLTS	$\frac{7}{16}$-20 THD. 12 BOLTS
SPICER	1800	II	6839406	6839406			7.78	14.30			—	—	7.750 7.752	8.01 7.99	7.250	.050 .065	.51 .49	.439 .441 DIA.-THRU 12 HOLES	
ROCK	7-N	IX	6838781	6838781	—	—	—	17.42			—	—	5.936 5.938	8.684 8.686				$\frac{5}{16}$-24 THD.-.38 MIN. DEEP 2 HOLES	$\frac{1}{2}$-20 THD. THRU 8 BOLTS
ROCK	7-N	VI	6838780	6838780	—	—	9.74	—			—	—	5.936 5.938					$\frac{5}{16}$-24 THD.-.38 MIN. DEEP 4 HOLES	
BRAKE ONLY	—	I	6771875	6771284	—	—	—	—	12.29	7.56	—	—	6.436 6.436	8.01 7.99	7.250	.145 .175		NONE	$\frac{3}{8}$-24 THD. 8 BOLTS
MECH	7-C	V	6773820	6773820	—	—	—	—	—	—	17.91	—	5.844 5.842	6.23 6.21			.59 .53	$\frac{1}{2}$-20 THD.-THRU 4 HOLES	
MECH	7-C	IV	6773822	6773822	—	—	—	—	—	—	8.51	—	5.844 5.842	6.436 6.434			.73 .63	$\frac{1}{2}$-20 THD.-.85 MIN DEEP 4 HOLES	$\frac{7}{16}$-20 THD 12 BOLTS
MECH	9-C	IV	6838716	6838716	—	—	—	15.67	—	—	—	—	8.251 8.249	8.686 8.684			.57 .55	$\frac{1}{2}$-20 THD.-THRU 4 HOLES	$\frac{1}{2}$-20 THD.-THRU 8 BOLTS
MECH	8-C	V	6771573	6771578	10.29	11.32	—	—	10.93	*6.20	—	—	8.123 8.125	8.59 8.41			.74 .70	$\frac{1}{2}$-20 THD.-.85 MIN. DEEP 4 HOLES	
MECH	9-C	V	6777400	6777400	10.29	11.32	—	—	10.93	*6.20	—	—	8.249 8.251	8.65 8.59			.74 .70	$\frac{1}{2}$-20 THD.-THRU 4 HOLES	
SPICER	1800	II	6771538	6771538	9.11	10.14	—	—	9.75	*5.02	—	—	7.750 7.752	8.01 7.99	7.250	.050 .065	.51 .49	.439 .441 DIA. THRU 12 HOLES	
ROCK	7-N	IX	6778950	6778950	—	—	—	17.42	15.42	10.69	—	—	5.936 5.938	8.684 8.686				$\frac{5}{16}$-24 THD.-.38 MIN. DEEP 2 HOLES	$\frac{1}{2}$-20 THD THRU 8 BOLTS
ROCK	7-N	VI	6778949	6778949	—	—	—	—	11.71	*6.98	—	—	5.936 5.938					$\frac{5}{16}$-24 THD.-.38 MIN. DEEP 4 HOLES	

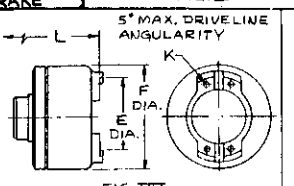


FIG. VII

TORQMATIC COUPLING

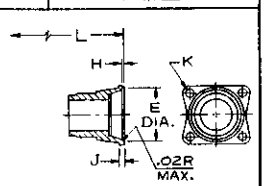


FIG. VIII

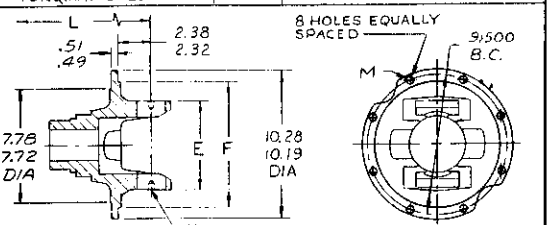


FIG. IX

AS 00-011

* ADD 2.54 IF BOTH C AND D OUTPUTS ARE USED WITH NO PARKING BRAKE

LTR	DATE	DESCRIPTION	BY	CHK
W	10-3-16	REVISED CHART (ARCHIVED)	MH	MK
V	11-17-78	ADDED 27.77 TO 15.42 DIM	DH	JK
U	11-1-74	ADDED 8 NEW FLANGES	DH	MK
R	1-18-74	ADDED NEW PART NOS	DH	MK
P	5-1-73	FIG VII & PARTS REVISED	DH	MK
N	11-29-72	SEE CHG NOTICE	DH	MK
M	5-24-72	SEE CHG NOTICE	DH	MK
L	6-30-67	SEE CHG NOTICE	DH	MK
K	2-17-67	ADD NOTE # (MASTER)	DH	MK
J	7-14-66	REVISED	DH	MK
H	6-22-65	SEE CHG NOTICE	DH	MK

DRAWN	DATE	CHECKED	DATE
HUGHES	3-28-61	R.W.K.	4-18-61
SCALE		APPL. ENG.	APPL. ENG. APPROVAL
NONE			E.P.M. R&D 4-28-61

GM GENERAL MOTORS

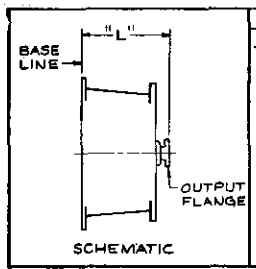
Allison TORQMATIC Drives

TITLE: DRIVE FLANGE OPTION

MODEL SEE CHART | AS 00-011

ALLISON DIVISION-GENERAL MOTORS CORPORATION-INDIANAPOLIS, INDIANA

FLANGE DELINEATION CHART



SCHEMATIC

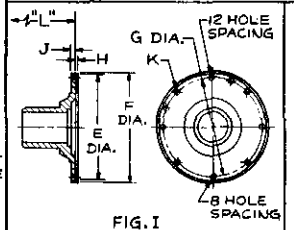


FIG. I

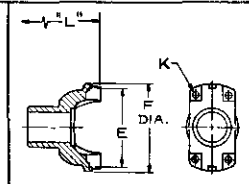


FIG. II

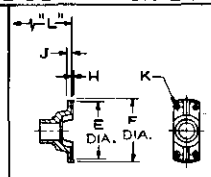


FIG. III

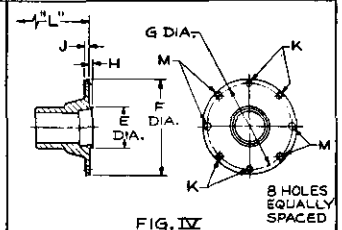


FIG. IV

FLANGE					"L" DIMENSION FOR MODEL & BASIC INSTALLATION					FLANGE DETAIL DIMENSIONS						
TYPE	SIZE	FIG. NO.	PART NO.	DETAIL NO.	TC-200 AS 31-001	TC-300 AS 31-001	TC-400 & 500 AS 51-003	TC8-500 OPTION AS 51-006	TC-800 & 900 AS 81-002	E	F	G	H	J	FOR DRIVE LINE MOUNTING K	FOR DRIVE LINE MOUNTING M
MECH.	4-C	III	6754963	6754967	9.90					4.249 4.251	4.51 4.49		.13 .11	.41 .39	.334 .354 DIA.-THRU 4 HOLES	
MECH.	4-C	III	6755333	6754034		9.90				4.249 4.251	4.51 4.49		.13 .11	.41 .39	.334 .354 DIA.-THRU 4 HOLES	
MECH.	7-C	III	6750413	6750413			12.99	18.02		5.842 5.844	6.25 6.19		.21 .17	.58 .55	.459 .479 DIA.-THRU 4 HOLES	
SPICER	1650	II	6770788	6770789			14.34			5.5875 5.5890	6.44				1/2-20 THD.-.75 DEEP 4 HOLES	
SPICER	1700	I	6752247	6752247			12.99	18.02		7.750 7.752	8.01 7.99	7.250	.050 .060	.40 .36	.377 .379 DIA. 8 HOLES EQUALLY SPACED	
SPICER	1800	I	6769127	6769127			12.99	18.02		7.750 7.752	8.01 7.99	7.250	.050 .060	.40 .36	.439 .441 DIA. 12 HOLES	
AL-METAL	—	IV	6750544	6750544			12.99			2.998 2.996	6.885 6.865	6.125	.197 .177	.385 .365	.396 .416 DIA.-THRU 4 HOLES	.4995 .5005 DIA.-THRU 4 HOLES
MECH.	7-C	III	6752933	6752933					16.30	5.842 5.844	6.25 6.19		.20 .18	.590 .530	1/2-20 THD.-THRU 4 HOLES	
SPICER	1700	I	6754103	6754103					17.30	7.750 7.752	8.01 7.99	7.250	.050 .060	.390 .370	.377 .379 DIA. 8 HOLES EQUALLY SPACED	
SPICER	1800	I	6752520	6752520					17.30	7.750 7.752	8.01 7.99	7.250	.050 .060	.390 .370	.439 .441 DIA. 12 HOLES	

AS 00-012

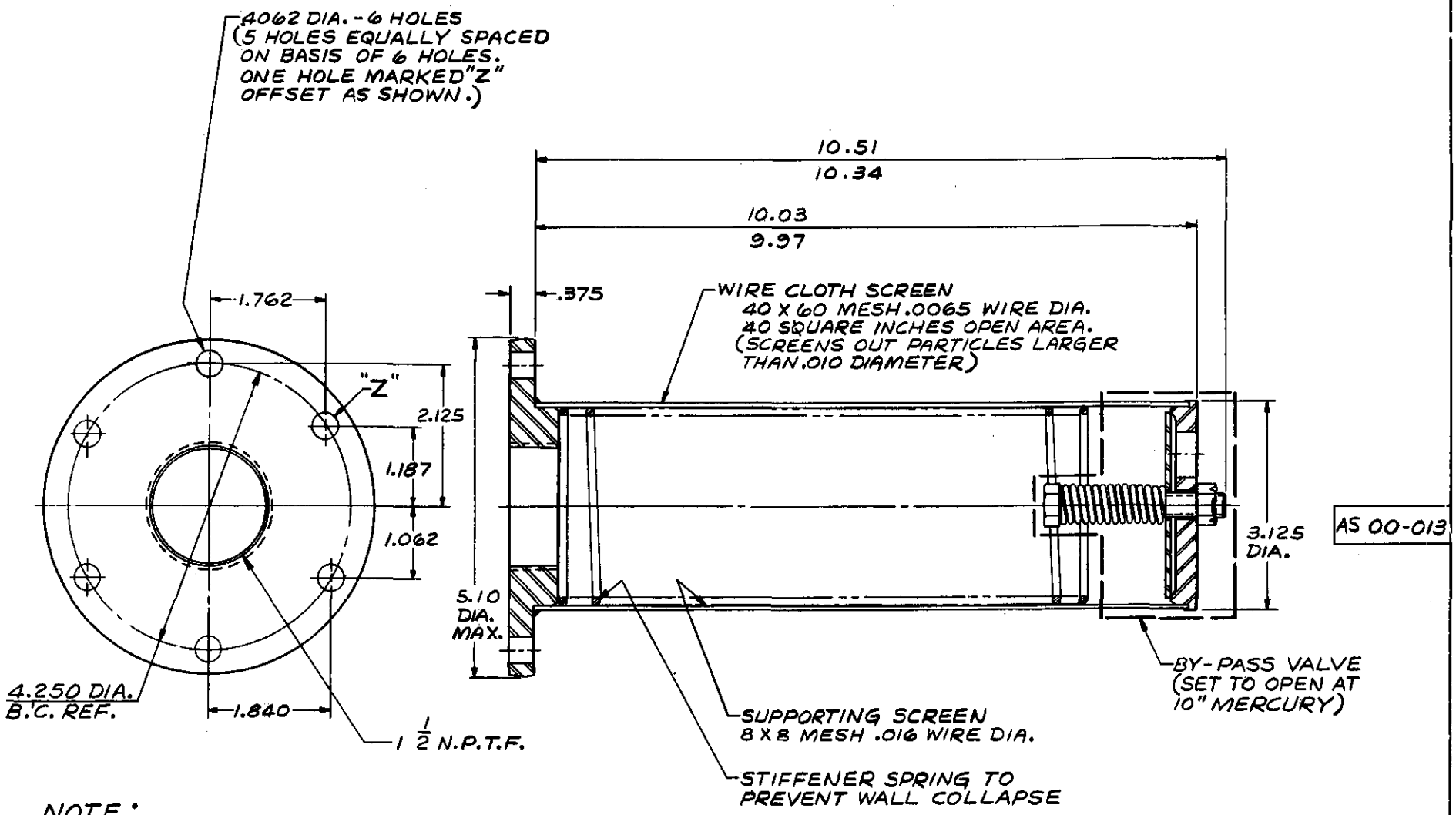
J			
H			
G			
F			
E			
D			
C			
B			
A			
REVISION			
NUMBER	DATE	BY	APP'D
5-6-61	4-26-61	SWEARNY	KG
SHEET 1 OF ONE.	SCALE	DRAWN	4-28-61
		DEAL	ST. JOHN
	5-11-61		5-11-61

Allison TORQMATIC Drive

TITLE OUTPUT FLANGE OPTION

MODEL SEE CHART AS 00

ALLISON DIVISION-GENERAL MOTORS CORPORATION



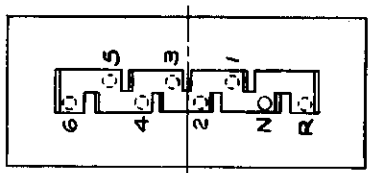
NOTE:
AVAILABLE AS ALLISON
PART NO. 6750266

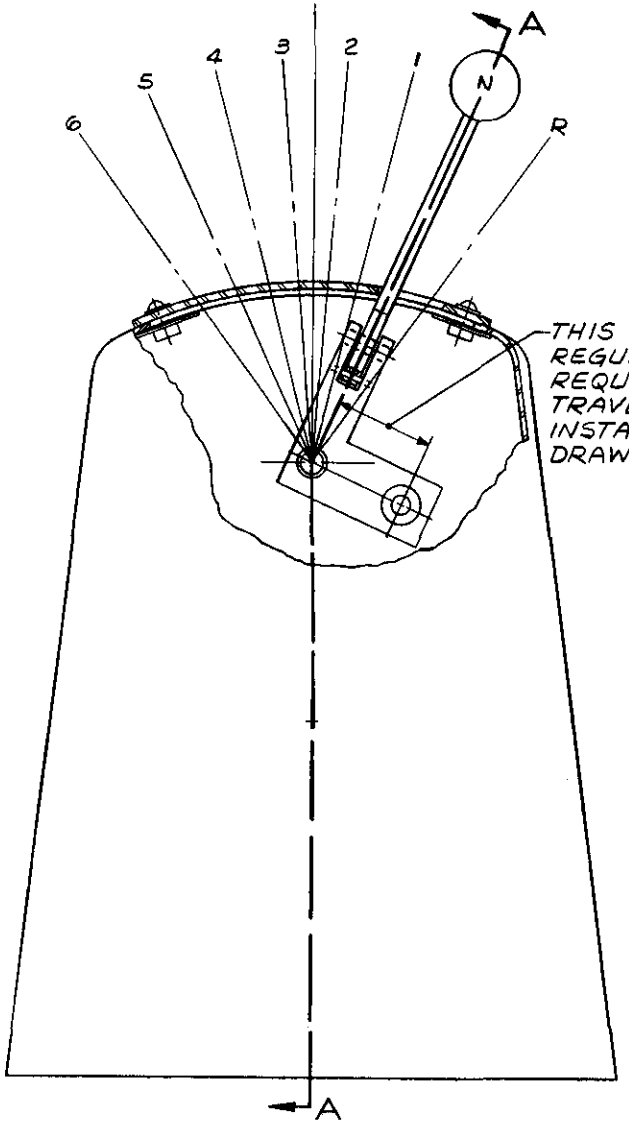
REF. 6752938

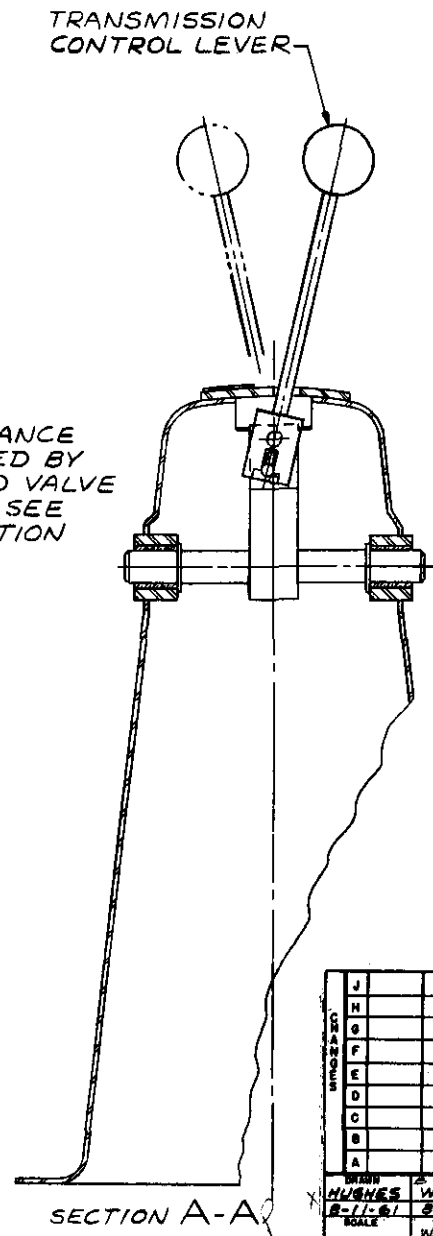
Allison TORQMATIC Drives

PUMP SUCTION SCREEN

AS 00-018







CONTROL TOWER MOUNTING MUST BE DESIGNED FOR MINIMUM RELATIVE MOVEMENT WITH TRANSMISSION. MOUNTING TO FRAME OR CROSS MEMBER IS RECOMMENDED WHERE FEASIBLE.

CONTROL TOWER & LINKAGE MUST BE DESIGNED TO ALLOW 10-15 % OVER TRAVEL, EACH POSITION OF SHIFT CONTROL LEVER, TO PERMIT TRANSMISSION SHIFT VALVE DETENT TO POSITION LEVER WITHOUT EXTERNAL INTERFERENCE OR BINDING.

THIS DRAWING SHOWS PRINCIPLES ONLY. DETAIL DESIGN SHOULD BE IN ACCORD WITH ACCEPTED HEAVY-DUTY CONSTRUCTION FOR OFF-HIGHWAY APPLICATIONS.

FOR REQUIRED SHIFT FORCE AND STROKE SPECIFICATIONS, REFER TO TRANSMISSION INSTALLATION DIAGRAM.

AS 00-014

VEHICLE MANUFACTURERS TOWER DESIGN SHOULD BE CORRELATED WITH ALLISON TRANSMISSION ENGINEERING.

DRAWN	CHECKED	CHF. DRAFTSMAN	
HUGHES 8-11-61	WELCHER 8-21-61	RTS 8-22-61	
SCALE	PROJ. ENGR.	APPL. ENGR.	
NONE	WELCHER 8-21-61	BONHAM 8-21-61	

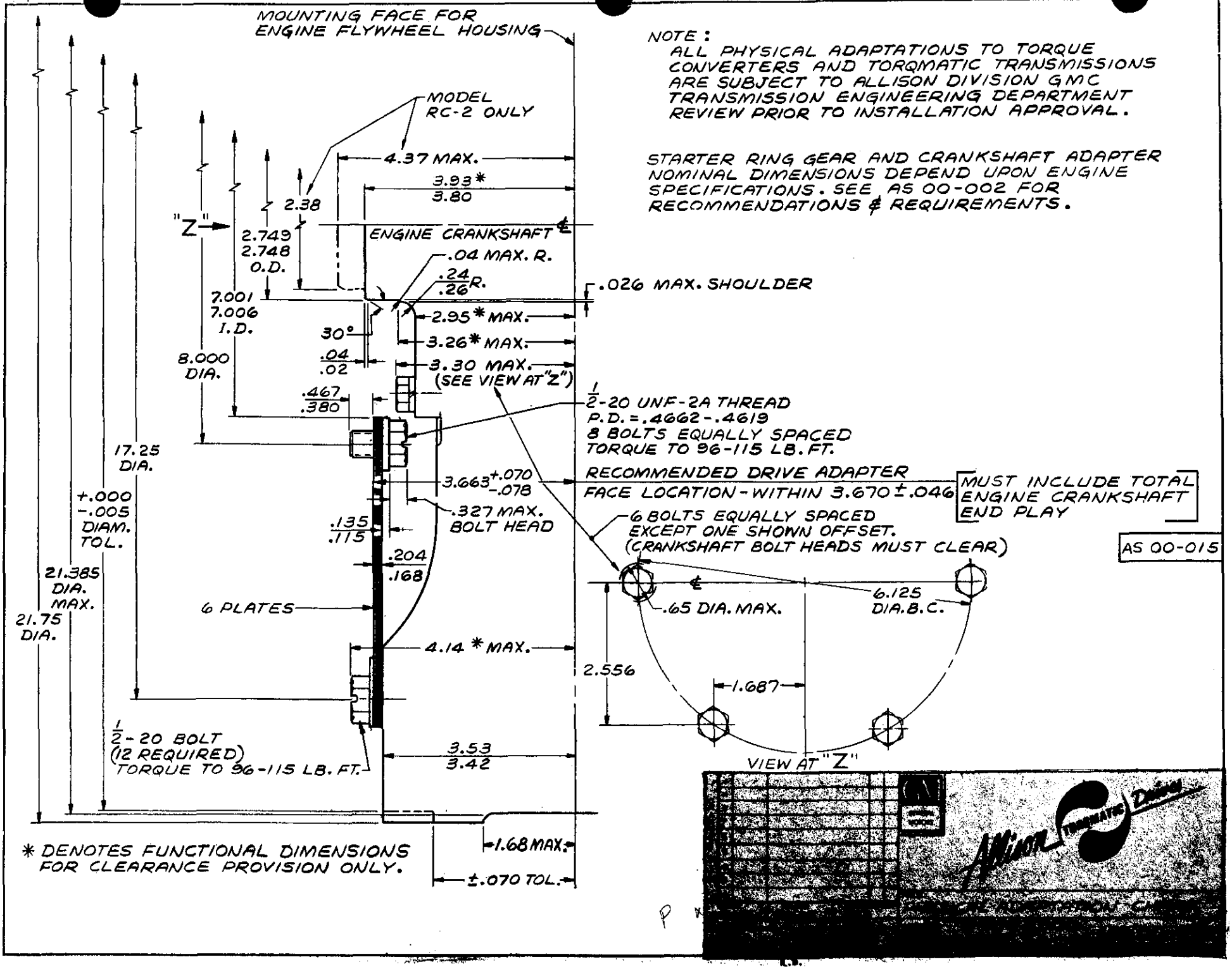
GM GENERAL MOTORS

Allison TORQMATIC Drives

TITLE: SHIFT CONTROL TOWER RECOMMENDED DESIGN

MODEL AS 00-014

ALLISON DIVISION · GENERAL MOTORS CORPORATION · INDIANAPOLIS, INDIANA



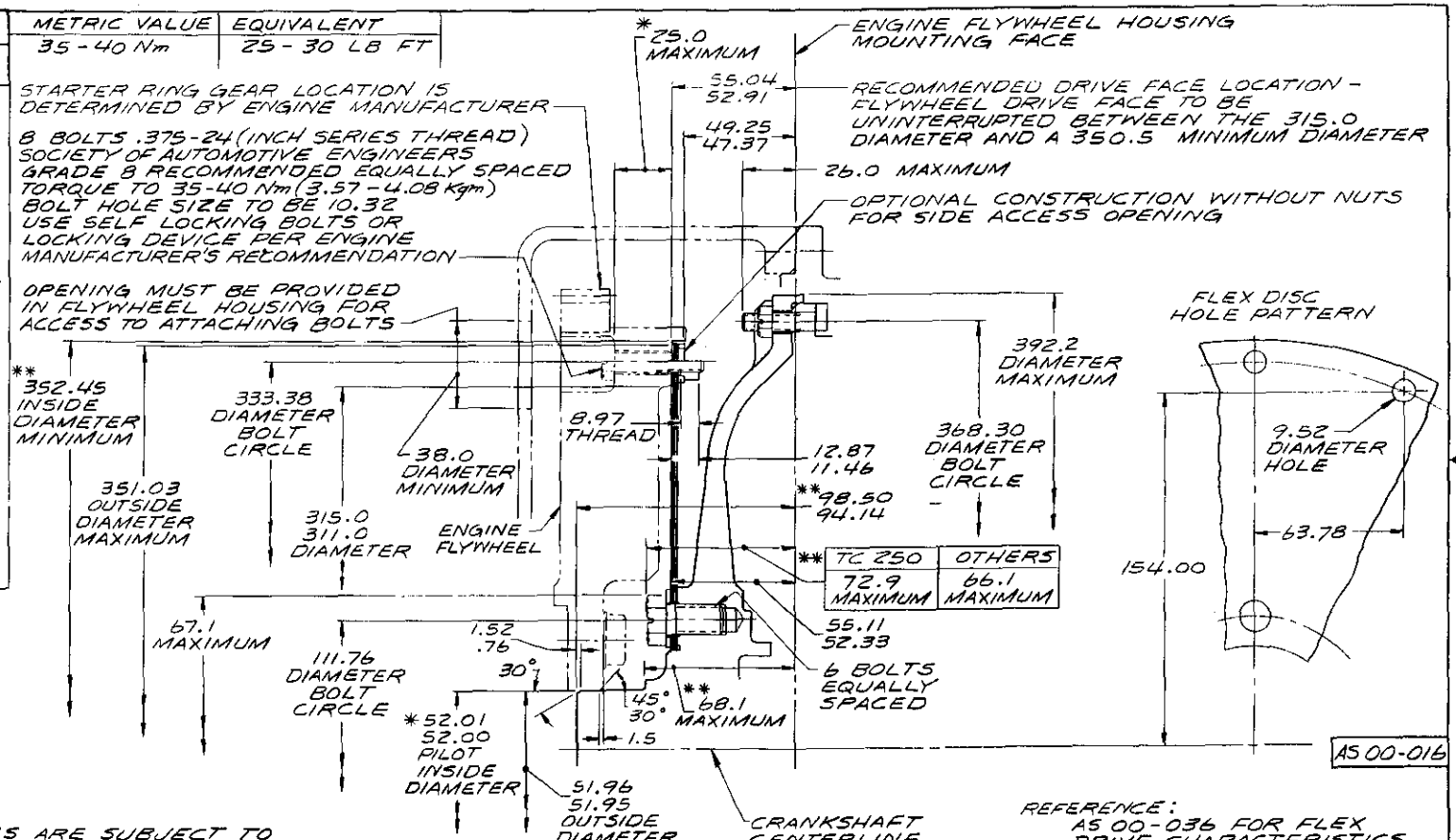
NOTE:
ALL PHYSICAL ADAPTATIONS TO TORQUE CONVERTERS AND TORQMATIC TRANSMISSIONS ARE SUBJECT TO ALLISON DIVISION GMC TRANSMISSION ENGINEERING DEPARTMENT REVIEW PRIOR TO INSTALLATION APPROVAL.

STARTER RING GEAR AND CRANKSHAFT ADAPTER NOMINAL DIMENSIONS DEPEND UPON ENGINE SPECIFICATIONS. SEE AS 00-002 FOR RECOMMENDATIONS & REQUIREMENTS.

* DENOTES FUNCTIONAL DIMENSIONS FOR CLEARANCE PROVISION ONLY.

MILLIMETRES TO INCHES			
mm MIN/NOM	mm MAX	in. MIN/NOM	in. MAX
.76	1.52	.030	.060
1.5		.06	
8.97		.353	
9.52		.375	
10.31		.406	
11.46	12.87	.451	.507
25.0		1.00	
26.0		1.02	
38.0		1.50	
47.37	49.25	1.865	1.939
51.95	51.96	2.045	2.046
52.00	52.01	2.047	2.048
52.33	55.11	2.060	2.170
52.91	55.04	2.083	2.167
63.78		2.511	
66.1		2.60	
67.1		2.64	
68.1		2.68	
72.9		2.87	
94.14	98.50	3.706	3.878
111.76		4.400	
154.00		6.063	
311.0	315.0	12.25	12.40
333.38		13.125	
350.5		13.80	
351.03		13.820	
352.45		13.876	
368.30		14.500	
392.2		15.44	

METRIC VALUE	EQUIVALENT
35 - 40 Nm	25 - 30 LB FT



REFERENCE:
AS 00-036 FOR FLEX DRIVE CHARACTERISTICS

ALL PHYSICAL ADAPTATIONS ARE SUBJECT TO DETROIT DIESEL ALLISON DIVISION TRANSMISSION ENGINEERING DEPARTMENT REVIEW PRIOR TO INSTALLATION APPROVAL

*DENOTES RECOMMENDED DIMENSION

** DENOTES FUNCTIONAL DIMENSIONS FOR CLEARANCE PROVISION ONLY.

ENGINE FLYWHEEL HOUSING AND FLYWHEEL PILOT DIAMETERS MUST MEET SOCIETY OF AUTOMOTIVE ENGINEERS NUMBER 3 CONCENTRICITY REQUIREMENTS.

FOR MODELS
TT-2000
TRT-2000
TT-3000
CRT-3000
TC-250
TC-300

METRIC
ALL DIMENSIONS ARE IN MILLIMETRES, UNLESS OTHERWISE SPECIFIED

THIRD ANGLE PROJECTION

CHANGES				
M	3-19-78	REVISED TO METRIC	C.HH	

Allison Transmissions

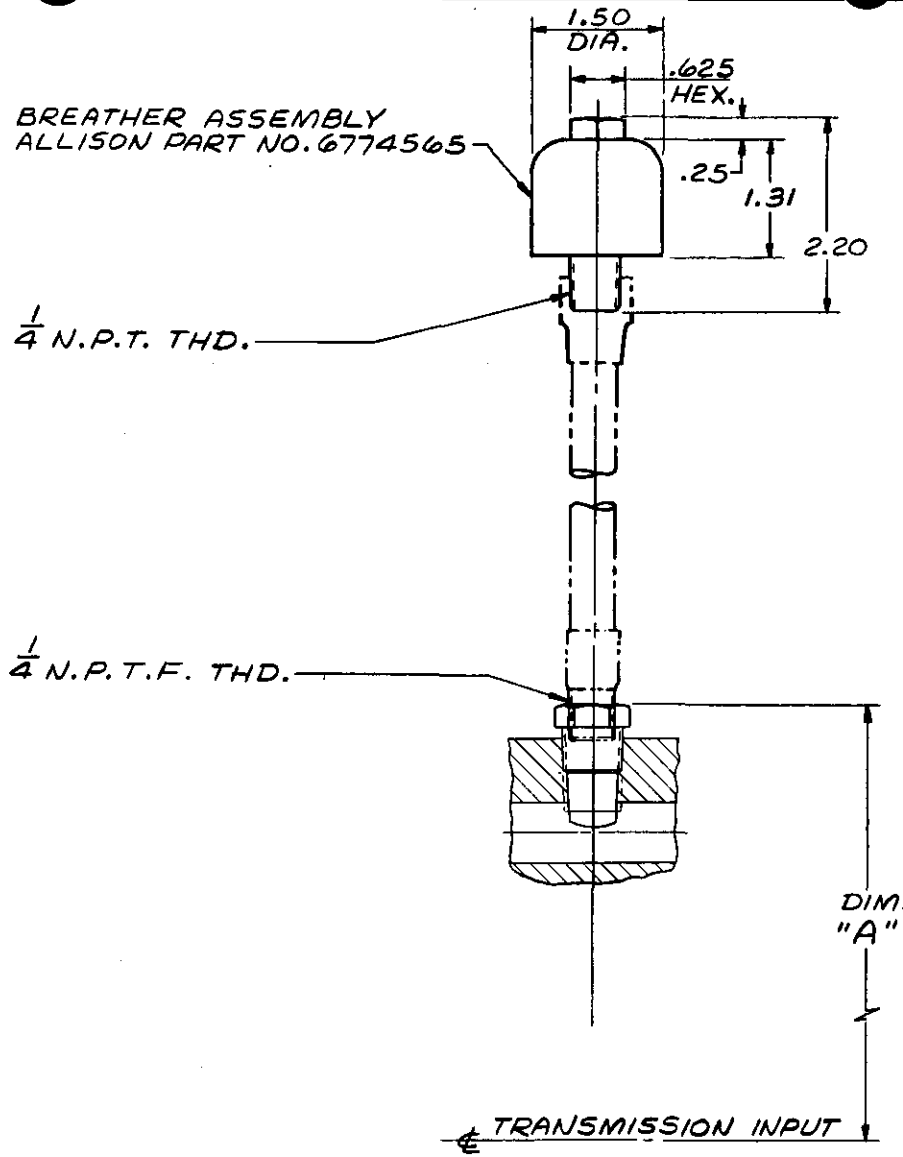
TITLE: FLEX PLATE INPUT DRIVE DATA

DRAWN	CHECKED	CHF. DRAFTSMAN
HUGHES 5-2-62	SWEANY 5-2-62	RTS 5-2-62
SCALE: FULL	PROJ. ENGR: MUELLER 5-2-62	APPL. ENGR: ST. JOHN 5-2-62

MODEL SEE NOTE | AS 00-016

Detroit Diesel Allison Division of General Motors - Indianapolis, Indiana

FORM 8202 S



PARTS SHOWN IN PHANTOM
ARE FURNISHED BY CUSTOMER

AS 00-019

REMOTE MOUNTED BREATHER OPTION

(FOR ALL OTHER TRANSMISSION INSTALLATION DATA SEE BASIC INSTALLATION DRAWING.)

TRANSMISSION MODEL	DIM. "A"
4460 HT-70	5.41 ±.06
5660, 5860 5960 & 6060	6.86 ±.08
DP-8860	6.86 ±.08

CHANGES				
J				
H				
G				
F				
E				
D				
C				
B	11-8-65	WAS 1/4 NPSC	DH	DRC
A	10-19-64	ADD DP8860 MODEL	DH	DRC

GM GENERAL MOTORS

Allison TORQMATIC Drives

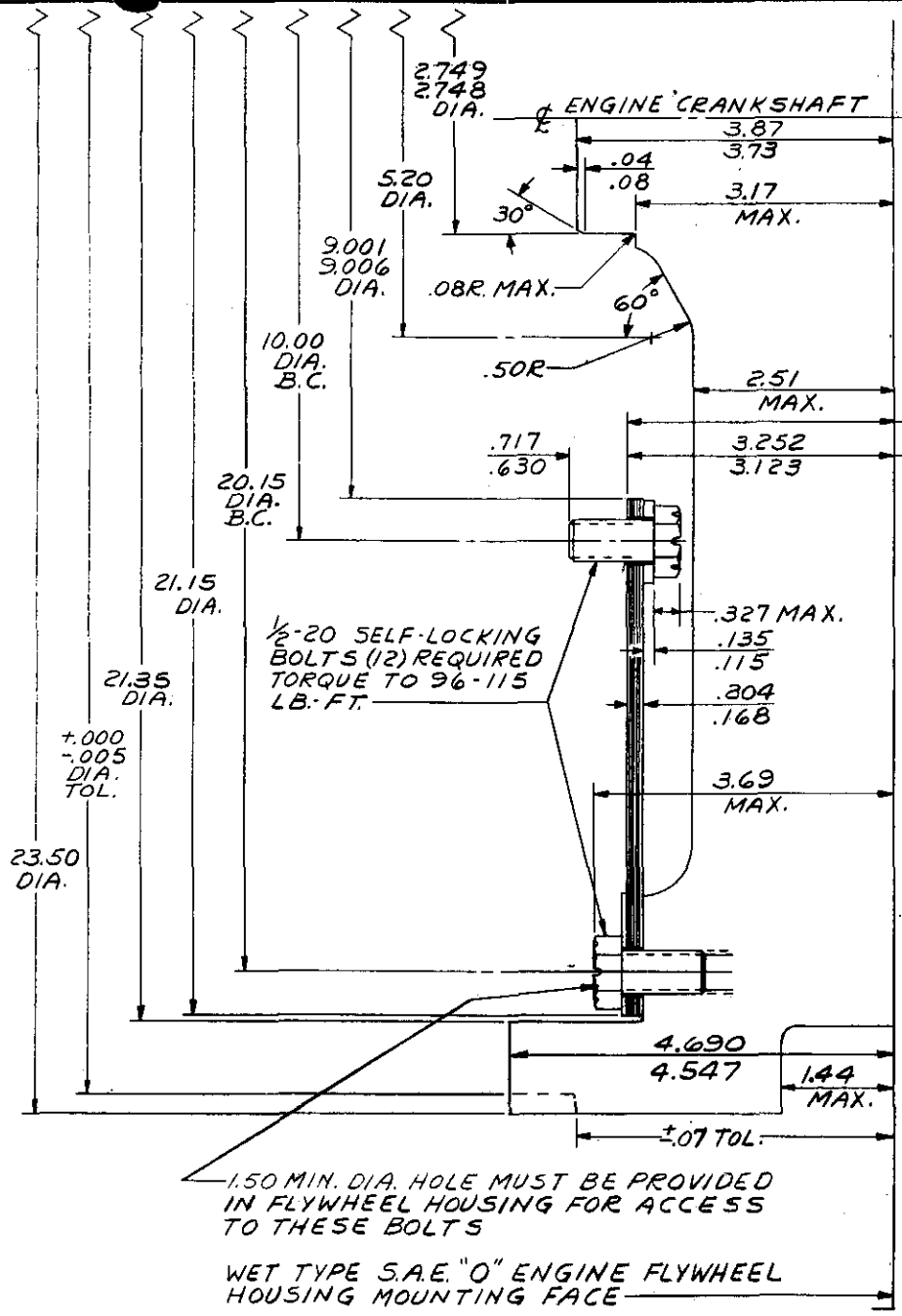
TITLE: REMOTE MOUNTED BREATHER OPTION

DIVISION	DRAWN	ENG. RELEASE
HUGHES 12-10-62	B. HIGGINS 4-9-63	BTS 4-9-63
SCALE	PROJ. ENGR.	APPL. ENGR.
FULL	NICH 12-20-63	WELCHER 12-20-62

MODEL SEE CHART | AS 00-019

ALLISON DIVISION · GENERAL MOTORS CORPORATION · INDIANAPOLIS, INDIANA

CHG 24 35 V



RECOMMENDED DRIVE ADAPTER FACE LOCATION WITHIN 3.219 ±.046 (MUST INCLUDE TOTAL ENGINE CRANKSHAFT END PLAY)

STARTER RING GEAR LOCATION AND CRANK SHAFT ADAPTER NOMINAL DIMENSIONS DEPEND ON ENGINE SPECIFICATIONS.

AS 00-021

ALL PHYSICAL ADAPTATIONS ARE SUBJECT TO ALLISON DIV. G.M.C. TRANSMISSION ENGINEERING DEPT. REVIEW PRIOR TO INSTALLATION APPROVAL

Allison Torqmatic Drive

PHYSICAL ADAPTATION

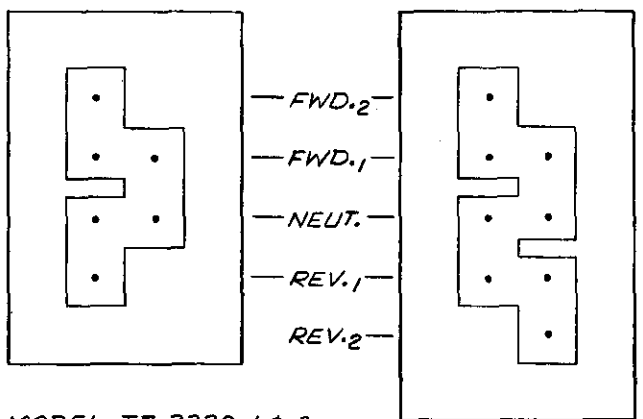
DR-8000 AS 00-021

CONTROL TOWER MOUNTING MUST BE DESIGNED FOR MINIMUM RELATIVE MOVEMENT WITH TRANSMISSION. MOUNTING TO FRAME OR CROSS MEMBER IS RECOMMENDED WHERE FEASIBLE.

CONTROL TOWER & LINKAGE MUST BE DESIGNED TO ALLOW 10 TO 15% OVER TRAVEL, EACH POSITION OF SHIFT CONTROL LEVER, TO PERMIT TRANSMISSION SHIFT VALVE DETENT TO POSITION LEVER WITHOUT EXTERNAL INTERFERENCE OR BINDING.

FOR REQUIRED SHIFT FORCE AND STROKE SPECIFICATIONS, REFER TO BASIC TRANSMISSION INSTALLATION DRAWING.

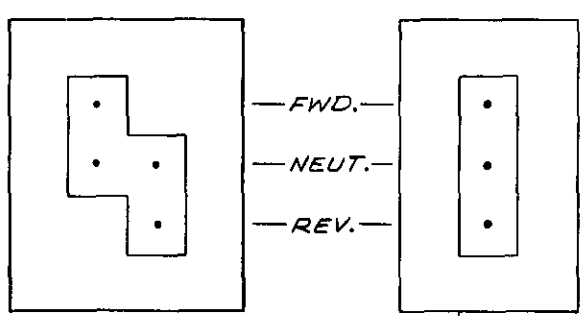
VEHICLE MANUFACTURERS TOWER DESIGN SHOULD BE CORRELATED WITH ALLISON TRANSMISSION ENGINEERING.



MODEL TT-2220-1 & -3
TT-2420-1 & -3

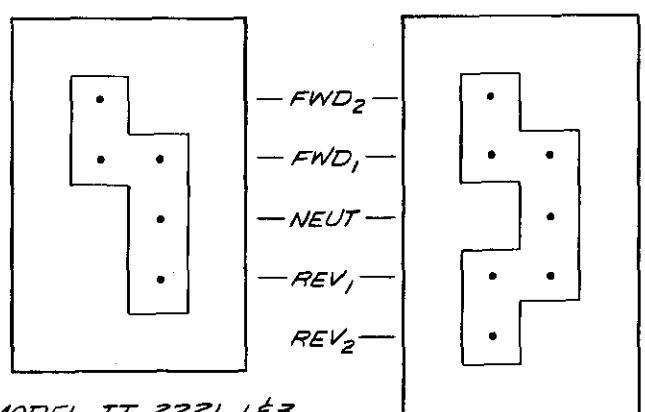
TT-4420-1

MODEL TRT-2220-1 & -3
TRT-2420-1 & -3
TRT-4420-1
TRT-4421-1
TRT-1220-1



MODEL TRT-2210-3
TRT-2410-3

MODEL TRT-2211-3
TRT-2411-3



MODEL TT-2221-1 & 3
TT-2421-1 & 3
TT-4720-1
TT-3420-1

MODEL TRT-2221-1 & 3
TRT-2421-1 & 3
TRT-4820-1

AS 00-026

CHANGE NO.				
E	3/20/75	ADDED TT-3420-1 AND REMOVED 1000 SERIES	D	MH
D	11/27/73	ADD SHIFT PATTERNS TT-2000 & 4000	MH	E
C	10-12-67	SEE REV NOTICE	JG	
B	2-22-65	WAS TT-1120-1		
A	2-10-65	ADDED TT-4420		

DRAWN	CHECKED	ENGR. APPR.
HUGHES 8-19-62	HIGGINS 8-24-62	8-24-62
SCALE NONE	PROJ. ENGR. MUELLER 8-12-62	APPL. ENGR. WELLNER 8-13-64

GM GENERAL MOTORS

Allison TORQMATIC Drives

TITLE
SHIFT TOWER GATING PATTERNS

MODEL SEE NOTE | AS 00-026

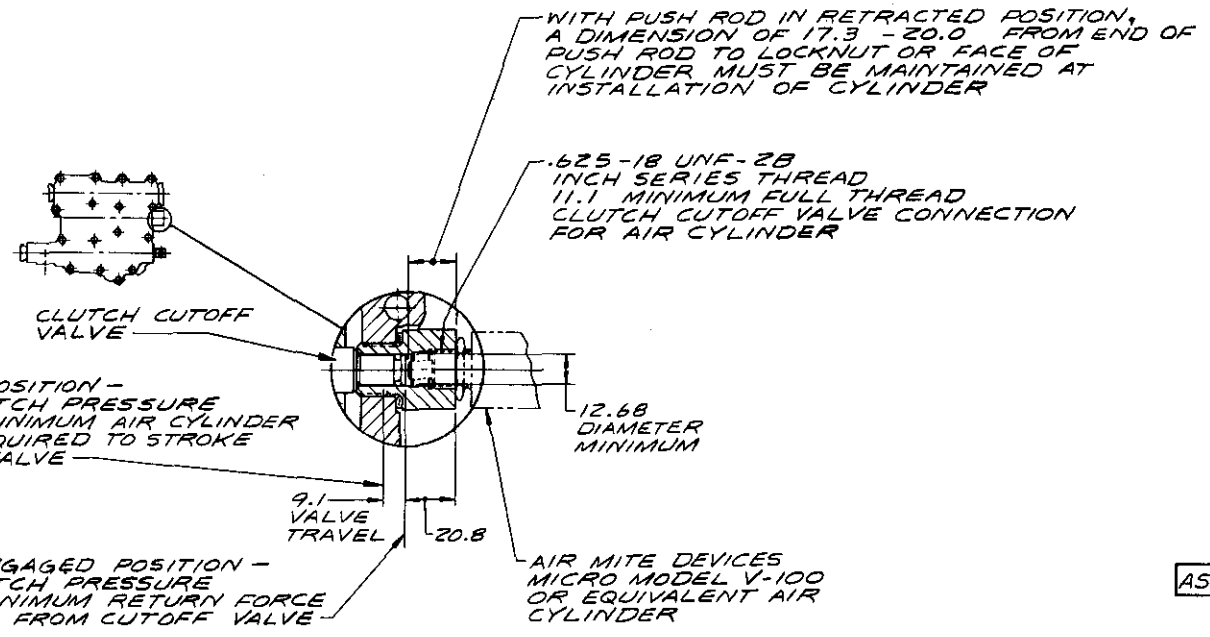
ALLISON DIVISION - GENERAL MOTORS CORPORATION - INDIANAPOLIS, INDIANA

FORM 10.10-C REV. 8-58

MILLIMETRES TO INCHES			
mm MIN/NOM	mm MAX	in. MIN/NOM	in. MAX
9.1		.36	
11.1		.44	
12.68		.4995	
17.3	20.0	.68	.79
20.8		.82	

METRIC VALUE	EQUIVALENT
66.0 N	15 POUNDS
111.0 N	25 POUNDS

MODEL SERIES	BASIC INSTALLATION DRAWING
TT 2000 AND TRT 2000	AS 22-003 AS 22-021
TT 3000	AS 32-001
TT 4000 AND TRT 4000	AS 42-011



AS 00-027

NOTE:

1. AIR MUST NOT BE INTRODUCED INTO VALVE BODY
2. AIR CYLINDER TO ACTUATE VALVE BY MEANS OF PUSH ROD AND PROVIDE POSITIVE RETURN FORCE
3. TRANSMISSION ENGINEERING DEPARTMENT'S APPROVAL IS A PREREQUISITE TO USE OF ACTUATING MECHANISM

SECTION VIEW OF CUTOFF VALVE PLUG
SCALE: FULL

FOR TRANSMISSION INSTALLATION DATA NOT SHOWN SEE BASIC INSTALLATION DRAWING

PARTS SHOWN IN PHANTOM ARE TO BE FURNISHED BY CUSTOMER

METRIC
ALL DIMENSIONS ARE IN MILLIMETRES, UNLESS OTHERWISE SPECIFIED

THIRD ANGLE PROJECTION

CHANGES			
C	5-20-75	REVISED TO METRIC	PH

DRAWN	CHECKED	CHG. ENGINEER
S WEANY	K HARPER	A T S
8-28-64	9-1-64	9-1-64
SCALE	PROJ. ENGR.	APPL. ENGR.
0.2 TIMES	D MUELLER	E P MELCHER
	8-28-64	8-28-64

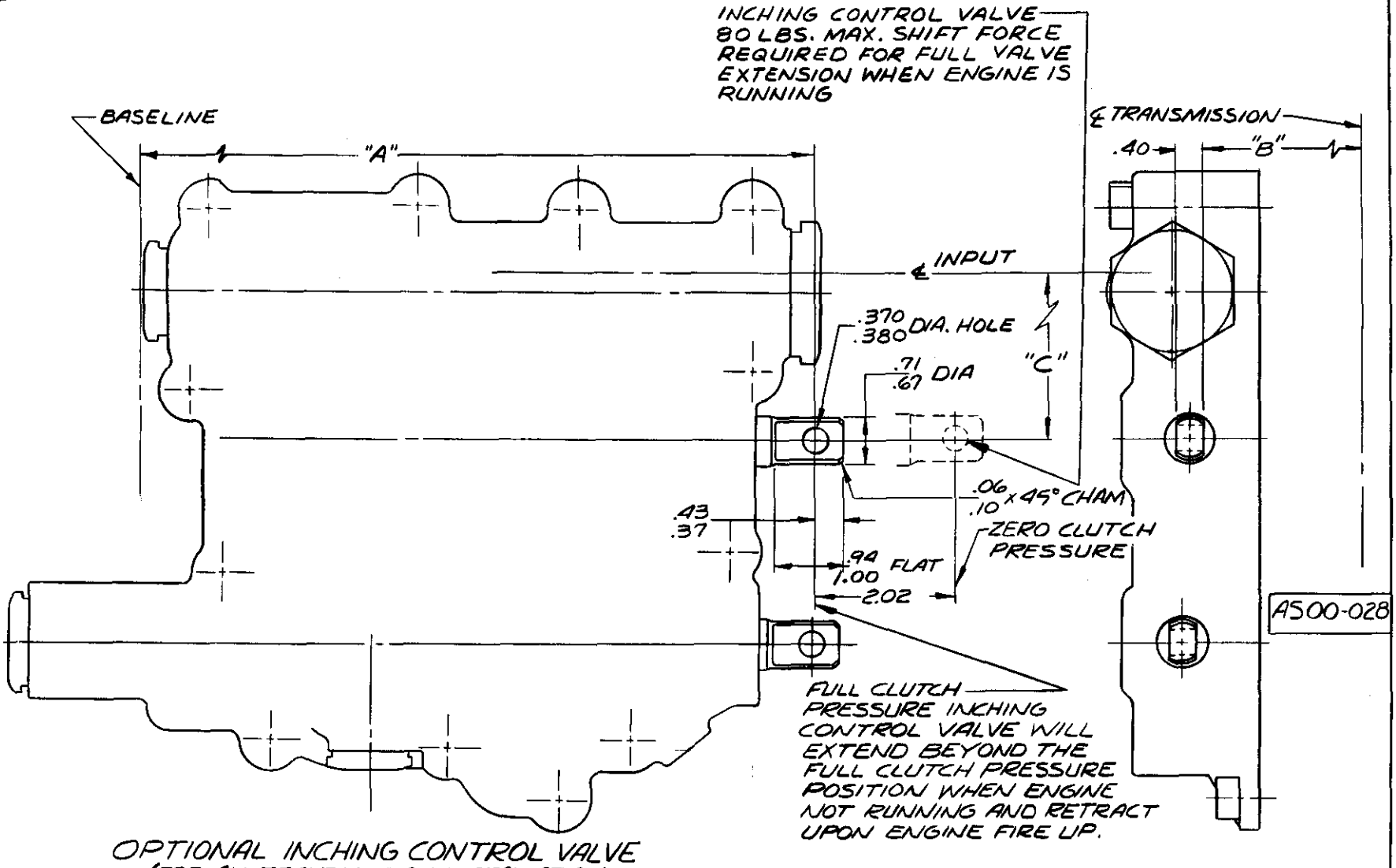
Allison Transmissions

TITLE: AIR ACTUATED CLUTCH CUTOFF OPTION

MODEL SEE CHART | AS 00-027

Detroit Diesel Allison Division of General Motors · Indianapolis, Indiana

FORM 8202 S



OPTIONAL INCHING CONTROL VALVE
(FOR ALL TRANSMISSION INSTALLATION DATA NOT SHOWN SEE BASIC INSTALLATION DRAWING)

MODEL SERIES	BASIC INST. DRAWING	"A" DIM.	"B" DIM.	"C" DIM.
TT & TRT-2000	AS 22-003 AS 22-021	9.76	9.065	2.40
TT & TRT-4000	AS 42-011	.35	10.44	4.40

CHANGES			
J			
N			
G			
F			
E	5-24-73	REDRAWN WITH REVISED VALVE BODY CONFIG ONLY.	DM
X			
X			
X			
X			

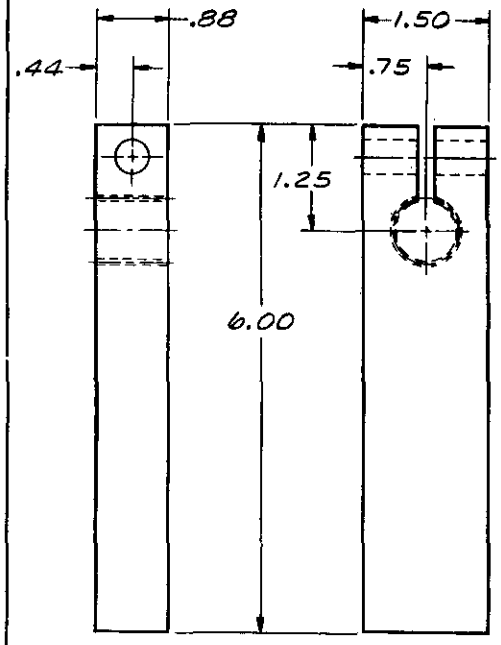
DRAWN	CHECKED	CHF. DRAFTSMAN
HUGHES	COL	RTS
9-10-64	9-29-64	9-25-64
SCALE	PROJ. ENGR.	APPL. ENGR.
FULL	DFM	EPW
	9-10-64	9-10-64

Allison Transmissions

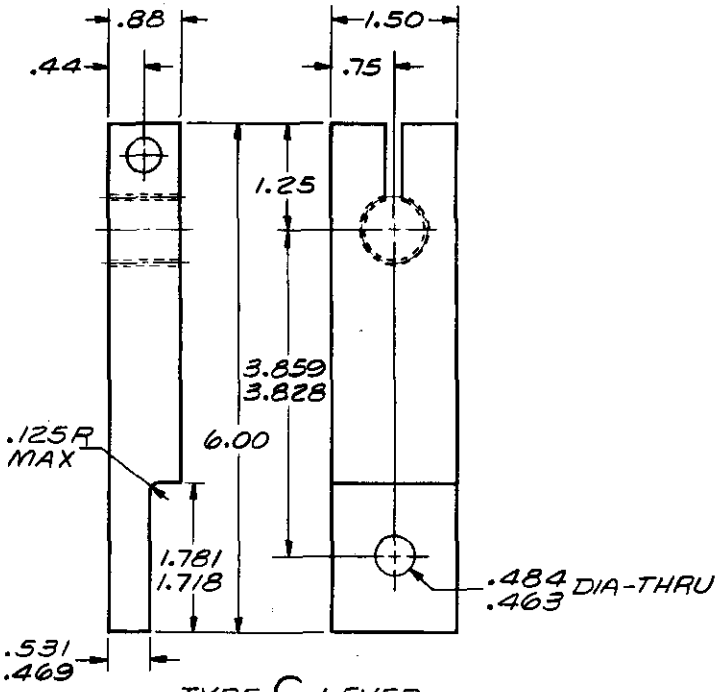
TITLE: INCHING CONTROL VALVE BODY

MODEL SEE CHART | AS00-028

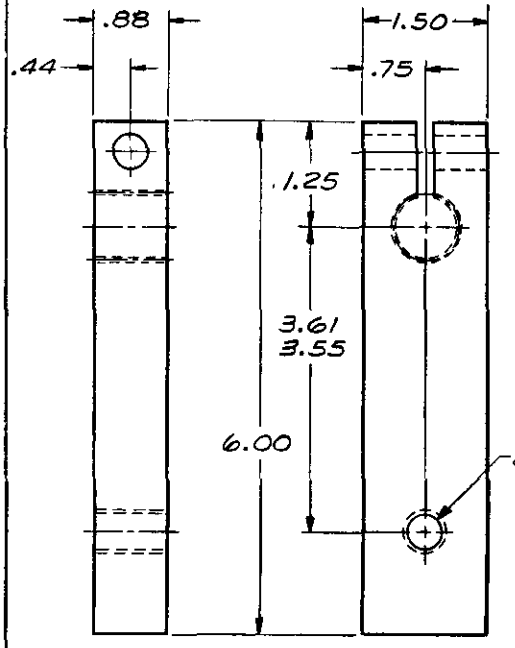
Detroit Diesel Allison Division of General Motors · Indianapolis, Indiana



TYPE A LEVER
ALLISON PART NO. 6771694



TYPE C LEVER
ALLISON PART NO. 6778940



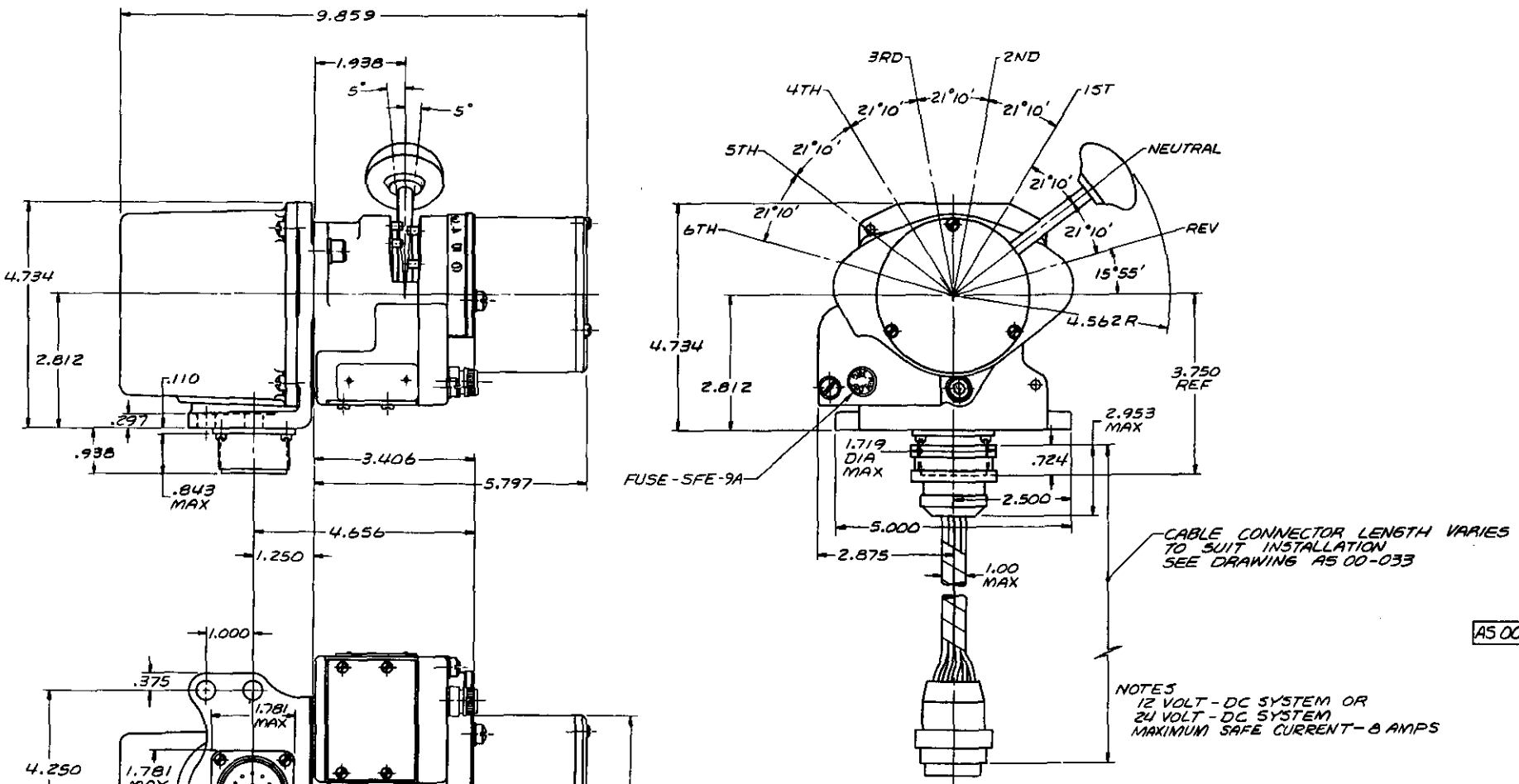
TYPE B LEVER
ALLISON PART NO. 6773780

AS 00-029

FOR ALL TRANSMISSION INSTALLATION DATA NOT SHOWN SEE BASIC INSTALLATION DRAWINGS AS 44-001, AS 44-005, AS 34-002, AS 34-004 AND AS 34-014

			Allison Torqmatic Drives
			TITLE: SELECTOR LEVER CHART
			MODEL 4460 AND 3460 AS 00-029
			FULL

DA V



C	12-11-67	ADDED FUSE & CONNECTOR	
B	1-31-67	REM. INHIB. OPT.	
A	1-2-67	REV. NOTE	

GM

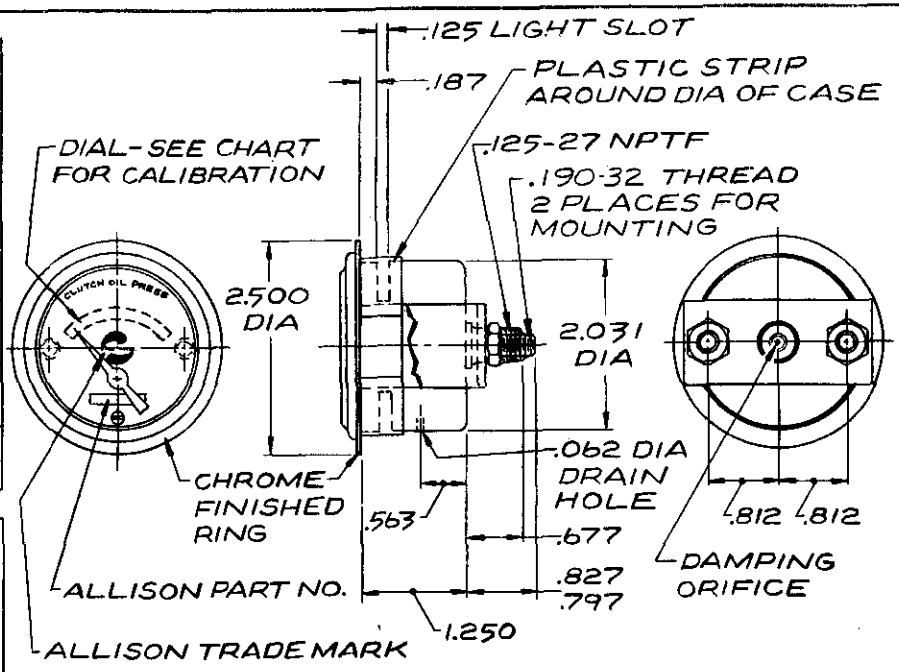
Allison TORQMATIC® Drive

TITLE INSTALLATION REQMTS FOR ELECTRIC SHIFT CONTROL

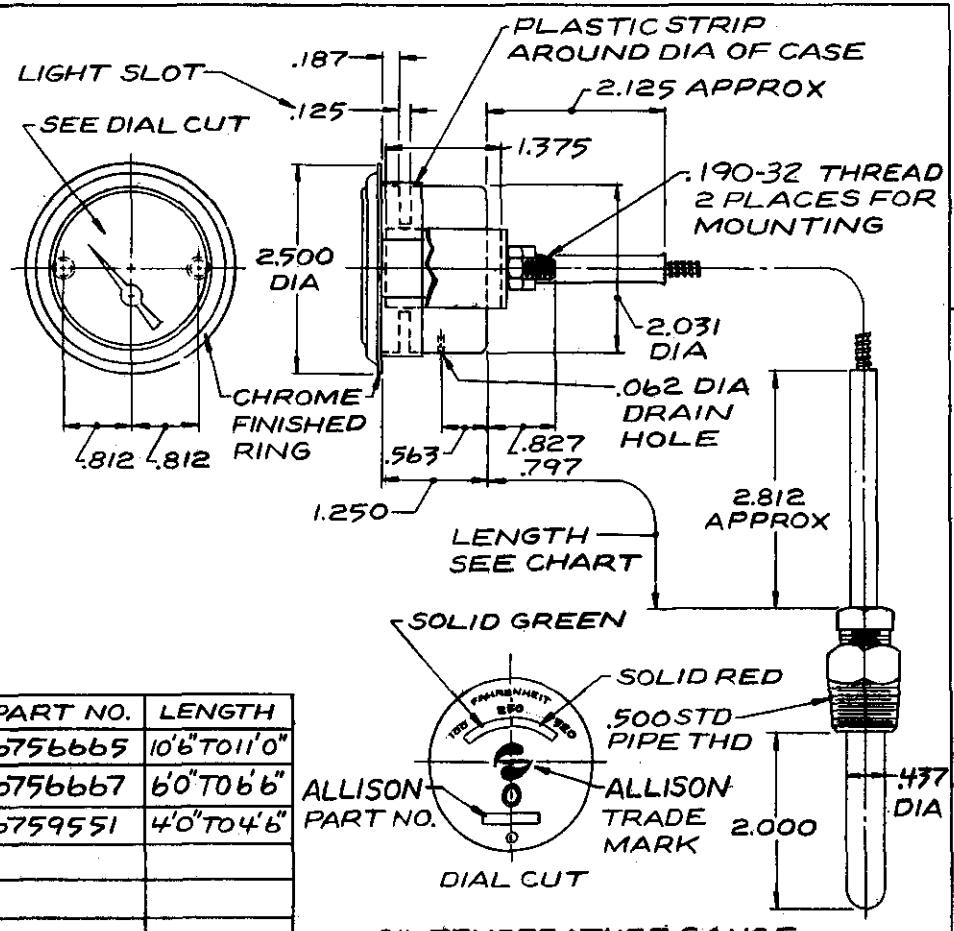
MODEL VARIOUS AS 00-031

ALLISON DIVISION - GENERAL MOTORS CORPORATION - INDIANAPOLIS, INDIANA

GAUGE PART NO.	TRANSMISSION MODEL	MAIN PRESSURE, RANGE CALIBRATIONS-PSI
6756654	TG600, TT, TRT-2000 CRT-3531	75 140 185 250 — RED | GREEN | RED
6758021	CRT-5000 CRT-3321, 31	50 110 150 200 — RED | GREEN | RED
6774195	CT, CLT, CLBT, VCLBT, 4000	50 100 175 200 280 300 — RED | WHITE | GREEN | RED
6770644	CT, CLT, VCLT-3000	50 90 135 190 210 260 300 — RED | WHITE | GREEN | RED
6777328	CT, CLT, CLBT, VCLBT-5,6000 TT, TRT-4000	50 160 220 300 — RED | GREEN | RED
6834032	DP-8000	50 140 190 250 300 — RED | GREEN | RED



OIL PRESSURE GAUGE



OIL TEMPERATURE GAUGE

PART NO.	LENGTH
6756665	10'6" TO 11'0"
6756667	6'0" TO 6'6"
6759551	4'0" TO 4'6"

AS00-032

CHANGES: A — IMP. 69 WAS .216-24 THD MC E

GM

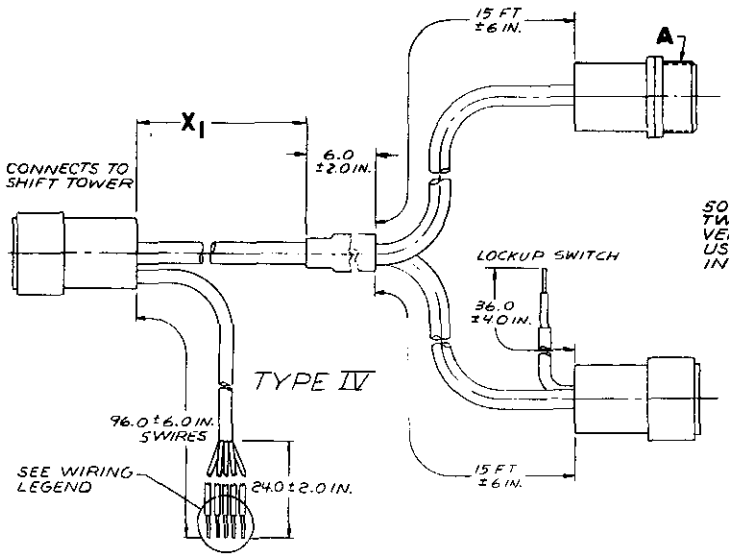
Allison TORQMATIC® Drive

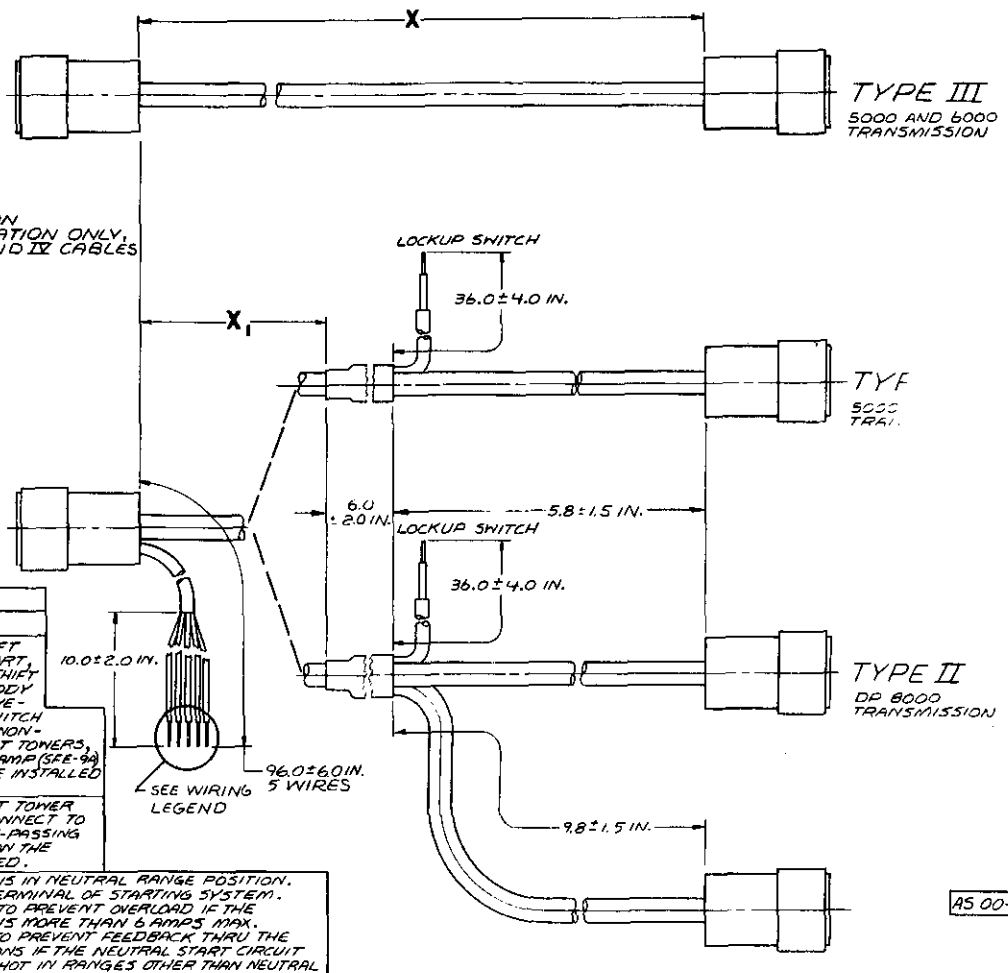
TITLE: OFF-HIGHWAY TRANSMISSION GAUGES

MODEL SEE CHART AS00-032

DRAWN	CHECKED	ENGR APPROVAL
M. Amy 8-11-68	CLARK 13 DEC 68	VOID
SCALE FULL	PROJ. ENGR. MUELLER 9 DEC 68	APPL. ENGR. LEWIS 9 DEC 68

ALLISON DIVISION • GENERAL MOTORS CORPORATION • INDIANAPOLIS, INDIANA





TRANSMISSION	TYPE	HARNESS P/N	X OR X1
5000 AND 6000	I	6834077	7 FT ± 6 IN.
	I	6836634	20 FT ± 6 IN.
	I	6834075	27 FT ± 6 IN.
	III	6836601	27 FT ± 6 IN.
	III	6836602	17 FT ± 6 IN.
	IV	6836600	2 FT ± 2 IN.
8000	II	6836695	20 FT ± 6 IN.
	II	6834071	27 FT ± 6 IN.

CABLE CLEARANCES AT CONNECTOR REQUIRED FOR INSTALLATION
- CYLINDER VOLUME OF 6 IN. DIAMETER AND 6 IN. LONG

CONNECTORS (MS TYPE) MULTI-PIN, SCREW-ON
- 2 IN. IN DIAMETER
- POTTING EXTENDS TO 2.25 IN. MAX

CABLE DIAMETER = 0.5 $^{+.25}_{-0}$ IN.

CABLE HAS TO BE PROTECTED FROM DAMAGE BY PROPER ROUTING IN THE VEHICLE

WIRING LEGEND

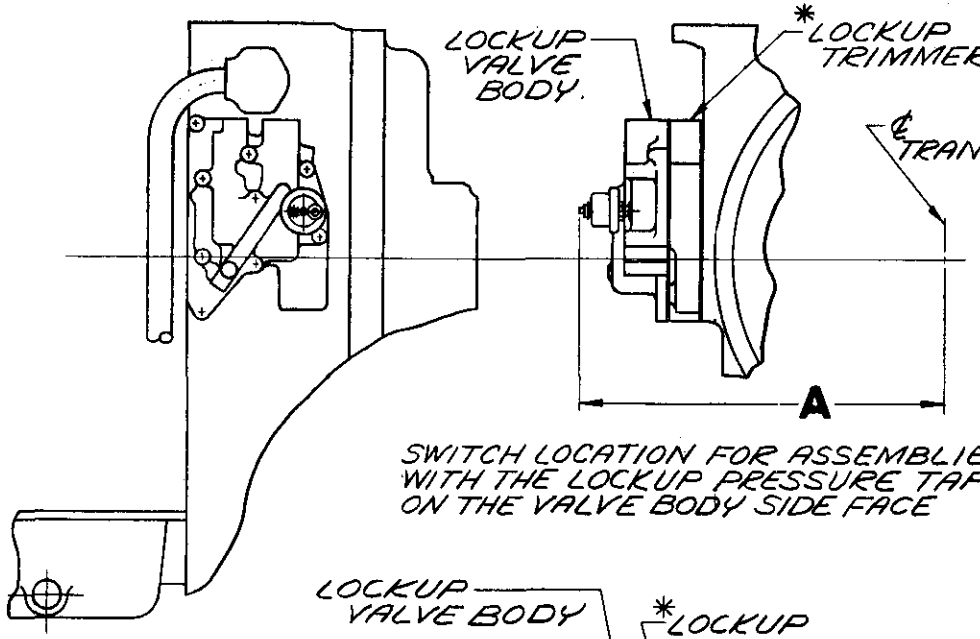
COLOR	PURPOSE	COMMENTS
RED	POWER-IN	SUPPLIES POWER TO SHIFT TOWER FOR NEUTRAL START, REVERSE SIGNAL, DOWNSHIFT INHIBITOR, AND VALVE BODY SOLENOIDS. CONNECT TO VEHICLE POWER ON-OFF SWITCH OR MASTER SWITCH. ON NON-INTEGRALLY FUSED SHIFT TOWERS, AN ALLISON-SUPPLIED 9 AMP (SFE-9A) CARTRIDGE FUSE MUST BE INSTALLED IN THIS LINE.
BLUE	SHIFT QUADRANT LIGHT	SUPPLIES POWER TO SHIFT TOWER FOR QUADRANT LIGHT. CONNECT TO PANEL LIGHT SWITCH. BY-PASSING THE DIMMER RHEOSTAT ON THE SWITCH IS RECOMMENDED.
WHITE	NEUTRAL START	HOT WHEN SHIFT LEVER IS IN NEUTRAL RANGE POSITION. CONNECT TO POWER-IN TERMINAL OF STARTING SYSTEM. A RELAY MUST BE USED TO PREVENT OVERLOAD IF THE STARTING SYSTEM DRAWS MORE THAN 6 AMPS MAX. A RELAY MUST BE USED TO PREVENT FEEDBACK THRU THE SHIFT TOWER TO THE TRANS IF THE NEUTRAL START CIRCUIT KEEPS THE WHITE WIRE HOT IN RANGES OTHER THAN NEUTRAL
GREEN	REVERSE SIGNAL	HOT WHEN SHIFT LEVER IS IN REVERSE RANGE POSITION. CONNECT TO POWER-IN TERMINAL OF REVERSE WARNING SYSTEM. A RELAY MUST BE USED TO PREVENT OVERLOAD IF THE REVERSE WARNING SYSTEM DRAWS MORE THAN 6 AMPS MAX. A RELAY MUST BE USED TO PREVENT FEEDBACK THRU THE SHIFT TOWER TO THE TRANS IF THE REVERSE SIGNAL IS TO BE USED FOR A REVERSE WARNING (BACKUP LIGHT) WITH AN OPTIONAL MANUAL OVERRIDE SWITCH IN THE CIRCUIT.
BLACK	GROUND	CONNECT TO CAB GROUND NOTE: STANDARD HIGH AMPERAGE CAB-TO-FRAME AND TRANSMISSION-TO-FRAME GROUND STRAPS MUST BE PROVIDED TO PREVENT DAMAGE TO THE ELECTRIC SHIFT SYSTEM FROM EXTERNAL SOURCES

AS 00-033

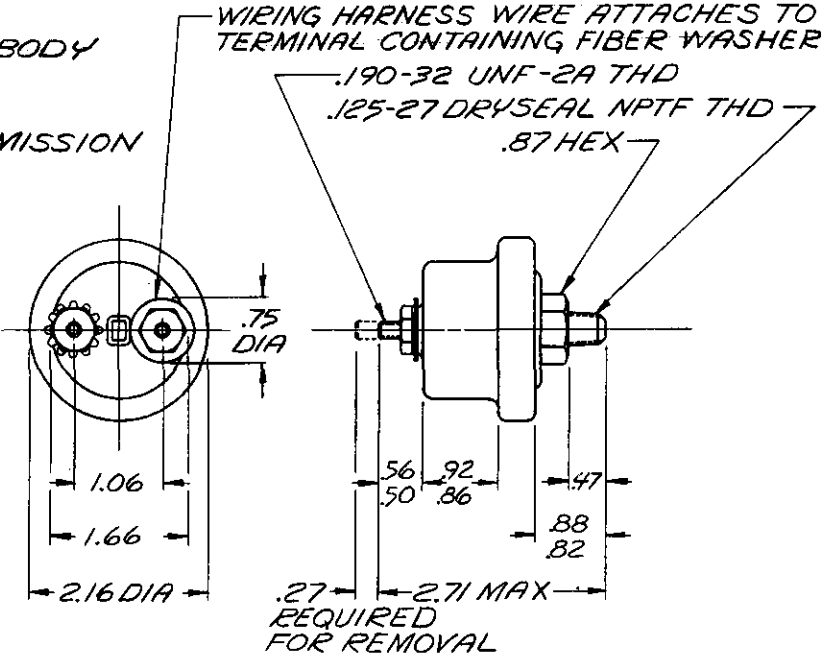
Allison TORQMATIC Drive

TITLE WIRE HARNESS, MANUAL ELECTRIC

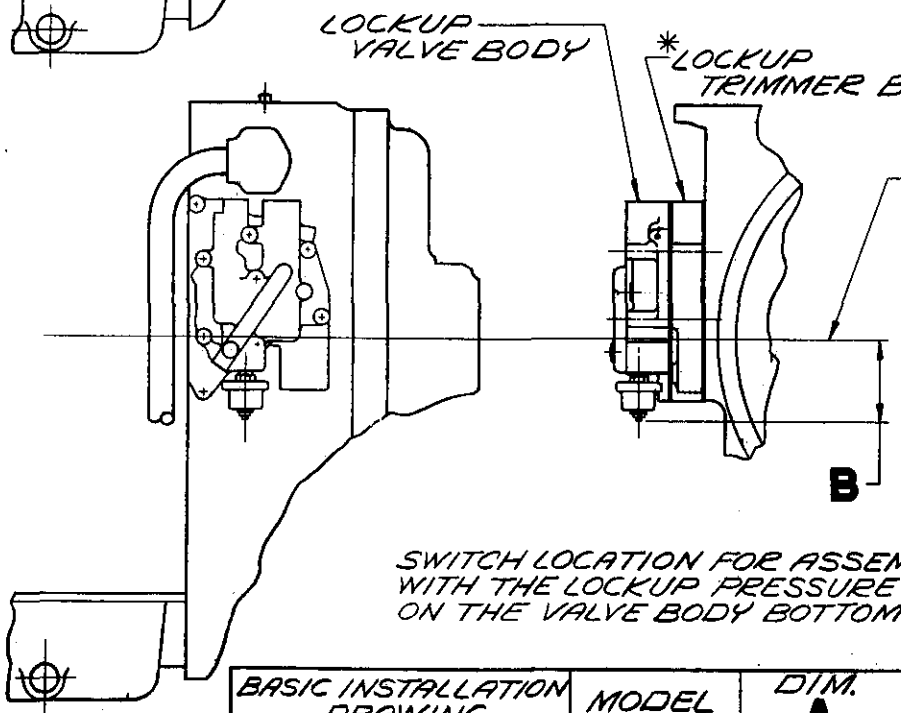
MODEL 5000, 6000 AND 8000 AS 00-033



SWITCH LOCATION FOR ASSEMBLIES WITH THE LOCKUP PRESSURE TAP ON THE VALVE BODY SIDE FACE



ENLARGED VIEW
SCALE: FULL



SWITCH LOCATION FOR ASSEMBLIES WITH THE LOCKUP PRESSURE TAP ON THE VALVE BODY BOTTOM FACE

SWITCH TO BE INSTALLED IN THE LOCKUP PRESSURE TAP ON THE LOCKUP VALVE BODY

AS 00-034

FOR INSTALLATION DATA NOT SHOWN SEE BASIC INSTALLATION DRAWING CHART

*LOCKUP TRIMMER BODY REQUIRED FOR DP-8961 ONLY

BASIC INSTALLATION DRAWING	MODEL	DIM. A	DIM. B
AS 58 - 029 AS 58 - 031	5860 5960 6061	15.92 MAX	4.09 MAX
AS 80 - 015	DP-8961	18.52 MAX	4.09 MAX

J			
H			
G			
F			
E			
D			
C			
B			
A	44469	SEE REV. NOTICE	VJ 5/6
ISSUE	JD PERRY	VEB	
	23 JAN 69	22 JAN 69	
	NOW		
	23 JAN 69	22 JAN 69	

GM

Allison TORQMATIC Drive

TITLE: ELECTRIC SHIFT INHIBITOR SWITCH INSTALLATION REQUIREMENTS

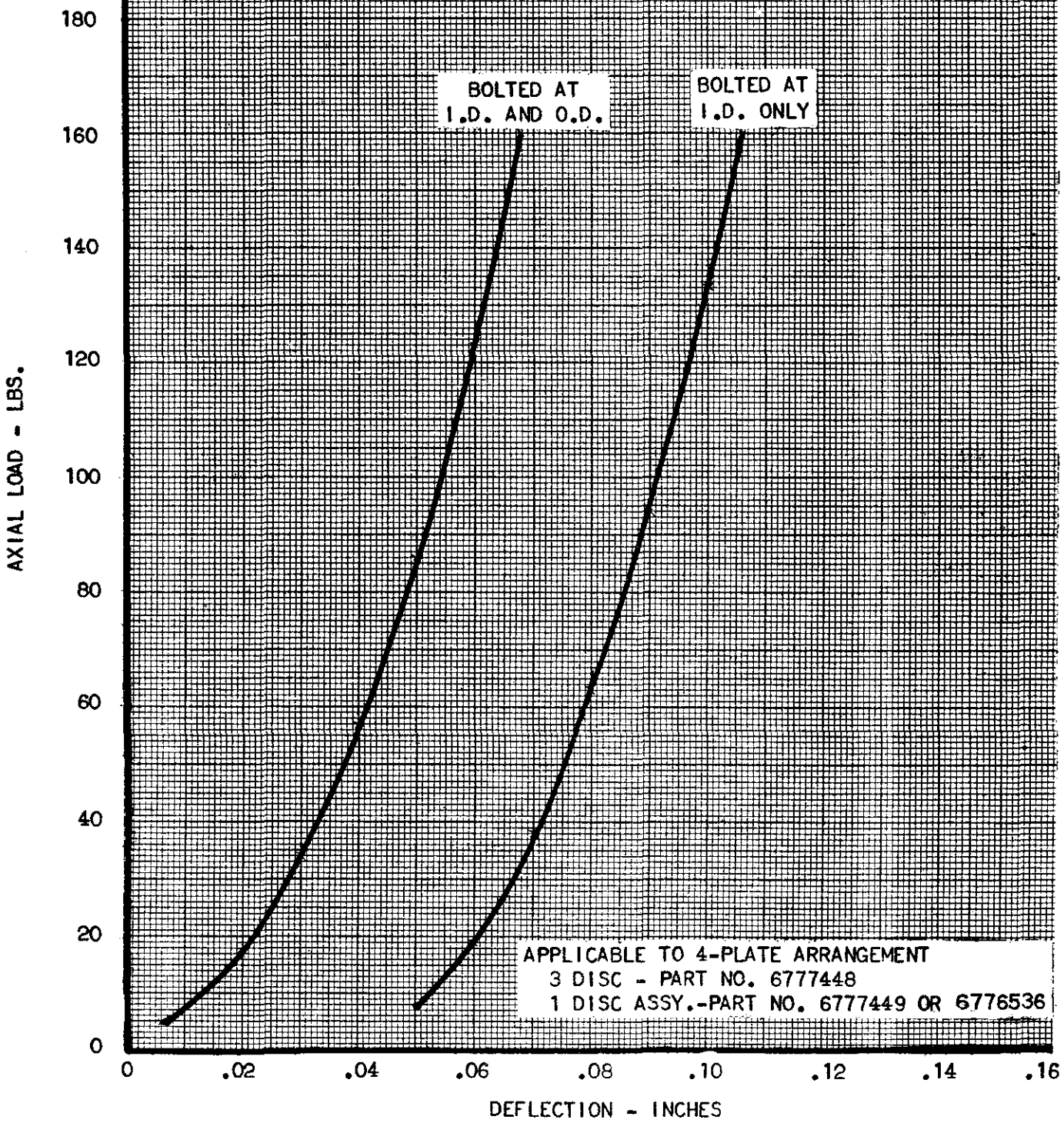
MODEL: SEE CHART | AS 00-034

Allison TORQMATIC Drives
INDIANAPOLIS, INDIANA
GENERAL MOTORS

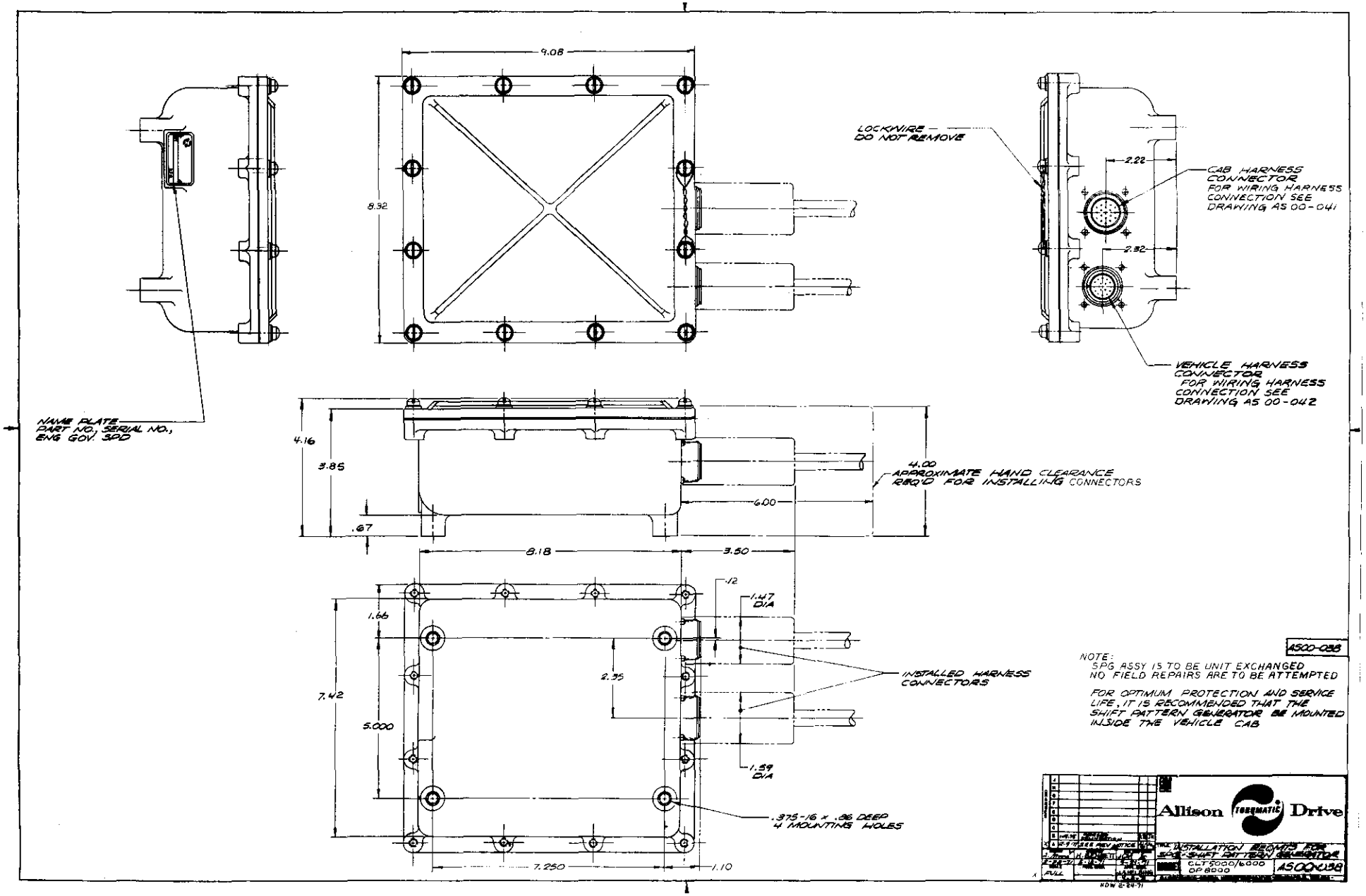
DATE 6-5-69
BY RAMSEY
AS-00-036

TRANSMISSION ENGINEERING DEPARTMENT

FLEX DRIVE CHARACTERISTICS FOR ALLISON TT & TRT-2000 AND CRT-3000 SERIES TRANSMISSIONS AND TC-250 & TC-300 SERIES INDUSTRIAL CONVERTERS



APPLICABLE TO 4-PLATE ARRANGEMENT
3 DISC - PART NO. 6777448
1 DISC ASSY.-PART NO. 6777449 OR 6776536



4500-038

NOTE:
SPG ASSY IS TO BE UNIT EXCHANGED
NO FIELD REPAIRS ARE TO BE ATTEMPTED

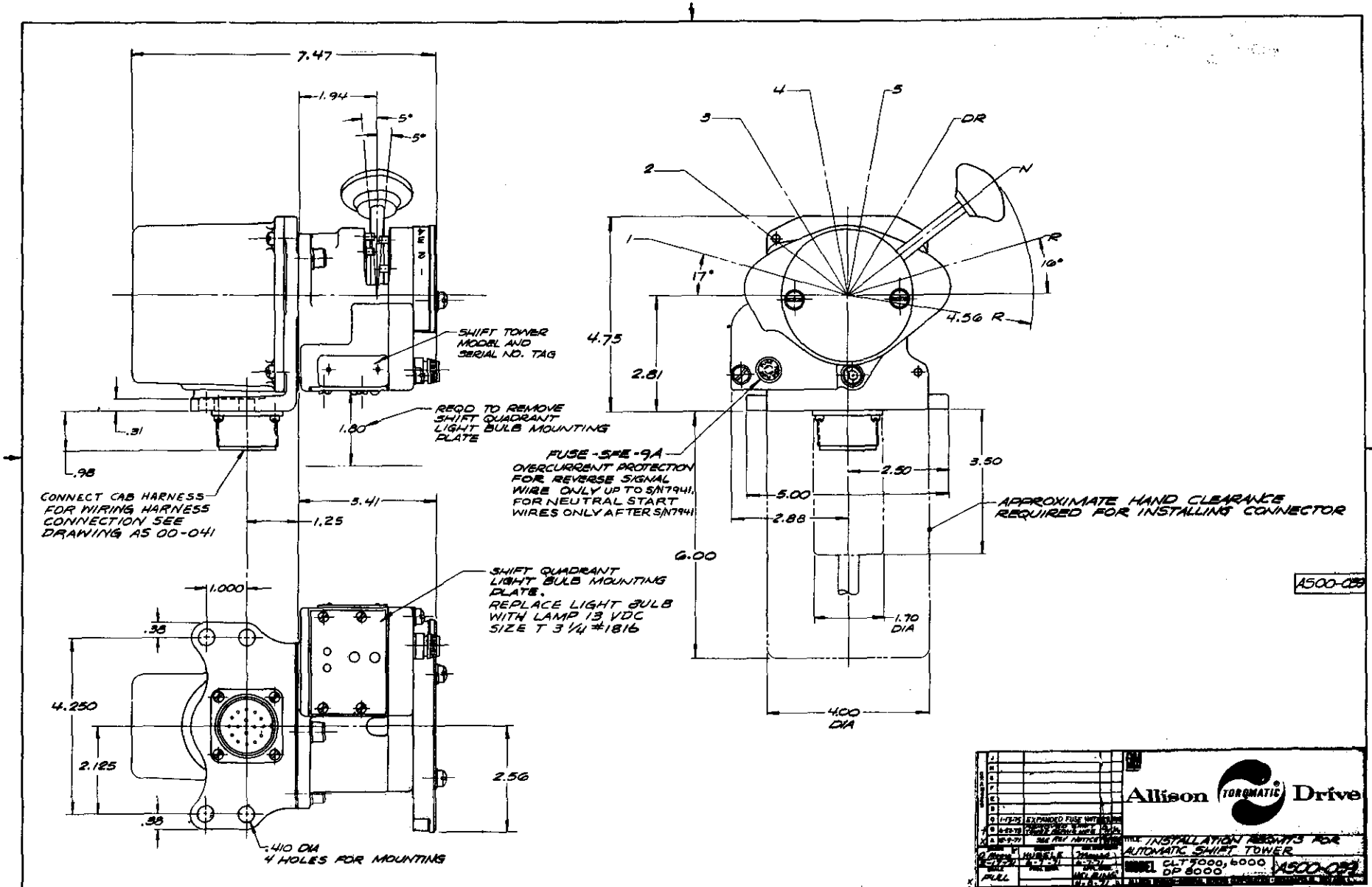
FOR OPTIMUM PROTECTION AND SERVICE LIFE, IT IS RECOMMENDED THAT THE SHIFT PATTERN GENERATOR BE MOUNTED INSIDE THE VEHICLE CAB

Allison TORQMATIC Drive

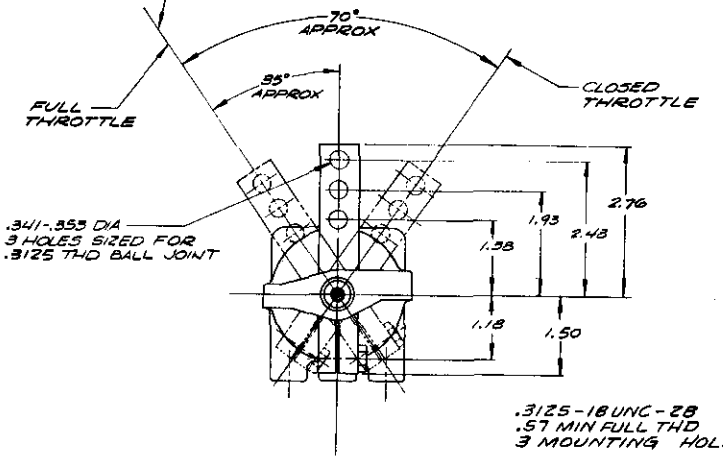
INSTALLATION DRAWING FOR SHIFT PATTERN GENERATOR

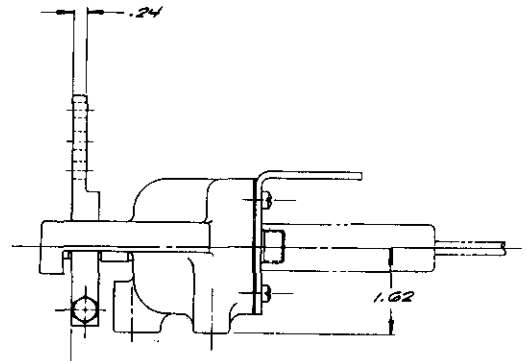
CLT5000/6000 OP 8000

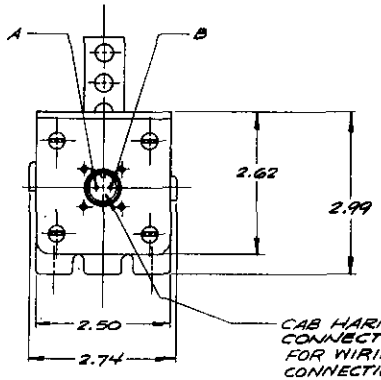
A500-038


7.47
1.94
5°
5°
SHIFT TOWER MODEL AND SERIAL NO. TAG
REQD TO REMOVE SHIFT QUADRANT LIGHT BULB MOUNTING PLATE
1.80
.31
.98
CONNECT CAB HARNESS FOR WIRING HARNESS CONNECTION SEE DRAWING AS 00-041
3.41
1.25
1.000
.38
4.250
2.125
.38
.410 DIA 4 HOLES FOR MOUNTING
SHIFT QUADRANT LIGHT BULB MOUNTING PLATE. REPLACE LIGHT BULB WITH LAMP 13 VDC SIZE T 3 1/4 #1816
2.56
4
5
3
OR
2
N
1
R
10°
17°
4.56 R
4.75
2.81
FUSE-5FE-9A OVERCURRENT PROTECTION FOR REVERSE SIGNAL WIRE ONLY UP TO S/N7941, FOR NEUTRAL START WIRES ONLY AFTER S/N7941
2.50
3.50
5.00
2.88
APPROXIMATE HAND CLEARANCE REQUIRED FOR INSTALLING CONNECTOR
6.00
1.70 DIA
4.00 DIA
A500-059
Allison TORQMATIC Drive
INSTALLATION DRAWING FOR AUTOMATIC SHIFT TOWER
CLT 5000, 6000 DP 8000
A500-059

NOTE: LINKAGE SHOULD BE CONSTRUCTED SUCH THAT SIDE LOADS ARE NOT IMPOSED ON THE LEVER. THROTTLE POTENTIOMETER LINKAGE IS ADJUSTED PROPERLY WHEN A RESISTANCE READING OF 275 OHMS IS OBTAINED ACROSS PINS A AND B AT FULL THROTTLE POSITION WITH A RESULTING 30 TO 90 OHMS ACROSS PINS A AND B AT CLOSED THROTTLE POSITION

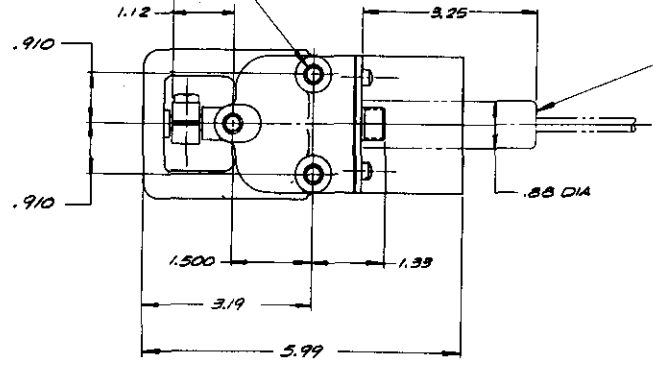






CAB HARNESS CONNECTOR FOR WIRING HARNESS CONNECTION SEE DRAWING AS 00-041

.3125-18 UNC-2B .57 MIN FULL THD 3 MOUNTING HOLES



INSTALLED HARNESS CONNECTOR

NOTE: LEVER IS TO BE CONNECTED TO AND ACTUATED BY THE ENGINE THROTTLE LINKAGE

4500-040

TO OBTAIN OPTIMUM THROTTLE POTENTIOMETER SERVICE LIFE, IT IS RECOMMENDED THAT THE THROTTLE POTENTIOMETER BE REMOTE MOUNTED FROM THE ENGINE.

WHENEVER GOVERNOR LINKAGE IS READJUSTED IT IS NECESSARY TO READJUST THROTTLE POTENTIOMETER LINKAGE

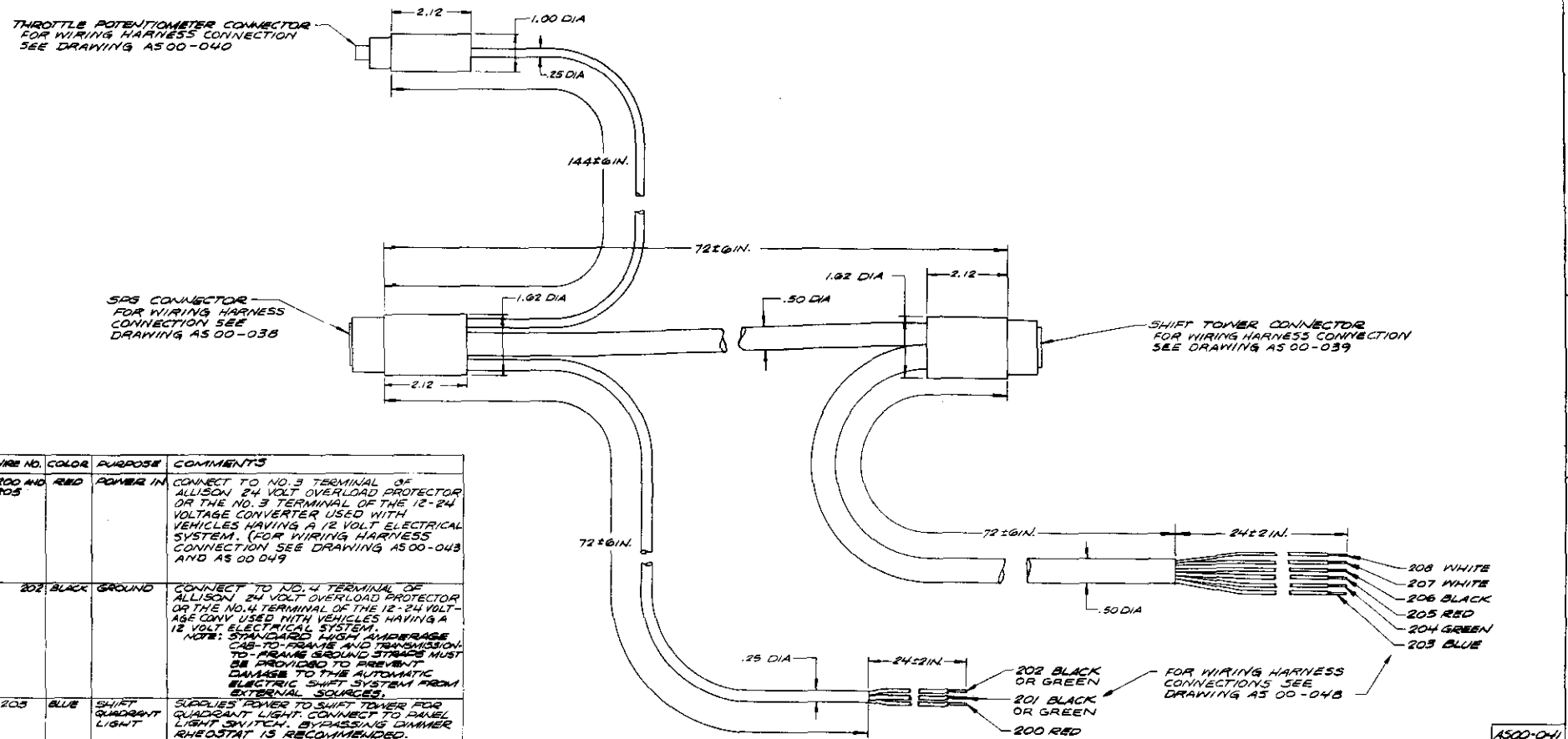
WHEN MAKING INSTALLATION OF A NEW THROTTLE POTENTIOMETER ASSEMBLY ON A VEHICLE, DO NOT LOOSEN THE THROTTLE POTENTIOMETER LEVER FROM THE POTENTIOMETER SHAFT TO ADJUST THE POTENTIOMETER. ALL ADJUSTMENT WITH A NEW THROTTLE POTENTIOMETER ASSEMBLY SHOULD BE MADE IN THE LINKAGE FROM THE FOOT THROTTLE TO THE THROTTLE LEVER. THE THROTTLE POTENTIOMETER IS PRESET AT THE FACTORY FOR THE PROPER RESISTANCE SETTINGS

Allison TORQMATIC Drive

TITLE: INSTALLATION REQMTS FOR THROTTLE POTENTIOMETER

MODEL: CLT 5000, 6000 DP 8000

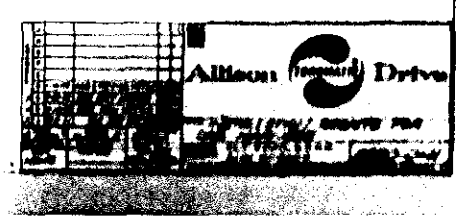
4500-040

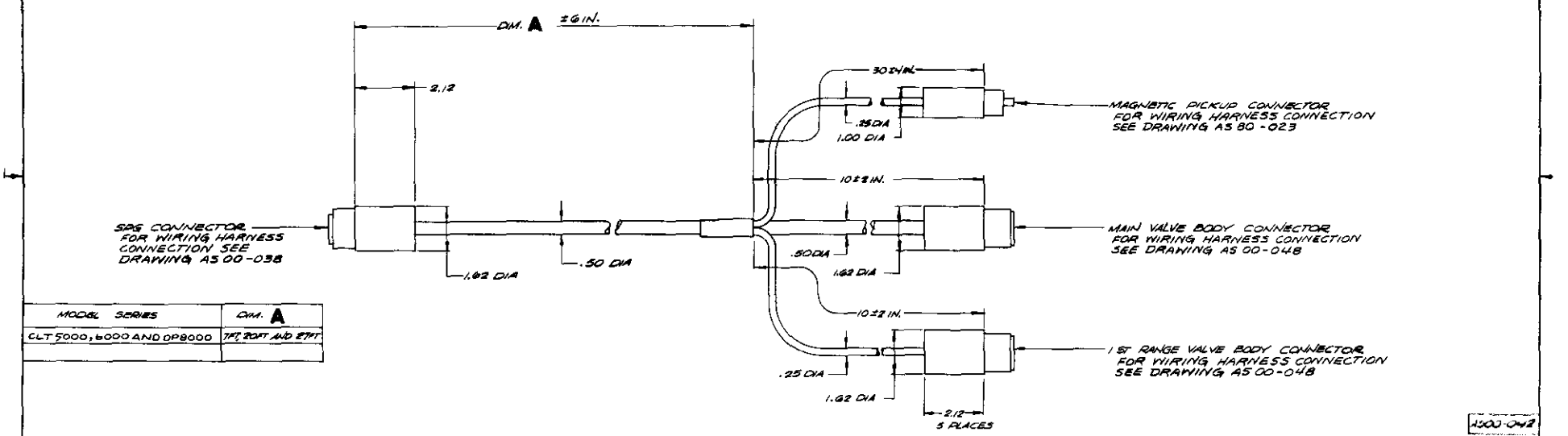


WIRE NO.	COLOR	PURPOSE	COMMENTS
200 AND 205	RED	POWER IN	CONNECT TO NO. 3 TERMINAL OF ALLISON 24 VOLT OVERLOAD PROTECTOR OR THE NO. 3 TERMINAL OF THE 12-24 VOLTAGE CONVERTER USED WITH VEHICLES HAVING A 12 VOLT ELECTRICAL SYSTEM. (FOR WIRING HARNESS CONNECTION SEE DRAWING AS 00-043 AND AS 00 049
202	BLACK	GROUND	CONNECT TO NO. 4 TERMINAL OF ALLISON 24 VOLT OVERLOAD PROTECTOR OR THE NO. 4 TERMINAL OF THE 12-24 VOLTAGE CONV USED WITH VEHICLES HAVING A 12 VOLT ELECTRICAL SYSTEM. NOTE: STANDARD HIGH AMPERAGE CAB-TO-FRAME AND TRANSMISSION-TO-FRAME GROUND STRAPS MUST BE PROVIDED TO PREVENT DAMAGE TO THE AUTOMATIC ELECTRIC SHIFT SYSTEM FROM EXTERNAL SOURCES.
203	BLUE	SHIFT QUADRANT LIGHT	SUPPLIES POWER TO SHIFT TOWER FOR QUADRANT LIGHT. CONNECT TO PANEL LIGHT SWITCH. BYPASSING DIMMER RHEOSTAT IS RECOMMENDED. NOTE: 12 OR 24 VOLT LIGHT BULB IS AVAILABLE.
204	GREEN	REVERSE SIGNAL	HOT 24 VOLT WHEN SHIFT LEVER IS IN REV RANGE POSITION. CONNECT TO POWER IN TERMINAL OF REVERSE WARNING SYSTEM. A RELAY MUST BE USED TO PREVENT OVERLOAD IF THE REVERSE WARNING SYSTEM DRAWS MORE THAN 1 AMP. A RELAY MUST BE USED TO PREVENT FEEDBACK THRU THE SHIFT TOWER TO THE TRANSMISSION IF THE REV SIGNAL IS TO BE USED FOR A REV WARNING (BACKUP LIGHT) WITH AN OPTIONAL MANUAL OVERRIDE SWITCH IN THE CIRCUIT.
207 AND 208	WHITE	NEUTRAL START	LEAD WIRES FROM SWITCH IN SHIFT TOWER THAT IS CLOSED WHEN SHIFT LEVER IS IN NEUTRAL POSITION. MAY BE USED WITH 12 OR 24 VOLT NEUTRAL START SYSTEM. 9 AMP MAX CURRENT RATING ON SWITCH. RECOMMEND THAT POWER BE SUPPLIED FROM NORMALLY OPEN STARTER TYPE SWITCH.
201 AND 206	BLACK	GROUND	CONNECT UNDER BOLT IN CAB AREA OR AT GROUND POINT FOR OTHER VEHICLE ELEC. DEVICES. DO NOT CONNECT TO TERM "4 OF 12-24 CONVERTER OR OVERLOAD PROTECTOR

CONNECTORS (MS TYPE) MULTI-PIN, SCREW ON

CABLE MUST BE PROTECTED FROM DAMAGE BY PROPER ROUTING IN THE VEHICLE





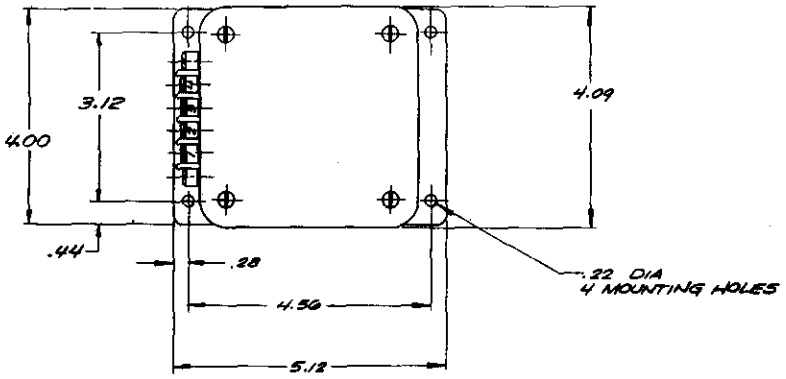
MODEL SERIES	DIM. A
CLT 5000, 6000 AND DP8000	7FT, 20FT AND 27FT.

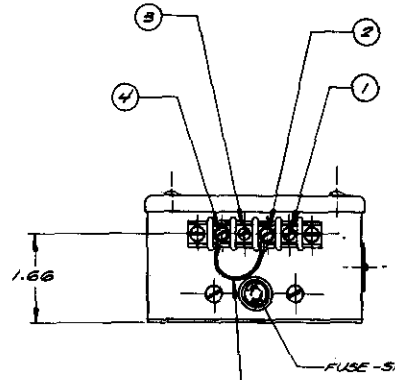
1300-042

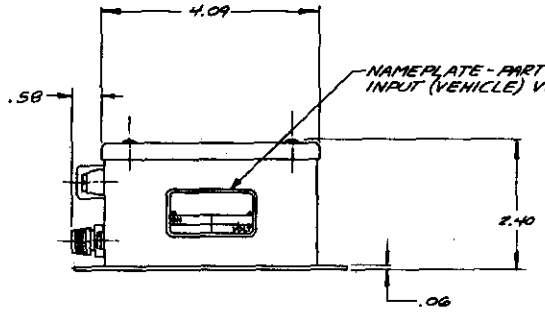
CONNECTORS (MS TYPE) MULTI-PIN, SCREW-ON

CABLE MUST BE PROTECTED FROM DAMAGE BY PROPER ROUTING IN THE VEHICLE

CLT 5000, 6000 USES THIS HARNESS AS IS. USER CAN CUT OFF FIRST RANGE VALVE BODY CONNECTOR AND TAPE IT UP TO INSULATE







A500-043

JUMPER WIRE: (PROVIDED WITH 12-24 VOLTAGE CONVERTER)
CONNECTED TO TERMINALS NO. 2 AND 4 ON NEGATIVE GROUND VEHICLES
CONNECTED TO TERMINALS NO. 1 AND 4. ON POSITIVE GROUND VEHICLES

NOTE: 12 TO 24 VOLTAGE CONVERTER TO BE UNIT EXCHANGED NO FIELD REPAIRS ARE TO BE ATTEMPTED

CONNECTIONS

TERMINAL NO. 1 POSITIVE, 12 VOLT INPUT
TERMINAL NO. 2 NEGATIVE, 12 VOLT INPUT
TERMINAL NO. 3 POSITIVE, 24 VOLT OUTPUT; CONNECTS TO RED WIRES OF CAB WIRING HARNESS FOR WIRING HARNESS CONNECTION SEE DRAWING A5 00-041 AND A5 00-048
TERMINAL NO. 4 NEGATIVE, 24 VOLT OUTPUT; CONNECTS TO ONE BLACK WIRE OF CAB WIRING HARNESS FOR WIRING HARNESS CONNECTION SEE DRAWING A5 00-041 AND A3 00-048

NOTE: SUPPLYING INPUT POWER FROM ENGINE OIL PRESSURE SWITCH PROVIDES AUTOMATIC KEY, THUS MINIMIZING POSSIBILITY OF DISCHARGING VEHICLE BATTERY

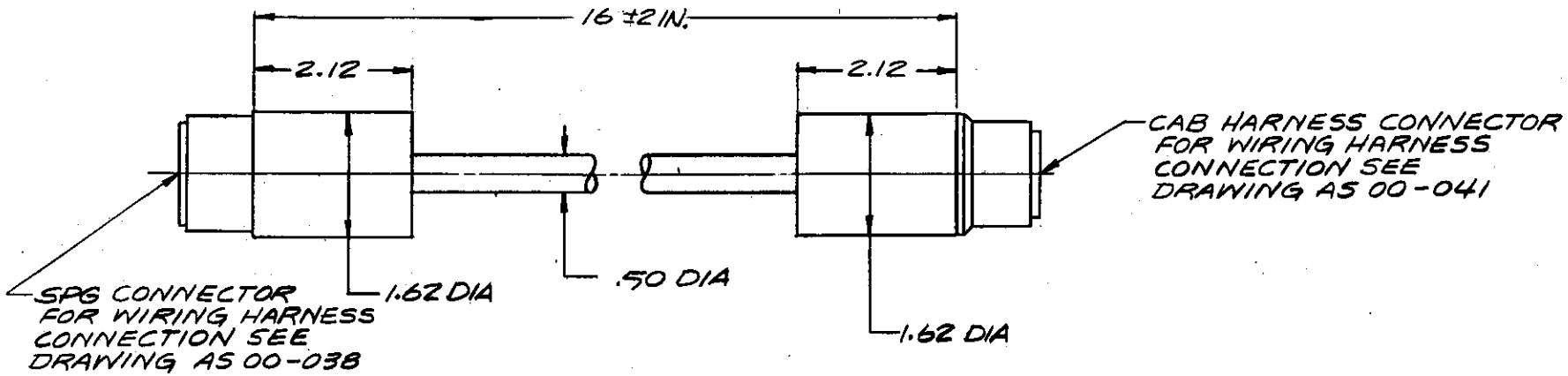
1-18-71	WAS BLACK WIRE				
12-7-70	ADD REV NOTICE				
11-6-70	SEE REV NOTICE				
QUANTITY PER UNIT					
12-21-70	12-21-70				
FULL					

Allison TORQMATIC Drive

TITLE: INSTALLATION INFOT FOR 12-24 VOLTAGE CONVERTER

MODEL: CLT5000, 6000 DP 8000

A500-04



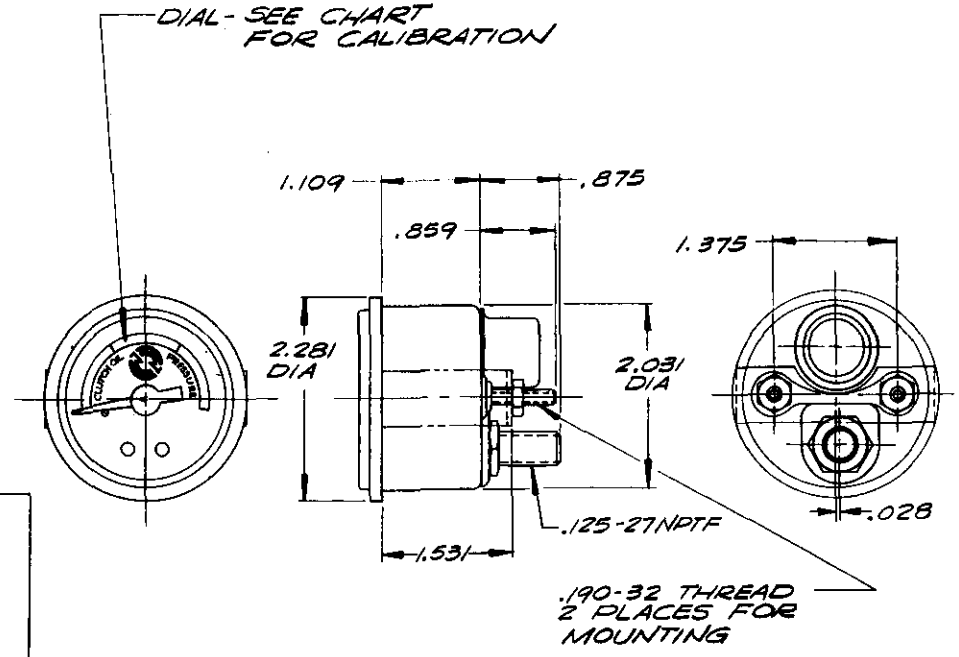
AS00-044

CONNECTORS (MS TYPE) MULTI-PIN, SCREW-ON

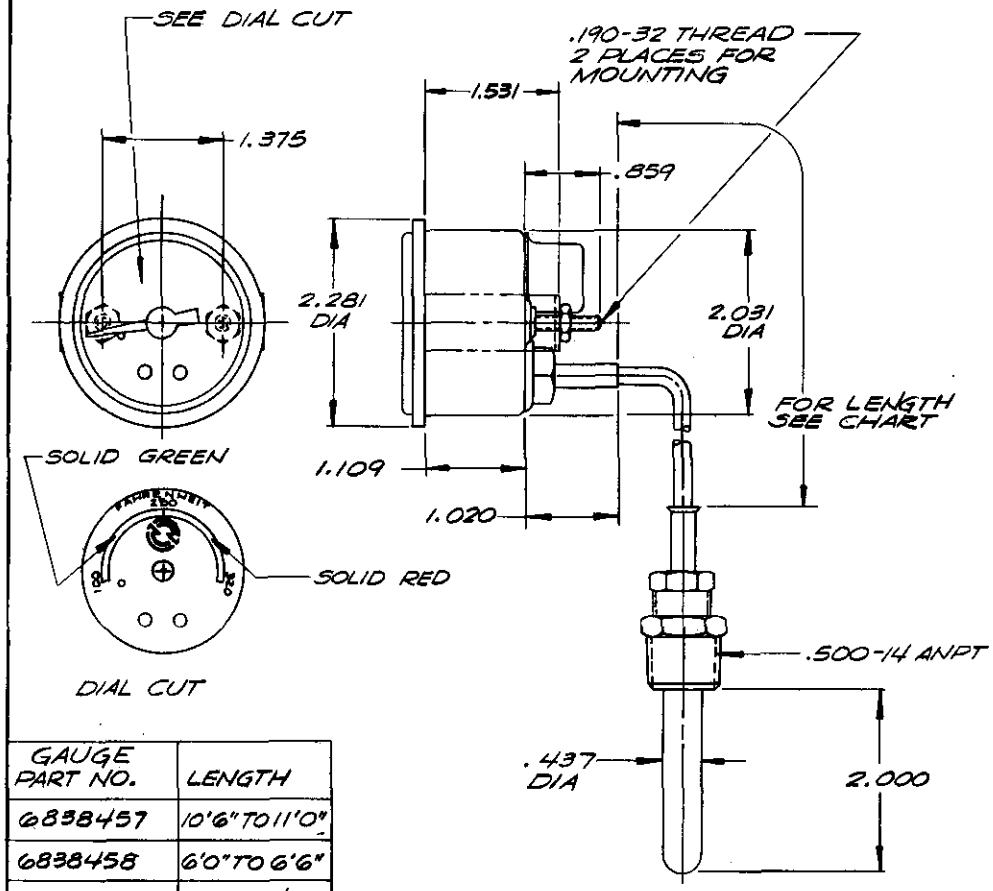
CABLE MUST BE PROTECTED FROM DAMAGE BY PROPER ROUTING IN THE VEHICLE

ADAPTER HARNESSES AVAILABLE FOR:
- BLOCKING OUT 6TH RANGE
- BLOCKING OUT 5TH AND 6TH RANGE

GAUGE PART NO.	TRANSMISSION MODEL	MAIN PRESSURE, RANGE CALIBRATIONS - PSI
6838450	TG-600 CRT-3531	0 RED 140 GREEN 185 RED 250
6838451	CRT-5000 CRT-3321, 31	0 RED 110 GREEN 150 RED 200
6838452	CT, CLT, CLBT, VCLBT-4000	0 RED 100 WHITE 175 200 GREEN 280 RED 300
6838453	CT, CLT, VCLT-3000	0 RED 90 WHITE 135 GREEN 190 210 260 RED 300
6838454	CT, CLT, CLBT, VCLBT-5, 6000, TT, TRT-4000	0 RED 160 GREEN 220 RED 300
6838455	DP-8000	0 RED 140 GREEN 190 250 RED 300
6838456	TT, TRT-2000 TT-3000	0 RED 130 GREEN 195 RED 250



OIL PRESSURE GAUGE



DIAL CUT

OIL TEMPERATURE GAUGE

GAUGE PART NO.	LENGTH
6838457	10'6" TO 11'0"
6838458	6'0" TO 6'6"
6838459	4'0" TO 4'6"

AS00-045

CHANGES					
J					
H					
G					
F					
E					
D					
C					
B					
A	4-4-75	ADDED TT-3000			

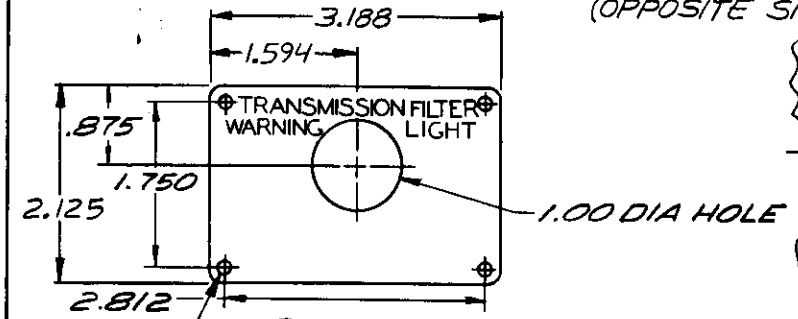
Allison Transmissions

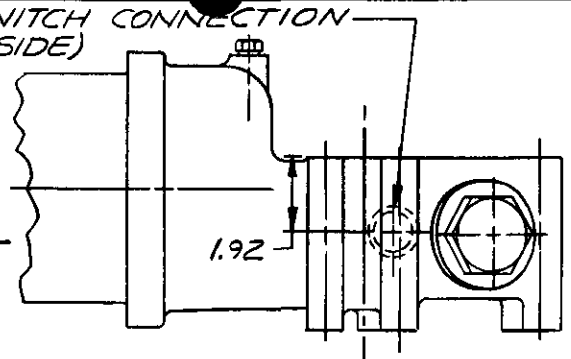
TITLE: OFF-HIGHWAY TRANSMISSION GAUGES

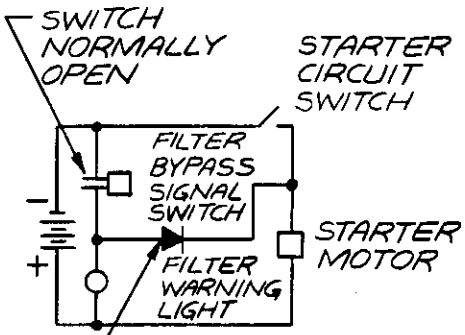
DRAWN	CHECKED	ENG. CLASSIFICATION
M. Moore 7-28-71	J.D. Peer 2-9-72	Mayer 2-9-72
SCALE: FULL	PROJ. ENGR. J.E. Banger 7-9-71	APPL. ENGR. M.P. Shearer 2-2-72

MODEL SEE CHART | AS 00-045

Detroit Diesel Allison Division of General Motors · Indianapolis, Indiana



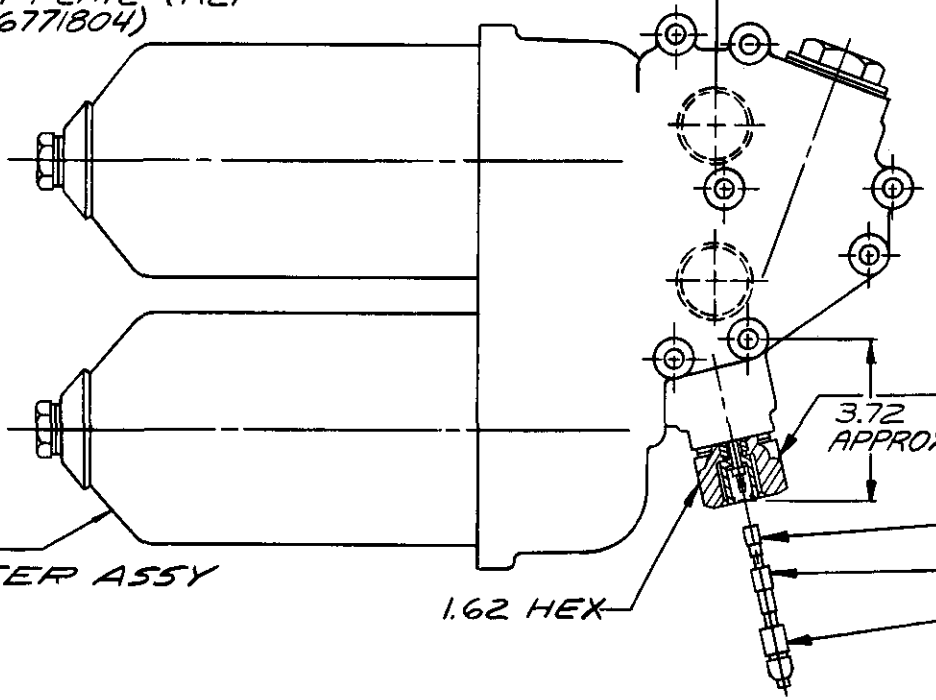




CUSTOMER SUPPLIED DASH WARNING LIGHT .015 THICK ALUMINUM PLATE (REF ALLISON PART NO. 6771804)

RECOMMENDED ELECTRICAL WIRING CIRCUIT TO CHECK FILTER WARNING LIGHT OPERATION DURING ENGINE STARTING

AS00-046



FILTER BYPASS SIGNAL SWITCH ASSY, ASSOCIATED SHOWN PARTS, AND 14 GAUGE (.160 OD) CABLE CONNECTED TO DASH MOUNTED WARNING LIGHT ARE CUSTOMER FURNISHED

CHANGES			
J			
H			
G			
F			
E			
D			
C			
B			
A			

DRAWN BY	CHECKED	CHF. DRAFTSMAN
BARNETT 9-14-71	CLARK 10-8-71	Mayo 10-8-71
SCALE 1/2 X SIZE	PROJ. ENGR.	APPL. ENGR. MEMMER 9-15-71

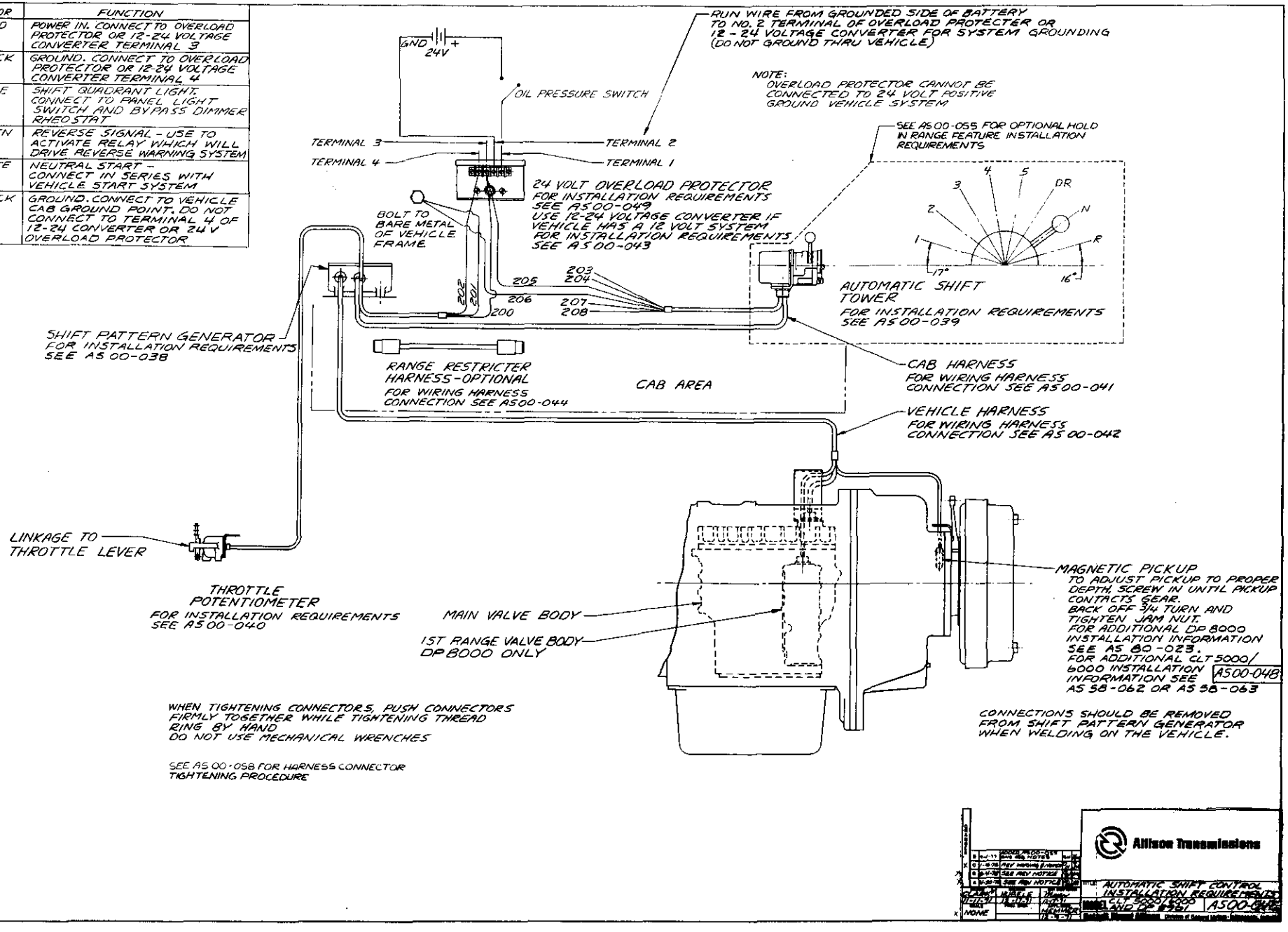
Allison Transmissions

TITLE: FILTER BYPASS SWITCH INSTALLATION DRAWING

MODEL CLBT5000, DP8000 | AS 00-046

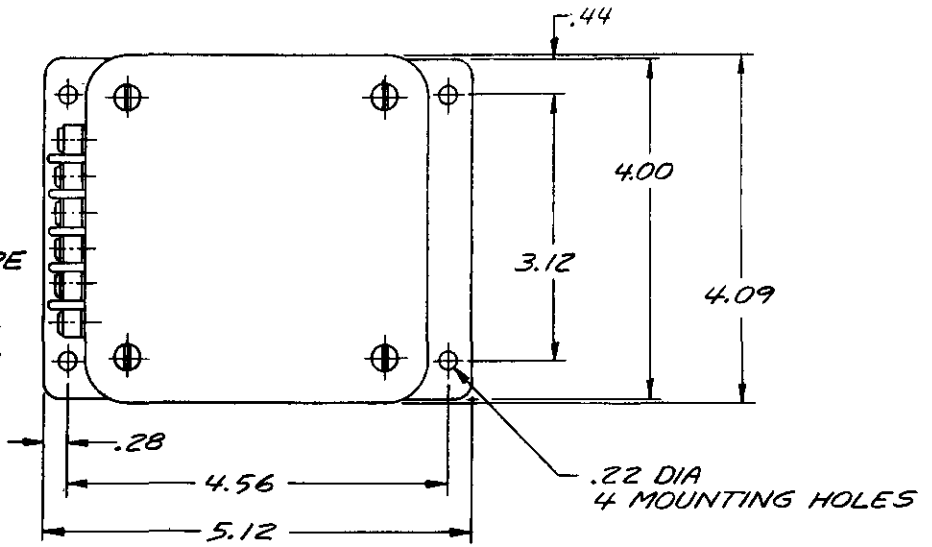
Detroit Diesel Allison Division of General Motors · Indianapolis, Indiana

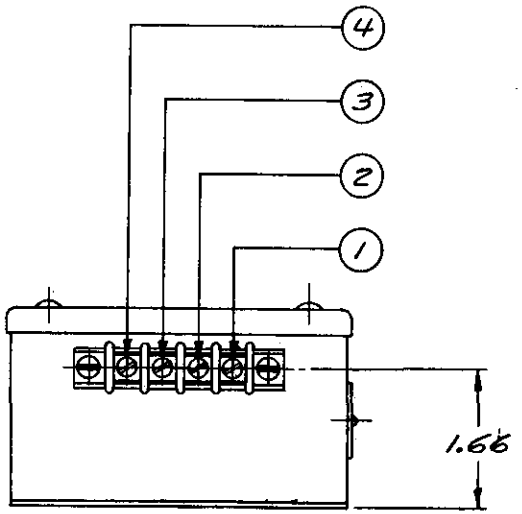
WIRE NO.	COLOR	FUNCTION
200 AND 205	RED	POWER IN. CONNECT TO OVERLOAD PROTECTOR OR 12-24 VOLTAGE CONVERTER TERMINAL 3
202	BLACK	GROUND. CONNECT TO OVERLOAD PROTECTOR OR 12-24 VOLTAGE CONVERTER TERMINAL 4
203	BLUE	SHIFT QUADRANT LIGHT. CONNECT TO PANEL LIGHT SWITCH AND BYPASS DIMMER RHEOSTAT
204	GREEN	REVERSE SIGNAL - USE TO ACTIVATE RELAY WHICH WILL DRIVE REVERSE WARNING SYSTEM
207 AND 208	WHITE	NEUTRAL START - CONNECT IN SERIES WITH VEHICLE START SYSTEM
201 AND 206	BLACK	GROUND. CONNECT TO VEHICLE CAB GROUND POINT. DO NOT CONNECT TO TERMINAL 4 OF 12-24 CONVERTER OR 24 V OVERLOAD PROTECTOR

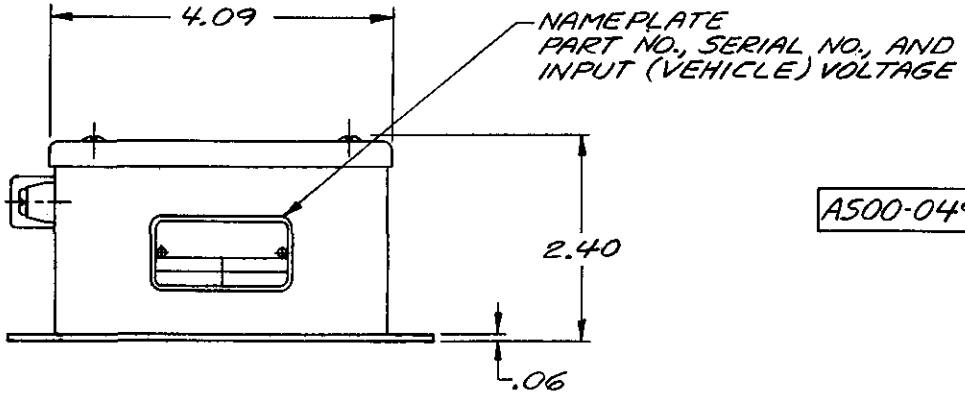


CONNECTIONS

TERMINAL NO. 1 POSITIVE, 24 VOLT INPUT
TERMINAL NO. 2 NEGATIVE, 24 VOLT INPUT
TERMINAL NO. 3 POSITIVE, 24 VOLT OUTPUT
CONNECTS TO RED WIRES OF CAB WIRING HARNESS.
FOR WIRING HARNESS CONNECTION, SEE DRAWING A500-041 AND A500-048
TERMINAL NO. 4 NEGATIVE, 24 VOLT OUTPUT
CONNECTS TO ONE BLACK WIRE OF CAB WIRING HARNESS.
FOR WIRING HARNESS CONNECTION, SEE DRAWING A500-041 AND A500-048







A500-049

24 VOLT OVERLOAD PROTECTOR TO BE UNIT EXCHANGED. NO FIELD REPAIRS ARE TO BE ATTEMPTED

NOTE: THE CONFIGURATION OF THIS UNIT IS AS A SOLID STATE CIRCUIT BREAKER WITH RESET ONLY BY REMOVAL OF INPUT POWER TO TERMINAL NO. 1

OVERLOAD PROTECTOR CANNOT BE CONNECTED TO 24 VOLT POSITIVE GROUND VEHICLE SYSTEM

SUPPLYING INPUT POWER FROM ENGINE OIL PRESSURE SWITCH PROVIDES AUTOMATIC KEY THUS MINIMIZING POSSIBILITY OF DISCHARGING VEHICLE BATTERY

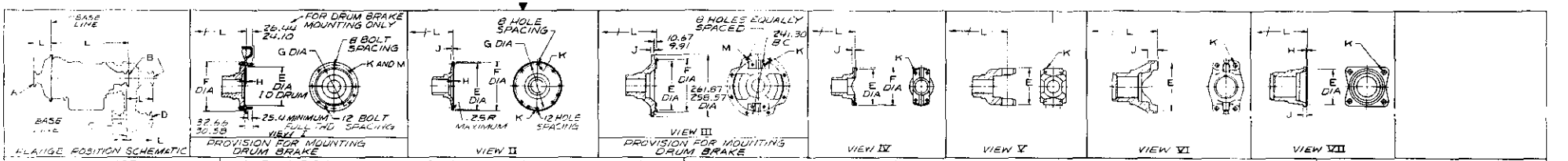
1-7-75	1965 BLK WIRES ADDED		
4-26-78	(1-8) SEE CMS NOTICE		
CLARK 11-11-97	H. BENNETT 12-14-71		
SCALE FULL	H. MEMMER 12-6-71		

Allison Transmissions

TITLE: INSTALLATION REQUIREMENT FOR 24 VOLT OVERLOAD PROTECTOR

MODEL CLT 5000/6000 AND DP8961 | A500-049

Detroit Diesel Allison Division of General Motors · Indianapolis, Indiana



FLANGE					L DIMENSION FOR MODEL AND INSTALLATION REFERENCE DRAWING	FLANGE DETAIL DIMENSIONS						
POSITION	TYPE	SIZE	VIEW	SPICER PART NUMBER	ALLISON PART NUMBER	HT 740D AS 45 -030	E	F	G	H	J	K FOR DRIVE LINE MOUNTING	M FOR PARKING BRAKE DRUM MOUNTING
A	SPICER	1550	VI	4-4-2531	6771941	264.30	124.12 125.08				26.19	11.78 11.48 DIA-THRU 4 HOLES	
A	SPICER	1550	VII	4-1-4181	6777069	240.48	95.30 95.25			2.77 2.01	9.91 9.14	13.03 12.85 DIA-THRU 4 HOLES	
A	SPICER	1650	VI	5-4-2341	6770787	275.41	142.00 141.96				30.18	.500-20 UNF 17.48 MINIMUM DEEP INCH SERIES THD 4 HOLES	
A	SPICER	1700	II	———	6771257	232.74	196.90 196.85	208.45 202.95	184.15	1.65 1.27	9.91 9.40	9.69 9.58 DIA-THRU 8 HOLES	
A	MECH	7C	IV	———	6771988	245.44	148.44 148.39	156.75 157.23			14.99 13.97	13.69 13.41 DIA-THRU 4 HOLES	

FLANGE					L DIMENSION FOR MODEL AND INSTALLATION REFERENCE DRAWING									FLANGE DETAIL DIMENSIONS						
					HT 700CT	HT 740D	HT 750D	CT 750	700 DB SERIES AS 45-036									K	M
TYPE	SIZE	VIEW	SPICER PART NUMBER	ALLISON PART NUMBER	AS 45 -034	AS 45 -030	AS 45 -031	AS 45 -032	position C WITH BRAKE	position C	position C WITH DIS-CONNECT	position D WITH DIS-CONNECT	position D	position D WITH BRAKE	position B WITH DIS-CONNECT	E	F	G	H	J	FOR DRIVE LINE MOUNTING	FOR PARKING BRAKE DRUM MOUNTING
					position B	position B	position B	position B														
SPICER	1700	I	———	6771285	881.14	937.02	1036.65	1050.37	187.43	—	—	—	—	316.92	—	163.53 163.47	203.48 202.95	184.15	4.44 3.68		.375-24 UNF INCH SERIES THD 8 BOLTS	.375-24 UNF INCH SERIES THD-8 BOLTS
SPICER	1700	II	6-1-4541	6771535	881.14	937.02	1036.65	1050.37	—	122.91	—	—	252.40	—	—	196.90 196.85	203.45 202.95	184.15	1.65 1.27	12.95 12.44	9.63 9.58 DIA-THRU 8 HOLES	
SPICER	1700	V	6-4-4561	———	924.70	980.58	1080.21	1093.93	—	166.47	—	—	295.96	—	—	154.76 154.71					.375-24 NF-3 10.34 MINIMUM DEEP INCH SERIES THD 4 HOLES	
SPICER	1810	I	———	6771519	881.14	937.02	1036.65	1050.37	187.43	—	—	—	—	316.92	—	163.53 163.47	203.48 202.95	184.15	4.44 3.68		.4375-20 UNF INCH SERIES THD 12 BOLTS	.4375-20 UNF INCH SERIES THD-12 BOLTS
SPICER	1810	II	6½-1-1801	6771538	881.14	937.02	1036.65	1050.37	—	122.91	—	—	252.40	—	—	196.90 196.85	203.45 202.95	184.15	1.65 1.27	12.95 12.44	11.20 11.15 DIA-THRU 12 HOLES	
SPICER	1810	V	6½-4-2581	———	934.10	989.98	1089.61	1103.33	—	175.87	—	—	305.96	—	—	191.80 191.74					.375-24 NF-3 10.41 MINIMUM DEEP INCH SERIES THD 4 HOLES	
MECH	7C	III	———	6778273	910.98	966.86	1066.49	1080.21	217.27	—	—	—	—	346.76	—	148.44 148.39	220.62 220.57			14.48 13.97	.500-20 UNF 21.59 MINIMUM DEEP INCH SERIES THD 4 HOLES	.500-20 UNF-THRU INCH SERIES THD 8 HOLES
MECH	7C	IV	———	6778274	910.98	966.86	1066.49	1080.21	—	152.75	—	—	282.24	—	—	148.44 148.39	159.51 157.99				.500-20 UNF 21.59 MINIMUM DEEP INCH SERIES THD 4 HOLES	
MECH	8C	III	———	6771255	910.98	966.86	1066.49	1080.21	217.27	—	—	—	—	346.76	—	206.38 206.32	220.62 220.57			14.48 13.97	.500-20 UNF 21.59 MINIMUM DEEP INCH SERIES THD 4 HOLES	.500-20 UNF-THRU INCH SERIES THD 8 HOLES
MECH	8C	IV	———	6771573	910.98	966.86	1066.49	1080.21	—	152.75	—	—	282.24	—	—	206.38 206.32	215.39 214.88			18.80 17.78	.500-20 UNF 21.59 MINIMUM DEEP INCH SERIES THD 4 HOLES	
MECH	9C	IV	———	6777400	910.98	966.86	1066.49	1080.21	—	152.75	—	—	282.24	—	—	209.58 209.52	219.71 218.19			18.80 17.78	.500-20 UNF THRU INCH SERIES THD 4 HOLES	
SPICER	1880	V	8-4-661	———	931.05	986.93	1086.56	1100.28	—	172.62	—	—	302.31	—	—	205.61 205.56					.4375-20 NF-3 20.57 MINIMUM DEEP INCH SERIES THD 4 HOLES	
SPICER	1800	II	———	6755666	—	—	—	—	—	—	321.75	450.40	—	—	432.27	196.90 196.85	203.48 202.95	184.15	1.65 1.27	9.91 9.40	11.20 11.15 DIA-THRU 12 HOLES	
SPICER	1700	II	———	6755670	—	—	—	—	—	—	321.75	450.40	—	—	432.27	196.90 196.85	203.48 202.95	184.15	1.65 1.27	9.91 9.40	9.63 9.58 DIA-THRU 8 HOLES	
MECH	8C	IV	———	6751689	—	—	—	—	—	—	342.30	470.95	—	—	452.81	206.38 206.32	216.15 215.64			16.13 15.62	12.16 11.65 DIA-THRU 4 HOLES	
MECH	7C	IV	———	6773820	—	—	—	—	—	—	329.63	458.28	—	—	440.14	148.44 148.39	158.24 157.73			14.99 13.46	.500-20 UNF THRU INCH SERIES THD 4 HOLES	

FR1 AS 00-050 A1

FR8

MILLIMETRES TO INCHES			
mm MIN/NOM	mm MAX	in. MIN/NOM	in. MAX
	0.25		.010
1.27	1.65	.050	.065
2.01	2.77	.079	.109
3.68	4.44	.145	.175
9.14	9.91	.360	.390
9.40	9.91	.370	.390
9.58	9.63	.377	.379
9.91	10.67	.390	.420
10.34		.407	
10.41		.410	
11.15	11.20	.439	.441
11.48	11.78	.452	.464
12.44	12.95	.490	.510
12.85	13.03	.506	.513
13.41	13.69	.528	.539
13.97	14.48	.550	.570
13.97	14.99	.550	.590
17.48		.688	
17.78	18.80	.700	.740
20.57		.810	
21.59		.850	
24.10	26.44	.949	1.041
25.40		1.000	
26.19		1.031	
30.18		1.188	
30.58	32.66	1.204	1.286
95.25	95.30	3.750	3.752
122.91		4.839	
126.08	126.12	4.964	4.965
141.96	142.00	5.589	5.590
148.39	148.44	5.842	5.844
152.75		6.014	
154.71	154.76	6.091	6.093
157.23	158.75	6.190	6.250
157.99	159.51	6.220	6.280
163.47	163.53	6.436	6.438
166.47		6.554	
172.82		6.804	
175.87		6.924	
184.15		7.250	
187.43		7.379	
191.74	191.80	7.549	7.551
196.85	196.90	7.750	7.752
202.95	203.45	7.990	8.010
205.56	205.61	8.093	8.095
206.32	206.38	8.123	8.125
209.52	209.58	8.249	8.251
214.88	215.39	8.460	8.480
217.27		8.554	
218.19	219.71	8.590	8.650
220.57	220.62	8.684	8.686
232.74		9.163	
240.48		9.468	
241.30		9.500	

MILLIMETRES TO INCHES			
mm MIN/NOM	mm MAX	in. MIN/NOM	in. MAX
245.44		9.663	
252.40		9.937	
258.57	261.87	10.180	10.310
264.30		10.406	
275.41		10.843	
282.24		11.112	
295.96		11.652	
302.31		11.902	
305.36		12.022	
316.92		12.477	
325.10		12.799	
346.76		13.652	
354.94		13.974	
368.66		14.514	
375.01		14.764	
378.06		14.884	
435.37		17.140	
454.46		17.892	
465.21		18.315	
478.93		18.856	
484.30		19.067	
485.28		19.106	
488.33		19.226	
498.02		19.607	
504.37		19.857	
507.42		19.977	
881.14		34.690	
910.98		35.865	
924.70		36.406	
931.05		36.656	
934.10		36.776	
937.02		36.890	
966.86		38.065	
980.58		38.606	
986.93		38.856	
989.98		38.976	
1036.65		40.813	
1050.37		41.353	
1066.49		41.988	
1080.21		42.528	
1086.56		42.778	
1089.61		42.898	
1093.93		43.068	
1100.28		43.318	
1103.33		43.438	

ADDITIONS - CHANGE A

mm MIN/NOM	mm MAX	in. MIN/NOM	in. MAX
11.65	12.16	.459	.479
13.46		.530	
15.62	16.13	.615	.635
157.73	158.24	6.210	6.230
215.64	216.15	8.490	8.510
321.75		12.667	
329.63		12.978	
342.30		13.476	
432.27		17.019	
440.14		17.328	
450.40		17.732	
452.81		17.827	
458.28		18.043	
470.95		18.541	

Allison Transmission

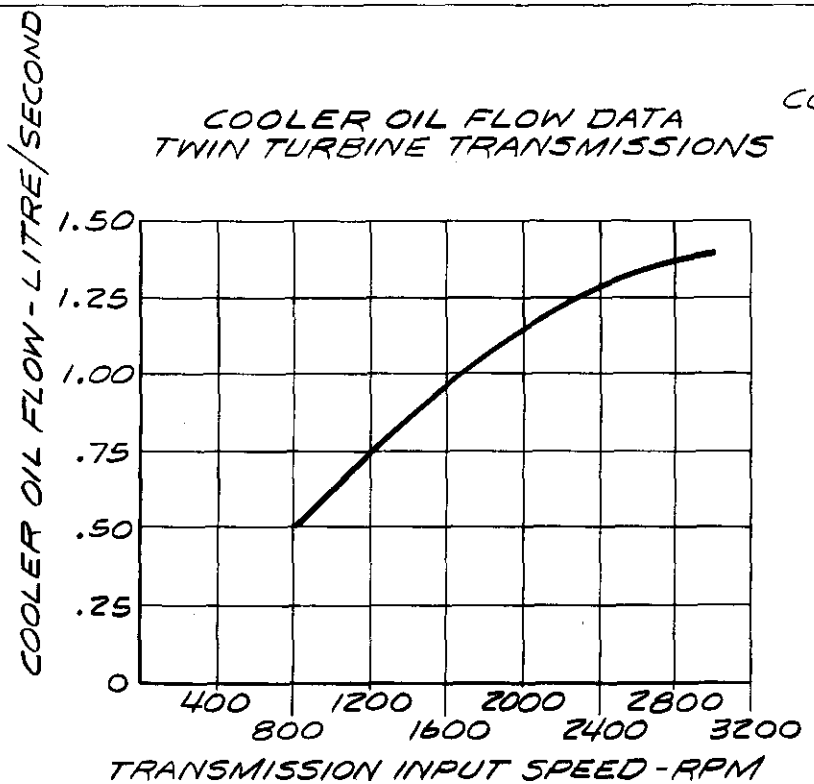
SHEET 2 OF 2

DRIVE FLANGE INFORMATION

700 SERIES A500-050

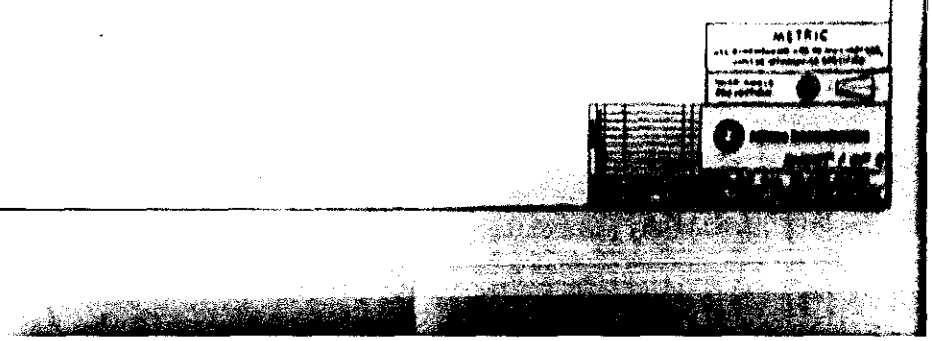
X727

COOLER OIL FLOW DATA
TWIN TURBINE TRANSMISSIONS



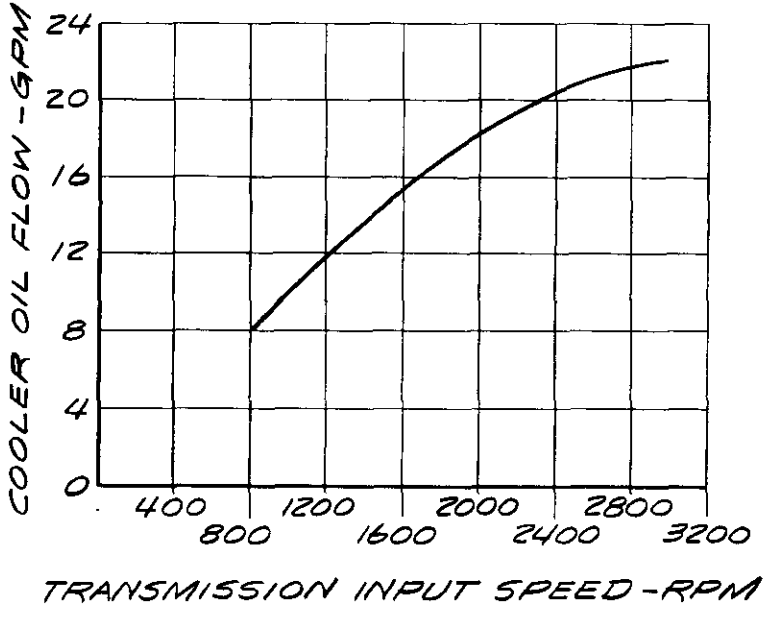
COOLER CIRCUIT PRESSURE SPECIFICATIONS:

1. AT OPERATING TEMPERATURE AND MAXIMUM SPEED IN TRAVEL GEAR - MAXIMUM ALLOWABLE CONVERTER OUT OIL PRESSURE 448 kPa (4.57 kg/cm²) MAXIMUM ALLOWABLE EXTERNAL CIRCUIT PRESSURE DROP 276 kPa (2.81 kg/cm²)
2. AT OPERATING TEMPERATURE AND FULL THROTTLE STALL, MINIMUM ALLOWABLE CONVERTER OUT OIL PRESSURE 276 kPa (2.81 kg/cm²) CUSTOMER TO INSTALL RESTRICTION IN COOLER RETURN LINE IF NECESSARY.



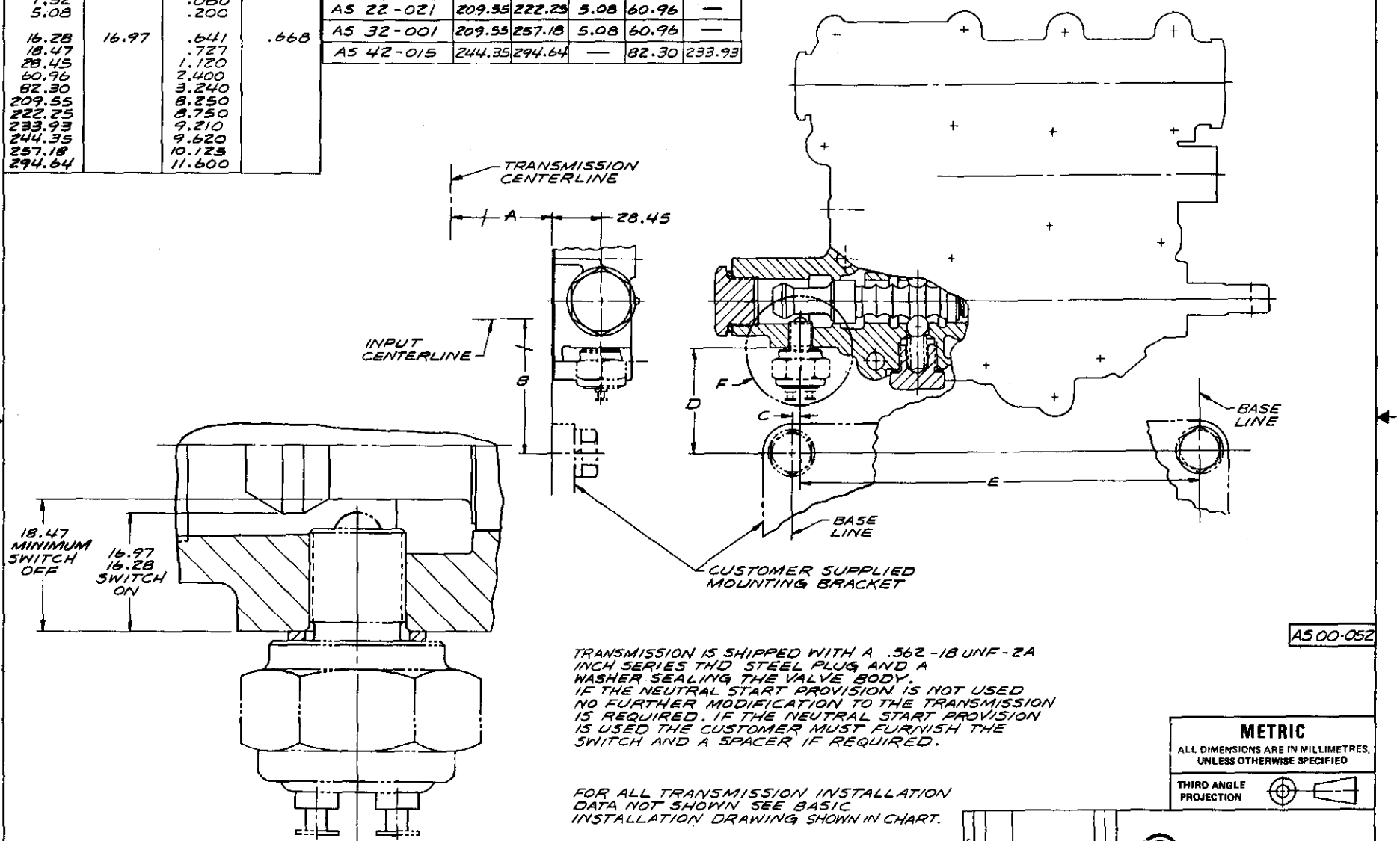
METRIC VALUES	EQUIVALENTS
276 kPa	40 PSI
448 kPa	65 PSI

COOLER OIL FLOW DATA
TWIN TURBINE TRANSMISSIONS



MILLIMETRES TO INCHES			
mm MIN/NOM	mm MAX	in. MIN/NOM	in. MAX
1.52		.060	
5.08		.200	
16.28	16.97	.641	.668
18.47		.727	
28.45		1.120	
60.96		2.400	
82.30		3.240	
209.55		8.250	
222.25		8.750	
233.93		9.210	
244.35		9.620	
257.18		10.125	
294.64		11.600	

BASIC INSTALLATION DRAWING	DIMENSION				
	A	B	C	D	E
AS 22-003	209.55	222.25	5.08	60.96	—
AS 22-021	209.55	222.25	5.08	60.96	—
AS 32-001	209.55	257.18	5.08	60.96	—
AS 42-015	244.35	294.64	—	82.30	233.93



ENLARGED VIEW F
SCALE 4.0 TIMES

TRANSMISSION IS SHIPPED WITH A .562-18 UNF-2A INCH SERIES THD STEEL PLUG AND A WASHER SEALING THE VALVE BODY. IF THE NEUTRAL START PROVISION IS NOT USED NO FURTHER MODIFICATION TO THE TRANSMISSION IS REQUIRED. IF THE NEUTRAL START PROVISION IS USED THE CUSTOMER MUST FURNISH THE SWITCH AND A SPACER IF REQUIRED.

FOR ALL TRANSMISSION INSTALLATION DATA NOT SHOWN SEE BASIC INSTALLATION DRAWING SHOWN IN CHART.

AS 00-052

METRIC
ALL DIMENSIONS ARE IN MILLIMETRES, UNLESS OTHERWISE SPECIFIED

THIRD ANGLE PROJECTION

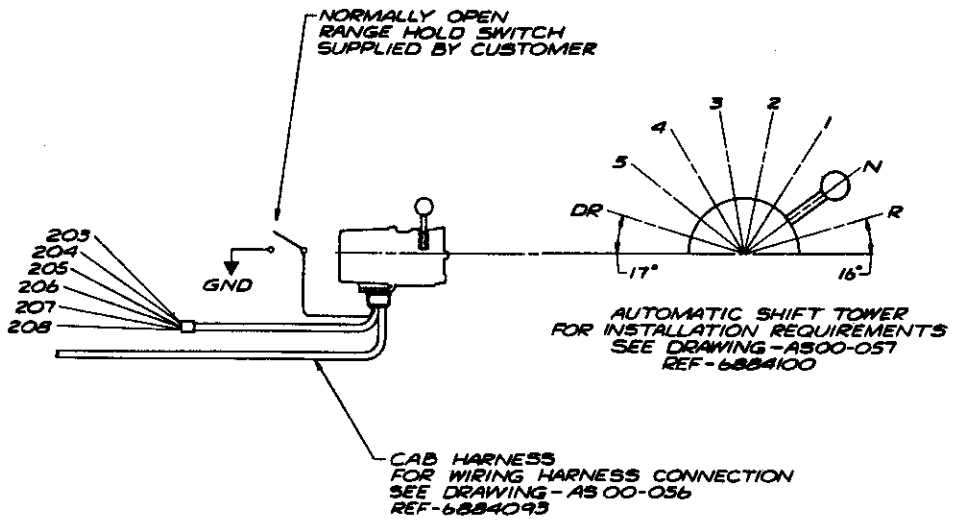
Allison Transmissions

TITLE: NEUTRAL START SWITCH PROVISION

MODEL TT/TRT SERIES AS 00-052

Detroit Diesel Allison Division of General Motors - Indianapolis, Indiana

FORM 8202S



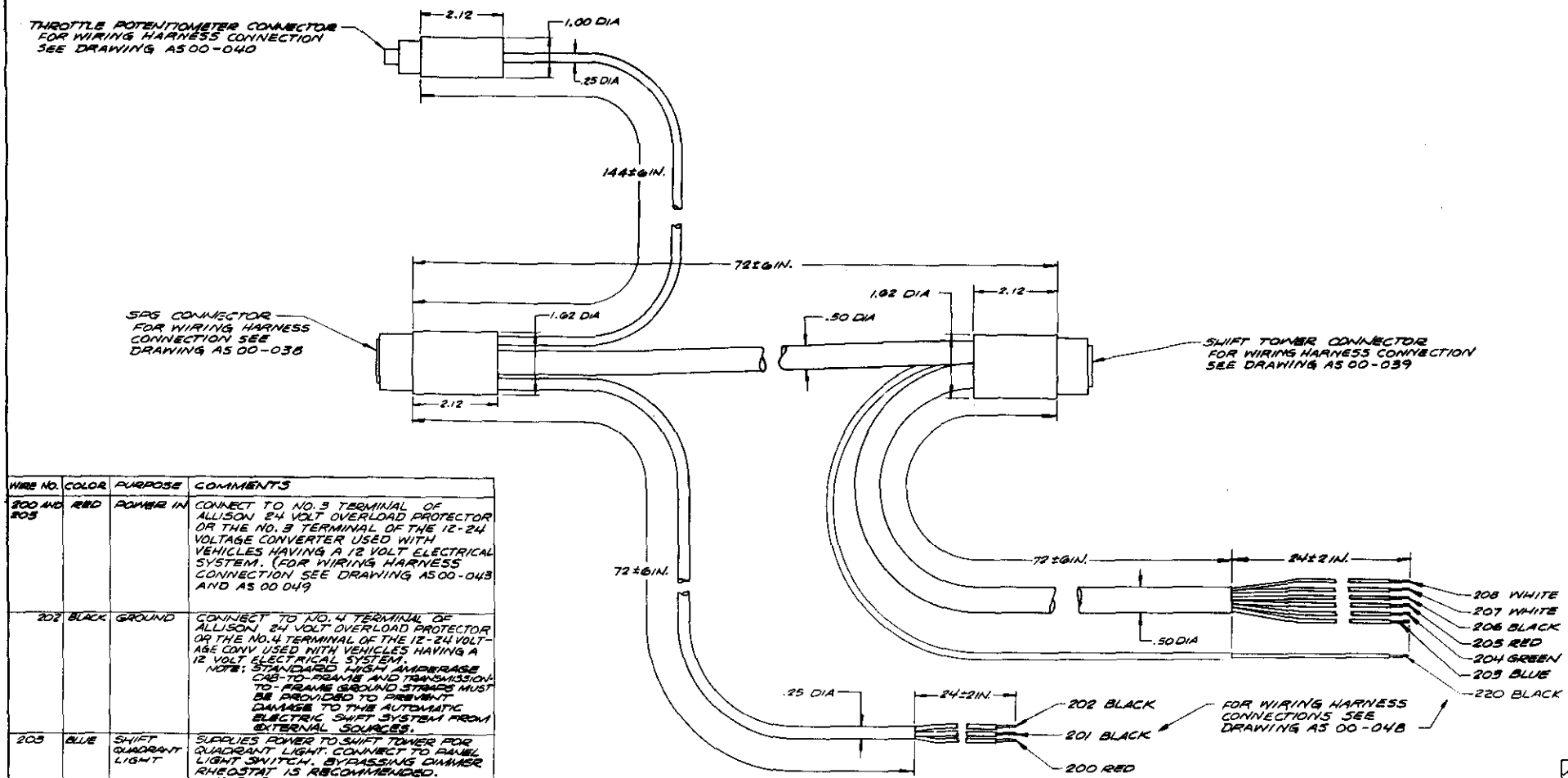
A500-055

REFERENCE -
INSTALLATION SCHEMATIC A558-070

DRAWN D. NEAL 8-8-94	APPROVED W. CLARK 8-8-94 PROJ. MGR.	SUPERSEDES A-9-92 APPL. ENGR. W. HERACLES 8-8-94	Allison Transmissions
SCALE NONE			TITLE INSTALLATION REQUIREMENTS FOR HOLD IN RANGE OPTION
			MODEL CLT 676000 DP 6941
			A500-055

Detroit Diesel Allison Division of General Motors - Indianapolis, Indiana

FORM 8202-5



A500-056

WIRE NO.	COLOR	PURPOSE	COMMENTS
200 AND 203	RED	POWER IN	CONNECT TO NO. 3 TERMINAL OF ALLISON 24 VOLT OVERLOAD PROTECTOR OR THE NO. 3 TERMINAL OF THE 12-24 VOLTAGE CONVERTER USED WITH VEHICLES HAVING A 12 VOLT ELECTRICAL SYSTEM. (FOR WIRING HARNESS CONNECTION SEE DRAWING AS00-043 AND AS 00 049
202	BLACK	GROUND	CONNECT TO NO. 4 TERMINAL OF ALLISON 24 VOLT OVERLOAD PROTECTOR OR THE NO.4 TERMINAL OF THE 12-24 VOLTAGE CONV USED WITH VEHICLES HAVING A 12 VOLT ELECTRICAL SYSTEM. NOTE: STANDARD HIGH AMPERAGE CAB-TO-FRAME AND TRANSMISSION-TO-FRAME GROUND STRAPS MUST BE PROVIDED TO PREVENT DAMAGE TO THE AUTOMATIC ELECTRIC SHIFT SYSTEM FROM EXTERNAL SOURCES.
203	BLUE	SHIFT QUADRANT LIGHT	SUPPLIES POWER TO SHIFT TOWER FOR QUADRANT LIGHT. CONNECT TO PANEL LIGHT SWITCH. BYPASSING DIMMER RHEOSTAT IS RECOMMENDED. NOTE: 12 OR 24 VOLT LIGHTBULB IS AVAILABLE.
204	GREEN	REVERSE SIGNAL	HOT 24 VOLT WHEN SHIFT LEVER IS IN REV RANGE POSITION. CONNECT TO POWER IN TERMINAL OF REVERSE WARNING SYSTEM. A RELAY MUST BE USED TO PREVENT OVERLOAD IF THE REVERSE WARNING SYSTEM DRAWS MORE THAN 1 AMP. A RELAY MUST BE USED TO PREVENT FEEDBACK THRU THE SHIFT TOWER TO THE TRANSMISSION IF THE REV SIGNAL IS TO BE USED FOR A REV WARNING (BACKUP LIGHT) WITH AN OPTIONAL MANUAL OVERRIDE SWITCH IN THE CIRCUIT.
207 AND 208	WHITE	NEUTRAL START	LEAD WIRES FROM SWITCH IN SHIFT TOWER THAT IS CLOSED WHEN SHIFT LEVER IS IN NEUTRAL POSITION. MAY BE USED WITH 12 OR 24 VOLT NEUTRAL START SYSTEM. 9 AMP MAX CURRENT RATING ON SWITCH. RECOMMEND THAT POWER BE SUPPLIED FROM NORMALLY OPEN STARTER TYPE SWITCH.
201 AND 206	BLACK	GROUND	CONNECT UNDER BOLT IN CAB AREA OR AT GROUND POINT FOR OTHER VEHICLE ELEC. DEVICES. DO NOT CONNECT TO TERM #4 OF 12-24 CONVERTER OR OVERLOAD PROTECTOR

	COLOR	PURPOSE	COMMENTS
220	BLACK	HOLD IN RANGE	CONNECT TO NORMALLY OPEN RANGE HOLD SWITCH SUPPLIED BY CUSTOMER

CONNECTORS (MS TYPE) MULTI-PIN, SCREW ON

CABLE MUST BE PROTECTED FROM DAMAGE BY PROPER ROUTING IN THE VEHICLE

FOR INSTALLATION DATA NOT SHOWN SEE INSTALLATION REQUIREMENTS FOR HOLD IN RANGE OPTION DRAWING - AS00-055

REFERENCE: INSTALLATION SCHEMATIC AS58-070

DRAWN	CHECKED	CNT DRAFTSMAN
D. NEW 2-8-77	H. CLARK 2-9-77	M. APPLEGATE 2-9-77
SCALE NONE	NOT THDA	APPL. ENGR. J. MERNER 2-10-77

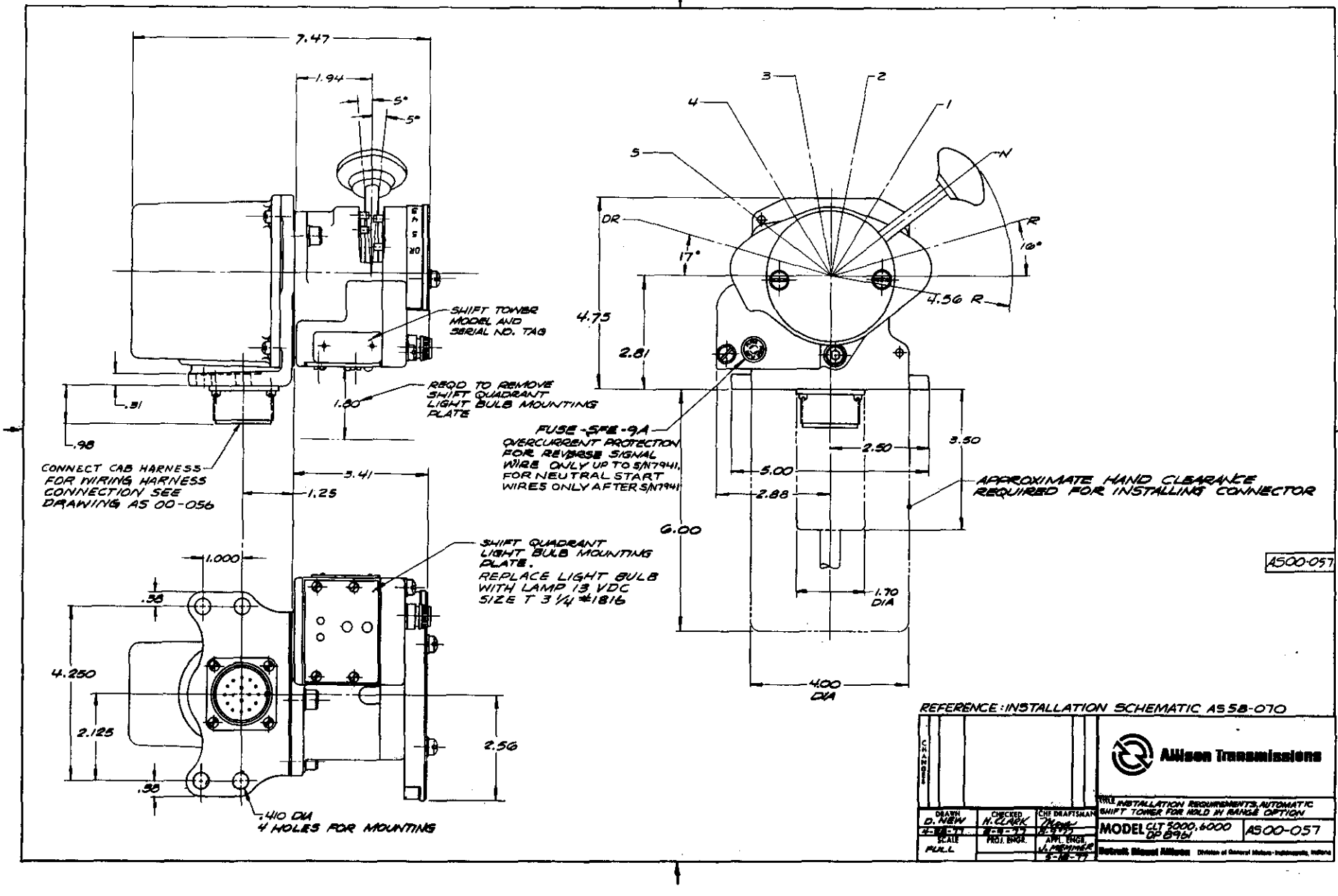
Allison Transmissions

TITLE INSTALLATION REQUIREMENTS, CAB HARNESS FOR HOLD IN RANGE OPTION

MODEL CLT 5/6000 (DP8961) A500-056

Detroit Diesel Allison Division of General Motors - Indianapolis, Indiana

REF-AS00-041, 6884093



REFERENCE: INSTALLATION SCHEMATIC A558-070

DRAWN	CHECKED	CHF DRAFTSMAN
D. NEW	N. CLARK	
4-[illegible]-77	8-19-77	8-19-77
SCALE	PROJ. ENGR.	APPL. ENGR.
FULL		5-18-77

Allison Transmissions

TITLE: INSTALLATION REQUIREMENTS, AUTOMATIC SHIFT TOWER FOR HOLD IN RANGE OPTION

MODEL CLT 5000, 6000 OP 696

A500-057

Detroit Diesel Allison — Division of General Motors · Indianapolis, Indiana

IT IS RECOMMENDED THAT OEM INSTALLATION DRAWINGS OF MANUAL AND AUTOMATIC ELECTRIC SHIFT CONTROL SYSTEMS INCORPORATE THE FOLLOWING INSTRUCTIONS:

A. LINE UP GUIDE KEY AND KEYWAY AND PUSH CONNECTORS TOGETHER

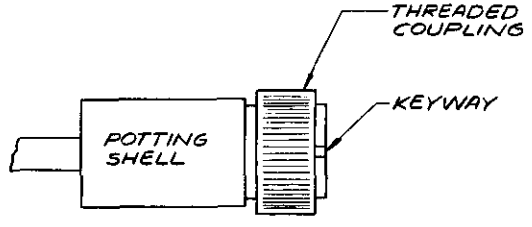
B. GRIP KNURLED PORTION OF THREADED COUPLING RING AND SCREW IN UNTIL RING IS DIFFICULT TO TURN

C. GRIP POTTING SHELL AND PUSH CONNECTORS TOGETHER

D. REPEAT STEPS B AND C UNTIL CONNECTORS ARE SECURELY TIGHTENED

E. THIS PROCEDURE WILL ASSURE THAT PROPER CONNECTIONS ARE MADE AND THAT THE CONNECTORS ARE SEALED

NOTE: TIGHTEN BY HAND, DO NOT USE A WRENCH

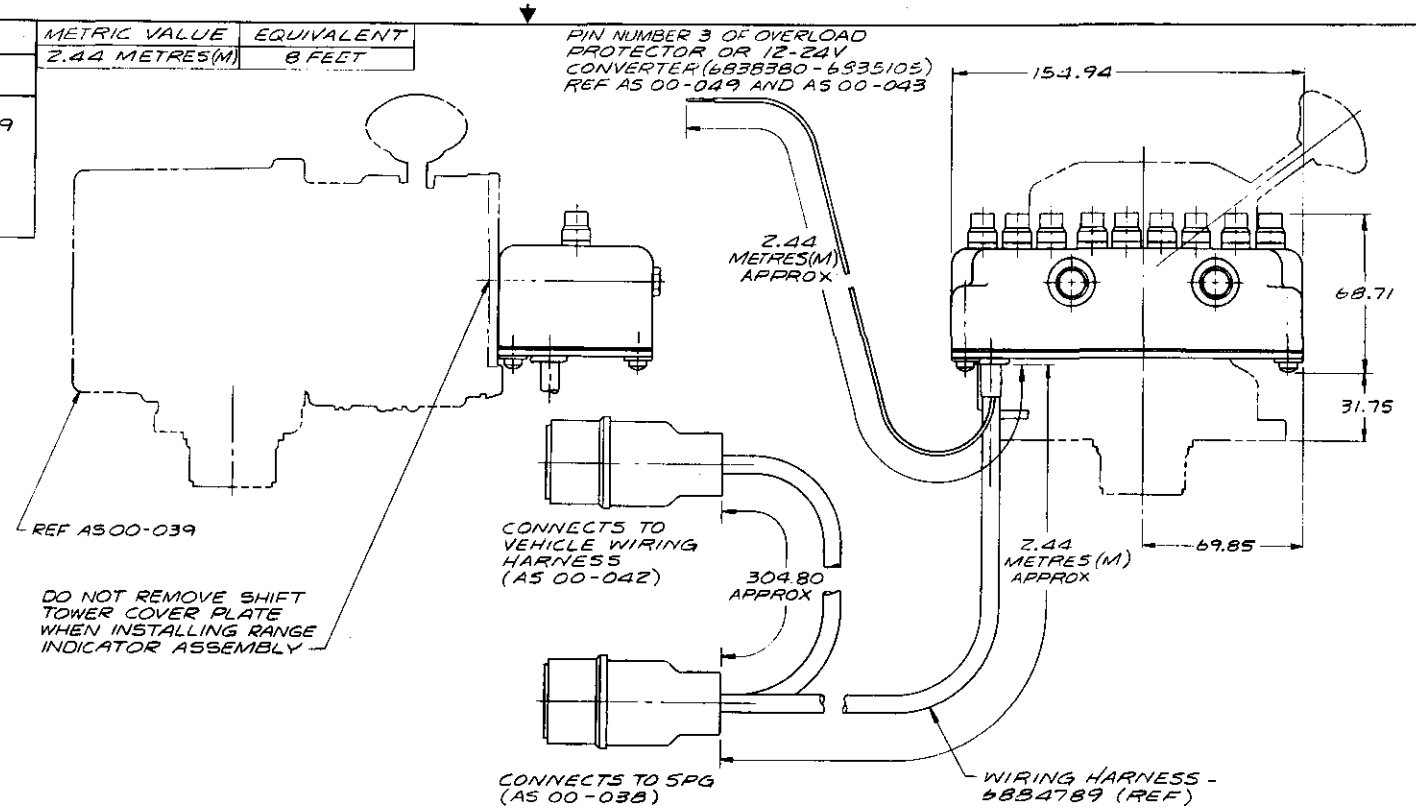


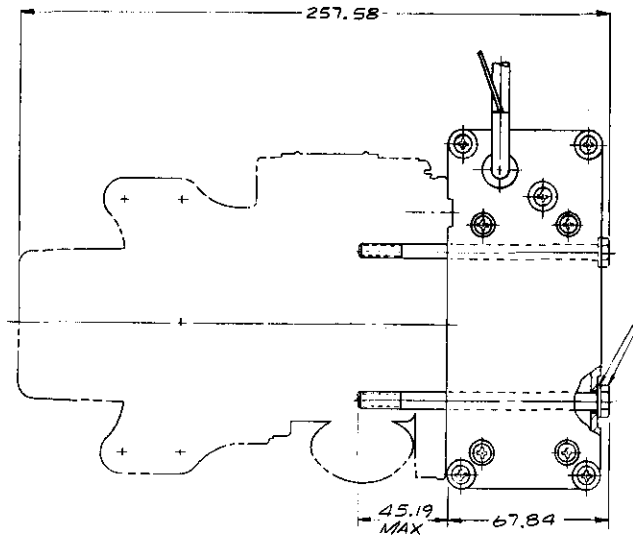
A500-058

CHANGES			Allison Transmissions
DRAWN ATM 5-27-77	DESIGN M. CLARK 5-26-77	2ND DRAFTSMAN Thayer 5-31-77	TITLE: INSTALLATION INSTRUCTION-TIGHTENING ELECTRICAL HARNESS CONNECTORS
SCALE NONE	PROJ. ENGR.	APPL. ENGR. J. Haynes 5-31-77	MODEL DP8901 AND CLT 5000 A500-058
			Detroit Diesel Allison Division of General Motors · Indianapolis, Indiana

MILLIMETRES TO INCHES			
mm MIN/NOM	mm MAX	in. MIN/NOM	in. MAX
31.75	45.19	1.250	1.779
67.84		2.671	
68.71		2.705	
69.85		2.750	
154.94		6.100	
257.58		10.140	
304.80		12.000	

METRIC VALUE	EQUIVALENT
2.44 METRES(M)	8 FEET





AS 00-061

METRIC
ALL DIMENSIONS ARE IN MILLIMETRES, UNLESS OTHERWISE SPECIFIED

THIRD ANGLE PROJECTION

Allison Transmissions

TITLE: INSTALLATION REQUIREMENTS, RANGE INDICATOR ASSEMBLY

MODEL DP8961 AND 5/6000 AS 00-061

Detroit Diesel Allison Division of General Motors - Indianapolis, Indiana

DRAWN G. HUGHES 8-18-77
CHECKED 9-3-77
APPL. ENGR 9-19-77
SCALE FULL

FORM 8202-S