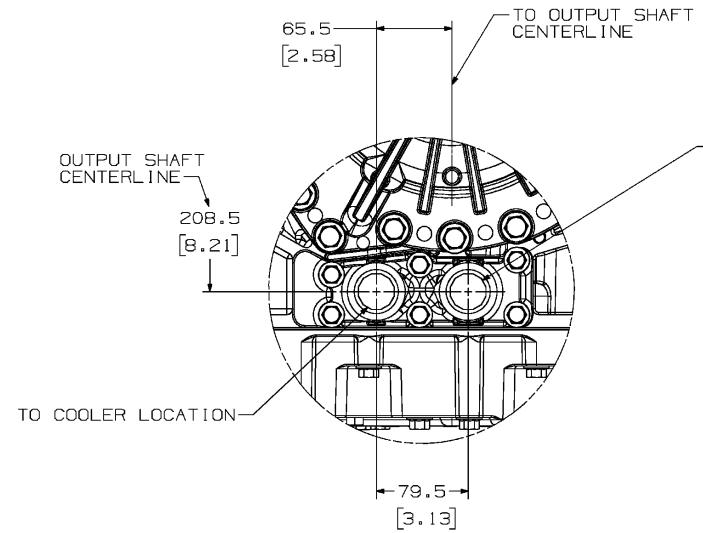


REMOVAL AND INSTALLATION CLEARANCE

| PART/ASSEMBLY          | DIMENSION*   | DIRECTION     | DESCRIPTION   |
|------------------------|--------------|---------------|---|
| TRANSMISSION           | 110.0 (4.33) | HORIZONTAL    | DISTANCE REQUIRED TO REMOVE TRANSMISSION                            |
| FILTERS                | 211.0 (8.31) | VERTICAL      | CLEARANCE REQUIRED FROM CONTROL MODULE FOR FILTER AND COVER REMOVAL |
| MAIN PRESSURE TAPS     | 38.0 (1.50)  | PERPENDICULAR | CLEARANCE REQUIRED BELOW CONTROL MODULE FOR PLUG REMOVAL            |
| DRAIN PLUG             | 24.3 (0.96)  | VERTICAL      | CLEARANCE REQUIRED TO REMOVE WIRING HARNESS FROM SPEED SENSOR       |
| SPEED SENSOR CONNECTOR | 40.0 (1.57)  | PERPENDICULAR | CLEARANCE REQUIRED TO REMOVE WIRING HARNESS FROM SPEED SENSOR       |

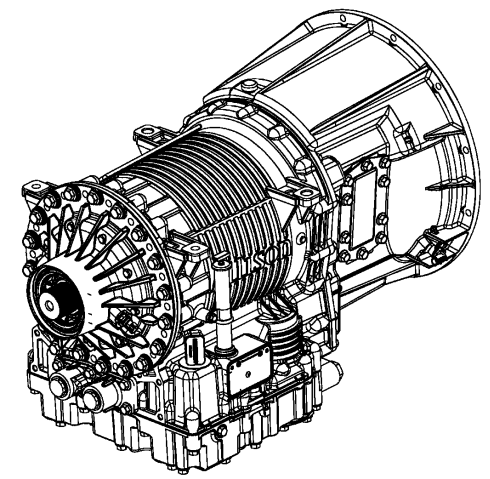
\* TRANSMISSION VIEWED FROM THE SIDE



VIEW A

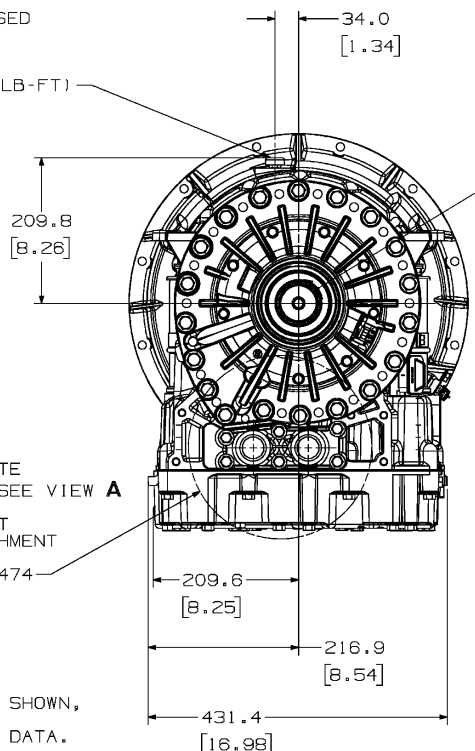
STANADAR REMOTE COOLER PROVISION

COOLER RETURN LOCATION  
 SOCIETY OF AUTOMOTIVE ENGINEERS  
 1.3125 STRAIGHT THREAD  
 O-RING CONNECTION INCH SERIES THREAD  
 TORQUE COOLER FITTINGS TO  
 54-68 N·m (40-50 LB-FT)  
 "TWO WRENCH" INSTALLATION METHOD IS  
 RECOMMENDED TO PREVENT ADDITIONAL ROTATION  
 OF COOLER FITTINGS WHEN ATTACHING HOSES.  
 FAILURE TO DO SO MAY RESULT IN AN OVER TORQUE  
 CONDITION AT THE FITTING IN THE TRANSMISSION.  
 FOR EXTERNAL HYDRAULIC CIRCUIT REQUIREMENTS  
 NOT SHOWN SEE  
 "TRANSMISSION SPECIFICATIONS" SECTION  
 OF 3000 PRODUCT FAMILY TECH DATA.



ISOMETRIC VIEW

BREATHER  
 M10 X 1.5-8g  
 IF A REMOTE BREATHER IS USED  
 USE ADAPTER 29502386 TO  
 ADAPT FITTING TO  
 M12 X 1.5-6H  
 TORQUE TO 12-16 N·m (9-12 LB-FT)



REAR SUPPORT MOUNTING  
 BRACKET MAY BE REQUIRED,  
 SEE DRAWING AS66-430.

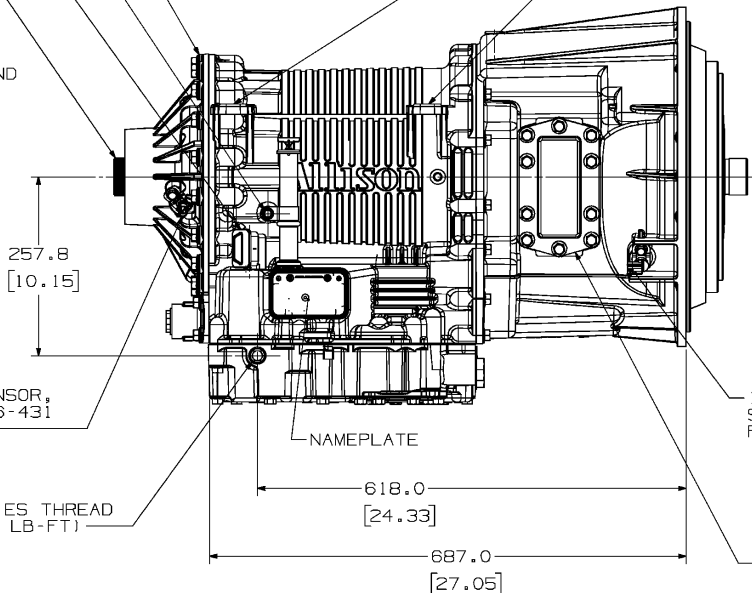
OIL FILL TUBE MOUNTING  
 BRACKET LOCATION  
 SEE DRAWING AS66-460

FOR MAIN ELECTRICAL  
 CONNECTOR INFORMATION  
 SEE DRAWING AS66-431

OUTPUT SHAFT  
 FOR AVAILABLE OUTPUT  
 FLANGES AND YOKES  
 SEE DRAWINGS  
 AS66-441 AND AS66-442

DIRECTION OF ROTATION IS SHOWN  
 FOR CLOCKWISE INPUT ROTATION AND  
 FORWARD GEAR

MACHINING LUGS (BOTH SIDES) USED  
 FOR MANUFACTURING - MAY BE USED  
 TO LIFT THE TRANSMISSION.  
 THESE LUGS WERE NOT DESIGNED TO  
 PROVIDE STRUCTURAL SUPPORT FOR  
 ANCILLARY EQUIPMENT. IF USED FOR THAT  
 PURPOSE, STRICT REQUIREMENTS  
 MUST BE MET. REFER TO DISCUSSION  
 REGARDING DESIGN CONSIDERATIONS  
 IN SECTION B, TRANSMISSION/ENGINE  
 PACKAGING, OF THE TRANSMISSION  
 INSTALLATION MANUAL.  
 FOR LOCATIONS, SEE DRAWING AS66-431.



MAIN PRESSURE TAP PLUG  
 .4375-20 UNF-2A INCH SERIES THREAD  
 TORQUE TO 10-13 N·m (7-10 LB-FT)

FOR TRANSMISSION SPECIFICATIONS NOT SHOWN,  
 SEE "TRANSMISSION SPECIFICATIONS"  
 SECTION OF 3000 PRODUCT FAMILY TECH DATA.

TORQUES SHOWN ARE FOR PLAIN (NON-PLATED)  
 FASTENERS AND OTHER THREADED COMPONENTS  
 SUPPLIED AND INSTALLED BY THE VEHICLE  
 BUILDER. TORQUE REQUIREMENTS SHOULD BE  
 REVIEWED IF PLATED FASTENERS WILL BE USED.  
 CONSULT THE SUPPLIER.

FOR WIRING HARNESS INFORMATION, REFER TO  
 TECHNICAL DOCUMENT 173 (TD-173)

FOR CONTROLS INFORMATION REFER TO  
 ALLISON 4TH GENERATION CONTROLS TECH DATA.

ALLISON 4th  
 GENERATION  
 CONTROLS

UG METRIC THIRD ANGLE

FR2

UNIVERSITY MICROFILMS

DATE 28MY04  
 CHECKED R.F.TLOCK  
 DATE 27MY04  
 APPROVED K. SCHNABEL  
 DATE 27MY04  
 PROJ. ENGR. R.F.TLOCK  
 DATE 27MY04  
 APPL. ENGR. B.LADD  
 DATE 27MY04

DIMENSIONS SHOWN IN PARENTHESES ARE  
 IN INCHES, AND ARE FOR REFERENCE ONLY.

FR1 DWG. NO. AS66-402 LTR SH B 1

|             |   |        |        |
|-------------|---|--------|--------|
| REV         | DESCRIPTION   | DATE   | DRNGR  |
| B           | (1)REVISE TORQUES ARE FOR NON-PLATED FASTENERS NOTE.<br>(2)REMOVED REAR SUPPORT MOUNTING BRACKET FROM DRAWING VIEWS   | JY1107 | MDM/MP |
| A           | REMOVED LIMIT FOR LOADS AT MACHINING LUG ON MAIN CASE. REPLACED WITH NOTE AND REFERENCE TO INSTALLATION MANUAL. ADDED "DO NOT REMOVE" NOTE TO BOLTS WHICH RETAIN OIL SUMP. ADDED SEVERAL REFERENCES TO AS66-431 | 22MY08 | RH/JH  |
| SEE SHEET 2 |   |        |        |

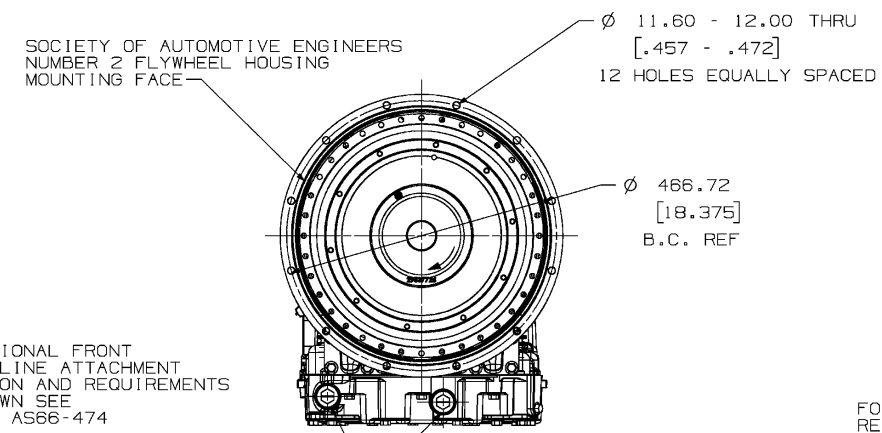
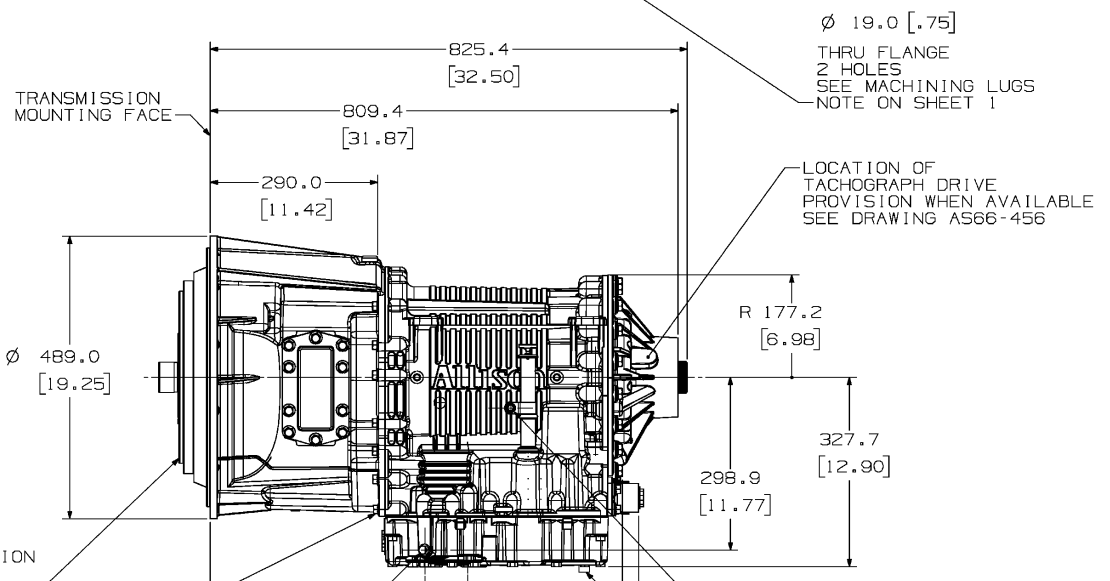
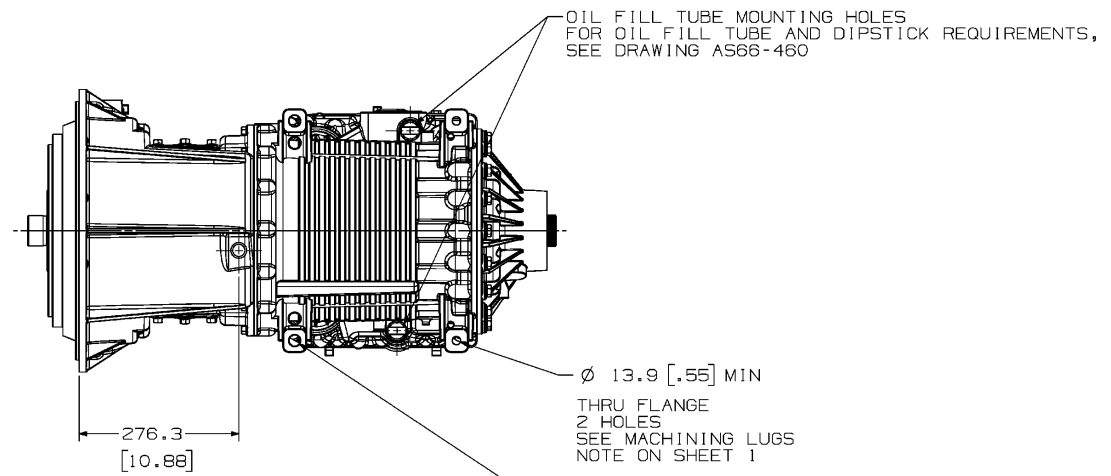
INSTALLATION DRAWING - BASIC MODELS, DEEP SUMP, PTO

MODEL 3000 PRODUCT FAMILY

SIZE/CAGE CODE DWG NO  
 R 73342 AS66-402

SCALE NONE SHEET 1 OF 2

AS66-402



FOR OPTIONAL FRONT COOLER LINE ATTACHMENT PROVISION AND REQUIREMENTS NOT SHOWN SEE DRAWING AS66-474

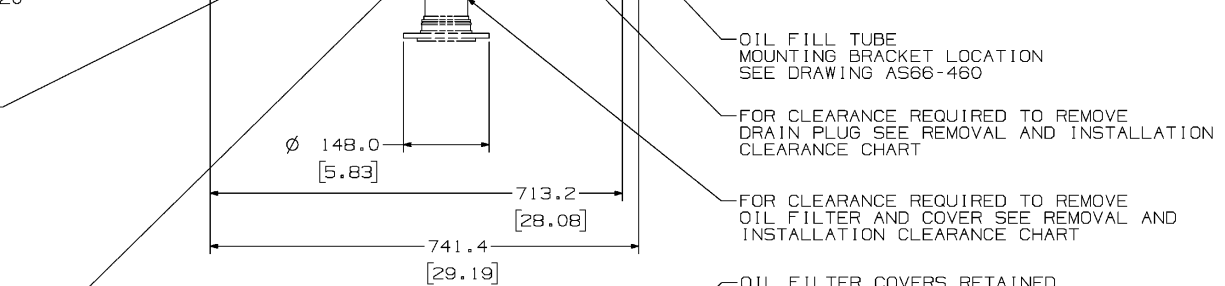
SOCIETY OF AUTOMOTIVE ENGINEERS  
1.0625 STRAIGHT THREAD  
O-RING CONNECTION INCH SERIES THREAD

FOR ENGINE ADAPTATION REQUIREMENTS SEE DRAWING AS66-420

EXTERNAL M10 X 35 LONG CONVERTER HOUSING-TO-MAIN CASE BOLT (17 PLACES)  
MAY BE REMOVED AND REINSTALLED FOR ATTACHMENT OF BRACKET WITH MAXIMUM THICKNESS OF 2.1 (0.08).

FOR BRACKETS WITH THICKNESS GREATER THAN 2.1 mm. A 40 mm BOLT MUST BE USED TO MAINTAIN ADEQUATE THREAD ENGAGEMENT. A WASHER MAY BE REQUIRED TO PREVENT BOTTOMING OUT OF BOLT IN THE TAPPED HOLE. BRACKET AND WASHER MUST HAVE COMBINED THICKNESS OF 5.0-6.0 mm (0.20-0.24 IN)

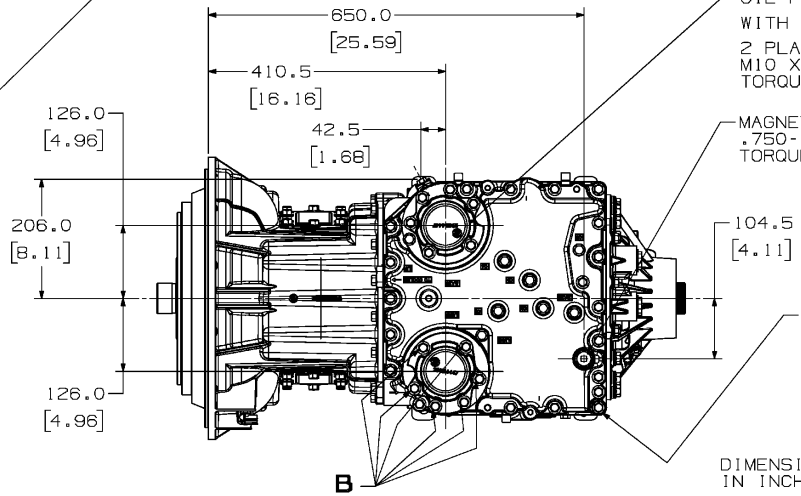
MAXIMUM OF TWO PER TRANSMISSION.  
ALL BOLTS MUST BE RE-TORQUED TO 61-72 N·m (45-53 LB-FT).



OIL FILTER COVERS RETAINED WITH 6 BOLTS INDICATED **B**  
2 PLACES  
M10 X 1.5-6g X 55 LONG  
TORQUE TO 51-61 N·m (38-45 LB-FT)

MAGNETIC DRAIN PLUG  
.750-16 UNF-2A INCH SERIES THREAD  
TORQUE TO 25-32 N·m (18-24 LB-FT)

MAIN PRESSURE TAP PLUG  
.4375-20 UNF-2A INCH SERIES THREAD  
TORQUE TO 10-13 N·m (7-10 LB-FT)



BOLT FOR RETAINING OIL SUMP TO TRANSMISSION. DO NOT REMOVE OR USE TO ATTACH AUXILIARY EQUIPMENT TO TRANSMISSION. 20 PLACES AROUND PERIPHERY OF SUMP.

DIMENSIONS SHOWN IN PARENTHESES ARE IN INCHES, AND ARE FOR REFERENCE ONLY.

ALLISON 4th GENERATION CONTROLS

UG

FR2

METRIC

THIRD ANGLE

|                           |                              |          |             |
|---------------------------|------------------------------|----------|-------------|
| REV                       | DESCRIPTION                  | DATE     | DWGR        |
| A                         | SEE SHEET 1 FOR RELATED INFO | 23MY08   | RH-JH       |
| REVISIONS                 |                              |          |             |
| DATE                      | DRAWN                        | CHECKED  | APPROVED    |
| 20MY04                    | R. HIGGINS                   | M. FLOCK | K. SCHNABEL |
| DATE                      | PROD. ENGR.                  | DATE     | APPL. ENGR. |
| 27MY04                    | M. FLOCK                     | 27MY04   | B. LADD     |
| MODEL 3000 PRODUCT FAMILY |                              |          |             |
| SIZE                      | CAGE CODE                    | DWG NO.  |             |
| R                         | 73342                        | AS66-402 |             |
| SCALE                     | NONE                         |          | SHEET 2     |

FR1 DWG. NO. AS66-402 LTR SH A 2

THE INFORMATION CONTAINED HEREIN IS PROPRIETARY AND THE PROPERTY OF ALLISON TRANSMISSION, GENERAL MOTORS CORPORATION AND MAY NOT BE REPRODUCED, DISCLOSED OR USED FOR ANY PURPOSE OTHER THAN A QUOTATION TO OR AN ORDER FROM ALLISON TRANSMISSION WITHOUT THE SPECIFIC WRITTEN AUTHORIZATION OF ALLISON TRANSMISSION.

DWG AS66-402

UNIGRAPHICS